

# Urban tree protection in Australia

## Review of regulatory matters

*A report for the South Australian Attorney General's Department Planning and Land Use Services*

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# 1. Executive Summary

The management of trees in Adelaide's built-up areas has become a topic of increasing attention, particularly given concern that some Adelaide suburbs have very low tree cover and the city as a whole is not on track to meet greening targets under the *30-Year Plan for Greater Adelaide*. In South Australia, the *Planning, Development and Infrastructure Act 2016* is the primary instrument for protecting urban trees, in contrast with many jurisdictions interstate which protect trees through a combination of state and local government laws. The 2021 Conservation Council Report, *Comparison of Australia's Tree Laws* (Morrison *et al.* 2021), claimed that metropolitan Adelaide has the "worst tree protections" in the country, compared with jurisdictions interstate. This should not be confused with claiming that South Australia has the weakest tree protections, as there are many jurisdictions - particularly those outside capital cities - which do not have any local tree protection laws for trees on private land. The authors of the Conservation Council report examined the regulations of 47 local governments across Australia and compared these with the state-level tree regulations of South Australia. In the present study, the tree protection laws of 101 local governments in capital cities were investigated, in addition to state-level regulations across Australia. Our expanded analysis demonstrated that metropolitan Adelaide does not have the weakest tree protections in the country; however, South Australia's laws were markedly less stringent than local governments in New South Wales, Victoria and Western Australia. More stringent rules were not universally seen, but it was readily apparent that the vast majority of local governments in Australian capital cities have laws designed to protect urban trees more effectively than South Australia's laws.

South Australia's limited tree protections were demonstrated in its narrow classification of protected trees: trees qualify as protected (termed 'Regulated' or 'Significant') if they achieve a trunk circumference of more than two metres (three metres for Significant trees) when measured at a height of one metre above the ground. This compares to an average circumference threshold for protection of approximately 0.5 metres (50 cm) among the interstate councils considered. Very few councils (four) required that a tree attain a trunk circumference of more than one metre to qualify for protection. Over half of councils reviewed also protected trees exceeding a given height (majority of thresholds between 4-6 metres) or crown spread (majority of thresholds between 3-5 metres), but these provisions do not exist in South Australia. Trees in South Australia can be listed on a Significant Tree Register (operated by the National Trust) on the basis of exceptional qualities, but these trees do not receive any additional legal protections. In contrast, trees in several other jurisdictions are afforded protection via tree registers, or by meeting criteria other than size.

A similar picture emerged when reviewing the exemptions that allow protected trees to be pruned or removed. In South Australia, any tree within ten metres of a house or swimming pool was exempted from protection, regardless of its trunk circumference. Similar provisions existed in many jurisdictions interstate, but proximities triggering exemption were lower (majority less than four metres) and some required additional evidence of the tree posing a threat to a substantial building or infrastructure.

The maximum penalties for unlawfully damaging or removing a protected tree in South Australia were broadly consistent with other state and territory laws: \$120,000 in South Australia compared with \$112,000 in the Australian Capital Territory, \$218,088 in Victoria and \$200,000 in Western Australia. These all fell far below the \$1.1 million maximum penalty in New South Wales. Multiple local governments interstate had additional penalties under local laws - generally between \$100 and \$6,000 but up to \$500,000 in the City of Sydney. Analogous local law penalties were not levied in South Australia.

This study also examined the tree bonds and valuations used across Australia, and at the request of the Attorney General's Department Planning and Land Use Services, provides recommendations on how these could be applied in the South Australian context. The present study did not reveal predominance of a particular tree valuation methodology, and it is difficult to recommend the most appropriate method for valuing South Australian trees without conducting extensive trials. Thyer, Helliwell, (Revised) Burnley and City of Melbourne methods were found to be used in other jurisdictions and there was no obvious reason why these would not be appropriate for use in South Australia. We note that a new valuation methodology, commissioned by Arboriculture Australia, is due for imminent public release and recommend this standard be evaluated for its suitability in the South Australian context.

Recommendations from this report were drawn from the interstate precedent and include reducing the circumference threshold for protected trees in South Australia (from two metres to 50 cm); implementing independent dimension-based protection thresholds for height (less than six metres) and crown spread (less than six metres); and the introduction of a series of other protection measures. Mandating the Australian Standard (AS4373-2007) for *Pruning of Amenity Trees*, as well as the involvement of qualified arborists in the assessment and undertaking of works to protected trees would also assist in strengthening protections in South Australia.

## 2. Introduction and Scope

The management of Adelaide's urban forest and promotion of canopy levels has become an increasingly prominent issue for state and local governments. Reports of a decline in Adelaide's urban tree canopy, despite significant government investment in tree planting on public land, has raised concerns that the removal of trees from private land is a major driver in canopy loss. In 2021, the Conservation Council of South Australia published a report - *Comparison of Australia's Tree Laws* (Morrison *et al.* 2021) - benchmarking Adelaide's tree protection laws against a number of local governments across Australia. The report claimed that metropolitan Adelaide has the worst tree protections in Australia "compared with other jurisdictions that protect trees on private land" (Morrison *et al.* 2021).

In partial response to this claim and ongoing concerns regarding urban trees, the Attorney General's Department, Planning and Land Use Services commissioned the University of Adelaide's Environment Institute to review the Conservation Council report and validate its representation of tree regulations across Australia. The review project scope included comparison of the regulations found in other jurisdictions to South Australian tree protections, as well as comparison of tree valuation methodologies and implementation in the context of tree protection by local governments. The project brief can be found in Appendix 1.

Due to the restricted time available to undertake this investigation, it fell beyond project scope to present an exhaustive analysis of tree protection rules nationally. We recommend undertaking a more comprehensive analysis, including a complete review of all local governments, additional data sources, and review of other regulatory approaches to tree protection, including those used effectively overseas. Data collection and analyses were subject to time and jurisdictional limitations, as noted in the relevant report sections, and the information presented should be read alongside the original datasets and resources for deeper interpretation.

## 2.1. Tree Regulations for public land vs private land

This project, and the Conservation Council report, both focus on the legislation relating to trees on private land. Trees on public land and council-managed properties were outside the project scope, and analysis of directly related laws was not undertaken in depth except in the case of tree penalties, bonds and valuation research. Information regarding tree valuation and tree security deposits (or bonds) was found to relate predominantly to street trees. Penalty-related information often referenced state-level laws which were applicable to unlawful tree works on both public and private land. Some councils specified penalties for damage to street trees; however, a number of councils did not specify whether fines applied to street trees or privately owned trees. To enable the questions in the project brief to be answered fully, information was collected on all maximum penalty and minimum bond values, and on all valuation methods used.

## 3. Review of Australia's Tree Laws

### 3.1. Conservation Council report approach

Morrison *et al.* note in their 2021 Conservation Council report that Adelaide is not on track to meet the urban canopy goals stipulated in the *30-Year Plan for Greater Adelaide*. The report authors posit that South Australian tree protection laws, which are the only applicable tree protection regulations across local governments within Adelaide's metropolitan region, are inadequate to maintain or increase the canopy. The Conservation Council report benchmarks South Australian tree protection laws against a selection of local governments interstate.

#### 3.1.1. Selection of jurisdictions to review

Councils to investigate were selected based on the combined characteristics of rainfall (low or high), urbanisation (how built-up an area is, i.e. urban or rural) and population density (spacious or compact distribution of residents according to land area). These factors were identified in the *Greener Places Better Spaces* reports and impact the growing environment and regulatory pressures associated with urban trees. The authors examined local governments with combined characteristics comparable to those held by councils in the Adelaide metropolitan region, with groupings as follows:

1. "Urban, spacious and low rainfall" - consistent with the Cities of: Burnside, Marion, Mitcham, Port Adelaide Enfield, Salisbury, Tea Tree Gully and West Torrens, and the Town of Gawler;
2. "Urban, compact and low rainfall" - consistent with Campbelltown City Council and the Cities of: Charles Sturt, Holdfast Bay, Norwood Payneham and St Peters, Prospect, and Unley, and the Town of Walkerville; and,
3. "Urban, compact and high rainfall" - chosen because these represent higher density councils that face regulatory pressures associated with high urban infill, which is increasing in Adelaide.

The resultant 47 selected interstate local governments are listed in Table 1.

### 3.1.2. Data collection approach

For each of the listed councils, the authors collected the following qualitative data:

- Qualifications for tree protection, with a focus on dimensional protections (trunk circumference, crown spread and height) and the use of tree registers;
- the rules applicable for limiting pruning activities on protected trees; and,
- exemptions which allow interference with or removal of trees that meet protection criteria.

The Conservation Council report authors stated that data was “resourced from the relevant council [or] jurisdiction website”. Several ‘key learnings’ are presented and are accompanied by suggestions for implementation in South Australia.

It is noted that the Conservation Council report does not detail state-controlled laws, which may affect the representations obtained from council information alone. The report does provide a summary of the Victorian system of vegetation protection via land overlays, however the effect of this on data representation for Victorian councils in the report is unclear.

**Table 1: Local governments selected for inclusion in the 2021 Conservation Council report**  
*Comparison of Australia’s Tree Laws*

New South Wales	Victoria	Western Australia
<ul style="list-style-type: none"> <li>• Camden Council<sup>1</sup></li> <li>• Bayside Council<sup>3</sup></li> <li>• Burwood Council<sup>3</sup></li> <li>• City of Canada Bay<sup>3</sup></li> <li>• City of Canterbury Bankstown<sup>3</sup></li> <li>• City of Paramatta Council<sup>3</sup></li> <li>• City of Ryde<sup>3</sup></li> <li>• Cumberland City Council<sup>3</sup></li> <li>• Fairfield City Council<sup>3</sup></li> <li>• Georges River Council<sup>3</sup></li> <li>• Hunter’s Hill Council<sup>3</sup></li> <li>• Inner West Council<sup>3</sup></li> <li>• Lane Cove Council<sup>3</sup></li> <li>• Mosman Council<sup>3</sup></li> <li>• North Sydney Council<sup>3</sup></li> <li>• Randwick City Council<sup>3</sup></li> <li>• Strathfield Council<sup>3</sup></li> <li>• Waverley Council<sup>3</sup></li> <li>• Willoughby City Council<sup>3</sup></li> <li>• Woollahra Municipal Council<sup>3</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Brimbank City Council<sup>1</sup></li> <li>• Frankston City Council<sup>1</sup></li> <li>• City of Greater Dandenong<sup>1</sup></li> <li>• City of Kingston<sup>1</sup></li> <li>• Hobsons Bay City Council<sup>1</sup></li> <li>• Banyule City Council<sup>2</sup></li> <li>• Bayside City Council<sup>2</sup></li> <li>• City of Boroondara<sup>2</sup></li> <li>• City of Port Phillip<sup>2</sup></li> <li>• City of Stonnington<sup>2</sup></li> <li>• Darebin City Council<sup>2</sup></li> <li>• Glen Eira City Council<sup>2</sup></li> <li>• Maribyrnong City Council<sup>2</sup></li> <li>• Moonee Valley City Council<sup>2</sup></li> <li>• Moreland City Council<sup>2</sup></li> <li>• Yarra City Council<sup>2</sup></li> </ul>	<ul style="list-style-type: none"> <li>• City of Cockburn<sup>1</sup></li> <li>• City of Freemantle<sup>1</sup></li> <li>• City of Joondalup<sup>1</sup></li> <li>• City of Nedlands<sup>1</sup></li> <li>• Shire of Peppermint Grove<sup>1</sup></li> <li>• Town of Cambridge<sup>1</sup></li> <li>• Town of Claremont<sup>2</sup></li> <li>• Town of Cottesloe<sup>2</sup></li> <li>• Town of East Freemantle<sup>2</sup></li> <li>• Town of Mosman Park<sup>2</sup></li> </ul>
		Australian Capital Territory <sup>4</sup>

<sup>1</sup>Urban, spacious and low rainfall; <sup>2</sup>Urban, compact and low rainfall; <sup>3</sup>Urban, compact and high rainfall.

<sup>4</sup>Due to its size, the Australian Capital Territory functions as both a Territory and municipal government.

## 3.2. University of Adelaide approach

The University of Adelaide was asked to verify the data and representations presented in the Conservation Council report, and to make appropriate comparisons to tree protection information across other jurisdictions in Australia. To confirm that the findings of the Conservation Council report were representative of a broad cross-section of Australian jurisdictions, a broader range of local governments was selected for the present review.

### 3.2.1. Selection of jurisdictions to review

It was initially intended to comprehensively audit all 470 local governments outside of South Australia (Local Government National Report 2017/18) for complete review of Australia's tree law landscape, in addition to reviewing state government tree laws; however, due to the restricted time available for this project, it was agreed to narrow the geographic scope. As the Conservation Council report claimed tree protection inadequacy within the Adelaide metropolitan area, councils falling within similarly urbanised areas, and thus similar planning and development environments, were of primary interest.

The Australian Bureau of Statistics Significant Urban Areas (SUA) statistical areas lend to comparison between urban hubs across Australia, including capital cities. The metropolitan areas of each capital city in Australia were not independently nominated for each state and could not be unambiguously defined, and due to the similarity between SUA lists and the Adelaide metropolitan list provided in the *30 Year Plan for Greater Adelaide*, it was identified that SUAs could be used as a proxy to define metropolitan areas.

Jurisdictions for comparison were selected using the following process:

1. SUA spatial data for Australia was located (Australian Bureau of Statistics, *Significant Urban Area (SUA) ASGS Ed 2016*).
2. National ABS Local Government Area (LGA) spatial information was located (Australian Bureau of statistics: *Local Government Areas – 2021*).
3. SUA and LGA datasets were uploaded to ArcGIS Pro (version 2.9.0, Esri Inc., 2021) and intersected to determine LGAs present within each SUA.
4. A list was produced of LGAs that fell wholly or partially within any SUA.

Due to time and resource restrictions, a further reduction in geographic scope was required. The decision was made to review only the councils identified by the ABS data as falling within a capital city SUA, and to focus attention on the metropolitan areas of the capital cities of the Australian Capital Territory, New South Wales, Victoria and Western Australia, in line with the Conservation Council approach. The research team was also able to cover the 3 councils falling within Darwin's SUA, adding Northern Territory to the review; however, Queensland and Tasmania, remained excluded from the local government reviews. The final list of 101 local government jurisdictions reviewed can be found in Table 2.

A high-level review was undertaken of the state legislation affecting tree protections for all Australian states and territories. This review was undertaken predominantly after collection of council-based information to enable a more accurate representation of the regulatory landscape than reviewing council laws alone. Detailed investigation of specific legislation and the interaction between Commonwealth, state and local laws may reveal additional or modified tree protections in some jurisdictions, however this analysis was not within the scope of the requested services.



**Table 2: Local government associations within capital city Significant Urban Areas (SUA) for selected states and territories**

New South Wales (Sydney SUA)	Victoria (Melbourne SUA)	Western Australia (Perth SUA)	Northern Territory (Darwin SUA <sup>1</sup> )
<ul style="list-style-type: none"> <li>• Bayside Council*</li> <li>• Blacktown City Council</li> <li>• Blue Mountains City Council</li> <li>• Burwood Council*</li> <li>• Camden Council*</li> <li>• Campbelltown City Council</li> <li>• Canterbury Bankstown Council*</li> <li>• City of Canada Bay Council*</li> <li>• Council of the City of Parramatta*</li> <li>• Council of the City of Ryde*</li> <li>• Council of the City of Sydney</li> <li>• Cumberland Council*</li> <li>• Fairfield City Council*</li> <li>• Georges River Council*</li> <li>• Hawkesbury City Council</li> <li>• Inner West Council*</li> <li>• Ku-ring-gai Council</li> <li>• Lane Cove Municipal Council*</li> <li>• Liverpool City Council</li> <li>• Mosman Municipal Council*</li> <li>• North Sydney Council*</li> <li>• Northern Beaches Council</li> <li>• Penrith City Council</li> <li>• Randwick City Council*</li> <li>• Strathfield Municipal Council*</li> <li>• Sutherland Shire Council</li> <li>• The Council of the Municipality of Hunters Hill</li> <li>• The Council of the Shire of Hornsby</li> <li>• The Hills Shire Council</li> <li>• Waverley Council*</li> <li>• Willoughby City Council*</li> <li>• Wollondilly Shire Council</li> <li>• Woollahra Municipal Council*</li> </ul>	<ul style="list-style-type: none"> <li>• Banyule City Council*</li> <li>• Bayside City Council*</li> <li>• Boroondara City Council*</li> <li>• Brimbank City Council*</li> <li>• Cardinia Shire Council</li> <li>• Casey City Council</li> <li>• Darebin City Council*</li> <li>• Frankston City Council*</li> <li>• Glen Eira City Council*</li> <li>• Greater Dandenong City Council*</li> <li>• Hobsons Bay City Council*</li> <li>• Hume City Council</li> <li>• Kingston City Council*</li> <li>• Knox City Council</li> <li>• Manningham City Council</li> <li>• Maribyrnong City Council*</li> <li>• Maroondah City Council</li> <li>• Melbourne City Council</li> <li>• Melton City Council</li> <li>• Monash City Council</li> <li>• Moonee Valley City Council*</li> <li>• Moreland City Council*</li> <li>• Mornington Peninsula Shire Council</li> <li>• Nillumbik Shire Council</li> <li>• Port Phillip City Council*</li> <li>• Stonnington City Council*</li> <li>• Whitehorse City Council</li> <li>• Whittlesea City Council</li> <li>• Wyndham City Council</li> <li>• Yarra City Council*</li> <li>• Yarra Ranges Shire Council</li> <li>• Mitchell Shire Council</li> </ul>	<ul style="list-style-type: none"> <li>• City of Armadale</li> <li>• City of Bayswater</li> <li>• City of Belmont</li> <li>• City of Canning</li> <li>• City of Cockburn*</li> <li>• City of Fremantle*</li> <li>• City of Gosnells</li> <li>• City of Joondalup*</li> <li>• City of Kalamunda</li> <li>• City of Kwinana</li> <li>• City of Mandurah</li> <li>• City of Melville</li> <li>• City of Nedlands*</li> <li>• City of Perth</li> <li>• City of Rockingham</li> <li>• City of South Perth</li> <li>• City of Stirling</li> <li>• City of Subiaco</li> <li>• City of Swan</li> <li>• City of Vincent</li> <li>• City of Wanneroo</li> <li>• Shire of Mundaring</li> <li>• Shire of Murray</li> <li>• Shire of Peppermint Grove*</li> <li>• Shire of Serpentine–Jarrahdale</li> <li>• Town of Bassendean</li> <li>• Town of Cambridge*</li> <li>• Town of Claremont*</li> <li>• Town of Cottesloe*</li> <li>• Town of East Fremantle*</li> <li>• Town of Mosman Park*</li> <li>• Town of Victoria Park</li> </ul>	<ul style="list-style-type: none"> <li>• City of Darwin</li> <li>• Litchfield Council</li> <li>• City of Palmerston</li> </ul> Australian Capital Territory <sup>2</sup>
<b>Number of councils:</b> 33	32	32	3

\* Councils included in the Conservation Council report.

<sup>1</sup> The intersection list resulting for Darwin SUAs included the “Darwin Waterfront Precinct”, which is a small waterfront area, similar to an estate, under the jurisdiction of the Darwin Waterfront Corporation. This was excluded from review as it is a non-council precinct.

<sup>2</sup> The Australian Capital Territory Government operates as the local government and no other councils intersect within the Canberra SUA



### 3.2.2. South Australian Jurisdictions

For comparative purposes, the South Australian (SA) councils within Adelaide's Significant Urban Area have been included in the findings, figures and tables where possible. Due to time constraints, South Australian councils were reviewed post-completion of the data collection from the states and territories listed in Table 2. The 23 South Australian councils relevant to this review were:

- Adelaide Hills Council
- Adelaide Plains Council
- Campbelltown Council
- City of Adelaide
- City of Burnside
- City of Charles Sturt
- City of Holdfast Bay
- City of Marion
- City of Mitcham
- City of Norwood Payneham & St Peters
- City of Onkaparinga
- City of Playford
- City of Port Adelaide Enfield
- City of Prospect
- City of Salisbury
- City of Tea Tree Gully
- City of Unley
- City of West Torrens
- Corporation of the Town of Walkerville
- Light Regional Council
- Mount Barker District Council
- The Barossa Council
- Town of Gawler

### 3.2.3. Data search method

Data collection was undertaken for each council individually.

The data collection process began by visiting the council's home web page. Searches for the specific data constituted a combination of the following methods:

1. Searching menus for relevant documentation and information pages – for example, 'Environment' pages, 'Development' or 'Planning' pages.
2. Utilising home page search bars to search for the following terms, until relevant matches were located: tree; trees; vegetation; trees on private property; tree protections; significant tree register.
3. For each potentially relevant site or document, the documentation was read fully, where possible within time constraints, or searched for specific terms including: tree; trees; vegetation; clearing; flora; habitat; plant; plants.

It should be noted that when sourcing relevant documents, home page search bars could not be expected to produce all relevant results, and that exhaustive review of search results was not reasonable

due to the volume of results returned. Terms were searched progressively, both when searching websites and within documents, and decisions to search for subsequent terms were made based on the content found.

In the early stages of this review, a limited number of councils were contacted by phone or email when up-to-date and relevant information was not able to be located online, or if information was ambiguous. Potentially due to COVID-related work restrictions, council responses were slow and due to the short timeframe for this project this was not pursued as a practical method of data acquisition.

Following review of council-based laws for a state, the state-level regulations were reviewed and noted separately. This was achieved by referring to any state-based legislation mentioned in council resources, or by search engine exploration of results leading to state government web pages. Relevant policies and Acts were reviewed using official information sheets and guides, or via keyword searches of the documents as per the council process.

### 3.2.4. Data collection format

For the local government data, a tabular data collection template was created in Microsoft Excel, with collection fields corresponding to the project brief requirements (Appendix 1). Table 3 provides an overview of the major data categories, and the specific data entry fields within these categories are listed within the subsequent relevant report sections.

To enable consistency in data entry and analysis, drop-down lists were created for data fields within the major categories, where appropriate. Information that did not fit within the data entry fields, but that provided supplementary detail, context or interest, was collected in free text 'details' columns, or in a comments section. For example, data relating to tree valuation methods was scarce, and an additional data field was not created for this, but this information was captured within the 'fees and offsets' details columns, or in the comments section for any given council.

A record of each state government's legislation was prepared, including a summary of their operation as interpreted by the research team.

**Table 3: Data categories investigated for each council**

Major data collection category	Description of data collected
Protected trees	Criteria and conditions that result in the protection of a tree, such that approval or permission must be sought to undertake any tree damaging activity.
Exemptions to protected trees	Circumstances or conditions under which trees that would otherwise be protected are exempt from being protected. That is, cases where no permit or approval is required to undertake tree damaging activities.
Pruning regulations	The extent to which pruning activities could be undertaken without permission, and applicable conditions for pruning works with and without permission.
Assessment of applications for tree works	The authority responsible for decision-making regarding applications for tree works or development, and the factors listed for consideration in making a determination.
Fees and offsets	Including permit fees for undertaking tree works on protected trees, tree security bonds, offsets via replacement planting or other means.
Penalties	Where specified, and within reasonable search constraints, the penalties applicable for unauthorised tree damage or works.

Regarding referencing, the research team sought to exhaust the available resources regarding tree protections for each council, within project limitations. Council application forms and downloadable documents were common sources of information, and these documents were collected where they were readily downloadable in portable document format (PDF). Reference links for specific pages and documents were collected alongside council home pages, and sources for specific data can be provided on request.

### **3.2.5. Data collection omissions**

Effort was made to avoid entering data arising from ambiguous, or “soft” regulations. This data was identified by terminology that implied flexibility in adherence, such as “may”, or “should”, resulting in more of a recommendation or allowance for council to undertake certain actions, with no guarantee that said actions would be undertaken. Data collection focused on definitive terms such as “must” and “shall”, with increased certainty of the processes and actions most likely to take place. Soft protections were captured only in comments, and within the valuation and bond entry fields, due to the need to fully capture the valuation methods available for use. Other omissions relating to each specific report sections are noted within the relevant sections.

During data collection, it was noted that some councils chose to highlight information relating to state-based tree regulations, identifiable by reference to a state government act or policy. Decisions were made to omit or remove this data from the local government datasets where it was clear that the data reflected state-based regulations rather than council-based regulations. State and federal protections, such as those afforded by the *Environmental Protection and Biodiversity Conservation Act 1999*, were omitted from the local government dataset, to avoid jurisdictional confusion.

Due to the order of investigation and the varying terminology presented across web pages and documents, it was not always immediately obvious whether a regulation listed in council documents reflected state laws. The research team therefore notes that some statistics pertaining to local governments may still contain reflections of state-based legislation in the data points.

### **3.2.6. Data limitations**

Interpretation of inconsistent terminology used in both council and state documents was required during the data collection process. Investigation was undertaken to the best of the ability of the research team; however, considering the volume of data uncovered and turnaround requested for the project, the outcomes for this report are necessarily limited. Further investigation, including data clarification via council contacts, may be beneficial if specific regulations are to be analysed in closer detail. Limitations for data collection that specifically apply to certain data fields or jurisdictions are noted throughout this report.

## 4. Findings

### 4.1. Tree laws by state

The following sections summarise the state and territory level protections for trees in large urban centres. Individual Significant Urban Area (SUA) council analyses for Queensland and Tasmania were not undertaken; however, state-based tree protections were investigated. South Australian tree protection regulations have not been summarised, as this was not part of the project scope.

#### 4.1.1. New South Wales

The *Vegetation State Environmental Planning Policy 2017* (SEPP) summarises the legislative environment affecting tree protection in urban areas in New South Wales. Councils can regulate the clearing of non-native vegetation (including non-native trees) on private land, and the clearing of native vegetation (including native trees) in certain circumstances; however, clearing control can only be established if the council specifies its regulations in a “Development Control Plan” (DCP).

State-controlled protections for native trees depend on the objective and extent of a proposed clearing activity, as well as any applicable vulnerability status of the vegetation or its inhabitants. Clearing of native vegetation (including trees) associated with development may require assessment under the *Environmental Planning and Assessment Act 1979* (NSW) and the *Biodiversity Conservation Act 2016* (NSW).

The *Biodiversity Conservation Act 2016* lists the loss of hollow-bearing trees and the removal of dead wood or dead trees as key threatening processes. It also lists all threatened and vulnerable species under protection within New South Wales, including several tree species. Under the *Biodiversity Conservation Act*, offences relating to tree removal can include damaging habitat of threatened species or a threatened ecological community (Part 2.4) or interfering with a threatened or protected plant.

Within the Sydney Metropolitan Area, the state-level protection of non-threatened native vegetation depends on land zones and the amount of clearing to be undertaken. Outside of national parks, clearance of native vegetation in the following zones may require approval from the Native Vegetation Panel:

- Urban zone
- Environmental Conservation (E2 or C2) zone
- Environmental Management (E3 or C3) zone
- Environmental Living (E4 or C4) zone
- Large Lot Residential (R5) zone

Councils may choose to control the clearing of native trees that are not elsewhere listed as protected, where the clearing is not part of a development activity and where it also falls below the NSW ‘Biodiversity Offsets Scheme’ threshold. Information on private tree protections afforded by councils was readily available on each NSW council website.

New South Wales state legislation affecting tree-related activities includes, but may not be limited to, the following Acts and their sub-legislation:

- *National Parks and Wildlife Act 1974*
- *Heritage Act 1977*
- *Environmental and Planning Assessment Act 1979*
- *Local Government Act 1993*
- *Roads Act 1993*
- *Threatened Species Conservation Act 1995*
- *Electricity Supply Act 1995*
- *Rural Fires Act 1997*
- *Water Management Act 2000*
- *Local Land Services Act 2013*
- *Rural Fire Service Amendment (Vegetation Clearing) Act 2014*
- *Biodiversity Conservation Act 2016*

### **Bushfire Protection Measures – New South Wales**

New South Wales introduced the 10/50 Vegetation Clearing Scheme for residential areas in high bushfire risk areas, defined as Vegetation Clearing Entitlement Areas. The 10/50 Code allows residents in an eligible area to clear trees from within ten metres of a dwelling, and to clear understorey within 50 metres of a dwelling, without seeking approval; however, several restrictions apply:

- Dimensional thresholds: removal of a tree is only allowed if part of the trunk that exceeds 0.3 metres (30 centimetres) in circumference, is within ten metres of an external wall.
- Species and location restrictions: Residents may not clear critical habitat, critically endangered plants, or those listed as critically endangered ecological communities. Species of lower threatened status, usually protected under state legislation, may be cleared.
- Proximity restrictions: clearing of vegetation within ten metres of a lake or river (identified by a two metre width), is not allowed regardless of the water level.
- Location restrictions: clearing is not allowed if the land falls within an Aboriginal Place or State heritage place, identifiable via online mapping tools.

#### **4.1.2. Victoria**

Tree protection on private land in Victoria is controlled predominantly by the Victorian Planning Provisions (VPP) under the *Planning and Environment Act 1987 (Vic)*. The VPP stipulates the state-wide requirements relating to development, land use and the undertaking of works (including tree works) and encompasses the local planning scheme (LPS) of each local government area. Local planning schemes are constructed using the VPP as a base, with schedules added to sections where the council specifies differing or additional regulations.

Within the VPP, a series of 'overlay' clauses are included, which detail regulations that apply if the overlay is imposed on a given land area within Victoria, as designated by the Victorian State Government (Department of Environment, Land, Water and Planning). Each overlay specifies the significance and strategic objectives of the overlay, and details the permit requirements for development, land use and works within the overlay zone.

Overlays of relevance to tree protection include:

- Environmental Significance Overlay (ESO);
- Vegetation Protection Overlay (VPO);
- Significant Landscape Overlay (SLO);
- Heritage Overlay (HO);
- Neighbourhood Character Overlay (NCO);
- Erosion Management Overlay (EMO);
- Salinity Management Overlay (SMO);
- Bushfire Management Overlay (BMO); and,
- Public Acquisition Overlay (PAO).

Within a council's LPS, the VPP overlays can contain schedules - approved amendments that customise the provisions of the overlay where it applies within the council boundary. If a council LPS contains a schedule to an overlay, the area over which those regulations apply is assigned a number code for identification, within the council bounds, on the Victorian land use map. For example, the City of Banyule specifies a schedule to the Environmental Significance Overlay, which is mapped and labelled as ESO1 within Banyule, over any area where the specified regulations apply.

In addition to the VPP and LPS, Victorian councils can define local laws regarding tree protection on private land, under the *Local Government Act 2020 (Vic)*. Due to the overlay and schedule regulations in Victoria having location-based applicability within councils, and local laws generally applying to the whole council area, information from these two data sources was separated.

The VPP sets the following generic protection for native vegetation (including native trees): "a permit is required to remove, destroy or lop native vegetation, including dead native vegetation". A long list of exemptions applies, and can be viewed in Appendix 2; however, a number of these exemptions are limited to preserve larger trees. For example, the exemption allowing the removal of dead native vegetation does not permit the removal of standing dead trees with a trunk circumference greater than 1.26 metres (measured at 1.3 metres above the ground).

Threatened species and critical habitats are protected under the *Flora and Fauna Guarantee Act 1988 (Vic)*, and habitat conservation orders issued under the Act prevail over planning scheme directives. Habitat conservation orders can therefore protect trees by prohibiting clearing, land use or development associated with critical habitat. Additional protection for trees is afforded under other state Acts, with notable mentions in:

- The *Heritage Rivers Act 1992 (Vic)*, under which the clearing of indigenous flora (including trees), or timber harvesting "must not be permitted or take place in a natural catchment area".
- The *Road Management Act 2004 (Vic)*, which requires written consent from the coordinating road authority to conduct any works, including removing a tree or other vegetation in, on, under or over a road.

While collecting information from the planning schemes, it was found that, in some cases, the information provided on council websites, reflected a combination of local law and planning scheme requirements. Because local laws apply to an entire LGA and LPS provisions apply only to specific overlay areas, effort was made to separate local law and planning scheme data by attaching a location condition to data originating from the planning scheme. For example, a protection criterion arising from the planning scheme was noted as being subject to an additional condition (a conditional protection), whereas a protection criterion arising from a local law was not conditional.

Victorian legislation affecting tree-related activities includes, but may not be limited to, the following Acts and their sub-legislation:

- *Planning and Environment Act 1987 (Vic)*
- *Conservation Forests and Lands Act 1987 (Vic)*
- *Flora and Fauna Guarantee Act 1988 (Vic)*
- *Heritage Rivers Act 1992 (Vic)*
- *Building Act 1993 (Vic)*
- *Catchment and Land Protection Act 1994 (Vic)*
- *Heritage Act 1995 (Vic)*
- *Electricity Safety Act 1998 (Vic)*
- *Occupational Health and Safety Act 2004 (Vic)*
- *Road Management Act 2004 (Vic)*
- *Aboriginal Heritage Act 2006 (Vic)*
- *Local Government Act 2020 (Vic)*

### Bushfire Protection Measures – Victoria

The Victorian Government allows limited clearing of vegetation and trees (both native and non-native) for properties located in bushfire prone areas. The 10/30 and 10/50 rules are in place, as detailed in Table 4. The Victorian Government lists 21 metropolitan councils in which the 10/30 rule does not apply, and where clearance of vegetation for bushfire protection is controlled by council alone.

**Table 4: Comparison between the Victorian 10/30 and 10/50 rules for bushfire protection**

Condition	10/30 Rule	10/50 Rule
Distance from existing building	Trees can be cleared within ten metres; other vegetation can be cleared within 30 metres	Trees can be cleared within ten metres; other vegetation can be cleared within 50 metres
Property location	Within a bushfire prone area defined by the <i>Building Act 1993 (Vic)</i>	Within a Bushfire Management Overlay (BMO) within a bushfire prone area defined by the <i>Building Act 1993 (Vic)</i>
Accommodation	<ul style="list-style-type: none"> <li>• Constructed or approved for construction before 10th September 2009, or</li> <li>• Constructed to replace a dwelling damaged by bushfire between 1st January and 31st March 2009</li> </ul>	<ul style="list-style-type: none"> <li>• Constructed or approved for construction before 10th September 2009, or</li> <li>• Lawfully constructed without a permit before 19th November 2011, or</li> <li>• Constructed to replace a dwelling damaged by bushfire between 1st January and 31st March 2009</li> </ul>

Where a Bushfire Management Overlay (BMO) applies, the VPP generic regulations allow for clearing of any vegetation up to four metres from either side of an existing boundary fence, or up to one metre along the opposite side of a fence-line that has already been cleared by four metres on one side. The VPP also allows clearing of native vegetation for fuel-breaks, up to a combined width of six metres.

Within their LPS, several councils specify further clearance requirements for properties situated within the BMO, aimed at creating defensible space and canopy breaks. Other clearing restrictions may still apply under Victorian legislation, and planning permits may still be required under a council's LPS for properties within a BMO area.



#### 4.1.3. Western Australia

Under the *Planning and Development Act 2005 (WA)* and the *Planning and Development (Local Planning Schemes) Regulations 2015 (WA)*, local governments can assume control for protecting non-native trees on private land via a Local Planning Scheme (LPS) or Town Planning Scheme (TPS).

The *Environmental Protection Act 1986 (WA)* stipulates that a clearing permit is required to clear native vegetation on both private and public land, unless an exemption applies. Exemptions may apply for “prescribed routine low impact land management practices”, and a long list of exempt activities is contained in the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (WA)*. Exemptions may also apply if authorised under “certain statutory processes under Schedule 6 of the *Environmental Protection Act*”. Exemptions do not apply to environmentally sensitive areas, which includes defined wetlands, rare flora, and a 50 metre buffer around both as per the *Environmental Protection (Environmentally Sensitive Areas) Notice (2005)*.

Clearing of native vegetation without a permit is an offence, liable to prosecution. The *Biodiversity Conservation Act 2016 (WA)* protects threatened species and their habitats, and specifically prevents the clearing of Western Australian Sandalwood (*Santalum spicatum*).

Western Australian legislation affecting tree-related activities includes, but may not be limited to, the following Acts and their sub-legislation:

- *Soil and Land Conservation Act 1945 (WA)*
- *Environmental Protection Act 1986 (WA)*
- *Fire and Emergency Services Act 1998 (WA)*
- *Planning and Development Act 2005 (WA)*
- *Biodiversity Conservation Act 2016 (WA)*
- *Heritage Act 2018 (WA)*
- *Aboriginal Heritage Act 1972 (WA)*
- *Aboriginal Cultural Heritage Act 2021 (WA)*

#### Bushfire Protection Measures – Western Australia

The *Bush Fire Risk Treatment Standards (2020)* allow clearing of vegetation within a ‘risk treatment zone’, for properties within a bushfire prone area as defined by the *Fire and Emergency Services Act 1998 (WA)*. The Standards do not prevail over any legislation protecting significant environmental areas or heritage places. Additional exemptions to bushfire risk treatment include:

- Trees listed on a Significant Tree Register
- Riparian vegetation

Risk treatment zones only apply within 20 metres of buildings approved for development before 8 December 2015, and trees with a height greater than five metres can only be removed within ten metres of a relevant building. The *Guide for Applying the Bush Fire Risk Treatment Standards* notes that buildings developed after the specified date must provide an acceptable separation from bushfire prone vegetation, and therefore the treatment standards do not apply.

#### 4.1.4. Australian Capital Territory

The Australian Capital Territory (ACT) Government acts as the local government for the ACT. Protection for trees on private land, in any area declared to be a “built up area” is regulated by the *Tree Protection Act 2005 (ACT)*. The Act requires a tree register, and trees can automatically qualify for protection (“Regulated Trees”) or be placed on the register individually or in groups (“Registered Trees”) if they meet any of the dimensional thresholds specified by the Act. Dead trees are automatically removed from the register.

Exemptions to the protection of Regulated or Registered Trees are provided under the following Acts:

- *Utilities Act 2000*
- *Plant Diseases Act 2002*
- *Emergencies Act 2004*
- *Planning and Development Act 2007*
- *Utilities (Technical Regulation) Act 2014*
- *Public Unleased Land Act 2014*

An application to remove or damage a protected tree can be made to the ACT Conservator of Flora and Fauna (under the *Nature Conservation Act 2014 (ACT)*). An application can also be made to the Conservator to cancel a tree’s registration. The Conservator may issue directions to protect a tree (including ordering a tree be assessed for protection). Should the landowner or tree impactor refuse direction, a delegate of the Conservator may undertake actions directed by the Conservator, and reasonable costs incurred considered a debt to the Territory government – for example, council could erect a fence to protect the tree and recover the costs from the landowner.

#### Bushfire Protection Measures – Australian Capital Territory

Regarding bushfire risk mitigation, the *Tree Protection Act 2005 (ACT)* only allows the removal of regulated or registered trees by authorised personnel for purposes under the *Emergencies Act 2004*. No further allowance for removing protected trees for bushfire risk mitigation could be found. The ACT *Strategic Bushfire Management Plan 2019-2024* calls for the development of urban vegetation guidelines to provide advice on bushfire resilience, however no mandates regarding removal of vegetation could be found. It is noted within the *Strategic Bushfire Management Plan 2019-2024* that advice provided to homeowners will be “consistent with broader ACT Government tree canopy targets”.

#### 4.1.5. Northern Territory

Like the Victorian system, the Northern Territory Planning Scheme, under the *Planning Act 1999 (NT)*, contains regulations for the clearing of native vegetation (including native trees). These regulations are implemented through two overlays:

- Clearing of Native Vegetation Overlay (CNVO); and,
- Restricted Clearing of Native Vegetation Overlay (RCNVO).

Where either overlay applies, the clearing of more than one hectare (in aggregate) of vegetation requires consent from the Northern Territory Government. In addition, where a RCNVO applies, clearing “must not exceed that reasonably necessary for the construction of a dwelling, outbuildings and associated

residential uses”. The overlays are only applicable within certain land zones specified by the NT Government, and several exemptions apply in both cases based on the purpose of clearing. Notably, the definition of land clearing in the NT Planning Scheme excludes the activity of lopping a native tree, as well as several other activities.

The following Acts and their sub-legislation may affect clearing activities or applications for clearing of native vegetation in the Northern Territory:

- *Territory Parks and Wildlife Conservation Act 1976 (NT)* - specifies threatened species and essential habitats.
- *Aboriginal Sacred Sites Act 1989 (NT)* – applicable where an Aboriginal sacred site is identified.
- *Planning Act 1999 (NT)*
- *Weeds Management Act 2001 (NT)* – the removal or destruction of declared plants or weeds is allowed.

The three relevant council websites in the Darwin Significant Urban Area were initially scanned for the required data; however, no protections for trees on private property could be located for any council. This finding is reflected throughout the report.

## **Bushfire Protection Measures – Northern Territory**

Since no protections are evident for trees on private property outside of the CNVO and RCNVO regulations, bushfire-related exemptions only apply in relation to native vegetation clearing restrictions. Within a CNVO area, clearing is allowed on private property to create a firebreak up to five metres wide along the boundary of a property of less than eight hectares in area, or up to ten metres wide along the boundary of a property of greater than eight hectares.

### **4.1.6. Queensland**

Queensland’s legislation predominantly regulates the clearing of native trees, with few additional protections at State level for non-native trees. Local governments may protect trees via local laws and several Queensland councils use this mechanism to implement vegetation protection orders, which can prevent works to council-defined significant trees on private property. For example, Brisbane City Council’s *Natural Assets Local Law 2003* provides protection for significant trees in several categories, including:

- Native trees with ecological value (habitat, food source, erosion or water management).
- Individual species listed within the local law, particularly those endemic to the region, such as remnant rainforest species.
- Trees within a wetland or waterway.
- Trees for which a vegetation protection order has been issued.

All native plants (including trees) in Queensland are considered by the *Nature Conservation Act 1992 (Qld)* to be ‘protected plants’, which are regulated from being ‘taken’ or ‘used’ if they are growing ‘in the wild’. A tree can be categorised as being ‘in the wild’ based on its location, relative natural range, and ecological situation, as well as how it became established. According to the *Nature Conservation Act 1992 (Qld)*, a plant clearing permit is not required for native plants found in gardens or other situations determined as not being in the wild.

The following state-wide prohibitions are contained in the *Nature Conservation Act 1992 (Qld)*:

- “A person must not destroy a flying-fox roost unless...[this] is authorised under [the] Act.”
- “A person...must not take a protected plant that is in the wild unless the plant is taken under...”
  - a conservation plan.
  - a licence, permit or other authority given under a regulation; or,
  - an exemption under a regulation.

According to Queensland Government resources, several exemptions apply to native vegetation protections. Native trees can be lawfully cleared without the need for a flora survey, permit or notification of any kind, where these exemptions apply, as well as under development permits, specified development codes, and for other “relevant purposes”. The conditions under which native trees can be cleared include, but are not limited to clearing for:

- Risk reduction or to avoid fatality, injury or serious damage to buildings or property (Hazardous trees).
- Authorised stock grazing.
- Firebreaks (Bushfire protection).
- Encroachment or weed management in accordance with a vegetation clearing code.
- Routine maintenance of infrastructure (such as buildings, roads, stockyards, fences and vehicular tracks).
- Re-clearing an area lawfully cleared under the Act within the past 10 years.
- Personal use, under conditions defined in the *Nature Conservation (Plants) Regulation 2020*.

Reference to clearing of vegetation also excludes lopping a tree, which is defined as the cutting or pruning of branches, but not “so severely that the tree is likely to die”. No additional references to lopping or pruning regulations were discovered within the relevant Queensland documentation.

The *Nature Conservation (Plants) Regulation 2020* lists critically endangered, vulnerable and near-threatened species under State protection. The *Nature Conservation (Koala) Conservation Plan 2017* contains additional tree-clearing guidelines related to koala habitat. Koala habitat trees are defined as those within *Corymbia*, *Melaleuca*, *Lophostemon* or *Eucalyptus* genera that are edible by koalas; or trees typically used by koalas for shelter, such as *Angophora* species. Process and timing-based requirements for clearing activities are specified to provide opportunity for koalas to transition safely away from areas or trees to be cleared. Once the koala(s) have left the clearing site, trees not otherwise protected may be removed.

Queensland legislation that affects tree protection includes, but may not be limited to, the following Acts and their sub-legislation:

- *Land Act 1994 (Qld)*
- *Nature Conservation Act 1992 (Qld)*
- *Vegetation Management and Other Legislation Amendment Act 2004 (Qld)*, which superseded the *Vegetation Management Act 1999 (Qld)*
- *Aboriginal Cultural Heritage Act 2003 (Qld)*
- *Torres Strait Islander Cultural Heritage Act 2003 (Qld)*

#### 4.1.7. Tasmania

The clearing of vegetation on both private and public land in Tasmania is subject to land clearing controls under the *Forest Practices Act 1985 (Tas)*. To clear native vegetation, a certified forest practices plan (FPP) may be needed. An FPP contains information regarding which practices will be carried out on land, with reference to the clearing of trees, harvesting of timber, or the conversion of threatened native vegetation areas. Of importance is the requirement that if the practices will impact on threatened native vegetation – defined by the *Threatened Species Protection Act 1995 (Tas)* or Commonwealth legislation - the FPP application must include information regarding the type of vegetation, how vegetation will be cleared, what will replace the native vegetation, and which clearing methods will be used. Fees are prescribed according to the Forest Practices Plan (FPP) ranking of the type of land to be cleared.

Various exemptions are specified within the *Forest Practice Regulations 2017*, where an application for an FPP is not required. These include, but are not limited to, clearing:

- To create a buffer for existing infrastructure to ensure the safety of the public or infrastructure.
- regrowth of native vegetation that has previously been cleared.
- For dam building.
- For easements for electricity and access tracks.
- For gas pipeline maintenance or construction; and
- Of trees on land that has not been identified as containing threatened native vegetation in the past five years.

The *Tasmanian Planning Scheme* is a new, state-wide planning scheme currently being implemented. The scheme consists of Local Provisions Schedules and State Planning Provisions. Similar to the operation of the Victorian Planning Provisions, local governments in Tasmania will be required to adopt the *Tasmanian Planning Scheme* to provide consistency in planning and development undertaken within council jurisdictions. Tree protection under a Local Provisions Schedule refers largely to protection of significant trees or trees on registers within council areas. There are exemptions under this Schedule, depending on whether tree(s) are part of a local heritage place. Local Provisions Schedules overlay map showing significant trees may be used to apply a Local Heritage Code with respect to tree protection and tree protection zones.

Tasmanian legislation that may affect tree protection includes, but is not limited to, the following Acts and their sub-legislation:

- *Aboriginal Heritage Act 1975 (Tas)*
- *Forest Practices Act 1985 (Tas)*
- *Land Use Planning and Approvals Act 1993 (Tas)*
- *Historic Cultural Heritage Act 1995 (Tas)*
- *Threatened Species Protection Act 1995 (Tas)*
- *Nature Conservation Act 2002 (Tas)*

## 4.2. Protected trees – Local Government

**Description of data collected:** Criteria and conditions that result in the protection of a tree by local government, such that approval or permission must be sought to undertake any tree damaging activity.

It is important to distinguish the protection criteria from the reasoning behind the criteria. Reasons behind councils implementing protection criteria were normally contained within strategic planning documents and tree management policies; both of which were not always found to be the data source for regulatory information.

Local governments protected trees based on a combination of the following criteria:

- Listing on a register, such as a Significant Tree Register (STR), Heritage List, or equivalent document maintained by the council.
- Dimensions, including minimum height, circumference and/or crown spread thresholds, above which a tree is protected.
- Location - for example, within a specified distance of a watercourse, or within a specified zone.
- Individual species (e.g. *Ficus macrophylla*, Moreton Bay Fig) or classes of tree (e.g. mangroves, indigenous or endemic species).
- Trees with specified perceived environmental benefit, such as trees bearing hollows for habitat.
- Other council-specific protections, such as trees that were planted to replace trees removed for development.

Note that the protection of trees arising from the recognition of a 'tree protection zone' – a protected zone with a calculable radius, surrounding a tree that has met other protection criteria – was considered to be a default protection and was not of interest in this project.

### 4.2.1. Distribution of protection types

The overwhelming majority (89.1%) of councils examined used one or more criteria to protect trees on private land, as captured in Table 5. Most commonly, trees were granted protection for meeting any of the criteria listed by a council; however, in limited instances there was a requirement to meet multiple criteria in order to gain protected status. It was recorded in the dataset where any given protection was dependent on another condition being met. These types of protections were recorded as "combined condition" protections. As previously mentioned, the Victorian council protections arising from LPS schedules were recorded as being combined condition protections, conditional on location.

It is known that four councils in South Australia have tree registers that are recognised within the Planning and Design Code, and that listing a tree within the code affords it the same protections as other Regulated trees. As these registers still rely on a state code to ensure protection, the South Australian councils were not included in the statistics for council-based protections.

**Table 5: Councils with council-based protection mechanisms for trees on private land**

Jurisdiction	Total number of councils reviewed	Number of councils with one or more council-based protections
ACT	1	1 (100%)
NSW	33	33 (100%)
NT	3	0 (0%)
Vic	32	32 (100%)
WA	32	24 (75%)
<b>Total</b>	<b>101</b>	<b>90 (89.1%)</b>
SA	23	0 (0%)

Table 6 shows the distribution of council-based tree protections. The most popular form of protection was based on tree dimensions - 65.3% of councils reviewed used thresholds for tree height, trunk circumference or crown spread, or a combination of these measures, to define a protected tree within council bounds, or within designated areas (for Victorian councils with overlays). Tree registers were popular nationally among councils examined, with approximately half of councils (51.5%) specifying a list or register to identify protected trees on private land. In South Australia, trees can be nominated to the National Trust of South Australia Significant Tree Register and thereby registered trees can be recognised as protected in the Planning and Design Code.

**Table 6: Distribution of the types of council-based tree protections**

State	Total no. councils reviewed	Register/List	Dimension <sup>1</sup>	Species	Location	Environmental	Other
		Number of councils (%)					
ACT	1	1 (100%)	1 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
NSW	33	25 (75.8%)	33 (100%)	12 (36.4%)	15 (45.5%)	4 (12.1%)	3 (9.1%)
NT <sup>2</sup>	3	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Vic	32	14 (43.8%)	25 (78.1%)	1 (3.1%)	31 (96.9%)	1 (3.1%)	2 (6.3%)
WA	32	12 (34.4%)	7 (21.9%)	3 (9.4%)	7 (21.9%)	0 (0%)	2 (6.3%)
<b>Total<sup>3</sup></b>	<b>101</b>	<b>52 (51.5%)</b>	<b>66 (65.3%)</b>	<b>16 (15.8%)</b>	<b>53 (52.5%)</b>	<b>5 (5%)</b>	<b>7 (6.9%)</b>
<b>SA</b>	<b>23</b>	Protection is in place	Protection is in place	Protection is not in place	Protection is not in place	Protection is not in place	Protection is not in place

<sup>1</sup>Dimension-based protection statistics reflect councils that specified any type of dimension as a protection criterion (height, circumference or canopy spread), including dimensions that were conditional. Councils where dimensions were conditional on location, from Local Planning Scheme schedules have been counted in this statistic for Victoria.

<sup>2</sup>Northern Territory councils did not have specific protections for individual trees, but some council websites noted that trees may be protected as Aboriginal sacred sites under Territory law.

<sup>3</sup>Totals are for all non-South Australian jurisdictions to facilitate comparison with South Australia.



Species were found to be less important in local government tree protection legislation interstate because of the importance of other regulatory instruments, including state native vegetation protection legislation. Only 15.8% of councils examined specified protections for trees based on species alone, although councils in Victoria commonly applied overlays to protect native vegetation. Overlay protection of species was instead considered to be a combined condition protection (species and location). The Victorian council deemed to protect trees based on species alone was Whittlesea City Council, where river redgums (*Eucalyptus camaldulensis*) were protected council wide. Twelve councils in New South Wales (36.4% of councils reviewed for New South Wales) protected endemic species including mangroves, cycads and remnant natives or bushland.

Location-based tree protections were common in Victoria, and less common in New South Wales and Western Australia. Victoria contributes the most councils with this protection due to the nature of the planning code, which uses complex overlays to replace a mosaic of local laws. The types of location-based protections reflected in the NSW and WA statistics are more commonly reflective of protections for trees located on properties above a given area limit, within specified land use zones, or within proximity to rivers (see Appendix 3).

Environmental protections were uncommon - identified in 5% of councils overall. This low percentage of protections categorised by the research team as 'environmental' does not negate the presence of environmentally reflective regulations at state and federal level such as native vegetation protection, or conservation laws for threatened species. Environmental protections such as the protection of hollow-bearing trees and trees with known wildlife habitat can be considered in some cases to be additional to legislation that protects vulnerable or threatened species and habitat. These protections may reflect councils concerned with biodiversity loss or wanting to implement additional protections for threatened ecosystems or vulnerable species endemic to the area.

Other protections were mainly comprised of protections for development-related plantings, including:

- NSW: Council of the Shire of Hornsby – trees retained as a condition of development consent.
- Victoria: Bayside City Council and Kingston City Council – trees planted to replace previously cleared trees.
- WA: City of Stirling – significant trees on development sites with a project cost of over \$100,000.
- WA: City of Swan – native trees on subdivision sites in Swan Valley.

Willoughby City Council (NSW) also protected trees based on visual prominence and contribution to local visual character, and Blue Mountains City Council (NSW) protected young indigenous trees that would not yet meet dimensional protection thresholds.

#### **4.2.2. Tree registers**

Tree Registers are used by state and local governments to provide a record of trees that have achieved specific protection criteria. Trees may be eligible for listing on a register based on size alone, but listing is often made based on other exceptional qualities not recognised in tree protection laws. For example, the National Trust of Australia operates a Significant Tree Register which is recognised by many local governments.

The National Trust Register lists trees using the following criteria:

1. Scientific
  - Horticultural or genetic value
  - Important source of seed or propagating stock
  - Particularly resistant to disease or exposure
  - Species or variety that is rare or of a very localised distribution
  - Remnant native vegetation
  - Outstanding for its size
  - An outstanding example of the species
2. Social
  - Unique location or context
  - Contribution to landscape
  - Associated with Aboriginal activities
  - Important landmark
  - Spiritual and religious associations
  - Contemporary association with the community
3. Historic
  - Forms part of an historic park, garden or town
  - Commemorative plantings
  - Associated with an important event
  - Associated with an important person, group or institution
4. Aesthetic
  - A really great looking tree
  - Exhibits curious growth form or unusual physical features
  - Is a better than average example of its species, or a tree in its location

The specific significance criteria used by each council are not captured in this dataset.

In New South Wales, council Local Environment Plans (LEP) can include trees on the list of environmental heritage items. If a council in NSW listed one or more trees on private property, this was counted as a council with a register for which private trees were eligible. In Western Australia, councils had heritage lists or 'Municipal Inventories'. If a council's Municipal Inventory or heritage list contained one or more trees located on private property, this was counted as a council with a register for which private trees were eligible. In both the NSW and WA cases, it is possible that councils may consider adding private trees to their respective heritage lists; however, with the consideration that each council has different heritage significance criteria and assessment processes, evidence of private tree inclusion was required to include councils in the relevant statistic. A number of councils in NSW, WA and Victoria hosted heritage or significant tree registers for which street or council-owned trees were the only eligible entries (Table 7).

**Table 7: Frequency of councils with a tree register, and for which trees on private land are eligible**

State or territory	Councils with a tree register or heritage list	Councils with a register for which private trees are eligible
	Number of councils (%)	
ACT	1 (100%)	1 (100%)
NSW	29 (87.9%)	25 (75.8%)
VIC	17 (53.1%)	14 (43.8%)
WA	23 (71.9%)	12 (37.5%)
NT <sup>1</sup>	0 (0%)	0 (0%)
<b>Total</b>	<b>70 (69.3%)</b>	<b>52 (51.5%)</b>
SA	Tree register held by the National Trust SA, and recognised in the <i>Planning and Design Code</i> .	

<sup>1</sup>While the NT councils investigated did not report using a Significant Tree Register, some trees may be listed on separate registers of Aboriginal Significant Sites that may achieve similar protections.

Approximately half (51.5%) of the reviewed interstate councils used tree registers for which trees on private land were listed or eligible to be listed (see Appendix 4 for which councils). The majority of councils with this type of register allowed trees to be nominated to the register by members of the community. Nominations typically required the nominating person to explain how the tree had met one or more significance criteria listed by council - often in line with the National Trust Criteria listed above. Tree Registers that allow trees to be nominated and assessed based on attributes other than size can provide a mechanism to protect a tree even after it has died and allow trees to be listed and protected in line with their value to the community. There is deliberate room for interpretative differences in the nomination and assessment process for listing a tree on a register.

Given the requirement to nominate each tree for listing and that many trees recognised by the community as worthy of protection are also likely to qualify for protections based on other protection criteria (i.e. dimensions, species, etc.) tree registers were not found to be the most common method of widescale tree protection, and tree registers operated by local governments often only had a handful of trees listed.

#### 4.2.3. Dimension-based protections

Size-based tree protections protect large trees, which is effective in conserving the urban canopy and its benefits, particularly given that large trees offer more benefits associated with shade, habitat and carbon storage. One or more size-based protections (tree height, trunk circumference and crown spread) were used in some capacity by 65.3% of the councils examined (Table 6). Note that crown spread is measured as the maximum foliage diameter measurable across a single plane and is sometimes referred to as 'canopy spread' by councils. Crown spread is an attractive metric for councils to use in determining tree protected status due to the ease of its determination from aerial photography, which is routinely examined during the development application process.

Statistical representations in this section include the use of independent dimensional protections present in Victorian council LPS schedules, which are technically conditional on location. These were included because this section is concerned with the variation in magnitude of dimensions used for protection nation-wide. Where multiple different dimensions were present for any given category within the same

council, as was the case in some of the Victorian councils due to the LPS and local laws, the minimum dimension was taken to represent the dimensional protection present within the council. Averages of the range of minimum protection thresholds were calculated for each type of dimensional threshold, and these averages included those arising from Victorian planning scheme schedules (Table 8).

Figure 1 displays the percentage of councils that use 'independent' dimensions to protect trees; i.e. a tree is protected if it meets any of the specified height, circumference or crown spread thresholds for the jurisdiction. This affords protection to a wider variety of tree growth forms than if a single metric were used. The list of councils and their respective dimension-based protections is contained in Appendix 5.

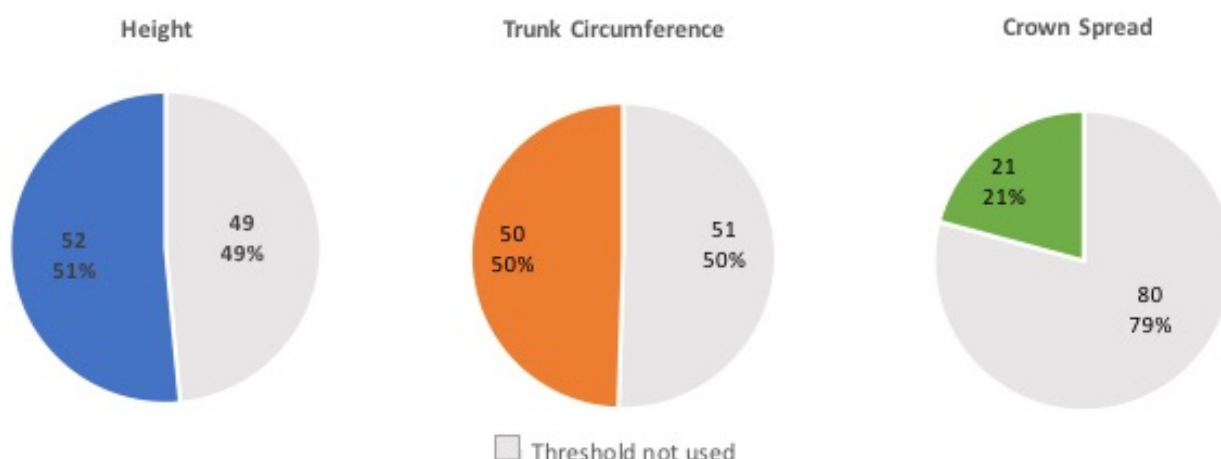


Figure 1: Number and ratio of councils using independent, size-based metrics for tree protection nationally, across the 101 councils reviewed. Victorian council statistics contributing to these ratios include dimensions that are conditional on location, due to having arisen from the Victorian LPS schedules.

**Table 8: Average minimum independent dimension protection thresholds**

State or territory	Minimum independent height protection threshold		Minimum independent circumference protection threshold		Minimum independent crown spread protection threshold	
	No. councils with threshold	Average threshold (m)	No. councils with threshold	Average threshold (cm)	No. councils with threshold	Average threshold (m)
ACT	1	12	0	-	0	-
NSW	28	4.24	22	58	14	3.50
NT	0	-	0	-	0	-
Vic	17	5.71	23	58	4	4.00
WA	6	3.33	5	44	3	3.00
<b>Total</b>	<b>52</b>	<b>6.32</b>	<b>50</b>	<b>53</b>	<b>21</b>	<b>3.5</b>
<b>SA</b>	Protection not used	-	Protection in use	200	Protection not used	-

While size metrics tend to be correlated - taller trees tend to have larger trunk diameters and crown spreads - some species or growth forms may not meet a single size threshold, even if they reach advanced age. For example, grey box (*Eucalyptus microcarpa*) trees in Adelaide rarely reach the 3m trunk circumference required to be classed as Significant, even when over a century old.

Size-based metrics are generally easy to establish. Measuring height may require a specialist hypsometer, particularly for taller trees, but if height thresholds are low, then it is easy to distinguish obviously protected trees from non-protected trees, requiring only trees close to the threshold to be individually measured. Establishing height thresholds with an easy reference can also aid in quickly determining whether a tree meets protection criteria; for example, in South Australia, low voltage powerlines must be a minimum of 6.5m high, which is higher than the height threshold used by most jurisdictions interstate (see Figure 2 & Table 9), reinforced by the interstate average of 6.32m (Table 8), and this provides a quick reference for height comparisons for nearby trees.

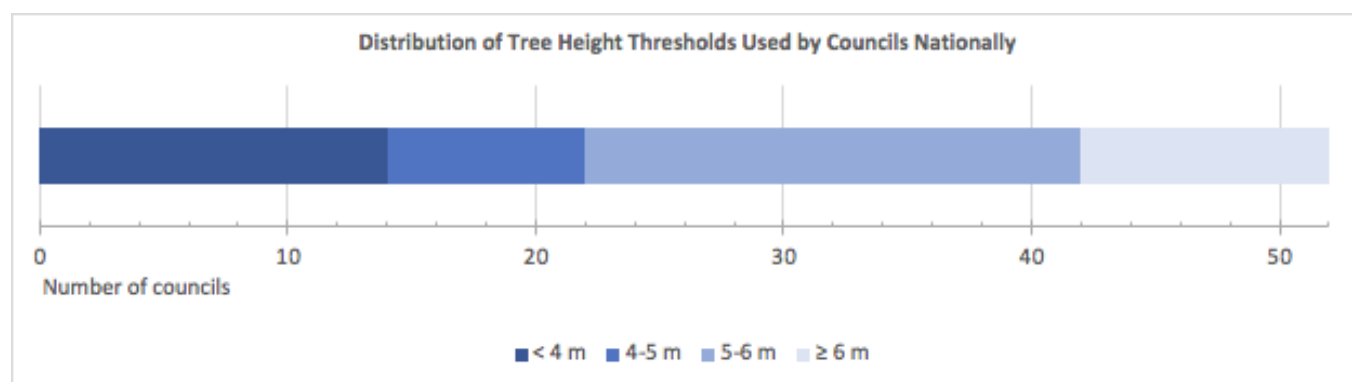


Figure 2: Tree height thresholds and their distribution of use as independent tree protections by councils nationally. Note that the majority of councils that used height as a protection metric used a threshold of six metres or less, with only Darebin City Council (8 metres), Banyule Shire Council (12 metres) and the ACT (12 metres) exceeding this.

**Table 9: Number of councils using independent height protection thresholds, and distribution of threshold ranges used**

Height threshold range	ACT	NSW	NT	VIC	WA	Total	SA
< 4 m	0	10	0	0	4	14 (13.9%)	Protection criterion not used
4 - 5 m	0	6	0	0	2	8 (7.9%)	
5 - 6 m	0	9	0	11	0	20 (19.8%)	
≥ 6 m	1	3	0	6	0	10 (9.9%)	
<b>Total</b>	<b>1</b>	<b>28</b>	<b>0</b>	<b>17</b>	<b>6</b>	<b>52 (51.5%)</b>	

Trunk circumference measurements were also commonly used, with most councils that employed this metric (approximately 76% of relevant councils) setting a threshold of less than 60cm for protection (see Figure 3 & Table 10). The average protection threshold across all jurisdictions was calculated at 53cm (Table 8). All interstate jurisdictions that used trunk circumference thresholds used a value well below the two metre (Regulated) and three metre (Significant) thresholds used in South Australia.

It is important to note that the method of measuring trunk circumference varied, particularly the height above ground at which the circumference was measured. This varied between ground level, one metre and 1.3 or –1.4 metres (“breast height”) as the most used measurement points. Trees with multiple

stems were accounted for by a number of councils; however, this information was provided inconsistently across councils and was omitted from further analysis.

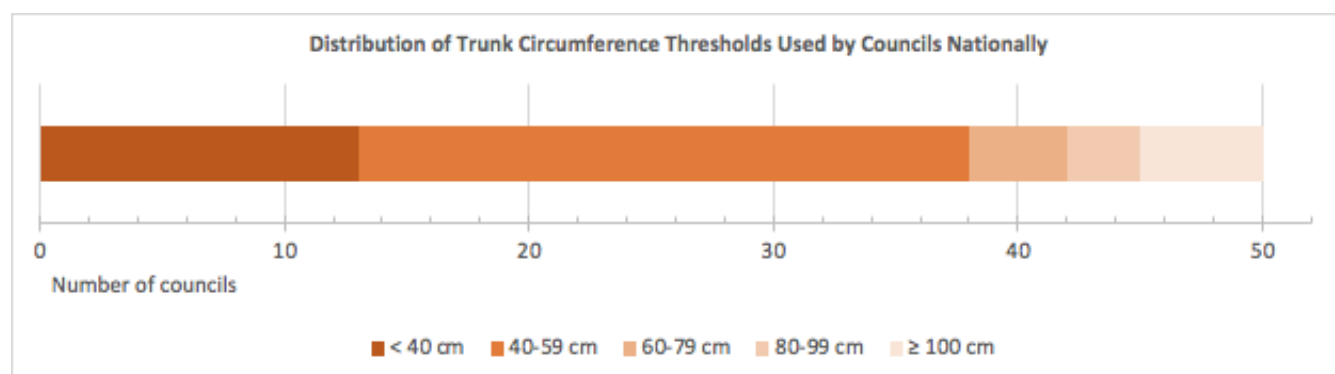


Figure 3: Tree trunk circumference thresholds and their distribution of use as independent tree protections by councils nationally. Note that the majority of councils that used trunk circumference as a protection metric used a threshold of less than 60 centimetres, with only a handful exceeding one metre (Banyule City Council, 1.26 m; Liverpool City Council, 1.26 m; and Hobsons Bay City Council, 1.4m).

**Table 10: Number of councils using independent circumference protection thresholds, and distribution of threshold ranges used**

Circumference threshold range	ACT	NSW	NT	Vic	WA	Total councils	SA
< 40 cm	0	5	0	6	2	13 (12.9%)	Protection criterion not used
40-59 cm	0	9	0	14	2	25 (24.8%)	
60-79 cm	0	3	0	0	1	4 (4%)	
80-99 cm	0	3	0	0	0	3 (3%)	
≥ 100 cm	0	2	0	3	0	5 (5%)	
<b>Total councils</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>23</b>	<b>5</b>	<b>50 (49.5%)</b>	

The least common dimension-based protection metric used was crown spread (Figure 4), where the average threshold used across jurisdictions was calculated at 3.5 metres (Table 8). A benefit of using this metric is that it can be readily obtained from aerial imagery, making it possible to rapidly identify protected trees remotely using publicly available tools such as Google Earth or the Location SA Viewer. Council staff can use historical imagery remotely verify whether a tree that is suspected to have been removed unlawfully was protected, even if the tree and stump have been removed. This facilitates ready collection of evidence to prosecute illegal tree removal that may otherwise be difficult.

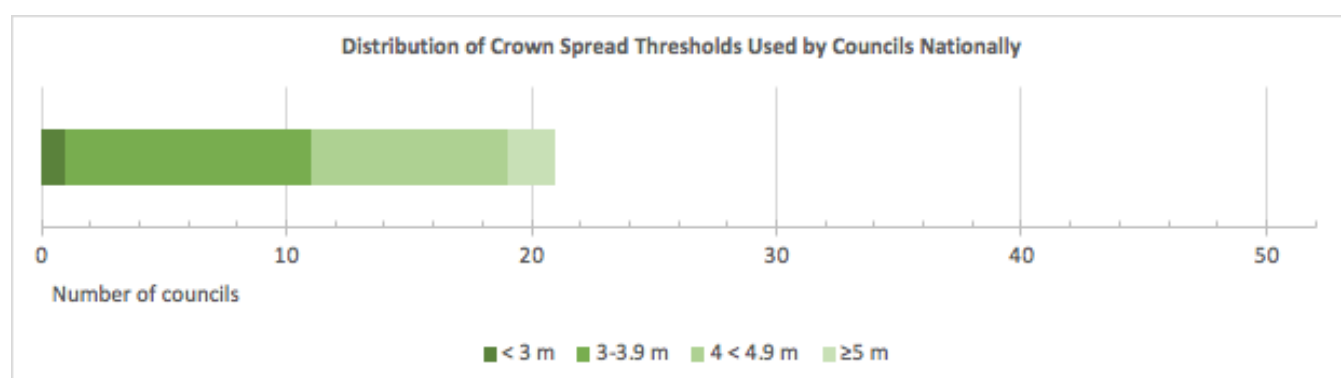


Figure 4: Crown spread thresholds used by councils nationally. Note the majority of councils that used crown spread (referred to as canopy spread) as a protection metric used a threshold of five metres or less, with only Brimbank City Council having a higher threshold for protection (10 metre crown spread).

**Table 11: Number of councils using independent crown spread protection thresholds, and distribution of threshold ranges used**

Crown spread threshold range	ACT	NSW	NT	Vic	WA	Total (%)	SA
< 3 m	0	1	0	0	0	1 (1%)	Protection criterion not used
3 - 3.9 m	0	7	0	0	3	10 (9.9%)	
4 < 4.9 m	0	4	0	4	0	8 (7.9%)	
≥ 5 m	0	2	0	0	0	2 (2%)	
<b>Total</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>4</b>	<b>3</b>	<b>21 (20.8%)</b>	

### 4.3. Exemptions to protected trees – Local Government

Description of data collected: Circumstances or conditions under which trees that would otherwise be protected are exempt from being protected. That is, cases where no permit or approval is required to undertake tree damaging activities.

Exemptions facilitating the removal of protected trees at local government level included:

- Health-based exemptions, such as permitted removal of dead, dying or diseased trees.
- Hazard-based exemptions, including removal permitted where imminent danger to life or property was present.
- Proximity-based exemptions whereby trees could be removed or pruned within set or described distances from certain structures or features.
- Species-based exemptions such as listed species (e.g. weeds), or vegetation categories (e.g. exotic species).
- Location-based exemptions, such as protections not applying to properties with an area less than 1000m<sup>2</sup> in certain residential zones (Hawkesbury City Council, NSW).
- Bushfire management exemptions – specifically, the clearing of fire breaks or clearing to achieve canopy separation distances. Effort was made to exclude bushfire-related exemptions arising from state legislation, and these are noted separately (see Section 4.1).



- Other exemption categories with too much variation to be readily classified, such as removal for vehicular access, trees grown for commercial purposes, exotics for the removal of pest animal burrows (Victoria), “young” trees below a given age, etc.
- Combined condition exemptions – where one of the previously listed conditions was subject to a major secondary condition. For example, exemptions arising from the Victorian LPS schedules were recorded as combined condition exemptions, as these related to protected trees only within the designated overlay areas and were therefore a combination of a location-based exemption and an exemption from another category. For example, exotic trees that would otherwise be protected based on one or more size thresholds may be removed within a specific overlay area.

### Additional conditions to exemptions

Some councils imposed additional conditions on the exemptions. Common conditions recorded alongside exemptions were:

- A requirement to provide evidence of the exemption to the council – the associated exemption was only recorded if the provision of evidence was not specified as being required prior to undertaking the works.
- Confirmation of the conditions of exemption being met by a qualified arborist.
- Other conditions such as having the work undertaken by a qualified arborist, or specific exclusions to the exemption.

The statistics and figures within this section include conditional exemptions; however, combined condition exemptions were recorded in a separate category (CO - see Table 12).

Where removal of protected trees was permitted by other (non-council) authorities without council permission - such as the State Emergency Services, or authorized electricity suppliers - this was not counted as an exemption, as it was not consistent with other exemptions that allowed members of the public to identify and act on the exemption.

The most commonly seen exemption was based on species – approximately 44% of councils revoked protections for weed species, or exempt species lists contained in council tree management documentation (Table 12). The South Australian *Planning, Development and Infrastructure (General) Regulations (2017)* provides a list of species exempt from being considered as Regulated or Significant (based on the circumference threshold criteria).

Removal of trees posing a threat to life or property (hazard-based exemption) was allowed by a quarter of councils reviewed (25.7%). In South Australia, the undertaking of temporary development (including tree-damaging activity) is allowed in an emergency to “prevent loss of life or injury” or “a health or safety hazard”.

Only approximately 7% of councils revoked protections for dead trees, whereas 16% specified that a tree should be dead with no habitat potential (DNH) to qualify for removal without permission. Removal of dead trees is also permitted in South Australia, with no mention of limitations to the exemption arising from the tree’s habitat potential.

**Table 12: Number of councils specifying exemptions that allow the removal of protected trees**

State or territory	Exemption type									
	H	S	HD	D	DNH	P	L	B	O	CO
ACT	1	0	0	0	0	0	0	1	0	0
NSW	15	29	5	3	16	14	3	1	1	0
NT	0	0	0	0	0	0	0	0	0	0
Vic	4	11	0	2	0	2	11	2	0	32
WA	6	4	1	2	0	6	2	7	5	1
<b>Total councils (%)</b>	26 (25.7%)	44 (43.6%)	6 (5.9%)	7 (6.9%)	16 (15.8%)	22 (21.8%)	16 (15.8%)	11 (10.9%)	6 (5.9%)	33 (32.7%)
<b>SA</b>	Permitted	Permitted		Permitted		Permitted			Permitted	

Exemption types represented:

H = Hazard; S = Species; HD = Health reasons, including dying trees; D = Dead; DNH = Dead with no habitat potential;

P = Proximity, to a dwelling or other structure; L = Location; B = Bushfire protection; O = Other;

CO = Combined condition exemption.

#### 4.3.1. Species-based exemptions

Multiple councils (43.6%) specified exemption from protection based on tree species (Table 13). This is somewhat reflective of the regulatory position in South Australia, where a list of 22 species of trees exempt from protection is provided in the *Planning, Development and Infrastructure (General) Regulations (2017)*. Only a handful of councils in New South Wales required evidence provided to council (four councils) or assessment by an arborist (three councils), to confirm that a tree was of an exempt species, prior to removal.

**Table 13: Number of councils with species-based exemptions from protection and conditions applicable to species-based exemptions**

State or Territory	No. councils with species-based exemptions (%)	Councils requiring evidence of exemption	Councils requiring arborist assessment to confirm exemption	Councils with additional conditions*
ACT	0 (0%)	-	-	-
NSW	29 (87.9%)	4	3	11
NT	0 (0%)	-	-	-
Vic	11 (34.4%)	0	0	0
WA	4 (15.6%)	0	0	0
<b>Total</b>	44 (43.6%)	4	3	11
<b>SA</b>	Applicable	Not required	Not required	Applicable

\*For example, the retained protection of heritage listed trees or exotic trees meeting proximity or height thresholds.

Interstate councils most commonly listed weed species as exempt, referring to regional biosecurity lists, or other council lists (Table 14). Fruit trees were included as exemptions by approximately a third of councils with species-based exemption. The South Australian regulation exempts orchard trees or trees

planted for produce harvest from being protected. An additional condition to the species-based exemption in South Australia is that Figs (*Ficus* spp.), other than Morton Bay Fig (*Ficus macrophylla*) retain protection if they are “located more than 15 m from a dwelling”.

**Table 14: Number of councils with species-based exemptions from protection, where exemptions are for weed or fruit tree species**

State or territory	Councils with species-based exemptions	Exempt species include weeds or species on a council list (%)	Exempt species include fruit trees
NSW	29	29	10
Vic	11	11	0
WA	4	3	2
Total	44	43	12
SA	Applicable	Applicable	Applicable

#### 4.3.2. Proximity-based exemptions

Councils recognised that there may be a need to prune or remove protected trees based on a need to protect structures and maintain access or safety clearances. Proximity-based exemption data reflects where the removal of a protected tree was allowed to achieve a specified clearance. Councils often used terminology such to the effect of “only the part of the tree causing a hazard may be removed”; however, this was recorded as an exemption allowing removal of the tree, as it relied on the decision of the person seeking to undertake the works and may have resulted in terminal damage (i.e. the removal of sufficient crown mass or root structure to kill the tree).

Most councils (78.2%) did not list proximity to a structure as a legitimate reason for removing a protected tree (Figure 5). Where such a provision did exist, the most commonly recognised structure for an exemption to apply was a house or substantial building, excluding less substantial structures such as garages, sheds and swimming pools (Table 15).

Most councils that had provisions for exemptions allowed removal of trees within stipulated proximities to buildings or other features. The South Australian *Planning, Development and Infrastructure Act 2016* allows removal of protected trees within ten m of an existing dwelling or an existing in-ground swimming pool other than *Agonis flexuosa* (Willow Myrtle) or *Eucalyptus* (any tree of the genus). Where analogous clearance distances were specified by councils interstate, these were more modest in comparison (Table 16). The majority of councils required a tree to be within three metres of a building and even closer to other structures.

One council reported allowing removal of protected trees to clear a structure by more than four metres: Frankston City Council – within ten metres of a dwelling, conditional on the property being located within a bushfire risk zone. The South Australian *Planning, Development and Infrastructure (General) Regulations (2017)* also allows trees to be cleared if:

“the tree is within 20 m of a dwelling in a Medium or High Bushfire Risk area within a Hazards (Bushfire Protection) Overlay under the Planning and Design Code”.

**Councils with exemptions due to proximity to a structure**

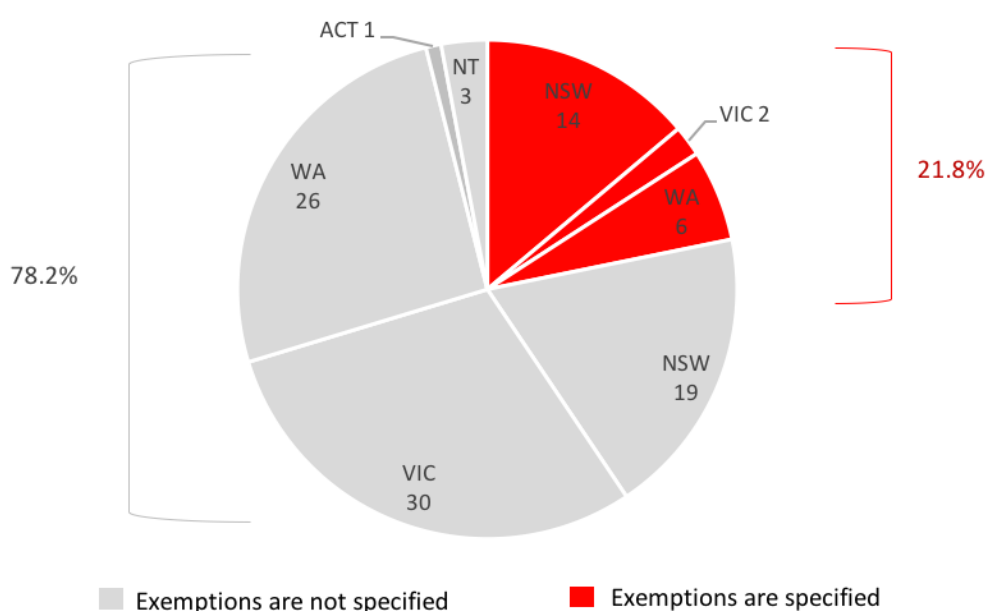


Figure 5: Distribution of councils that specified exemptions (red) versus those that did not specify exemptions (grey) due to proximity to a structure. Combined condition exemptions are not included in these statistics. Note that all councils reviewed are represented, including councils that did not specify protections and thus would not be expected to have exemptions.

The Australian Capital Territory did not stipulate clearance distances from protected trees, however, the *Tree Protection Act 2005 (ACT)* makes provision for the Conservator of Flora and Fauna to grant approval to damage or remove a protected tree if “the tree is shown to be causing or threatening to cause substantial damage to a substantial building, structure or service”.

**Table 15: Number of councils permitting protected tree removal to maintain clearance of specified structures**

State or territory	Structure type							
	Building or dwelling	Garage or outbuilding	Carport	Swimming pool	Driveway	Dam wall	Property line	Other
ACT	0	0	0	0	0	0	0	0
NSW	11	2	1	2	1	1	3	0
NT*	-	-	-	-	-	-	-	-
Vic	2	0	0	0	0	0	0	0
WA	4	1	0	0	1	0	5	3
<b>Total councils (%)</b>	<b>17 (16.8%)</b>	<b>3 (3%)</b>	<b>1 (1%)</b>	<b>2 (2%)</b>	<b>2 (2%)</b>	<b>1 (1%)</b>	<b>8 (7.9%)</b>	<b>3 (3%)</b>
SA	Permitted	-	-	Permitted	-	-	-	-

\*In the case of the Northern Territory, councils did not have protections and thus exemptions were not applicable.

**Table 16: Clearance information available from councils with proximity-based exemptions\*  
(ascending)**

Building clearance distances		Other clearance distances	
New South Wales	m	New South Wales	m
Cumberland Council	2	Camden Council	0.5
Northern Beaches Council	2	Liverpool City Council	3
Randwick City Council	2	Wollondilly Shire Council	3
Campbelltown City Council	3	Council of the City of Ryde	4
Canterbury Bankstown Council	3	Penrith City Council	Encroaching <sup>1</sup>
Ku-ring-gai Council	3	Hawkesbury City Council	Encroaching <sup>1</sup>
Liverpool City Council	3		
Penrith City Council	3	<b>Western Australia</b>	<b>m</b>
The Council of the Shire of Hornsby	3	City of Kalamunda	0.5
Wollondilly Shire Council	3	City of Mandurah	1
Council of the City of Ryde	4	Shire of Mundaring	1-2 <sup>[2]</sup>
		Shire of Serpentine-Jarrahdale	1-2 <sup>[3]</sup>
<b>Victoria</b>	<b>m</b>	City of South Perth	2
Yarra Ranges Council	2	City of Rockingham	Unspecified
Frankston City Council	10		
<b>Western Australia</b>	<b>m</b>		
City of Mandurah	3		
Shire of Mundaring	3		
Shire of Serpentine-Jarrahdale	3		
City of Rockingham	Unspecified		
<b>South Australia</b>	<b>m</b>		
State-wide proximity	10-20 <sup>[4]</sup>		

\*This table contains data from councils where a clearance was specified. Some councils had proximity-based exemptions but did not specify clearances.

<sup>1</sup>Represents exemptions applicable to trees overhanging or encroaching on a structure.

<sup>2</sup>1m of a fence and 2m of a sewer or water main.

<sup>3</sup>1m of a fence corridor and 2m of a utility network where damage has been caused.

<sup>4</sup>10m of a dwelling or swimming pool, or within 20m of a dwelling in a specified bushfire risk zone.

It was rare for councils to require additional conditions to be met for a person to go ahead with removal of a tree due to proximity to a structure, with a minority of councils requiring an arborist report or other conditions to be met (Table 17).

**Table 17: Number of councils where conditions applied to tree removal  
on the basis of proximity to structures**

State	Council condition	Proximity to building	Proximity to other structure*
NSW	Removal permitted	11	7
	Evidence must be submitted to council	0	0
	Arborist assessment must be submitted to council	1	0
	Council applies other conditions	3	3
Vic	Removal permitted	2	0
	Evidence must be submitted to council	0	0
	Arborist assessment must be submitted to council	0	0
	Council applies other conditions	1	0
WA	Removal permitted	4	8
	Evidence must be submitted to council	0	0
	Arborist assessment must be submitted to council	0	0
	Council applies other conditions	3	6

\*e.g. swimming pool, road, etc. Note ACT, NT and SA did not specify proximity-based exemptions at a local government level.

#### 4.3.3. Bushfire protection exemptions – State legislation

State laws or councils with local laws pertaining to bushfires may allow clearance of vegetation (including protected trees) within a given proximity of a dwelling in an identified bushfire risk zone (see Section 4.1). Such laws were outside the scope of this study to investigate in detail but may include the clearing of emergency fire breaks or mandates for defendable space surrounding a dwelling. The applicability of bushfire protection exemptions is generally confined to peri-urban councils; however, bushfire risk zones may be subject to change in the future.

## 4.4. Pruning protected trees without a permit

**Description of data collected:** The extent to which pruning activities could be performed on protected trees without permission (non-permit pruning), and the conditions applicable to these activities.

Information on pruning protected trees was categorised into the following activity types:

- Trimming – where pruning was allowed up to maximum dimension limits, such as removal of a percentage of the tree crown, or removal of branches up to a specified diameter.
- Maintenance pruning – remedial pruning or pruning to within acceptable tolerances for the species in question.
- Hazard-mitigation pruning – removal of part of a tree posing a threat to human life or property.
- Dead-wooding – removal of dead branches.
- Clearance-based pruning – where specified clearances to certain structures (e.g. dwellings, property lines, footpaths, etc.) could be maintained.
- Other categories too variable to specify – any other allowable pruning activity not requiring permission, such as formative pruning of young trees, removal of parasitic mistletoe, pollarding, crown lifting, etc. See Appendix 6 for the range of non-permit pruning activities.
- Qualification and standard-based pruning – where pruning could be undertaken by an appropriately qualified arborist and/or to a recognised pruning standard.

In consistence with the categorisation of data for the protections and exemptions analyses, data arising from the Victorian LPS overlay schedules was categorised separately as combined condition non-permit pruning. It is important to recognise that combined condition non-permit pruning was only apparent within Victoria, and that this data contains a combination of the non-permit pruning activities listed above. Where noted, statistics within this section include the combined-condition data to capture the variety of dimensional thresholds and clearances used in all councils, regardless of location. Primarily, this was the case when analysing the clearance-based and trimming non-permit pruning.

As per exemptions allowing tree removal, pruning without permission was often subject to additional conditions. Conditions included dimensional limits (branch size or crown reduction limits), adherence to industry standards, or having work undertaken by a qualified arborist. Upholding tree health or overall visual form was also required in some cases.

The majority (61.4%) of councils permitted some form of pruning of protected trees to be undertaken without requiring a permit to be issued by council (Figure 6). The South Australian *Planning, Development and Infrastructure (General) Regulations (2017)* allow for the following pruning activities to be undertaken on protected trees without a permit:

- The removal of dead wood (dead-wooding) or diseased wood;
- Pruning to mitigate hazards to buildings or people;
- Pruning of up to 30% of a tree's crown volume.

Aside from the pruning activities contained in the combined condition category representing non-permit pruning within Victorian overlays, the most common activities were trimming (22.8% councils), dead-wooding, and pruning to achieve clearance to structures (Table 18). It was found that councils commonly allowed more than one type of pruning activity to be undertaken. Hazard mitigation pruning was permitted in approximately 9% of councils; however, it was more common for councils to make an exemption to trees classified as protected by allowing the removal of a whole tree that was considered as a hazard (Section 4.3).



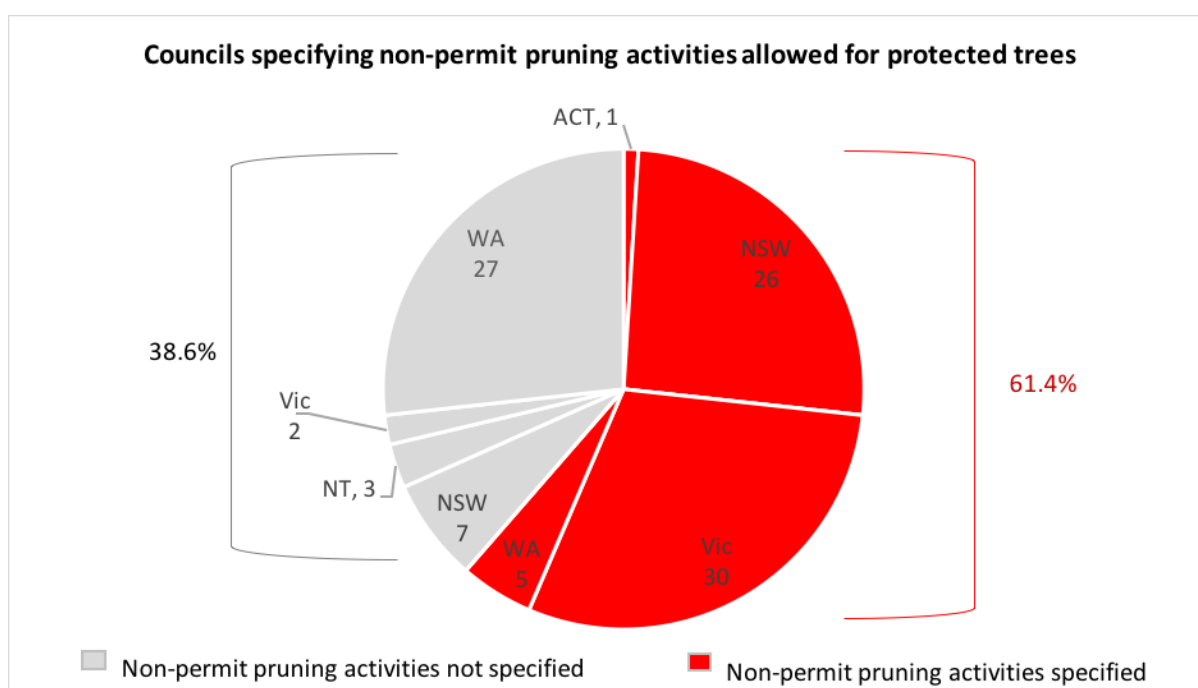


Figure 6: Distribution of councils that specified allowable non-permit pruning of protected trees. All councils are represented, including councils that did not specify protections and thus did not specify non-permit pruning.

**Table 18: Number of councils allowing non-permit pruning of protected trees**

State or Territory	Pruning activity permitted							
	Trimming	Maintenance	Hazard	Dead-wooding	Clearance from dwelling or building	Clearance from another structure	Other reasons <sup>3</sup>	Combined condition pruning
ACT	1	0	0	1	0	0	0	0
NSW	13	3	4	15	12	9	5	0
NT <sup>1</sup>	-	-	-	-	-	-	-	-
Vic	9	0	5	0	0	1	4	27
WA	0	1	0	1	2	2	0	0
<b>Total</b>	23 (22.8%)	4 (4.0%)	9 (8.9%)	17 (16.8%)	14 (13.9%)	12 (11.9%)	9 (8.9%)	27 (26.7%)
<b>SA<sup>2</sup></b>	Permitted	Not specified	Permitted	Permitted	Permitted	Permitted	Diseased wood removal	Not applicable

<sup>1</sup>Northern Territory councils did not protect trees on private land and thus pruning allowances did not apply. <sup>2</sup>Because South Australian tree protections are regulated by state legislation, all SA councils offer the same pruning conditions of Regulated and Significant trees. <sup>3</sup>Other reasons included formative pruning, removal of parasitic plants, pollarding, crown lifting, etc.

Several councils imposed conditions on non-permit pruning activities (Table 19), with the most common form of condition being limits to branch or canopy dimensions able to be pruned. Less prevalent conditions to non-permit pruning were adherence to the Australian Standard *AS4373-2007 for Pruning of Amenity Trees*, and the involvement of a qualified arborist, either to undertake the works or to provide an assessment to verify that works could be undertaken. The South Australian regulations do not explicitly

mention the standard, and do not include the requirement for a qualified arborist to be involved in pruning activities.

A minority of councils reviewed (39.6%) imposed dimensional limitations on non-permit pruning activities; however, this should be considered alongside the requirement to adhere to Australian Standard AS4373-2007 *Pruning of Amenity Trees* which provides *de facto* limitation, as unnecessary major crown reduction is not consistent with the standard.

**Table 19: Distribution of councils imposing conditions on non-permit pruning of protected trees**

	Adherence to dimensional limitations	Adherence to AS4373-2007 <i>Pruning of Amenity Trees</i>	Qualified arborist involvement required <sup>1</sup>
<b>ACT</b>	1 (100%)	1 (100%)	0 (0%)
<b>NSW</b>	19 (57.6%)	22 (66.7%)	6 (18.2%)
<b>NT<sup>2</sup></b>	-	-	-
<b>Vic</b>	20 (62.5%)	10 (31.3%)	3 (9.4%)
<b>WA</b>	0 (0%)	1 (3.1%)	1 (3.1%)
<b>Total</b>	<b>40 (39.6%)</b>	<b>34 (33.7%)</b>	<b>10 (9.9%)</b>
SA	Applicable	Not required	Not required

Conditions may apply to one or more non-permit pruning activities within a council. <sup>1</sup>Arborist involvement includes: when an arborist must undertake the works; if having an arborist undertake the works means that no permit is required; or, if an arborist assessment must be undertaken. <sup>2</sup>Northern Territory councils did not protect trees on private land and thus pruning allowances did not apply.

The most commonly imposed dimensional limits on pruning protected trees without a permit, were for branch diameter (25% of councils reviewed) and crown reduction (29% of councils), with a small number of councils also imposing root pruning restrictions (Figure 7). The South Australian regulations impose a 30% crown reduction limit, above which further removal is considered a tree damaging activity.

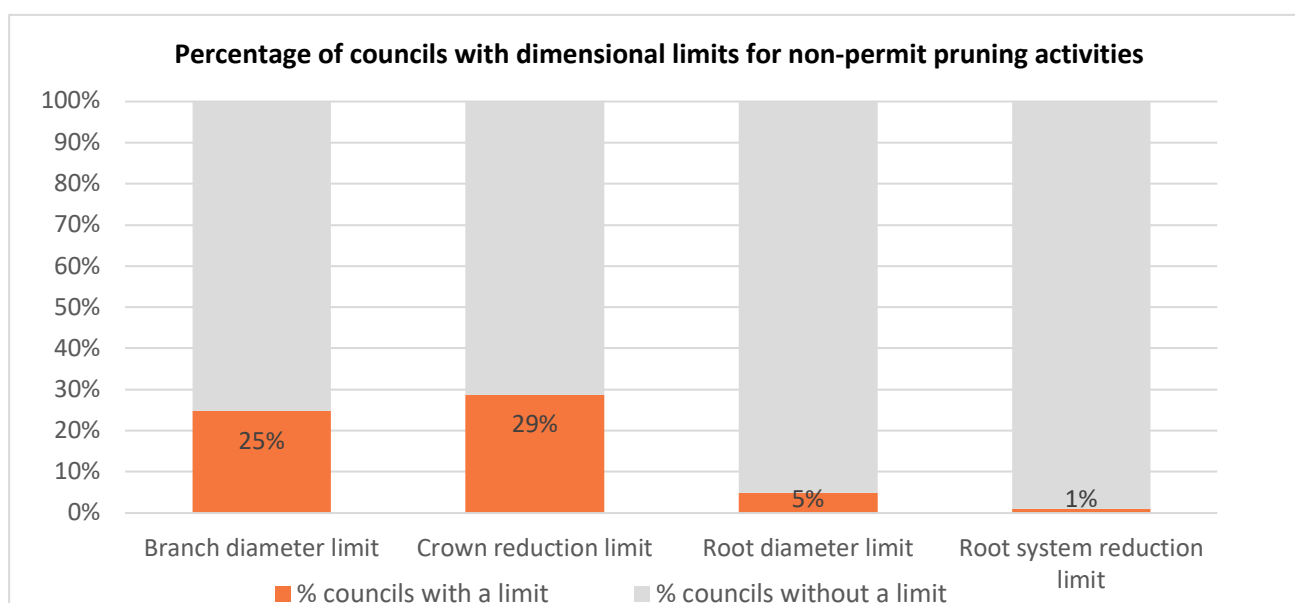


Figure 7: Percentage of all councils reviewed using dimensional limits for non-permit pruning activities. Note that this includes councils that do not have protections, and therefore do not specify non-permit pruning activities.

Councils applied dimensional limits to several types of pruning activities in addition to trimming, likely to limit residents from using other pruning activities to enable them to lop large branches or remove a significant crown percentage (Table 20). In New South Wales, several councils attached a maximum branch diameter limit to maintenance, dead-wooding and pruning to clear structures. Crown reduction limits were imposed on maintenance and dead-wooding activities by several Victorian councils.

**Table 20: Number of councils allowing non-permit pruning activities subject to dimensional limits\***

Non-permit pruning activity	Type of dimensional limitations to non-permit pruning activity				
	Any dimensional limit	Crown volume reduction limit	Branch diameter limit	Root system reduction limit	Root diameter limit
<b>Australian Capital Territory</b>					
Trimming	1	1	1	0	1
Maintenance	0	0	0	0	0
Hazard reduction	0	0	0	0	0
Dead-wooding	0	0	0	0	0
Clearance of buildings	0	0	0	0	0
Clearance of other structures	0	0	0	0	0
Other	0	0	0	0	0
Combined condition non-permit pruning	0	0	0	0	0
<b>New South Wales</b>					
Trimming	13	11	5	1	2
Maintenance	2	1	1	0	0
Hazard reduction	0	0	0	0	0
Dead-wooding	2	1	1	0	0
Clearance of buildings	6	0	6	0	0
Clearance of other structures	7	2	6	0	0
Other	1	1	0	0	0
Combined condition non-permit pruning	0	0	0	0	0
<b>Victoria</b>					
Trimming	11 <sup>[2]</sup>	9 <sup>[3]</sup>	9 <sup>[3]</sup>	0	2
Maintenance	7 <sup>[1]</sup>	7 <sup>[1]</sup>	0	0	0
Hazard reduction	0	0	0	0	0
Dead-wooding	7 <sup>[1]</sup>	7 <sup>[1]</sup>	1 <sup>[1]</sup>	0	0
Clearance of buildings	0	0	0	0	0
Clearance of other structures	2 <sup>[1]</sup>	1 <sup>[1]</sup>	2 <sup>[1]</sup>	0	0
Other	6 <sup>[1]</sup>	6 <sup>[1]</sup>	1 <sup>[1]</sup>	0	0
Combined condition non-permit pruning	15 <sup>[1]</sup>	15 <sup>[1]</sup>	8 <sup>[1]</sup>	0	0

\*Northern Territory councils did not impose protections or specify non-permit pruning activities, and Western Australian councils did not impose dimensional limitations on non-permit pruning activities.

The data for Victoria shows the distribution of dimensional limits for non-permit pruning activities inclusive of non-permit pruning arising from the combined conditions category, as annotated: <sup>[1]</sup>Includes only councils where condition arises from overlay schedules; <sup>[2]</sup>Includes 2 councils where conditions arise only from overlay schedules; <sup>[3]</sup>Includes 4 councils where conditions arise only from overlay schedules;

The distribution of branch diameter limits varied between 3.2-15 centimetres (Table 21), with the most common limitation being five centimetres. Pruning crown volume reduction limits varied between 10-33.33%, with 10% limitations being most common in NSW and imposed by the ACT government; and 33.33% seen as the prevailing limit within Victorian overlay schedules.

**Table 21: Dimensional limits imposed by councils for non-permit pruning activities.**

Pruning limit: branch diameter		Pruning limit: crown volume	
Council	Limit (cm)	Council	Limit (% total volume)
<b>Australian Capital Territory</b>		<b>Australian Capital Territory</b>	
Australian Capital Territory	5	Australian Capital Territory	10%
<b>New South Wales</b>		<b>New South Wales</b>	
Camden Council	5	Blacktown City Council	10%
Campbelltown City Council	5	Campbelltown City Council	10%
Council of the City of Parramatta	5	Canterbury Bankstown Council	10-20% <sup>5</sup>
Cumberland Council	5-15 <sup>1</sup>	Council of the City of Ryde	10%
Ku-ring-gai Council	5	North Sydney Council	10%
Penrith City Council	5-15 <sup>2</sup>	Northern Beaches Council	10%
Randwick City Council	5	Randwick City Council	10%
The Council of the Municipality of Hunters Hill	5	Sutherland Shire Council	10%
Woollahra Municipal Council	5	The Council of the Shire of Hornsby	10%
Blacktown City Council	10	The Hills Shire Council	10%
Council of the City of Sydney	5-10 <sup>3</sup>	Willoughby City Council	10%
North Sydney Council	10		
Canterbury Bankstown Council	15 <sup>4</sup>		
<b>Victoria</b>		<b>Victoria</b>	
Glen Eira City Council	3.2	Glen Eira City Council	10%
Banyule City Council	5*	Moonee Valley City Council	10%
Boroondara	5	Frankston City Council	10%* - 33.33% <sup>6</sup>
Manningham City Council	5*	Moreland City Council	15%
Nillumbik Shire Council	5*	Banyule City Council	33.33%*
Stonnington City Council	5	Boroondara	33.33%
Yarra City Council	5*	Manningham City Council	33.33%*
Casey City Council	7.5	Nillumbik Shire Council	33.33%*
Darebin City Council	7.5	Stonnington City Council	33.33%*
Frankston City Council	7.5*	Yarra City Council	33.33%*
Moonee Valley City Council	10	Casey City Council	33.33%*
		Hume City Council	33.33%*
		Knox City Council	33.33%*
		Melton City Council	33.33%*
		Mitchell Shire Council	33.33%*
		Whittlesea City Council	33.33%*
		Wyndham City Council	33.33%*

<sup>1</sup>5cm to achieve clearance of lower branches above ground, 15cm to achieve clearance above walkways or driveways; <sup>2</sup>5cm for maintenance, 15cm to achieve clearances of rooflines and above ground;

<sup>3</sup>5cm to achieve clearance from a dwelling, 10cm to achieve clearance to other structures;

<sup>4</sup>15cm limit applies for both exotics and natives, although crown % differs;

<sup>5</sup>10% for natives, 20% for exotics. <sup>6</sup>10% limit for clearance to structures, 33.33% limit for trimming.

\*Indicates pruning limits applicable only within overlay areas.

Several councils imposed both branch diameter and crown volume reduction limitations to control non-permit pruning activities; however, pruning of root systems was only addressed by a handful of councils (Table 22), however, adherence to Australian Standard AS4373-2007 *Pruning of Amenity Trees* requires that “specialist advice from a person with a minimum AQF Level 4 in arboriculture should be sought before any root pruning occurs”, effectively preventing homeowners from undertaking root pruning of protected trees. Given the difficulty in establishing root system extent, it is difficult to envisage a root system reduction metric being policed by council. In practice, this is likely to refer to encroachment on a tree protection zone.

**Table 22: Root pruning limitations imposed by specified councils (diameter or root system extent)**

Pruning limit: root diameter		Pruning limit: root system extent	
Council	Limit (cm)	Council	Limit (%)
<b>Australian Capital Territory</b>		<b>New South Wales</b>	
Australian Capital Territory	5	Canterbury Bankstown Council	10%
<b>New South Wales</b>			
Penrith City Council	4		
Council of the City of Paramatta	5		
<b>Victoria</b>			
Monash City Council	3		
Greater Dandenong City Council	5		

A notable condition was imposed by some councils, relating to non-permit trimming activities. A total of seven councils (the Australian Capital Territory and six councils within New South Wales) specified time periods over which crown reduction limits applied (Table 23). The ACT specified that pruning of up to 10% of a protected tree’s crown could only occur for the first pruning event of the year. The New South Wales councils’ limitations varied from pruning the specified amount once per growing season (Blacktown City Council), to a total reduction allowed over a 5-year period (Willoughby City Council). Three councils specified that limits represented the total reduction allowed over the course of a year.

**Table 23: Conditions imposed on trimming without a permit by specified councils**

Council	Time period over which crown reduction volume limit applied
<b>Australian Capital Territory</b>	
Australian Capital Territory	First pruning of the year only
<b>New South Wales</b>	
Blacktown City Council	Limited to once per growing season
Northern Beaches Council	Limited total within a 12 month period
Council of the City of Ryde	Limited total within a 12 month period
The Council of the Shire of Hornsby	Limited total within a 12 month period
Randwick City Council	Limited total within a 24 month period
Willoughby City Council	Limited total within a 5 year period

Approximately one third of councils reviewed (33.7%) specified that non-permit pruning of protected trees must be undertaken in accordance with Australian Standard AS4373: *Pruning of Amenity Trees* (Table 24 & Table 25). AS4373 requires an assessment to be “undertaken by a person competent in arborist assessment (minimum AQF Level 3 in arboriculture)” and that works “should be carried out by a person suitably qualified and experienced in arboriculture (minimum of AQF Level 2 in arboriculture)”, effectively meaning a professional arborist must be employed to undertake pruning activities. It is noted that some councils requiring dimensional limits also required adherence to AS4373-2007, and the most commonly listed activity requiring adherence to the standard was “trimming” (Table 25). This implies that councils were most concerned about uncontrolled crown reductions or the lopping of large branches.

**Table 24: Distribution of council requirements for pruning to be undertaken in accordance with Australian Standard AS4373-2007 *Pruning of Amenity Trees***

	Number of councils (%)				
	ACT	NSW	NT	Vic	WA
Standard not specified	0	8 (24.2%)	3 (100%)*	21 (65.6%)	25 (78.1%)
Standard specified as a condition of at least one non-permit pruning activity	1 (100%)	22 (66.7%)	0	10 (31.3%)	1 (3.1%)
Standard specified as a condition of pruning under a permit	0	18 (54.5%)	0	3 (9.4%)	6 (18.8%)

\*NT councils do not regulate tree clearing on private land, and therefore do not specify standards for pruning activities.

**Table 25: Distribution of council requirements for specific non-permit pruning activities to be undertaken according to Australian Standard AS4373-2007 *Pruning of Amenity Trees***

Pruning activity	Number of councils where AS4373-2007 applies (%)					
	ACT	NSW	NT	Vic	WA	Total
Trimming	1 (100%)	10 (30.3%)	-	3 (9.4%)	0	14 (13.9%)
Maintenance	0	3 (9.1%)	-	0	1 (3.1%)*	4 (4%)
Hazard reduction	0	3 (9.1%)	-	1 (3.1%)	0	4 (4%)
Dead-wooding	0	9 (27.3%)	-	0	0	9 (8.9%)
Clearance of buildings	0	7 (21.2%)	-	0	0	7 (6.9%)
Clearance of other structures	0	4 (12.1%)	-	1 (3.1%)	0	5 (5%)
Other pruning activity	0	3 (9.1%)	-	3 (9.4%)	0	6 (5.9%)
Combined condition non-permit pruning	0	0	-	5 (15.6%)	0	5 (5%)

\*City of Cockburn requires that maintenance pruning be undertaken according to "International Society of Arboriculture standards".

## 4.5. Permits for tree works to protected trees

**Description of data collected:** application and permit fees for undertaking tree works on protected trees, including for pruning or removal of multiple trees.

Requiring applications for tree permits with a fee to be paid to council provides a mechanism to disincentivise unnecessary tree works, as well as allowing council to assess the appropriateness of proposed tree works before they occur. Application forms for permits assessed by the council are available on council websites, particularly for New South Wales and Victoria. Victorian council tree permits sometimes required an application through the Victorian Planning Scheme development application portal. The ranges of costs for single tree applications are visualised in Figure 8, for removal fees, and Figure 9 for pruning fees. Several councils required permits to be issued for the pruning or removal of protected trees, with permits typically requiring a payment of \$100-200 for either the application or permit (see Figure 10).

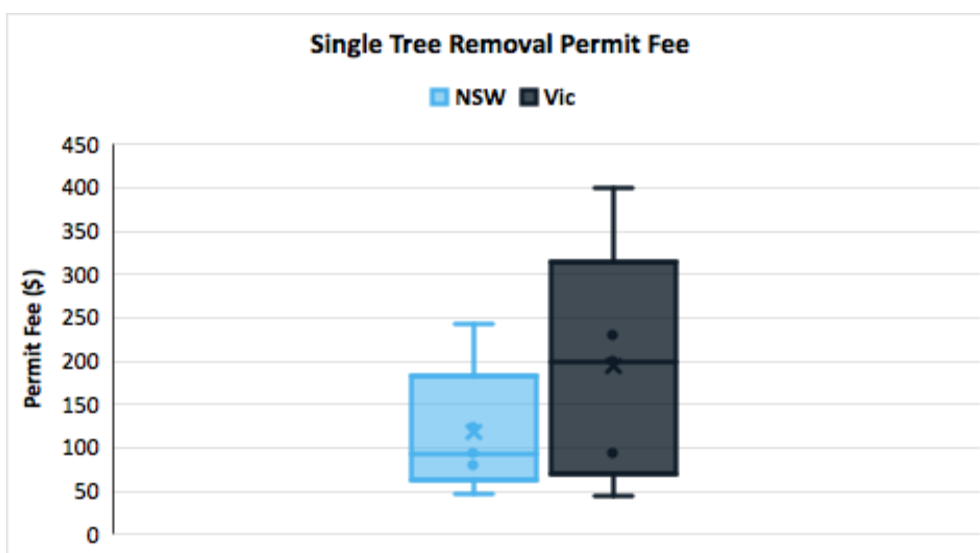


Figure 8: Box and whisker plot of the 5 number summary for single tree removal permit fees in New South Wales and Victoria, for councils where the fee was greater than \$0. Normality was assumed for datasets with  $n > 30$ . For datasets with  $n < 30$ , Shapiro-Wilk tests were performed, with p values  $> 0.05$  returned.

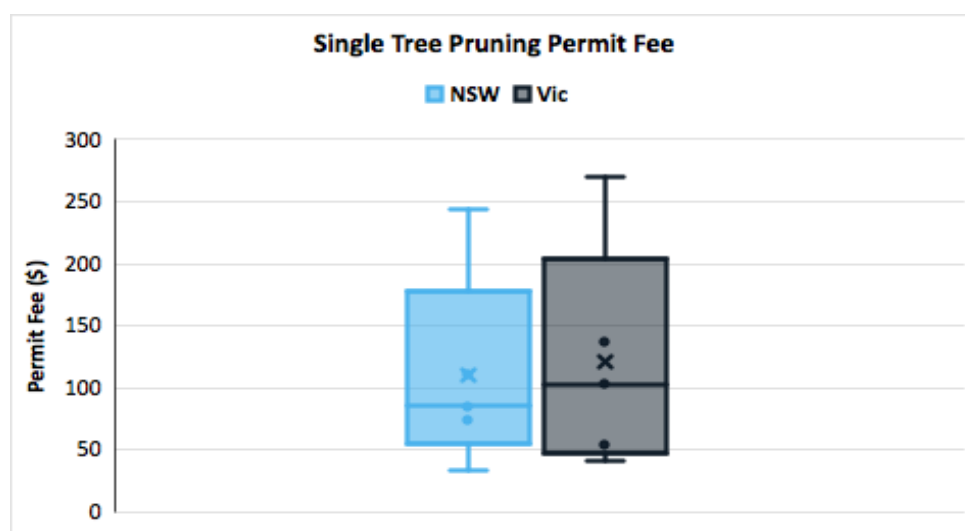


Figure 9: box and whisker plot of the 5 number summary for single tree pruning permit fees in New South Wales and Victoria, for councils where the fee was greater than \$0. Normality was assumed for datasets with  $n > 30$ . For datasets with  $n < 30$ , Shapiro-Wilk tests were performed, with p values  $> 0.05$  returned.



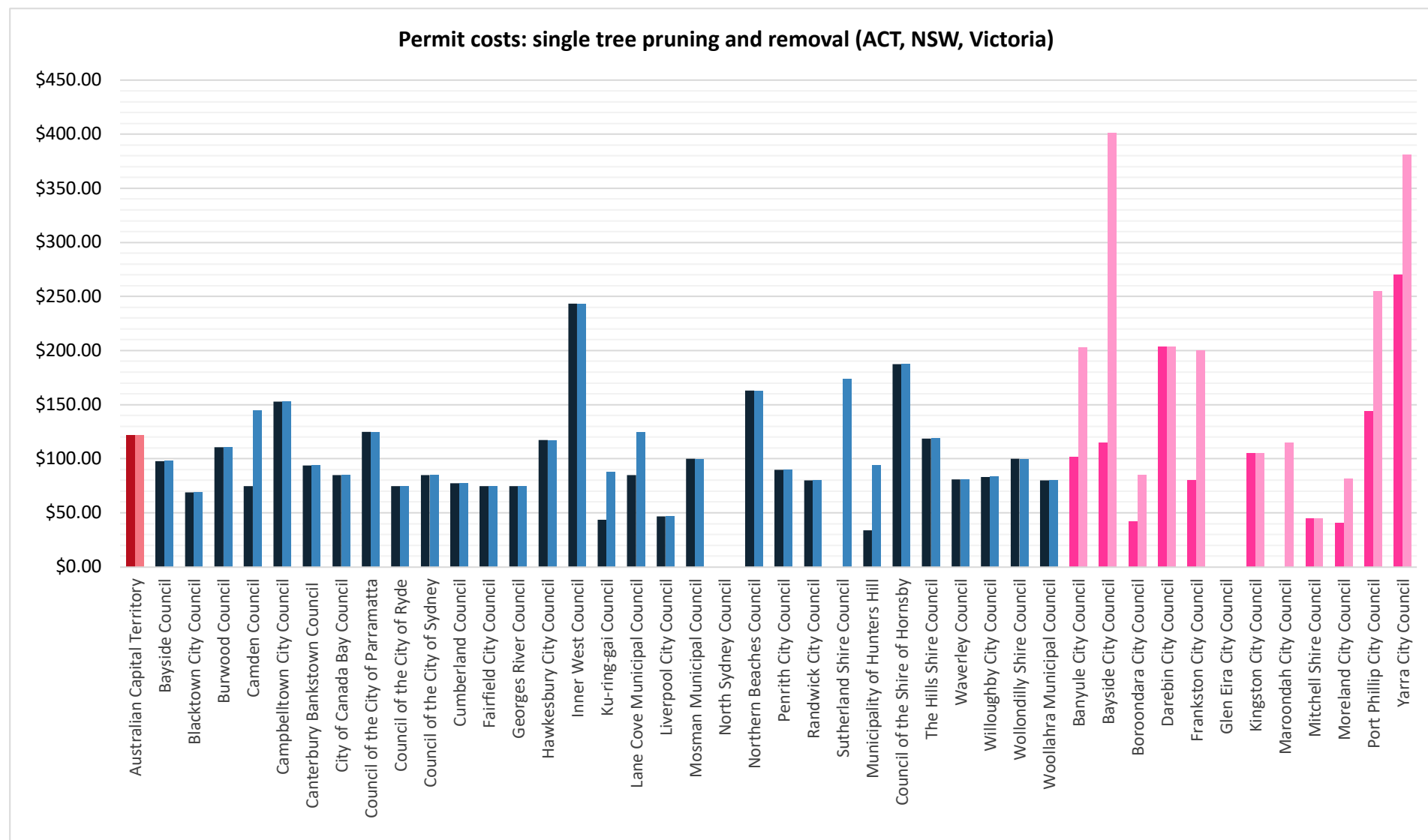


Figure 10: Permit costs for the pruning (dark bars) or removal (light bars) of single trees in the ACT (orange), NSW (blue) and Victoria (pink). Note that the Northern Territory and Western Australia do not require pruning or removal permits, though removal may require a development application. South Australia also does not require permit fees to undertake tree works on private trees. Maroondah City Council charges \$115 for permits for the Heritage Overlay, Neighbourhood Character Overlay and Significant Landscape Overlay regions; and \$240 for the Vegetation Protection Overlay region. Glen Eira and North Sydney Councils require permits, but these are free.

Pruning permits were not applicable to the Northern Territory (where local government tree protections were not specified) or Western Australia, though in Western Australia tree works may be subject to a development application, with fees varying between councils. Some Victorian council permit fees vary in price depending on the zoning overlay. A number of New South Wales and Victorian council also provide reduced per-tree permit costs for multiple tree removal (Figure 11) or pruning (Figure 12). Permit costs were approximately linear and dependent on the number of trees under consideration.

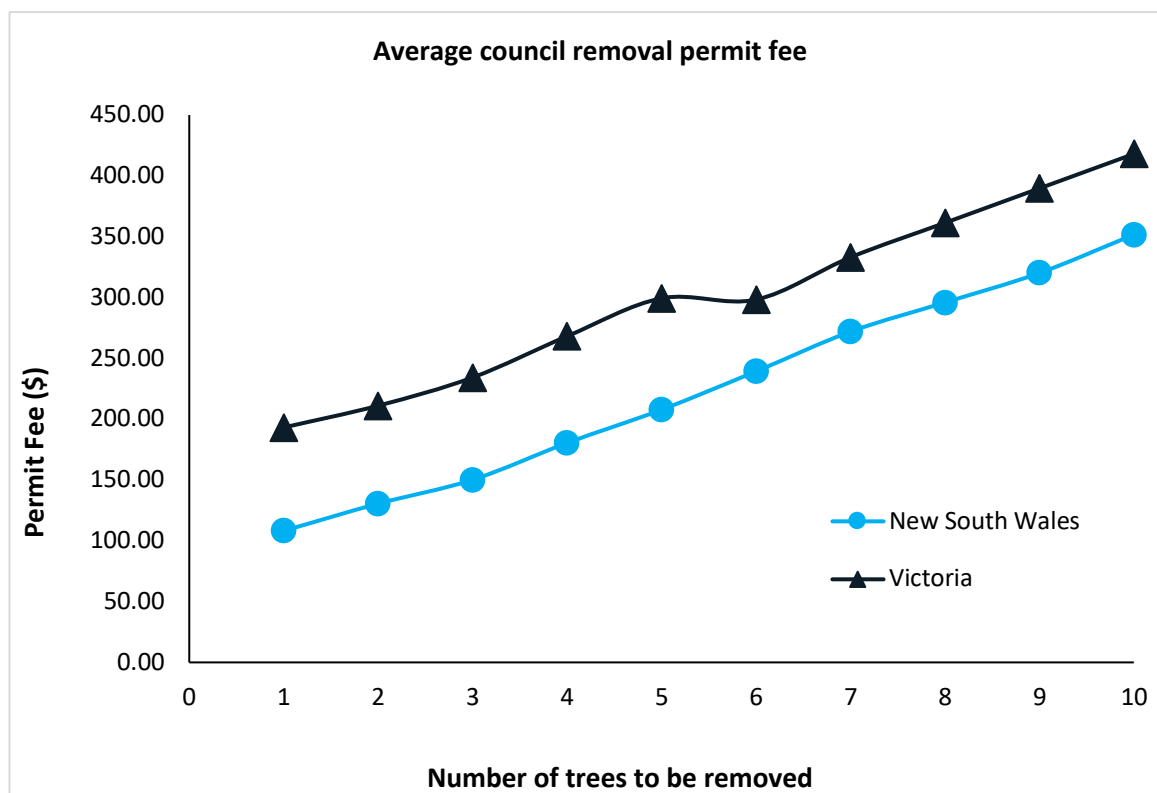


Figure 11: Average permit fees for removal of multiple protected trees, where fees were specified for councils in NSW (30 councils) and Victoria (11 councils). Note that councils that did not specify or charge a removal permit fee (including WA and NT councils) were excluded. Data was extrapolated where councils specified a 'per tree' value; however, where councils only provided fee information up to a set number of trees (less than ten), extrapolation up to ten trees was not conducted. A plateau is observed in the Victorian trendline resulting from a lack of data for three councils (Bayside City Council, Darebin City Council, and Maroondah City Council) beyond 3–6 trees, combined with a number of councils having set values for the removal of any number of trees up to ten.

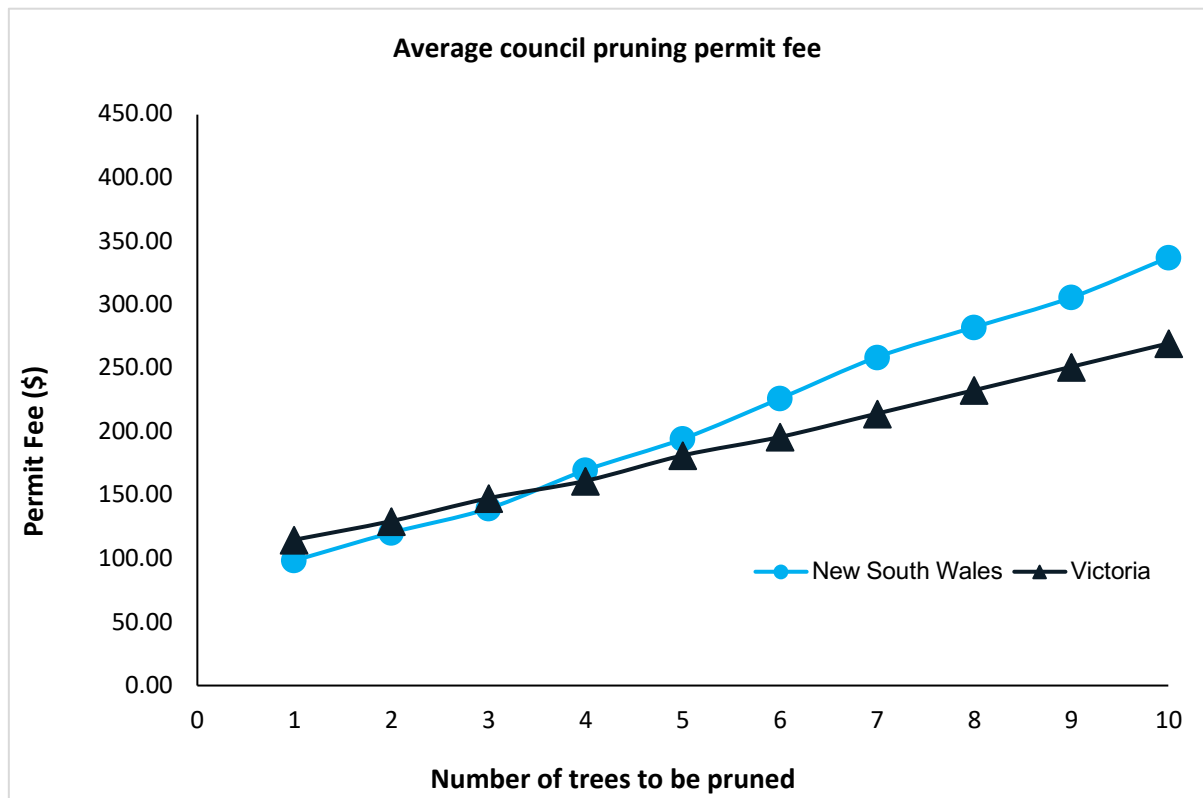


Figure 12: Average permit fees for pruning of multiple protected trees in NSW (29 councils) and Victoria (10 councils) for councils specifying fees. Note that councils that did not charge for a pruning permit fee (including WA and NT councils) were excluded. Data was extrapolated where councils specified a 'per tree' value; however, where councils only provided fee information up to a set number of trees (less than ten), extrapolation up to ten trees was not conducted. Darebin City Council and Bayside City Council in Victoria were two such councils where fee information was provided for pruning of up to three and up to five trees respectively.

## 4.6. Qualifications

In Australia, tertiary qualifications are delivered under the Australian Qualifications Framework (AQF). The current qualifications relating to arboriculture are the Certificate III in Arboriculture (AQF Level 3), Diploma in Arboriculture (AQF Level 5), Advanced Diploma in Arboriculture (AQF Level 6) and Graduate Certificate in Arboriculture (AQF Level 8). The AQF Level 3 (Certificate III) and 5 (Diploma) qualifications are widely delivered by Registered Training Organisations across Australia, while the AQF Level 6 and 8 are only available at a small number of training organisations and are far less common in the industry.

Within the arboriculture industry, arborists with a Level 3 qualification are referred to as “Practising Arborists”, and are trained to undertake practical arboriculture activities, including pruning and treatment of diseases and disorders. Level 5 qualified arborists are referred to as “Consulting Arborists” and are trained in higher level risk assessment, development of Tree Protection Plans for development sites, formulation of treatment for diseases, etc.

Within New South Wales, five councils of 33 assessed (15%) required that a qualified arborist undertake permit-approved pruning works. Camden Council and the City of Sydney require an AQF Level 3 arborist to undertake approved pruning works to protected trees; City of Canada Bay, North Sydney Council and Strathfield Municipal Council require that works be undertaken by a “qualified arborist” but do not stipulate a specific qualification. Six councils require an arborist involvement in pruning works that are exempt from requiring a permit:

1. Camden Council specifies that pruning branches up to 5cm in diameter (trimming) must be undertaken by at least an AQF Level 3 arborist;
2. Campbelltown City Council requires an AQF Level 3 arborist to trim up to 10% of the crown;
3. The City of Sydney requires trees that are dead, dying, or pose an imminent threat to life or property (hazardous trees) to be assessed by an AQF Level 3 arborist such that a report can be supplied to Council, post-works;
4. Penrith City Council requires an arborist assessment of hazardous trees before pruning can be undertaken without a permit;
5. Cumberland Council requires an AQF Level 3 arborist to undertake any non-permit dead-wooding and proximity clearance pruning; and
6. Strathfield Municipal Council stipulates that non-permit dead-wooding must only be carried out by a person with a minimum Certificate II in Horticulture or Arboriculture.

Within Victoria, four of the 32 (12.5%) councils examined specified qualifications associated with protected tree pruning works. Brimbank City Council specified that an arborist must undertake all pruning works to protected trees approved for pruning under a permit. Two councils (Bayside City Council and Darebin City Council) also stated that a permit would not be required if pruning works to protected trees were to be undertaken by a qualified arborist, who provides photographic evidence of their work to council. In Bayside, work is only allowed if the arborist is qualified to Level 3. Moreland City Council requires an AQF Level 3 arborist to undertake works where up to 15% of a tree crown is to be removed.

The only council within Western Australia to unambiguously require specific arboricultural training for tree pruning was the City of Vincent, where pruning works on significant trees could only be undertaken by a “qualified arborist”. The Australian Capital Territory and Northern Territory did not stipulate specific arboricultural training to undertake protected tree works.

## 4.7. Assessment of applications to prune or remove protected trees

**Description of data collected:** The authority responsible for decision-making regarding applications for tree works or development, and the factors listed for consideration in deciding the outcome of applications.

Authorities responsible for decision-making regarding applications to prune or remove protected trees included:

- Council – inclusive of any specific Tree Management Officer (TMO) or department.
- Council arborist – distinguished from other council officers who may not be trained in arboriculture.
- Independent arborists – where council specified that an external arborist would be required or contracted.

For nearly all local governments examined, applications to prune or remove protected trees were assessed by the council. Most councils did not stipulate who within council would be responsible for assessing applications, although some stipulated a “council arborist” (see Appendix 7). It is likely that applications would initially be assessed by a council arboriculture officer (generally a Consulting Arborist, holding an AQF Level 5 qualification), and potentially referred to a Planning Officer in the case of complex or contentious applications. A similar process is undertaken in South Australia, with council staff assessing applications in accordance with the State-based Planning and Design Code and the *Planning, Development and Infrastructure (General) Regulations (2017)*.

Assessment factors listed by councils varied significantly and this data was separated into categories during collection. Assessing authorities were typically required to consider:

- The reason for the tree works.
- Tree type (species), health and condition.
- Whether the tree was listed on a tree register.
- Values provided by the tree, including environmental, cultural, historical, community, aesthetic/amenity, botanical, and other values.
- The suitability of the tree to its location, or the presence of other trees on site (or nearby); and, in some cases the possibility of replacing the tree by planting in the immediate area.
- Proximity of the tree to certain structures including utilities and infrastructure.
- Hazard mitigation - whether the tree was causing or likely to cause damage to infrastructure, or posed a risk to human life or property.
- Amenity benefits afforded by the tree.

Beyond tree policies, planning rules and relevant State legislation, councils did not indicate further criteria or policies to be applied in considering application; however, it is highly likely that applications would be considered in line with Australian Standards AS4373-2007 *Pruning of Amenity Trees* and AS4970-2009 *Protection of Trees on Development Sites*, including where arborist reports or assessments are required.

Information regarding council processing times was scarce and the range was large (see Appendix 8). The range of processing periods varied between 10 days (Mosman Municipal Council, NSW) and up to 160 days (City of Cockburn, WA). New South Wales councils most commonly listed processing times of up to 4 weeks, similar to the ACT (30 day time frame for determination). Application processing times are likely to depend on council resources.

## 4.8. Penalties

**Description of data collected:** penalties applicable for unauthorised tree damage or works (where specified and within reasonable search constraints) on either private or public trees.

Information was sought from both local and state governments regarding penalties, including:

- Statements that penalties applied.
- Type of penalty – individual or company level fines or other penalties including further prosecution or the display of shaming signage.
- Maximum or set fine amount.

The distinction between penalties for unlawful activity related to public versus private trees was not consistently clear and therefore data on penalty values was not separated into these categories. Maximum penalties for damaging versus removing a protected tree were also generally not separated at the source of information; however, it is anticipated that damaging a tree would be considered less serious than killing or removing it, leading to the possibility of reduced penalties being imposed, particularly where matters are taken to court.

Some jurisdictions may impose additional penalties for tree damaging activities under legislation other than the primary tree protection legislation. For example, in addition to penalties under the Victorian *Planning and Environment Act 1987 (Vic)* and any relevant local laws, the Victorian *Summary Offences Act 1966* provides for penalties of up to \$4,100 or six-months imprisonment for wilful destruction of public trees. It is likely that under some circumstances, damaging or removing trees could attract penalties under criminal codes legislation not detected as part of this research.

Several council documents also stated or implied that in addition to any penalty leveraged, council would seek to be compensated for the replacement cost of damaged or removed public trees. Based on the cost of standard nursery stock and street tree establishment expenses, it would be expected that these additional costs could be up \$3,000. If the value of an established tree is included in such restitution, the fees could be considerably higher; however, it was not evident that such amounts pertaining to established trees would be pursued.

Of the examined states and territories, New South Wales has by far the highest maximum penalty for damaging a protected tree at \$1.1 million (see Figure 13 & Table 26). Other jurisdictions range from \$112,000 (ACT) to \$218,088 (Victoria), while the Northern Territory has no relevant penalties. Penalties are broadly in line with the values of large trees that could be expected using various valuation methodologies (i.e. \$100,000-200,000) but are unlikely to fully incorporate the costs of policing, prosecution and full loss of amenity associated with the loss of one or more protected trees.

Penalties under local laws are inconsistent, with most local governments opting to eschew their own penalties in favour of using state laws (and penalties) to pursue those who illegally damage or remove trees. Notable exceptions include the City of Sydney, which imposes a maximum penalty of \$500,000 in addition to the \$1.1 million penalty available under state law (Figure 14). Other local governments impose penalties up to \$6,000 (Figures 14-16). Western Australian local governments had the lowest penalties, with only the City of Cockburn exceeding \$1,000 (Figure 16). Several local laws imposed penalties in the form of Penalty Units, which allowed penalties to be updated easily over time, in line with fines for offences under other legislation.

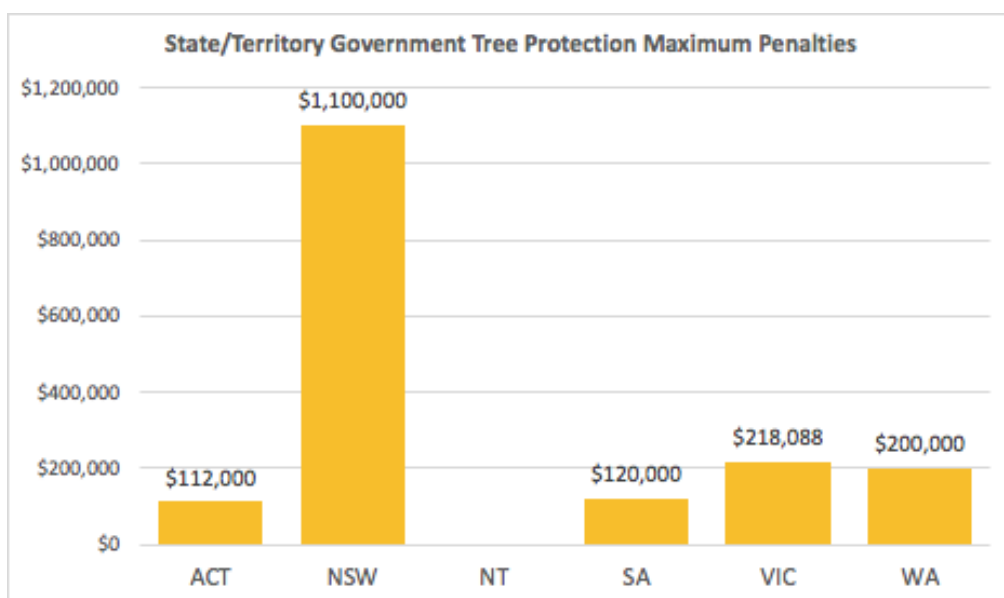


Figure 13: Maximum penalties imposed by states and territories for tree damaging activities to protected trees on private or public land. Note that the Northern Territory does not have Territory-level tree protection legislation and therefore does not leverage penalties for tree damaging activities to individual trees.

**Table 26: Maximum penalties available for damaging or removing a protected tree under State/Territory legislation**

Jurisdiction	Maximum penalty	Relevant Act
Australian Capital Territory	\$112,000	<i>Tree Protection Act 2005</i>
New South Wales	\$1,100,000	<i>Environmental Planning and Assessment Act 1979</i>
Northern Territory	-	<i>Planning Act 1999*</i>
South Australia	\$120,000	<i>Planning, Development and Infrastructure Act 2016</i>
Victoria	\$218,088	<i>Planning and Environment Act 1987</i>
Western Australia	\$200,000	<i>Planning and Development Act 2005</i>

\*The Northern Territory Planning Act 1999 controls and imposes penalties on the clearing of vegetation in areas of one hectare or larger, but this does not apply to individual trees.



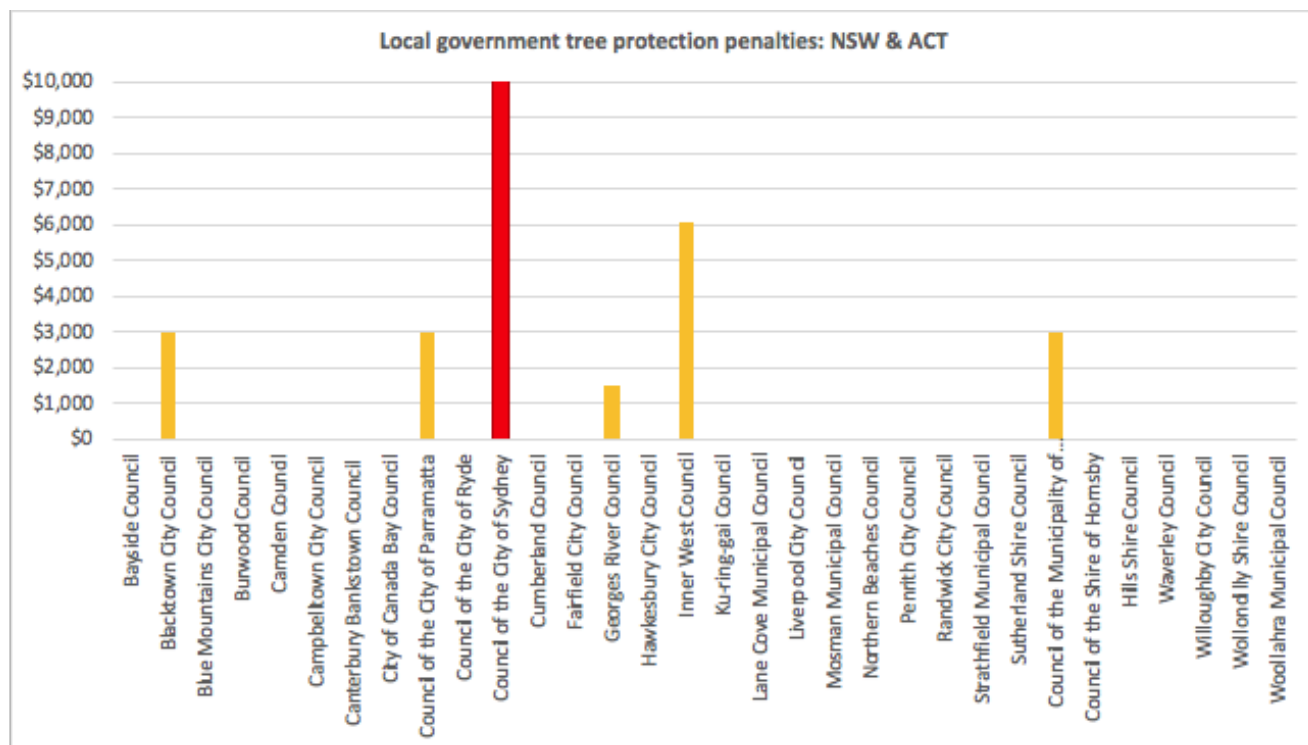


Figure 14: Note the City of Sydney (highlighted red) imposes penalties of up to \$500,000 (vertical scale has been limited to display other council data). The Bayside Council, Blue Mountains Council, Burwood Council, Council of the City of Ryde, Cumberland Council, Council of the Shire of Hornsby and Waverley Council listed additional unspecified penalties.

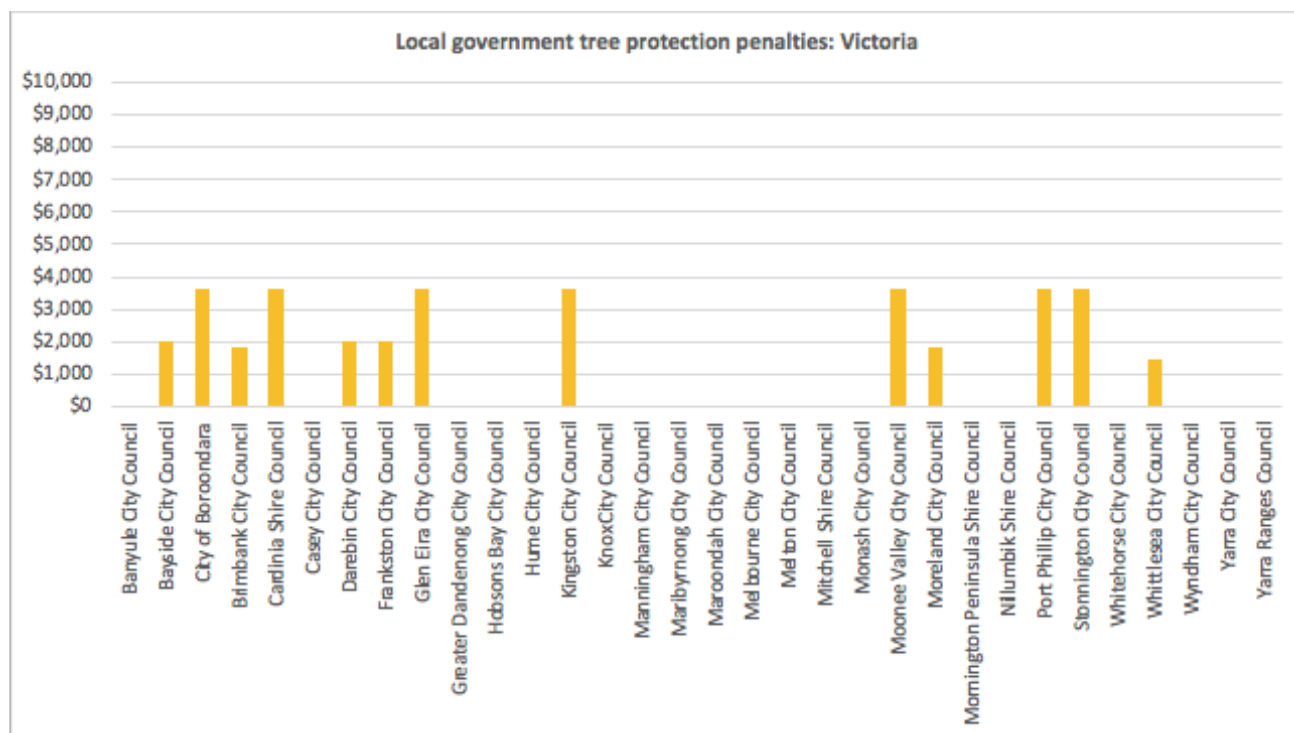


Figure 15: The Hobsons Bay City Council, Mitchell Shire Council, Monash City Council and Wyndham City Council listed additional unspecified penalties.

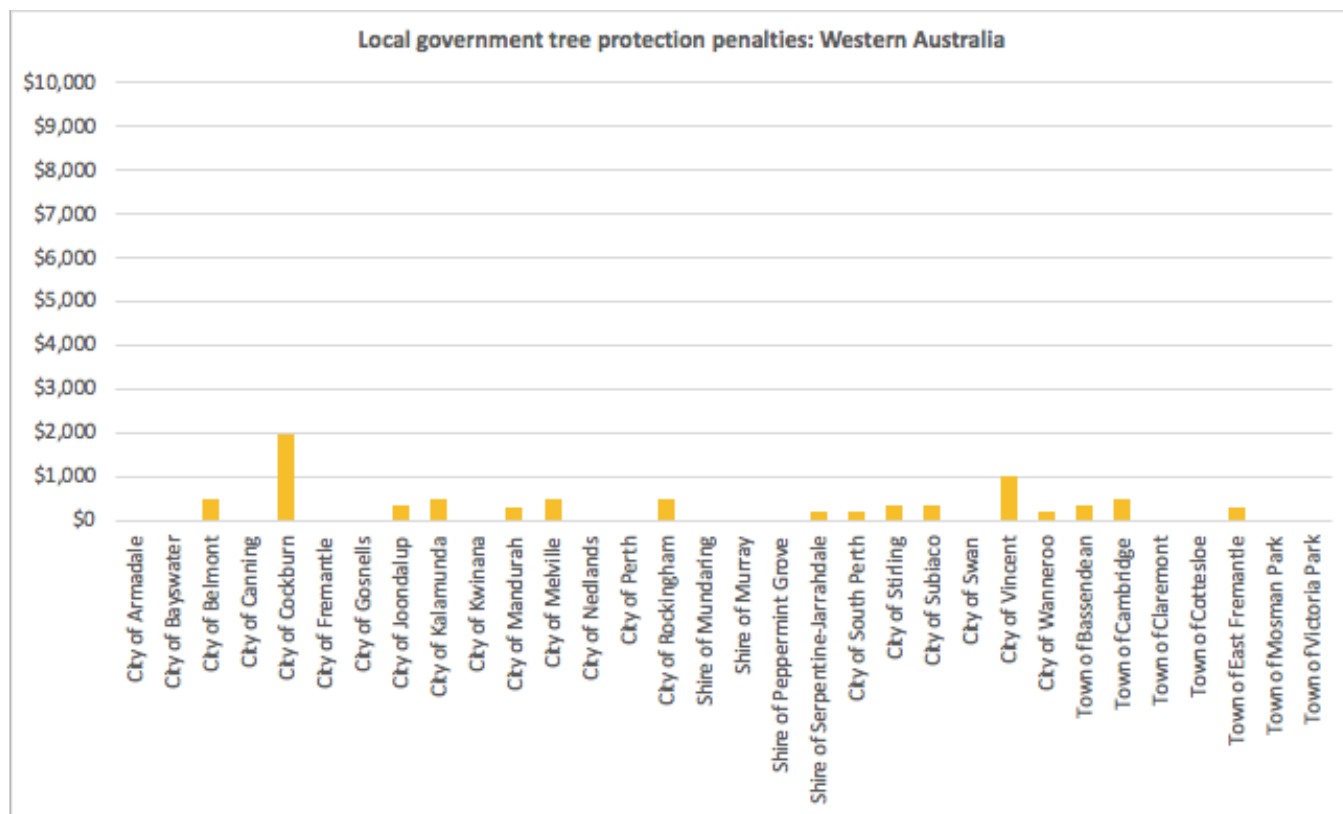


Figure 16: Western Australian local government penalties for damaging protected trees were consistently low, with only the City of Cockburn exceeding \$1,000. The Cities of Armadale, Bayswater, Bunbury, Canning and Gosnells, and Towns of Cambridge and Mosman Park referenced additional, unspecified penalties.

Local government rules did not typically have separate penalties for tree removal and tree damage, but it is reasonable to assume that lower penalties would be sought for tree damage (including pruning) than complete removal. Some councils also listed lower penalties for removing dead trees. For example, the City of Boroondara imposed a maximum penalty of 5 penalty units (\$908.70) for the removal of a dead tree and up to 20 Penalty Units (\$3,634.80) for a single instance of (living) tree removal.

### Penalties – Shaming signage

Of note during data collection was the use of an alternative penalty for tree vandalism, in the form of 'shaming signage' applied on or at the site of vandalised trees. The following councils specified within their tree management documentation that signs or banners may be erected on public land following the vandalism of protected trees. The following councils impose visual penalties:

#### New South Wales

- Lane Cove Municipal Council: tree preservation banners are installed by Council in place of any tree over 4m high on Council land that has been killed, removed or trimmed without consent.
- Mosman Municipal Council: banners are implemented for mid-high range breaches of tree laws.
- Northern Beaches Council: council erects signs or banners at the site of poisoned trees.
- Waverley Council: signage and shrouding will be applied to vandalised trees for minimum of 12 months.

## Victoria

- Hobsons Bay City Council: a sign will be posted on the tree during investigation and a letter circulated to adjacent residents requesting information

## Western Australia

- City of Bayswater: signage is shown for two years, dead trees are painted, and local residents are notified of the illegal activity.

The aim of such banners is to deter future vandals, especially in cases where trees have been poisoned or damaged to achieve personal gain such as views, decreased shading, or reduced debris. Signage is also used to notify the local community of the illegal behaviour and in some cases request assistance regarding information on the vandal.

## 5. Tree bonds and valuations

**Description of data collected:** Tree security bond values, and offsets required for approved tree removal.

The following information was collected in association with tree security bonds and offset requirements:

- Whether security bonds were applicable where development may affect protected trees, or street trees.
- The value of security bonds, and whether they were calculated based on the value of the tree.
- Requirements for offsets for approved removal of protected trees, and the type of offset (set or variable fee).
- The industry tree valuation methods used to calculate security bonds or offset fees associated with approved removal of a protected tree.

Most local governments examined in this study (60 of 101) referenced payments associated with developments that were assessed as having the potential to negatively impact protected trees or street trees. Such payments were in the form of either security deposits or offset payments as a condition of the approved removal of trees. Data was collected on the requirement for, and value of, bonds and offsets in cases where these applied to street trees or protected trees, due to the interest in the monetary value placed on trees.

### 5.1. Security bonds

The majority of local governments applying bonds specified that bonds were applicable only to street trees (Table 27). A small number of councils (six) extended bond protections to trees on private land. These councils were: Camden Council, North Sydney Council, City of Sydney, Brimbank City Council, Bayside City Council (NSW) and Georges River Council. Twenty-three councils had fixed minimum bond amounts, which were typically \$1,000 per tree, with eight councils specifying that valuation methods may be used to incur a higher bond capped at a maximum of \$100,000, following a formal valuation of the tree (Figure 17).

**Table 27: Incidence of councils requiring security bond payments to protect trees**

	Number of councils
Bonds possible <sup>1</sup>	39
Bonds applicable to trees on public land only	33
Bonds applicable to protected trees on private land	6
Fixed minimum bond value applies	23
Bond value depends on tree valuation <sup>2</sup>	8

<sup>1</sup>Including instances where councils stated that bonds may apply.

<sup>2</sup>Fixed minimum bond amount may also apply, and some bonds were capped at a maximum value.

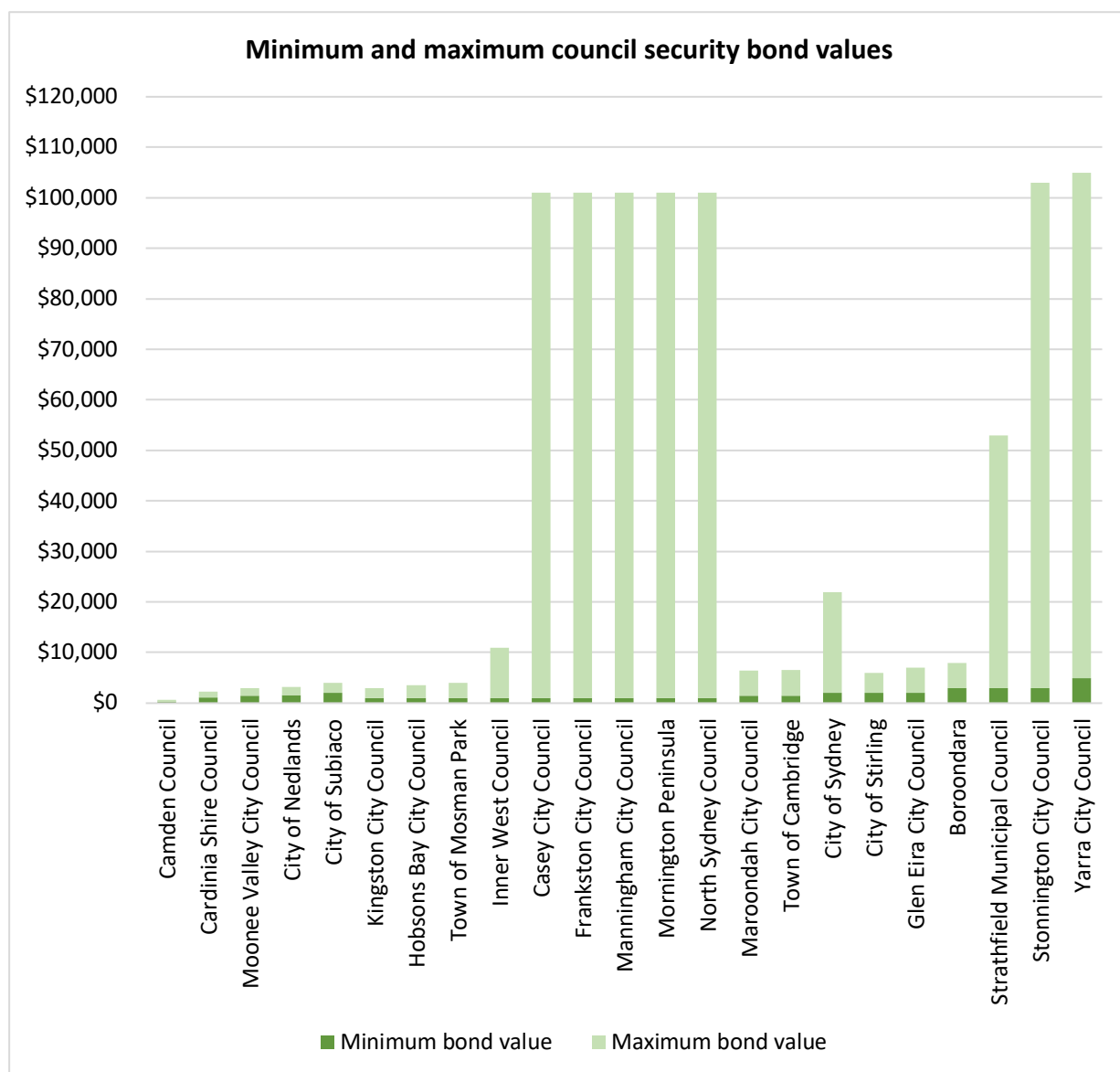


Figure 17: Minimum and maximum tree bonds stipulated by local governments. Minimum tree bonds (if present) were generally a token amount, with some councils reserving the right to leverage maximum bonds of several thousand dollars if warranted.

Bonds are normally applied when proponents submit an application to council to remove a public tree, or a development application for works with the potential to impact a public tree. Councils generally require a report from an arborist (minimum qualification AQF Level 3 or AQF Level 5) to accompany such applications, particularly if valuations are requested, although it appears some councils accept applications without accompanying reports. Fees and bonds are payable once applications have been approved, and bonds are held by council until works are complete and have been signed off by a council arborist. If works impact a protected tree, a portion of the bond will be forfeited in line with the council arborist determination. Such a determination may be disputed by a proponent by providing an independent arborist report, however in the majority councils reserve the right to make a final determination.

Fees may be retained in general revenue or invested in a tree protection fund. Tree protection funds are used to fund the planting of trees on public land, and in some cases, made available to residents on

application to support the arboricultural care of Protected trees on private land. Given that the council is the party that receives the bond payment and also assesses whether bond conditions have been met (facilitating full or partial refund of the bond), it is possible that disagreement may arise between proponents and the council. In such instances, disputes may need to be informed by advice sought from an independent arborist, or in extreme cases, escalated to a higher authority.

## 5.2. Tree valuations

The valuation of urban trees has remained a contentious issue for many years, with several valuation methods being developed to respond to demand from stakeholders. Valuation methodologies have generally been developed by tree-owning agencies to determine the amount that should be paid by stakeholders wishing to remove trees to enable development. Examples include the City of Burnside and City of Melbourne formulas for tree valuation. Despite attempts to develop a common valuation standard (most notably by Standards Australia), this has not been successful due to differing jurisdictional requirements and opposition from stakeholders expected to bear the costs for removing trees (developers, utility providers, insurers, etc). Arboriculture Australia has recently engaged ACTIVE Tree Services to develop a Minimum Industry Standard which is expected to be published in May 2022. This standard has been designed for compatibility with major methodologies that use tree dimensions and assessable modifying factors to determine tree value (see Table 28).

A number of industry-recognised valuation methodologies are referenced by councils (Table 29 & Figure 18), as well as several bespoke methodologies developed for individual councils, e.g. the City of Melbourne, City of Bunbury and Hume City Council methods. The City of Melbourne methodology has also been adopted by other local governments (e.g. Cities of Brimbank and Kalamunda). Several councils refer to valuation being undertaken but do not specify a specific methodology. For example, Moreland City Council states:

“the developer must pay for the cost of [street] tree valuation which includes amenity value and the cost of tree removal and replacement.”

**Table 28: Breakdown of proposed Minimum Industry Standard (MIS506) tree valuation method**

Valuation method and general principle	Calculation	Requirements	Strengths	Weaknesses
MIS506  Tree costed by size using a market base value, and modified based on land zone, amenity and condition/quality.	<b>Individual tree value = <math>B \times Z \times S \times Q</math>;</b>  <b>Grouped tree value = <math>B \times Z \times S \times D</math>;</b> B = market baseline value (base \$ value per trunk or crown cross-sectional area); Z = land use modifier; S = social modifier; Q = quality modifier. D = tree density modifier	Measure DBH or measure tree crown cross-section using aerial imagery; Determine land use zone; Assess site for social modifiers; Assess form, vigour and life expectancy of the tree.	Distinguishes between valuations for individual trees versus groups of trees. Considers land use zones. Considers public and private amenity. Modifier values can be aligned to government targets.	Does not consider additional costs, which may result in lack of maintenance resources for in-going stock. Ecosystem benefits are only partially considered.

Table information adapted from Strauss (2022).

**Table 29: Breakdown of industry tree valuation methods commonly used by Australian councils**

Valuation method and general principle	Calculation	Requirements	Strengths	Weaknesses
(Revised) Burnley  Tree costed by volume based on retail value for nursery stock and modified based on tree condition.	<b>Value = V x B x ULE x L x FV:</b> V = Volume (approximate inverted cone); B = monetary value per unit volume of retail nursery stock; ULE = Useful life expectancy modifier; L = Location modifier; FV = Form and vigour modifier.	Measure DBH, tree height and height to tree crown; Assess life expectancy, form, vigour and location against categories; Survey three nursery prices to calculate average cost per unit volume.	Simple and time-effective calculation based on set value modifiers and easily sourced stock costs. Arborist assessment is relatively simple.	Does not consider additional costs, which may result in lack of maintenance resources for in-going stock. Does not consider ecosystem services value. Low weighting for amenity loss.
City of Melbourne  Total sum of costs associated with removing and replacing the tree, and the monetary value of amenity and ecological services.	<b>Value = A + B + C + D:</b> A = Removal and replacement costs (physical removal, disposal, site preparation and stock); B = Amenity value = base value (cost per area of trunk or crown) x species modifier x aesthetics modifier x locality modifier x condition modifier'; C = Ecological services value using i-Tree <sup>1</sup> eco; D = Reinstatement costs (2 years maintenance)	Measure DBH; identify species and life span; Assess life expectancy, structure, crown form, vitality, location; Calculate ecological services value using i-Tree <sup>1</sup> and modifying for carbon and pollutants.	Comprehensively considers costs. Simple calculation using set value modifiers, and set rates can be established for some costs. Considers ecosystem services - air quality, stormwater retention, neighbouring household energy savings, carbon sequestration, property value increase.	Requires access to i-Tree eco software or establishment of bespoke ecosystem services calculator. Additional time may be required to calculate removal and replacement costs specific to the site if a set fees list is not established.
Helliwell <sup>2</sup>  Tree costed by size multiplied by a set \$ point and modified based on condition, amenity and special qualities.	<b>Value = B x S x ULE x LI x LN x LS x F x SF:</b> B = base monetary value; S = tree size modifier (crown height x average crown spread, matched to a modifier); ULE = Useful life expectancy; LI = Locational importance modifier; LN = Location neighbouring trees modifier (presence of other trees); LS = Location suitability modifier; F = Form modifier; SF = Special factors modifier	Measure tree height and height to tree crown; Assess life expectancy, form and special factors of importance; Assess location and suitability to the location.	Considers suitability of tree to location and presence of neighbouring trees. Simple calculation and assessments.	Does not consider additional costs, which may result in lack of maintenance resources for in-going stock. Does not consider ecosystem services value.
Thyer  Current average supply cost of 5L pot size modified based on actual tree size, age, condition and amenity.	<b>Value = S x A x Q x P;</b> S = size factor (using trunk cross-sectional area of the tree and dripline parameters); A = age modifier; Q = amenity modifiers (physical and social qualities); P = planting cost	Measure DBH, tree height, height to tree crown, dripline and crown width; Assess form, life expectancy, vigour and location; Determine reference price for supply and planting of a 5L advanced tree.	Simple and time-effective calculation. Parameters are relatively easy to establish. Considers the tree's amenity value.	Does not consider removal or replacement costs, which may result in lack of maintenance resources for in-going stock. Does not consider ecosystem services value. Amenity modifier affords more weight to subjectivity.

Table Information adapted from Strauss (2022) and Morrissey (2020).

<sup>1</sup> i-Tree is a peer-reviewed software tool for urban forest analysis that can be adapted for local conditions. <sup>2</sup>Helliwell Valuation information was based on a City of Melville arborist assessment.



Most valuation methodologies are designed to be as prescriptive as possible to reduce variability in valuations between observers, but invariably observer bias and variability will influence the valuation. For example, the Helliwell method requires the observer to rate a tree's importance of position in the landscape on a scale of 0 to 4 (none to great). This observation is clearly subjective and the expertise of the valuer is likely to influence the rating. Similarly, the City of Melbourne Tree Valuation protocol requires the observer to rank the aesthetics of a tree between 0.5 (contributes little to the landscape) and 1 (solitary feature specimen tree). While guidance is provided to aid the observer, invariably differences between observers will occur.

Tree valuations can range from less than \$1,000 to more than \$200,000 per tree, depending on the age, size, condition, amenity value and environmental value of the tree. Arboricultural expertise is required to assess the tree's health, structure and life expectancy and some ecological knowledge is necessary to assess the tree's ecological value. The ecological value of amenity trees is often underappreciated by arborists, who may regard non-indigenous species or trees without obvious hollows or nests as providing little environmental benefit. In reality, native and introduced fauna may use such trees extensively and their environmental benefit should not be quickly dismissed, particularly in highly developed landscapes.

The majority (68.9%) of councils reviewed did not reference tree valuations as part of their tree management frameworks (Figure 19). The 31 local governments that did reference tree valuations generally required that tree valuations be used to calculate the fees payable to local government as part of an application to remove trees on public land, generally for development purposes (e.g. the installation of a new crossover between the road and a housing development). For example, the Georges River council requires replacement trees "or an offset fee calculated using the Thyer Method of Valuation 2011 (2000b formula)".

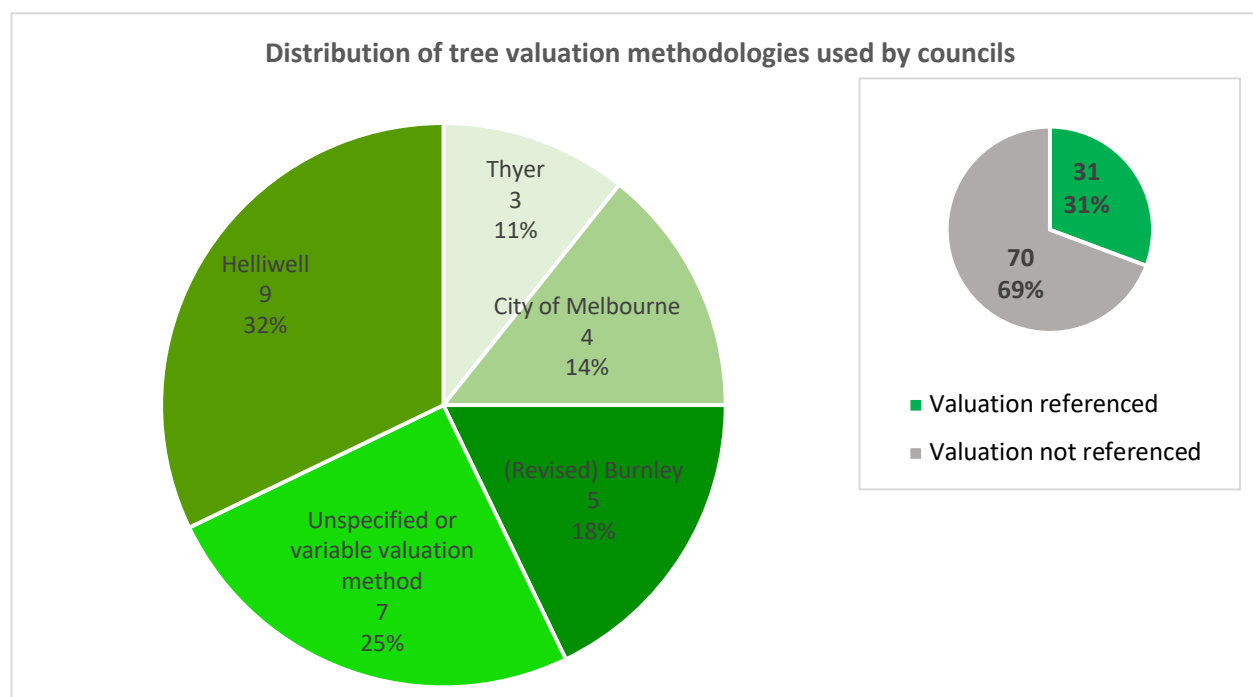


Figure 19: Councils referencing valuation approaches in their tree management frameworks (inset), and specific valuation methodologies (main figure). Most councils remained agnostic on tree valuation methodologies, and those that stipulated specific methods were not consistent.

Several local governments remained ambiguous about whether a valuation would be applied when approving developments with the potential to impact on nearby public trees, and retained a high degree of discretion. For example, the North Sydney Council document “Managing Trees on Development Sites” states:

“Conditions and/or (financial) bonds will be applied where necessary to ensure maintenance procedures are followed for the protection of trees on adjacent public land or for the successful establishment of new trees. The minimum bond amount is \$1,000 per tree and maximum bond amount will be the value of each tree calculated using an industry accepted Valuation Method (which may be several hundred thousand dollars for high retention value trees).”

Local government regulations were ambiguous regarding who is authorised to undertake a tree valuation, however they would generally be included in a report undertaken by a Consulting (Level V) Arborist employed by the proponent, or by council. Anecdotally, the application of various valuation methods (Thyer, Burnley, Helliwell, etc.) to a given tree by well-qualified assessors will yield similar results (e.g.  $\pm <20\%$ ). Nevertheless, in the case of high value trees, this could result in differences in the tens of thousands of dollars, and therefore regulation should be structured to make valuations as consistent and transparent as possible. In particular, quantitative metrics should be collected wherever possible, and all metrics contextualised to the local environment. For example, shoot extension (growth length of a typical twig in the crown per growing season) is often cited as an indication of tree health, but the length of shoot extension should be benchmarked against local growth conditions and tree species.

Attention should also be given to the financial basis of valuations. For a very limited number of tree species, it is possible to “test the market” by selling and relocating a mature tree, giving a good understanding of the tree’s value based on what someone is willing to pay for it. Most tree species, particularly large specimens, remnant trees and those with extensive root systems (e.g. eucalypts) are difficult or impossible to relocate and their value cannot be benchmarked in this manner. Such trees can only realistically be benchmarked against their replacement cost in nursery stock, adjusted size, environmental value etc. i-Tree is a popular online tool that can be used to economically quantify the functional benefits (e.g. carbon sequestration, stormwater mitigation, etc). Quantifying the intangible value of trees that have been culturally modified or are otherwise culturally significant remains very difficult and is likely to be contentious, particularly for native species that attract disparate levels of community value.

## 6. Recommendations

This study has been conducted under the premise that the South Australian government wishes to strengthen tree protection laws through regulatory reform, to assist in meeting the canopy growth targets set by the South Australian government and local governments. On this basis, the authors present a series of recommendations drawn from data collected from interstate jurisdictions (Table 30), as well as a series of recommendations based on the expertise of the authors (Table 31).

### 6.1. Recommendations drawn from regulatory review data

It is noteworthy that New South Wales, Victoria and Western Australia empower local governments to set and police local laws, and as such these states have stronger tree protection measures than those present in South Australia. A similar approach could be pursued in the South Australian context, though this is likely to lead to uneven protection levels across the metropolitan area, depending on the priorities of councils. Similar outcomes could also be achieved without invoking local government regulation through reforming the *Planning, Development and Infrastructure Act 2016* and/or its sub-legislation, and/or passing specific tree protection legislation.

**Table 30: Recommendations for the adoption of tree protection measures drawn from interstate precedent**

Recommendation	Rationale
Reduce circumference protection threshold from two metres to approximately 50cm	<p>38% of all councils reviewed used a protection threshold of &lt;60cm, and only four councils used a threshold greater than one metre. The average of all circumference protection thresholds used was 53cm.</p> <p>The current protection threshold is inadequate to protect current canopy levels and will need to be strengthened to meet canopy targets. Independence of dimensional protection thresholds is important to remove any bias against specific tree forms and/or species.</p>
Institute an independent height protection threshold of less than six metres.	<p>42% of all councils reviewed used an independent height protection threshold of less than six metres. 52% of all councils reviewed used an independent height threshold as a protection measure. Protecting taller trees ensures canopy structure is preserved, maximising the biodiversity, amenity and public health benefits of the urban forest.</p> <p>The current circumference protection threshold alone is inadequate to protect current canopy levels and additional protections can be implemented to assist in meeting canopy targets. Independence of dimensional protection thresholds is important to remove any bias against specific tree forms and/or species.</p>
Institute an independent crown spread protection threshold of ≤6m	<p>21% of councils reviewed protected trees based on crown spread. Protecting trees with larger crowns ensures canopy structure and continuity is maximised, promoting the biodiversity, amenity and public health benefits of the urban forest. This type of dimensional protection also allows illegal removal to be readily detected on the basis of current and historic aerial imagery.</p>

	<p>The current circumference protection threshold alone is inadequate to protect current canopy levels and additional protections can be implemented to assist in meeting canopy targets. Independence of dimensional protection thresholds is important to remove any bias against specific tree forms and/or species.</p>
Institute location-based protections for trees	<p>A majority of councils reviewed (53%) use location-based protections for trees to ensure vegetation in specific areas is preserved or promoted. Examples include water courses (where trees improve water quality, habitat and public amenity) and heritage zones, where extant trees embody heritage listing values. This approach would have value in the South Australian context, with State or local governments able to identify specific planning rules for declared zones. Aspects of the overlays used in the Victorian planning system may represent a model that could be usefully adopted in South Australia.</p>
Designate one or more tree registers to which nominations can be made, the entries on which should be extended full protections.	<p>A majority of the councils reviewed (52%) have constructed tree registers that are hosted by council, which allow trees on private land to be nominated and listed on the basis of a wide variety of values, in line with community expectations and interest. These registers allow trees to be protected despite not meeting other protection criteria (e.g. dimensional thresholds).</p>
Reduce proximity-based exemptions to existing tree protections to three metres of a substantial structure (house or other major building).	<p>Currently, trees that would otherwise be protected on the basis of their trunk circumference may be removed if they are within ten metres of a structure including house, shed or swimming pool, or within 20 m of a dwelling in a bushfire risk zone. Only 22% of interstate councils examined allow protected trees to be removed on the basis of their proximity to a structure alone, and those that did have such a provision generally had a far lower proximity (approximately 2-3m). A ten metre proximity is likely to effectively remove protections for many urban trees in Adelaide, given ongoing urban infill.</p> <p>In addition, other states generally stipulate that the only structures that generate a buffer to nullify tree protections are major buildings and utilities, and exclude minor structures such as sheds and swimming pools.</p>
Ensure that any assessments or works on significant trees are undertaken by a suitably qualified arborist.	<p>Interstate jurisdictions have promoted appropriate arboricultural advice by requiring such advice be provided by a minimum Level V qualified arborist, and that any works be undertaken by a person with a minimum Level III qualification in arboriculture. This approach will improve the quality and consistency of arboricultural advice and practice which is currently poorly regulated in South Australia.</p>
Provide a tree protection mechanism to promote the biodiversity of the urban forest through the protection of rare or unusual species.	<p>Climate change is predicted to increase the stressors on urban trees directly, and through the spread of existing and new pathogens. Several jurisdictions are seeking to rapidly increase the diversity of their urban forests to minimise the impact of the loss of one or more tree taxa. For example, the City of Melbourne Urban Forest Strategy aims to modify the urban forest to be composed of no more than 5% of any tree species, no more than 10% of any genus and no more than 20% of any one family</p>
Institute limits on the pruning that may be undertaken on protected trees without arboricultural advice	<p>25% of all councils reviewed, including 41% of councils that imposed conditions on tree pruning without a permit, limited the dimensions of branches that could be pruned without arboricultural advice and/or a permit from council. This approach helps ensure protected trees are not damaged by unregulated pruning, and improves public safety by ensuring pruning is undertaken safely and defects are not introduced during pruning. A 5-15cm diameter limitation was common amongst councils using this protection.</p>
Stipulate all pruning of protected trees, including clearance from public utilities, must be undertaken in accordance with <i>AS4373: Pruning of Amenity Trees</i>	<p>34% of councils that imposed conditions on tree pruning without a permit stipulated that pruning should be undertaken in accordance with the Australian standard. Unregulated pruning has the capacity to decrease tree life expectancy and promote unregulated growth in many species. It is important to note that AS4373 includes root as well as crown pruning provisions.</p>

Provide a mechanism for local governments to charge a fee for assessment of tree works applications.	44% of councils reviewed charged a fee for the assessment of applications for tree works. This provides an incentive for residents to ensure their applications are likely to supported (i.e. follow current arboricultural standards) and provides a revenue stream for councils to reinvest in urban forestry initiatives.
Provide a mechanism for local governments to erect structures where protected trees have been vandalised or illegally removed.	Several councils interstate have experienced tree owners or other parties vandalising (excessively pruning, poisoning, etc) or removing protected trees in order to facilitate development, improve property views or other personal interests. Giving councils the power to preserve dead trees and/or erect signs or other structures to highlight such vandalism and remove any advantage conveyed by such illegal tree damage has the potential to obviate the incentive to vandalise protected trees.
Provide a mechanism for local governments to require bonds be paid to protect Regulated and Significant trees on development sites	Several interstate councils have implemented tree bonds to ensure development proponents have a strong financial interest in protecting trees from deliberate or inadvertent adverse development impacts.
Review the penalties available for local governments to police protected tree provisions	Currently, penalties under the <i>Planning, Development and Infrastructure Act 2016</i> are broadly consistent with state-level protections interstate. However, a number of local governments interstate have the power to issue on-the-spot fines for breaches of local laws which may be more effective in deterring illegal tree interference than court prosecution, particularly for lower-level offences.

## 6.2. Recommendations based on expertise

On the basis of the authors' expertise and familiarity with the South Australian context, we present the following recommendations (Table 31) that are not necessarily drawn from similar provisions interstate, but represent novel regulatory approaches to promote urban canopy retention and growth in South Australia. These recommendations represent novel approaches to prioritising tree protection and it is recognised that their feasibility will need to be considered in the context of a broader review of State planning rules, community attitudes and government priorities.

**Table 31: Novel author recommendations**

Recommendation	Rationale
A <b>fee</b> and <b>bond</b> be instituted to apply for any works with the potential to impact a Regulated, or Significant tree.	<i>A base fee to undertake works with the potential to impact protected trees provides an incentive to design developments to avoid or minimise impacts. A bond provides an incentive to avoid damage to trees and employ appropriate precautions (arborists, AS4970 compliance, etc).</i>
For protected trees on private land, <b>bond</b> to have a floor value of \$1000 (indexed) per tree, plus up to 100% of the value of the tree (calculated using stipulated methodology) plus replacement cost (cost to remove existing tree, purchase, plant and establish a similar tree (i.e. cost within first three years). "Similar tree" to be defined by a government authority in line with a council or State Urban Forest	<i>Setting an indexed floor value ensures the disincentive for interfering with protected trees remains current with inflation. Adding the tree value and replacement cost recognises the lost amenity for the community and could mean that individual tree bonds could exceed \$100,000 for large trees (though this is likely to generally be much lower for most street trees). Providing a high cost ensures the community become aware of the intrinsic value of the trees and afford them protection.</i>

Strategy and may represent a tree of a similar age/size and the same or a different species.	
For protected trees on <b>private</b> land, <b>bond</b> to have a floor value of \$1000 per tree (calculated using stipulated methodology), plus up to 100% of the value of the tree <b>and</b> <b>land area</b> (area within crown extent). Land value to be calculated using council rates and post any rezoning or subdivision.	<i>Setting an indexed floor value ensures the disincentive for interfering with protected trees remains current. Adding the tree value and replacement cost recognises the lost amenity for the community and could mean that individual tree bonds could exceed \$100,000 for large trees. Adding the land cost (noting that council rates are generally below market rates) provides an additional disincentive to remove trees as a default, as the removal of the tree will cost an equivalent to the “recovery” of land otherwise “lost” to development. Providing a high cost ensures the community become aware of the intrinsic value of the trees and afford them protection.</i>
Value of tree to be calculated using a methodology that has been developed or optimised for Adelaide conditions and tree species (suggest upcoming Minimum Industry Standard MIS506: <i>Industry guidance on tree valuation methodologies, practices and standards</i> to be used as a starting point) and used across greater Adelaide area. Methodology to be developed or endorsed by the South Australian government.	<i>Stipulating a single valuation methodology will ensure all arborists are working from the same standard and avoids “methodology shopping” whereby developers select the method that will minimise tree value. Using a single methodology allows optimisation for South Australian tree species, growth conditions, etc and provides an ongoing mechanism for that methodology to be adjusted by government to reflect community expectations.</i>
Tree valuations to be undertaken by a Level V arborist who has undertaken a training course in the state-endorsed valuation methodology indicated above. Register of qualified valuers to be maintained by appropriate industry body or SA govt.	<i>Tree valuations require a high level of expertise to assess tree structure, ecological value etc. “Arborist” is not a protected term, and some operators who describe themselves as arborists have limited training, a problem which has been identified by peak bodies. Most trained arborists are strong on structural assessment but not consistently trained in ecological value or visual amenity, leading to inconsistency in assessments of tree values. Developing a training program and register of arborists for valuations would ensure a standard knowledge base that can readily be updated as needed, as well as an easy reference for local governments to identify appropriately qualified tree valuers.</i>
Tree valuations can be disputed by a proponent or council by commissioning a second appropriately qualified valuer. Final decision to be made by a relevant authority, who may commission a third independent valuer if required.	<i>Recognises that valuation necessarily incorporates a degree of opinion and should be able to be disputed. Ultimate decision-making power should rest with the relevant authority, with arbitration by the Environment, Resources and Development Court if necessary.</i>
Level V arborist to inspect bonded trees for damage, and if necessary, undertake a new valuation using the valuation accepted in the development application as a benchmark. Any damage reducing the value of the tree will be penalised through the forfeiture of that amount. The inspecting arborist may recommend deferral of inspection by up to a year if they suspect impacts are not yet detectable.	<i>Consulting arborist has expertise to produce report noting any negative impacts to the tree. Some impacts (e.g. shading from new buildings, disturbance of roots, etc.) may take several months to become apparent, so the Consulting arborist should have the power to defer final inspection to allow a full assessment to be made.</i>
In the case of works impacting the structural root zone or >25% of the tree protection zone, including soil compaction, grade change or interference with roots, proponent remains liable for tree damage for a period of one year following work completion.	<i>As above.</i>



Tree to be inspected by council arborist one year after works completed, if tree appears to be in decline, clock extended for a maximum of three years.

Fees and forfeited bonds are to be collected by a relevant authority and held in a dedicated fund to be used for the development of urban canopy within the local area, including to fund the purchase of land for tree planting

*Recognises that councils may have differing needs in the maintenance of their urban forests. Uses could include planting trees on public land, making grants for arboricultural care of private trees, etc. It is recognised that some councils lack enough land to plant trees to offset current levels of canopy loss, particularly in a homogenous way across their suburbs. The funding of land to support plantings should therefore be explicitly supported, on the condition that tree planting remains the primary purpose of such acquisitions.*

It is recognised that these recommendations will create an environment whereby the cost to damage or remove Regulated or Significant trees is significantly more expensive than is currently the case. This is deliberate, and will create a culture in which retention of trees remains the default, rather than the current default of removal. Additional benefits include:

- Increasing the likelihood of meeting tree canopy targets which have been set to meet various strategic objectives including climate change hazard mitigation, community health and well-being benefits, etc.
- Improving community understanding of the value of trees in terms of amenity, ecological, environmental and health value, which has been highlighted in a number of studies including the *30-Year Plan for Greater Adelaide* and the *Green Adelaide Urban Greening Strategy* documents. This is particularly important given recent recognition that canopy retention and growth on private land will need to be increased in order to meet the canopy growth targets within the 30-Year Plan and several local government plans.
- Assisting a culture-shift in the management of green assets by industry (developers and designers) and community (property owners), whereby incentives are in place for trees to be built into designs at project outset.
- Providing a revenue base for local and state government to plant new trees to offset losses of canopy on private land, including through the acquisition land to plant trees.
- Providing a strong financial pressure for the property development and construction industries to design developments to avoid or minimise impacts on trees.
- Provide an environment where trees become an important element of development risk management, in line with occupational health and safety, building standards etc. This will effectively require developers to meet tree protection requirements as part of their insurance, providing a strong incentive to achieve compliance.
- Stimulate the arboricultural sector to upskill its members in understanding the protection of trees on development sites in the South Australian context; maintain professional registrations for its members; and develop a culture of ongoing education through courses and accreditation in valuation, tree ecology, etc.

*Note: The authors would like to emphasize the importance of continuing investigation, and that the datasets and reference database associated with this project are available.*



## 7. Resources

Resources for datasets used to select jurisdictions for this review:

- Australian Bureau of Statistics (2016). *1270.0.55.004 - Australian Statistical Geography Standard (ASGS): Volume 4 - Significant Urban Areas, Urban Centres and Localities, Section of State*. Available at: <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/1270.0.55.004July%202016?OpenDocument>
- Australian Bureau of Statistics (2021). *Digital boundary files – Australian Statistical Geography Standard (ASGS) Edition 3*. Available at: <https://www.abs.gov.au/statistics/standards/australian-statistical-geography-standard-asgs-edition-3/jul2021-jun2026/access-and-downloads/digital-boundary-files>

Resources used to obtain tree valuation methodology information:

- Strauss, S. (2022) *Active Green Services: DRAFT: Tree Valuation: Industry Guidance on Tree Valuation Methodologies, Practices and Standards – MIS506*.
- Morrissey, A. (2020) *Arboricultural Assessment & Helliwell Tree Valuation for the City of Melville*. Available at: <https://www.melvillecity.com.au/our-city/our-council/agendas-and-minutes/ordinary-meeting-of-the-council/2020/june/agenda-ordinary-meeting-of-council-16-june-2020/3855-arboriculture-advice-44-44a-polglass-w>

Aside from council webpages and documentation contained within the reference database, we present the following list of resources used to obtain information regarding state-level regulations.

### New South Wales

- NSW Government – Planning & Environment (2017). *State Environmental Planning Policy (Vegetation) – Explanation of Intended Effect*. Available at: <https://apo.org.au/sites/default/files/resource-files/2017-05/apo-nid90396.pdf>
- NSW Government (2022). *Environment zones*. Available at: <https://www.planning.nsw.gov.au/Policy-and-Legislation/Environment-and-Heritage/Environmental-zones>
- NSW Government – NSW Rural Fire Service (n.d.). *10/50 vegetation clearing*. Available at: <https://www.rfs.nsw.gov.au/plan-and-prepare/1050-vegetation-clearing>

## Victoria

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# 8. Appendices

## Appendix 1: Project Brief – Open Space and Trees Project

### *Project Scope*

The scope of the Research Project (Part 1A and 1B) Brief is as follows:

1. *Part 1A* - Undertake a detailed peer review of the Comparison of Australia's Tree Laws from the Conservation Council SA at **Attachment 2** (the Conservation Council Report). This should include:
  - consideration and comparison of the regulatory provisions in each local government area noted in **Attachment 2**, and consideration of additional local government areas as necessary to validate this as an accurate cross-representation of tree regulations in Australia; and
  - comparison of the regulatory position in those other jurisdictions against the regulatory position in South Australia, including:
    - Definition of Protected (Regulated or Significant) Trees (which may include reference to trunk circumference, tree height, tree canopy width or size).
    - Exemptions to the definition of Protected (Regulated or Significant) Trees (which may include reference to tree species, location or distance of tree from dwelling or swimming pool, other structure or fence, or any other relevant exemptions).
    - Pruning requirements (which should include details of what regulations apply to pruning a Protected (Regulated or Significant) tree, what (if any) qualifications are required to undertake pruning works).
    - Use of Significant Tree Registers (including what regulatory controls apply when a tree is listed on the register, in comparison with what controls apply with Protected, Regulated or Significant trees more generally).
    - Process for assessment of applications to remove Protected Trees (including what entity is responsible for assessment, what criteria or policy is applied in such assessment, and (if sufficient data is available) the processing times for such applications).
    - Penalties for removal or tree-damaging works to a Protected (Regulated or Significant) Tree without development approval.
2. *Part 1B* - Undertake an analysis and comparison of:
  - The various tree valuation methods utilised across Australia, or other fee structures utilised for contributions or payments resulting from removal of Protected Trees;
  - How these tree valuation methods or fees are administered and applied and by whom (for example, is expert evidence required to confirm the value of a tree).
  - How tree valuation models or fees are utilised in a regulatory sense (for example in the calculation of penalties, in the calculation of off-set contributions or tree replacement costs).

## Appendix 2: Victorian Planning Provisions Exemptions Example

### (VPP) 52.17 NATIVE VEGETATION

#### Permit requirement

A permit is required to remove, destroy or lop native vegetation, including dead native vegetation. This does not apply:

- If the table to Clause 52.17-7 specifically states that a permit is not required.

#### 52.17-7 Table of Exemptions

The requirement to obtain a permit does not apply to:	
<b>Conservation work</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to enable the carrying out of conservation work: which provides an overall improvement for biodiversity; and with written agreement of the Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i> ).
<b>Crown land</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to manage Crown land: by or on behalf of the Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i> ), the Great Ocean Road Coast and Parks Authority or Parks Victoria, and in accordance with the <i>Procedure for the removal, destruction or lopping of native vegetation on Crown land</i> ; or with written permission from the Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i> ).
<b>Dead native vegetation</b>	<b>Native vegetation that is dead. This exemption does not apply to a standing dead tree with a trunk diameter of 40 centimetres or more at a height of 1.3 metres above ground level.</b>
<b>Emergency works</b>	Native vegetation that is to be removed, destroyed, or lopped: in an emergency by, or on behalf of, a public authority or municipal council to create an emergency access associated with emergency works; or where it presents an immediate risk of personal injury or damage to property. Only that part of the vegetation that presents the immediate risk may be removed, destroyed or lopped under this exemption.
<b>Existing buildings</b>	Native vegetation that is to be removed, destroyed, or lopped to the minimum extent necessary to enable the use or maintenance of a building constructed in accordance with a planning or building permit issued before 15 September 2008. This exemption does not apply to: the operation or maintenance of a fence; or native vegetation located more than 10 metres measured from the outermost point of the building.
<b>Existing buildings and works in the Farming Zone and Rural Activity Zone</b>	Native vegetation that is to be removed, destroyed, or lopped to the minimum extent necessary to enable the use or maintenance of an existing building or works used for Agricultural production, including a dam, utility service, bore, horticultural trellising and accessway in the Farming Zone or the Rural Activity Zone. This exemption does not apply to: the use or maintenance of a Dwelling; or the operation or maintenance of a fence; or native vegetation located more than 10 metres measured from the outermost point of the building or works.
<b>Extractive industry</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to enable the carrying out of extractive industry in accordance with a work plan approved under the <i>Mineral Resources (Sustainable Development) Act 1990</i> and authorised by a work authority under that Act.
<b>Fences</b>	Native vegetation that is to be removed, destroyed, or lopped to the minimum extent necessary to enable: the operation or maintenance of an existing fence; or the construction of a boundary fence between properties in different ownership. The clearing along both sides of the fence when combined must not exceed 4 metres in width, except where land has already been cleared 4 metres or more along one side of the fence, then up to 1 metre can be cleared along the other side of the fence.



<b>Fire protection</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to carry out any of the following fire protection activities: fire fighting; planned burning; making or maintenance of a fuelbreak or firefighting access track (or any combination thereof) that does not exceed a combined width of 6 metres; making a strategic fuelbreak up to 40 metres wide by, or on behalf of, a public authority in accordance with a strategic fuelbreak plan approved by the Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i> ); in accordance with a fire prevention notice issued under either: Section 65 of the <i>Forests Act 1958</i> ; or Section 41 of the <i>Country Fire Authority Act 1958</i> ; keeping native vegetation clear of, or minimising the risk of bushfire ignition from, an electric line in accordance with a code of practice prepared under Part 8 of the <i>Electricity Safety Act 1998</i> ; minimising the risk to life and property from bushfire on a roadside of a public road managed by the relevant responsible road authority, and carried out by or on behalf of that authority, in accordance with the written agreement of the Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i> ). In this exemption, roadside, public road and responsible road authority have the same meanings as in section 3 of the <i>Road Management Act 2004</i> . <i>Note: Additional permit exemptions for bushfire protection are provided at Clause 52.12.</i>
<b>Geothermal energy exploration and extraction</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary in accordance with an operation plan approved under the <i>Geothermal Energy Resources Act 2005</i> .
<b>Grasses</b>	Native grass that is to be mowed or slashed for maintenance only, provided that the grass is: located within a lawn, garden or other landscaped area; or maintained at a height of at least 10 centimetres above ground level.
<b>Grazing</b>	Native vegetation that is to be removed, destroyed or lopped by domestic stock grazing on: freehold land; or Crown land in accordance with a license, permit or lease granted under applicable legislation.
<b>Greenhouse gas sequestration and exploration</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary in accordance with an operation plan approved under the <i>Greenhouse Gas Geological Sequestration Act 2008</i> .
<b>Harvesting for timber production – naturally established native vegetation</b>	Naturally established native vegetation that is to be removed, destroyed or lopped to enable timber harvesting operations and associated activities that are in accordance with the <i>Code of Practice for Timber Production 2014</i> and are: undertaken on public land under a licence or permit issued under section 52 of the <i>Forests Act 1958</i> ; or authorised in accordance with Part 5 of the <i>Sustainable Forests (Timber) Act 2004</i> .
<b>Land management or directions notice</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to comply with a land management notice or directions notice served under the <i>Catchment and Land Protection Act 1994</i> .
<b>Land use conditions</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to comply with a land use condition served under the <i>Catchment and Land Protection Act 1994</i> .
<b>Lopping and pruning for maintenance</b>	<b>Lopping or pruning native vegetation, for maintenance only, provided no more than 1/3 of the foliage of each individual plant is lopped or pruned. This exemption does not apply to: the pruning or lopping of the trunk of a native tree; or native vegetation on a roadside or railway reservation.</b>
<b>Mineral exploration and extraction</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary by the holder of an exploration, mining, prospecting, or retention license issued under the <i>Mineral Resources (Sustainable Development) Act 1990</i> : that is low impact exploration within the meaning of Schedule 4A of the <i>Mineral Resources (Sustainable Development) Act 1990</i> ; or in accordance with a work plan approved under Part 3 of the <i>Mineral Resources (Sustainable Development) Act 1990</i> . <i>Note: Schedule 4A of the Mineral Resources (Sustainable Development) Act 1990 specifies limits on the extent of native vegetation that may be removed as part of low impact exploration.</i>
<b>New buildings and works in the Farming Zone and Rural Activity Zone</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to enable the construction of a building or works used for Agricultural production, including a dam, utility service, bore and accessway, in the Farming Zone or the Rural Activity Zone. <b>The maximum extent of native vegetation that may be removed, destroyed or lopped under this exemption on contiguous land in the same ownership in a five year period must not exceed any of the following: 1 hectare of native vegetation which does not include a tree; 15 native trees</b>



	<b>with a trunk diameter of less than 40 centimetres at a height of 1.3 metres above ground level; 5 native trees with a trunk diameter of 40 centimetres or more at a height of 1.3 metres above ground level.</b> This exemption does not apply to the construction or operation of a pivot irrigation system or horticultural trellising.
<b>New dwellings in the Farming Zone and Rural Activity Zone</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to enable the construction of a dwelling in the Farming Zone or Rural Activity Zone. The maximum extent of native vegetation removed, destroyed or lopped under this exemption on contiguous land in the same ownership in a five year period <b>must not exceed any of the following: 300 square metres of native vegetation which does not include a tree; 5 native trees with a trunk diameter of less than 40 centimetres at a height of 1.3 metres above ground level; 1 native tree with a trunk diameter of 40 centimetres or more at a height of 1.3 metres above ground level.</b> This exemption does not apply native vegetation removed, destroyed or lopped to enable the construction of a swimming pool, tennis court or horse ménage.
<b>Personal use</b>	<b>Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to obtain reasonable amounts of wood for personal use by the owner or lawful occupier of the land.</b> For the purpose of this exemption personal use means uses such as heating and cooking, building and fence construction on land, and hobbies such as arts and craft. <b>This exemption does not apply to: contiguous land in one ownership that has an area of less than 10 hectares; the removal, destruction or lopping of native vegetation by means other than cutting or chopping; or a standing native tree (including a dead tree) with a trunk diameter of 40 centimetres or more at a height of 1.3 metres above ground level.</b>
<b>Pest animal burrows</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to enable the removal of pest animal burrows in the Farming Zone or the Rural Activity Zone: in accordance with written agreement of an officer of the department responsible for administering the <i>Flora and Fauna Guarantee Act 1988</i> ; or provided the maximum extent of native vegetation removed, destroyed or lopped on contiguous land in the same ownership in a five year period does not exceed any of the following: <b>1 hectare of native vegetation which does not include a tree; or 15 native trees with a trunk diameter of less than 20 centimetres at a height of 1.3 metres above ground level.</b>
<b>Planted vegetation</b>	<b>Native vegetation that is to be removed, destroyed or lopped that was either planted or grown as a result of direct seeding.</b> This exemption does not apply to native vegetation planted or managed with public funding for the purpose of land protection or enhancing biodiversity unless the removal, destruction or lopping of the native vegetation is in accordance with written permission of the agency (or its successor) that provided the funding.
<b>Railways</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to maintain the safe and efficient function of an existing railway, or railway access road, in accordance with the written agreement of the Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i> ).
<b>Regrowth</b>	<b>Native vegetation that is to be removed, destroyed or lopped that has naturally established or regenerated on land lawfully cleared of naturally established native vegetation, and is less than 10 years old; or bracken (<i>Pteridium esculentum</i>); or within the boundary of a timber production plantation, as indicated on a Plantation Development Notice or other documented record, and has established after the plantation; or less than ten years old at the time of a property vegetation plan being signed by the Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i>), and is:</b> shown on that plan as being 'certified regrowth'; and on land that is to be used or maintained for cultivation or pasture during the term of that plan. This exemption does not apply to land where native vegetation has been destroyed or otherwise damaged as a result of flood, fire or other natural disaster.
<b>Road safety</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary by and on behalf of a public authority or municipal council to maintain the safe and efficient function of an existing road in accordance with the written agreement of the Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i> ).
<b>Site area</b>	<b>Native vegetation that is to be removed, destroyed or lopped on land, together with all contiguous land in one ownership, which has an area of less than 0.4 hectares.</b> This exemption does not apply to native vegetation on a roadside or rail reservation.

<b>Stock movements on roads</b>	Native vegetation that is to be removed, or destroyed by stock being moved along a road. This exemption does not apply to grazing as a result of holding stock in a temporary fence (including an electric fence) on a roadside for the purpose of feeding.
<b>Stone exploration</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to enable the carrying out of Stone exploration. The maximum extent of native vegetation that may be removed, destroyed or lopped under this exemption on contiguous land in the same ownership in a five year period must not exceed any of the following: <b>1 hectare of native vegetation which does not include a tree; 15 native trees with a trunk diameter of less than 40 centimetres at a height of 1.3 metres above ground level; 5 native trees with a trunk diameter of 40 centimetres or more at a height of 1.3 metres above ground level.</b> This exemption does not apply to costeaning and bulk sampling activities.
<b>Surveying</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary by, or on behalf of, a licenced surveyor (within the meaning of section 3 of the <i>Surveying Act 2004</i> ) using hand-held tools to establish a sightline for the measurement of land.
<b>Traditional owners</b>	Native vegetation that is to be removed, destroyed or lopped by a person acting under, and in accordance with: a natural resource agreement under Part 6 of the <i>Traditional Owner Settlement Act 2010</i> ; or an authorisation order made under sections 82 or 84 of the <i>Traditional Owner Settlement Act 2010</i> as those sections were in force immediately before the commencement of section 24 of the <i>Traditional Owner Settlement Amendment Act</i> in 2016 (1 May 2017).
<b>Tram stops</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary by or on behalf of the Head, Transport for Victoria to construct a tram stop, including a tram stop shelter.
<b>Transport land</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary by or on behalf of the Head, Transport for Victoria on land in a Transport Zone, or land in a Public Acquisition Overlay if the Head, Transport for Victoria is the acquiring authority, to construct or maintain transport system infrastructure, in accordance with the written agreement of the Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i> ).
<b>Utility installations</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary: to maintain the safe and efficient function a Minor utility installation; or by or on behalf of a utility service provider to maintain or construct a utility installation in accordance with the written agreement of the Secretary to the Department of Environment, Land, Water and Planning (as constituted under Part 2 of the <i>Conservation, Forests and Lands Act 1987</i> ).
<b>Vehicle access from public roads</b>	Native vegetation that is to be removed, destroyed, or lopped to the minimum extent necessary to enable the construction or maintenance of a vehicle access across a road reserve from a property boundary to a public road. This exemption only applies to properties which share a common boundary with the road reserve, and the total width of clearing must not exceed 6 metres. This exemption does not apply where there is a practical opportunity to site the accessway to avoid the removal, destruction or lopping of native vegetation. In this exemption, roadside and public road have the same meanings as in section 3 of the <i>Road Management Act 2004</i> . <i>Note: Under the Road Management Act 2004 the written consent of the coordinating road authority is required to conduct any works, including removing a tree or other vegetation, in, on, under or over a road.</i>
<b>Weeds</b>	Native vegetation that is to be removed, destroyed or lopped to the minimum extent necessary to enable the removal or destruction of a weed listed in the schedule to Clause 52.17. The maximum extent of native vegetation that may be removed, destroyed or lopped under this exemption on contiguous land in the same ownership in a five year period must not exceed any of the following: <b>1 hectare of native vegetation which does not include a tree; 15 native trees with a trunk diameter of less than 20 centimetres at a height of 1.3 metres above ground level.</b>

## Appendix 3: List of location-based protections

Council	Location-based protection detail
<b>New South Wales</b>	
Blue Mountains City Council	Heritage Conservation Area
Camden Council	Heritage Conservation Area
Canterbury Bankstown Council	Terrestrial Biodiversity Map - Bankstown Local Environmental Plan 2015; Heritage properties; Foreshore area - Bankstown Local Environment Plan 2015
City of Canada Bay Council	Heritage Conservation Area
Council of the City of Parramatta	Heritage Conservation Area
Hawkesbury City Council	Heritage Conservation Area; Within 40m of an adjoining watercourse
Liverpool City Council	Heritage Conservation Area
Randwick City Council	Heritage Conservation Area
Strathfield Municipal Council	Heritage Conservation Area
Sutherland Shire Council	Heritage Conservation Area; Within 4m of a Watercourse; Slopes > 18 degrees
Council of the Municipality of Hunters Hill	Properties adjoining Buffalo Creek Reserve or Boronia Park Reserve; lands defined by Hunter's Hill LEP 2012
The Council of the Shire of Hornsby	Heritage Conservation Area
Willoughby City Council	Heritage Conservation Area; defined wildlife corridor
Wollondilly Shire Council	Within a watercourse; Biobanking Sites; Slopes > 15 degrees
Woollahra Municipal Council	Heritage Conservation Area
Mosman Municipal Council	Heritage Conservation Area
Penrith City Council	Heritage Conservation Area; Environmental Conservation Zone (LEP) or on Natural Resources Sensitive Land
North Sydney Council	Heritage land
Northern Beaches Council	Heritage location

Council	Location-based protection detail
<b>Victoria</b>	
Banyule City Council	ESO; Yarra River, Plenty River and Darebin Creek; Macleod Red Gum Area; Sites of Botanical, Zoological and Habitat Significance; Street Views Estate; VPO; Plenty River East Area; Loyola Seminary Precinct; Eaglemont, Ivanhoe East and Ivanhoe Area; Elliston Estate; SLO; Yarra River Corridor Environs; HO; PAO
Bayside City Council	ESO; VPO; Coastal Areas; Bushland Areas; Beaumaris and Black Rock Native Vegetation Areas; SLO; Coral Avenue and Point Avenue, Beaumaris; HO; EMO
Boroondara City Council	Properties over 400m <sup>2</sup> ; ESO; Beckett Park Environmental Significance Area; Willsmere Vegetation Protection Area; VPO; Kew Residential Services Significant Vegetation Protection; SLO; Yarra River Corridor Environs; HO; PAO
Brimbank City Council	ESO; Baldwin Ave/Solomon Heights Environmental Significance Area; Kororoit Creek Corridor Protection; Maribyrnong River Valley and Environs; Sites of Known Biological Significance; SLO; Old Caldher Highway (Between Green Gully Road and Maribyrnong River), Keilor Recreation Reserve and The Lagoon Reserve; Sunshine Municipal Office Garden; HO; PAO
Cardinia Shire Council	ESO; Northern Hills; Western Port Coastal Wetland Areas; Other Significant Sites; Pakenham North Ridge; Cardinia Road Precinct Structure Plan - Areas of Environmental Significance; VPO; Low Density Residential; Hills Townships; Vegetation Control for Emerald Town Centre; SLO; Puffing Billy Tourist Railway Scenic Corridor; Western Port; Lang Lang/Heath Hill; Menzies Creek Valley; Cockatoo Creek; Cardinia Road Precinct; Stokes Croft Planting, Emerald; HO; EMO; NVPPSc
Casey City Council	ESO; Coastal Environs; Cranbourne South Conservation Area; Cranbourne Gardens; Cranbourne Gardens Environs (Settlers Run and Botanic Ridge Estates); Urban Conservation Area - within 10m of a building; VPO; Brookland Greens - Native Vegetation; Cardinia Creek Parklands Environs; SLO; Berwick Township and Environs; HO; BMO; PAO; NVPPSc
Darebin City Council	ESO; Merri Creek and Environs; Darebin Creek and Environs; VPO; Former Kingsbury Centre - Significant Vegetation; Mount Cooper, Bundoora - Significant Vegetation; Springthorpe - Significant Vegetation; Lancaster Gate - Significant Vegetation; HO; PAO
Frankston City Council	ESO; Native Vegetation and Fauna Habitat; SLO; Langwarrin Hinterland; Frankston South; Frankston South - Sweetwater Creek Environs; Former G.K. Tucker Brotherhood of St. Laurence Settlement; Frankston South - Sweetwater Creek Fringe Area; EMO
Glen Eira City Council	VPO; Kitmont Street Reserve and Southern End of Boyd Park in the Outer Circle Railway Linear Park, Murrumbeena; SLO; 21 Omama Road, Murrumbeena; HO; NCO; Boyd Park Area, Murrumbeena; PAO
Greater Dandenong City Council	ESO; Greens Road Plains Grassland Area; Abbots Road Vegetation Protection Area; Eastern Treatment Plant BufferArea; VPO; Native Vegetation in the Main Portion of the Green Wedge; HO; PAO; NVPPSc
Hobsons Bay City Council	ESO; Kororoit Creek Corridor Protection; HO; PAO
Hume City Council	ESO; Rural Waterways and Environs; Merri Creek and Moonee Ponds Creek and Environs; Evans Street Grassland; Northern Railway Reservation; Mount Ridley Grassland and Woodland; Cooper Street Grassland; Western Plains Grassland and Grey Box Grassy Woodland; Amaroo Conservation Reserve and Amaroo South Conservation Reserve; Greenvale Reservoir Catchment Protection; Rural Conservation Area; River Red Gum and Grassy Woodlands; VPO; Grassy Woodlands in Vicinity of Spavin Drive, Sunbury; Burke Hill Shrubland; Kalkallo Grasslands; Greenvale Rise - River Redgums; HO; PAO; NVPPSc
Kingston City Council	ESO; VPO; Indigenous Vegetation Protection Area; HO; NCO; Hillston Road, Moorabbin Precinct - within the front setback of properties; PAO

Council	Location-based protection detail
Knox City Council	ESO; Sites of Biological Significance; Dandenong Ranges Buffer; VPO; Remnant Overstorey Vegetation - 5m High or More; Remnant Overstorey Vegetation 8m in Height or More; SLO; Lysterfield Valley and Lysterfield Hills Rural Landscape; Dandenong Foothills - Foothills Backdrop and Ridgeline Area; Dandenong Foothills - Lower Slope and Valley Area; The Basin Rural Landscape; Lysterfield Urban/Rural Transition and Lysterfield Valley Contributory Area; Dandenong Foothills - Former Fern Tree Gully Quarry; HO; PAO
Manningham City Council	ESO; Sites of Biological Significance; Buffer Conservation Areas Supporting Sites of Biological Significance; Sites of Biological Significance and Buffer Conservation Areas in Low Density Residential Areas; Environmentally Significant Urban Areas; VPO; Templestowe Vegetation Protection Area; 131 High Street, Doncaster; SLO; Significant Low Density Residential Landscape Areas; Yarra (Birrurung) River Corridor Environs; The Doman Significant Landscape Area; Low Density Residential Significant Pine and Cypress Tree Theme Areas; Donvale/Doncaster East, Ruffey Lake Park and Zerbes Reserve Pine and Cypress Tree Areas; Mullum Valley Estate; HO; EMO; PAO
Maribyrnong City Council	ESO; HO; NCO; PAO
Maroondah City Council	VPO; Sites of Biological Significance; SLO; Ridgeline Protection Area; Maroondah Canopy Tree Protection Area; HO; NCO; PAO
Melbourne City Council	ESO; HO; PAO
Mitchell Shire Council	ESO; Mt Piper and Surrounds; Eppalock and Mollison Creek (Pyalong) Special Water Supply Catchment Areas; Watercourse Conservation; Rural Conservation Area; Urban Conservation Area; VPO; Roadside and Corridor Protection; Freeway Environs Protection; SLO; Kilmore Historic Outdoor Recreation Precinct; Tallarook Ranges; Kilmore Creek Environs; HO; EMO; SMO; PAO; NVPPSc
Monash City Council	VPO; Tree Protection Area; HO; NCO; PAO
Moonee Valley City Council	ESO; Napier Park and Strathnaver Reserve Grasslands; Upper Maribyrnong River, Maribyrnong River Escarpment, Steele Creek Escarpment; HO; NCO; PAO
Moreland City Council	ESO; Merri Creek and Environs (Includes Edgars, Merlynston and Campbellfield Creeks); Moonee Ponds Creek and Environs (Includes Melville Creek); HO; EMO; PAO
Mornington Peninsula Shire Council	ESO; VPO; SLO; HO; PAO; EMO
Nillumbik Shire Council	ESO; Sites of Faunal and Habitat Significance; Plenty River Environs; Waterways; SLO; Eltham Town Centre; Bush and Semi-Bush Residential Areas; Bush Garden Character; Garden Court Character; Eltham Central Character; Diamond Creek Major Activity Centre; Eltham Gateway; Yarra (Birrurung) River Corridor Environs; HO; PAO
Port Phillip City Council	ESO; Light Rail Remnant Indigenous Vegetation; Ngargee Tree; West Beach Natural History Reserve; VPO; HO; NCO; PAO
Stonnington City Council	SLO; Yarra (Birrurung) River Corridor Environs; HO; NCO; Hedgeley Dene Precinct; PAO
Whitehorse City Council	ESO; 131-173 Central Road, Nunawading; 15 Virgillia Street, Blackburn North; VPO; SLO; Blackburn Area 1; Blackburn Area 2; Walker Estate; Blackburn Early Settlement Neighbourhood Character - Vegetation Retention; Nominated Large Sites: 1 Lake Road, Blackburn, 57-67 Central Road, Blackburn and 131-173 Central Road, Nunawading; Yarran Dheran, Somers Trail, Collina Dell and Menin Road; Vermont (Glenburnie Road and Environs); Vermont (South of Canterbury Road); HO; NCO; Neighbourhood Character Areas; PAO

Whittlesea City Council	ESO; River Redgum Grassy Woodland Native Habitat Area; Craigieburn Grasslands; Merri Creek and Environs; Rural Conservation Area; River Red-Gum and Grassy Woodlands; Urban Conservation Area; VPO; Significant Vegetation (River Redgum Grassy Woodland); Significant Vegetation (River Redgum Grassy Woodland); SLO; Whittlesea Hills; Quarry Hills; HO; PAO; NVPPSc
Wyndham City Council	ESO; Rural Conservation Area; Grasslands within the Weeribee Plains Hinterland; Western Grassland Reserves; Kororoit Creek Corridor Protection; VPO; Angliss Estate Grassland Reserve; SLO; HO; PAO; NVPPSc
Yarra City Council	ESO; Merri Creek and Environs; Darebin Creek and Environs; SLO; Yarra (Birraring) River Corridor Environs; HO; PAO
Yarra Ranges Council	ESO; Sites of Botanical Significance / Sites of Zoological Significance; SLO; Yarra Ranges Significant Landscapes; Foothills and Rural Townships; Dandenong Ranges and Upper Yarra Valley; HO; EMO; PAO
Melton City Council	ESO; Remnant Woodlands, Open Forests and Grasslands; Wetlands, Waterways and Riparian Strips; Western Grassland Reserves; Grasslands within the Weeribee Plains Hinterland; Rural Conservation Area; Rural Conservation Area; SLO; HO; PAO; NVPPSc

Council	Location-based protection detail
<b>Western Australia</b>	
City of Armadale	Commercial Zone; Special Control areas; Rural Living Zone and Special Rural Zone
City of Cockburn	Rural land use; Rural living zone; Wetland Buffer Zone; Conservation Zone
City of Kalamunda	Rural composite zone
City of Kwinana	Special Rural Zone; Mixed Business 1 Zone; Areas of Landscape Protection
City of Mandurah	Scheme reserve; Rural-residential Zone; Rural Zone; Residential density code R2, R2.5, R5; Tree Preservation Areas; within 120m of a watercourse high water mark; on a slope with gradient > 10%; properties with A > 4000m <sup>2</sup>
Shire of Murray	Place of Heritage and Landscape Value; Hills Landscape Protection Zone; Special Residential Zone
City of Wanneroo	Special Rural Zone; Landscape Enhancement Zone; Special Residential Zone
City of South Perth	Further than 3m from a side or rear boundary
City of Swan	Lots defined by Council
City of Stirling	Menora and Inglewood Heritage Areas
City of Rockingham	Special Rural Zones and Special Residential Zones
Shire of Mundaring	Within 20m of a watercourse

## Appendix 4: List of councils with a tree register

Council with a Tree Register	STR entry by nomination (Y/N)	Private land trees eligible (Y/N)
<b>Australian Capital Territory</b>		
ACT State	Y	Y
<b>New South Wales</b>		
Bayside Council	LEP	Y - one entry only
Blacktown City Council	Y	Y
Blue Mountains City Council	Unclear	Y
Campbelltown City Council	Unclear	Y
Council of the City of Ryde	Y	Y
Council of the City of Sydney	Y	Y
Georges River Council	LEP	Y
Hawkesbury City Council	LEP	Y - one entry only
Lane Cove Municipal Council	LEP	Y
Penrith City Council	LEP	Y
Randwick City Council	Unclear	Y
Strathfield Municipal Council	NO	Y
Council of the Municipality of Hunters Hill	Y	Y
Waverley Council	Y	Y
Willoughby City Council	NO	Y
Wollondilly Shire Council	LEP	Y
Woollahra Municipal Council	LEP	Y - two entries only
City of Canada Bay Council	LEP	Y - two entries only
Council of the City of Parramatta	LEP	Y
Cumberland Council	LEP	Y - two entries only
Fairfield City Council	LEP	Y
Liverpool City Council	LEP	Y
Sutherland Shire Council	LEP	Y
The Council of the Shire of Hornsby	LEP	Y
The Hills Shire Council	LEP	Y - one entry only
Inner West Council	LEP - Street trees only	Assumed
Mosman Municipal Council	LEP - Street trees only	Assumed
North Sydney Council	LEP - Street trees only	Assumed - no listings
Northern Beaches Council	STR - Street trees only	Assumed
Burwood Council	LEP - No listings	Assumed - no listings
Camden Council	LEP - No listings	Assumed - no listings
Canterbury Bankstown Council	LEP - No listings	Assumed - no listings
Ku-ring-gai Council	LEP - No listings	Assumed - no listings



Council with a Tree Register	STR entry by nomination (Y / N)	Private land trees eligible (Y / N)
<b>Victoria</b>		
Banyule City Council	Y	Y
Bayside City Council	Y	Y
Boroondara City Council	Y	Y
Cardinia Shire Council	Y	Y
Casey City Council	Y	Y
Glen Eira City Council	Y	Y
Manningham City Council	Y	Y
Maribyrnong City Council	Y	Y
Melbourne City Council	Y	Y
Moonee Valley City Council	Unclear	Y
Moreland City Council	Unclear	Y
Whitehorse City Council	Unclear	Y
Wyndham City Council	Y - Nominations closed	Y
Yarra City Council	Y	Y
Kingston City Council	Unclear	Unclear - Assume no
Brimbank City Council	Y	NO
Frankston City Council	Y	NO
<b>Western Australia</b>		
City of Armadale	Y	Y
City of Belmont	Unclear	Y
City of Canning	Y	Y
City of Cockburn	Y	Y
City of Fremantle	Y	Y
City of Mandurah	Y	Y
City of South Perth	Y	Y
City of Vincent	Y	Y
Town of Victoria Park	Y	Y
City of Melville	Municipal inventory - appears to include private trees	Y
City of Gosnells	Municipal inventory - appears to include private trees	Y
City of Perth	Heritage list appears to include private property trees	Y - Assumed
City of Bayswater	Y	NO
Shire of Serpentine-Jarrahdale	Y	NO
Town of Bassendean	Y	NO
City of Joondalup	Y	NO
Town of Mosman Park	Y - Unclear if closed	NO
City of Wanneroo	Municipal inventory lists street trees only	Assume No
Town of Cottesloe	Municipal inventory lists street trees only	Assume No
City of Kalamunda	Municipal inventory lists street trees only	Assume No
City of Kwinana	Local Heritage Survey lists street trees only	Assume No
Town of Cambridge	Municipal inventory lists street trees only	Assume No
Town of Claremont	Heritage List - appears to list street trees only.	Assume No

## Appendix 5: Dimension-based protection thresholds set by councils

Council	Height threshold	Council	Circumference threshold	Height above ground	Council	Canopy spread threshold
	m		m	m		m
<b>Australian Capital Territory</b>						
ACT State	12	ACT State			ACT State	
<b>New South Wales</b>						
Bayside Council	3	Bayside Council	0.3	1	Burwood Council	2
Blacktown City Council	3	Camden Council	0.3	1	Camden Council	3
Camden Council	3	Georges River Council	0.3	0.45	Georges River Council	3
Campbelltown City Council	3	Penrith City Council	0.31	1.4	Inner West Council	3
Georges River Council	3	Sutherland Shire Council	0.31	0.5	The Hills Shire Council	3
The Council of the Shire of Hornsby	3	Council of the City of Ryde	0.45	1.4	Willoughby City Council	3
Wollondilly Shire Council	3	Mosman Municipal Council	0.45	0.3	Wollondilly Shire Council	3
Liverpool City Council	3.5	Wollondilly Shire Council	0.45	1	Woollahra Municipal Council	3
Penrith City Council	3.5	Burwood Council	0.47	1.4	Blue Mountains City Council	4
Cumberland Council	3.6	Ku-ring-gai Council	0.47	0	Campbelltown City Council	4
Blue Mountains City Council	4	Campbelltown City Council	0.5	0	Liverpool City Council	4
Burwood Council	4	City of Canada Bay Council	0.5	0	Randwick City Council	4
City of Canada Bay Council	4	North Sydney Council	0.5	0	Council of the City of Sydney	5
Strathfield Municipal Council	4	Strathfield Municipal Council	0.5	1	North Sydney Council	5
The Council of the Municipality of Hunters Hill	4	Willoughby City Council	0.6	1.4	Fairfield City Council	
Willoughby City Council	4	Blacktown City Council	0.63	1	Hawkesbury City Council	
Canterbury Bankstown Council	5	The Council of the Municipality of Hunters Hill	0.63	1.4	Waverley Council	
Council of the City of Parramatta	5	Council of the City of Sydney	0.94	0	Bayside Council	
Council of the City of Ryde	5	Inner West Council	0.94	0	Blacktown City Council	
Council of the City of Sydney	5	The Hills Shire Council	0.94	0	Canterbury Bankstown Council	
Ku-ring-gai Council	5	Randwick City Council	1	1	City of Canada Bay Council	
Mosman Municipal Council	5	Liverpool City Council	1.26	1	Council of the City of Parramatta	

North Sydney Council	5	Fairfield City Council			Council of the City of Ryde	
Northern Beaches Council	5	Lane Cove Municipal Council			Cumberland Council	
Woollahra Municipal Council	5	Hawkesbury City Council			Ku-ring-gai Council	
Inner West Council	6	Waverley Council			Lane Cove Municipal Council	
Randwick City Council	6	Blue Mountains City Council			Mosman Municipal Council	
The Hills Shire Council	6	Canterbury Bankstown Council			Northern Beaches Council	
Fairfield City Council		Council of the City of Parramatta			Penrith City Council	
Hawkesbury City Council		Cumberland Council			Strathfield Municipal Council	
Lane Cove Municipal Council		Northern Beaches Council			Sutherland Shire Council	
Waverley Council		The Council of the Shire of Hornsby			The Council of the Municipality of Hunters Hill	
Sutherland Shire Council		Woollahra Municipal Council			The Council of the Shire of Hornsby	
<b>Victoria</b>						
Glen Eira City Council	5	Boroondara City Council	0.35	1	Darebin City Council	4
Kingston City Council	5	Darebin City Council	0.35		Manningham City Council	4
Knox City Council	5	Frankston City Council	0.35	1	Whittlesea City Council	4
Maribyrnong City Council	5	Manningham City Council	0.35	1.4	Yarra City Council	4
Maroondah City Council	5	Whittlesea City Council	0.35	1	Banyule City Council	
Monash City Council	5	Yarra City Council	0.35	1	Bayside City Council	
Moonee Valley City Council	5	Casey City Council	0.5		Boroondara City Council	
Port Phillip City Council	5	Glen Eira City Council	0.5	1	Brimbank City Council	
Stonnington City Council	5	Kingston City Council	0.5	1	Cardinia Shire Council	
Whitehorse City Council	5	Knox City Council	0.5	0.5	Casey City Council	
Yarra Ranges Council	5	Maribyrnong City Council	0.5	1	Frankston City Council	
Boroondara City Council	6	Maroondah City Council	0.5	1	Glen Eira City Council	
Darebin City Council	6	Monash City Council	0.5	1	Greater Dandenong City Council	
Manningham City Council	6	Moonee Valley City Council	0.5	1	Hobsons Bay City Council	
Nillumbik Shire Council	6	Moreland City Council	0.5	1	Hume City Council	
Yarra City Council	6	Nillumbik Shire Council	0.5	1	Kingston City Council	
Banyule City Council	12	Port Phillip City Council	0.5	1	Knox City Council	
Bayside City Council		Stonnington City Council	0.5	1	Maribyrnong City Council	
Brimbank City Council		Whitehorse City Council	0.5	1	Maroondah City Council	
Cardinia Shire Council		Yarra Ranges Council	0.5	1	Melbourne City Council	
Casey City Council		Banyule City Council	1.26	1.4	Melton City Council	

Frankston City Council		Hobsons Bay City Council	1.41	1.5	Mitchell Shire Council	
Greater Dandenong City Council		Bayside City Council	1.55	1	Monash City Council	
Hobsons Bay City Council		Brimbank City Council			Moonee Valley City Council	
Hume City Council		Cardinia Shire Council			Moreland City Council	
Melbourne City Council		Greater Dandenong City Council			Mornington Peninsula Shire Council	
Melton City Council		Hume City Council			Nillumbik Shire Council	
Mitchell Shire Council		Melbourne City Council			Port Phillip City Council	
Moreland City Council		Melton City Council			Stonnington City Council	
Mornington Peninsula Shire Council		Mitchell Shire Council			Whitehorse City Council	
Whittlesea City Council		Mornington Peninsula Shire Council			Wyndham City Council	
Wyndham City Council		Wyndham City Council			Yarra Ranges Council	
<b>WA</b>						
City of Bayswater	3	City of Bayswater	0.31	1	City of Bayswater	3
City of Canning	3	City of Canning	0.31	1.4	City of Canning	3
City of Mandurah	3	Shire of Serpentine-Jarrahdale	0.47	1.2	City of Mandurah	3
City of South Perth	3	City of Stirling	0.5	1	City of Armadale	
Shire of Serpentine-Jarrahdale	4	City of Armadale	0.6	1	City of Belmont	
City of Stirling	4	City of Belmont			City of Cockburn	
City of Armadale		City of Cockburn			City of Fremantle	
City of Belmont		City of Fremantle			City of Gosnells	
City of Cockburn		City of Gosnells			City of Joondalup	
City of Fremantle		City of Joondalup			City of Kalamunda	
City of Gosnells		City of Kalamunda			City of Kwinana	
City of Joondalup		City of Kwinana			City of Melville	
City of Kalamunda		City of Mandurah			City of Nedlands	
City of Kwinana		City of Melville			City of Perth	
City of Melville		City of Nedlands			City of Rockingham	
City of Nedlands		City of Perth			Shire of Mundaring	
City of Perth		City of Rockingham			Shire of Murray	
City of Rockingham		Shire of Mundaring			Shire of Peppermint Grove	
Shire of Mundaring		Shire of Murray			Shire of Serpentine-Jarrahdale	
Shire of Murray		Shire of Peppermint Grove			City of South Perth	
Shire of Peppermint Grove		City of South Perth			City of Stirling	

City of Subiaco	City of Subiaco	City of Subiaco
City of Swan	City of Swan	City of Swan
Town of Bassendean	Town of Bassendean	Town of Bassendean
Town of Cambridge	Town of Cambridge	Town of Cambridge
Town of Claremont	Town of Claremont	Town of Claremont
Town of Cottesloe	Town of Cottesloe	Town of Cottesloe
Town of East Fremantle	Town of East Fremantle	Town of East Fremantle
Town of Mosman Park	Town of Mosman Park	Town of Mosman Park
Town of Victoria Park	Town of Victoria Park	Town of Victoria Park
City of Vincent	City of Vincent	City of Vincent
City of Wanneroo	City of Wanneroo	City of Wanneroo

## Appendix 6: Other reasons for pruning without permission

Council	Other pruning conditions + details
<b>New South Wales</b>	
Blacktown City Council	Torn limb removal
Northern Beaches Council	Removal of parasitic mistletoe or parasitic plant
Randwick City Council	Formative pruning of young trees
Willoughby City Council	Formative pruning of young trees
Willoughby City Council	Crown lifting via removal of lower branches
Willoughby City Council	Crown thinning that does not alter the overall size of the tree
Willoughby City Council	Reduction pruning
Willoughby City Council	Pollarding
Council of the City of Parramatta	Pruning to remove parasitic mistletoe or other plant
<b>Victoria</b>	
Manningham City Council	Broken limb pruning
Nillumbik Shire Council	Broken limb pruning
Stonnington City Council	Broken limb pruning
Yarra City Council	Broken limb pruning
Banyule City Council	Broken limb pruning
Frankston City Council	Broken limb pruning
Boroondara	Canopy trees can be pruned with no permit
Frankston City Council	Maintaining existing specialised pruning methods
Knox City Council	Minor utility installation
Darebin City Council	Permit not required if work undertaken by a qualified arborist to AS4373-2007 with photographic documentation
Bayside City Council	Pruning of natives allowed if AS4373 is followed
Bayside City Council	Permit not required if work undertaken by an AQF3 arborist to AS4373-2007 with photographic documentation
Nillumbik Shire Council	Regrowth pruning
Darebin City Council	To maintain access
Whittlesea City Council	To maintain access
Yarra City Council	To maintain access
Moonee Valley City Council	Unspecified minor works
Moonee Valley City Council	Emergency works

## Appendix 7: List of authorities assessing tree applications for council

Council	Who assesses applications?	Comments
<b>Australian Capital Territory</b>		
ACT State	Other authority	Conservator of Flora and Fauna
<b>New South Wales</b>		
Bayside Council	Council	TMO (Tree management officer); TPO (Tree protection officer)
Blacktown City Council	Council	Tree officer
Blue Mountains City Council	Council	
Burwood Council	Council	
Camden Council	Council	Urban Tree and Landscape Team
Campbelltown City Council	Council	
Canterbury Bankstown Council	Council	Tree officer - ground level VTA; AQF5 arborist - arranged by applicant for assessments above 2m height
City of Canada Bay Council	Council	TMO; TPO
Council of the City of Parramatta	Council	
Council of the City of Ryde	Council	
Council of the City of Sydney	Council	
Cumberland Council	Council	Landscape and Tree Management Unit; Council contractors
Fairfield City Council	Council	TMO
Hawkesbury City Council	Council	
Inner West Council	Council	
Ku-ring-gai Council	Council	Council Duty Planner for development applications
Lane Cove Municipal Council	Council	TPO
Liverpool City Council	Council	
Mosman Municipal Council	Council	TMO
North Sydney Council	Council	TMO; TPO; Bushland Management Officer; Landscape Development Officer
Northern Beaches Council	Council	
Penrith City Council	Council	Tree Asset Management Team
Randwick City Council	Council	
Strathfield Municipal Council	Council	
Sutherland Shire Council	Council	TMO
The Council of the Municipality of Hunters Hill	Council	
The Council of the Shire of Hornsby	Council	Tree officer
The Hills Shire Council	Council	TMO
Willoughby City Council	Council	
Wollondilly Shire Council	Council	
Woollahra Municipal Council	Council	
Waverley Council	Council arborist	
Northern Beaches Council	Other arborist	
Georges River Council	Council	



Council	Who assesses applications?	Comments
<b>Victoria</b>		
Banyule City Council	Council arborist	
Bayside City Council	Council	
Boroondara	Council	
Brimbank City Council	Council	
Hume City Council	Council	
Kingston City Council	Council	
Manningham City Council	Council	
Maroondah City Council	Council	
Moonee Valley City Council	Council	
Moreland City Council	Council	
Yarra City Council	Council	External arborist assessment <b>may</b> be required – sourced by Council
Darebin City Council	Council arborist	Permit assessments are undertaken by an authorised officer with arboriculture qualifications
Frankston City Council	Council arborist	Council's qualified arborists investigate the request to remove a tree in response to an application
Glen Eira City Council	Council arborist	
Port Phillip City Council	Council arborist	The requirement to obtain a permit under Local Law is additional to requirement to obtain planning permission
Casey City Council	Council	
Whittlesea City Council	-	All proposals to remove River Red Gum trees must be reported to a Council meeting for a decision.
<b>Western Australia</b>		
City of Armadale	Council	
City of Bayswater	Council	
City of Bunbury	Council	
City of Busselton	Council	
City of Canning	Council	
City of Cockburn	Council	
City of Fremantle	Council	
City of Gosnells	Council	
City of Kalamunda	Council	
City of Mandurah	Council	
City of Rockingham	Council	
Shire of Mundaring	Council	
Shire of Murray	Council	
Shire of Serpentine-Jarrahdale	Council	
City of South Perth	Council	
City of Stirling	Council	
City of Swan	Council	
Town of Bassendean	Council	
Town of Cottesloe	Council	
City of Vincent	Council	
City of Wanneroo	Council	
City of Belmont	Council arborist	

## Appendix 8: Processing times for applications to undertake tree works

Council	Comments	Estimated processing time
		Days
<b>Australian Capital Territory</b>		
ACT State		30
<b>New South Wales</b>		
Council of the City of Sydney	Processing times: Application assessed within 28 days according to NSW SEPP 2017	28
Cumberland Council	Processing times: VTAs undertaken within 2 weeks of tree application receipt	14
Georges River Council	Processing times: Permit determinations usually provided within 28 days	28
Ku-ring-gai Council	Processing time: 4-6 weeks	28+
Lane Cove Municipal Council	Processing time: Typical 2 week turnaround between application and inspection, and written response 1 week after inspection	21
Mosman Municipal Council	Processing times: Determination of applications usually within 10 working days	14
Sutherland Shire Council	Processing times: Inspections within 30 days from application	30+
The Council of the Shire of Hornsby	Applications processed within 28 days	28
Waverley Council	Processing time: 4 weeks	28
Willoughby City Council	Processing time: within 28 days	28
Wollondilly Shire Council	Processing time: 14 days	14
<b>Victoria</b>		
Banyule City Council		10-42
<b>Western Australia</b>		
City of Cockburn	Processing of applications (development): 60 - 120 days	60-120



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