

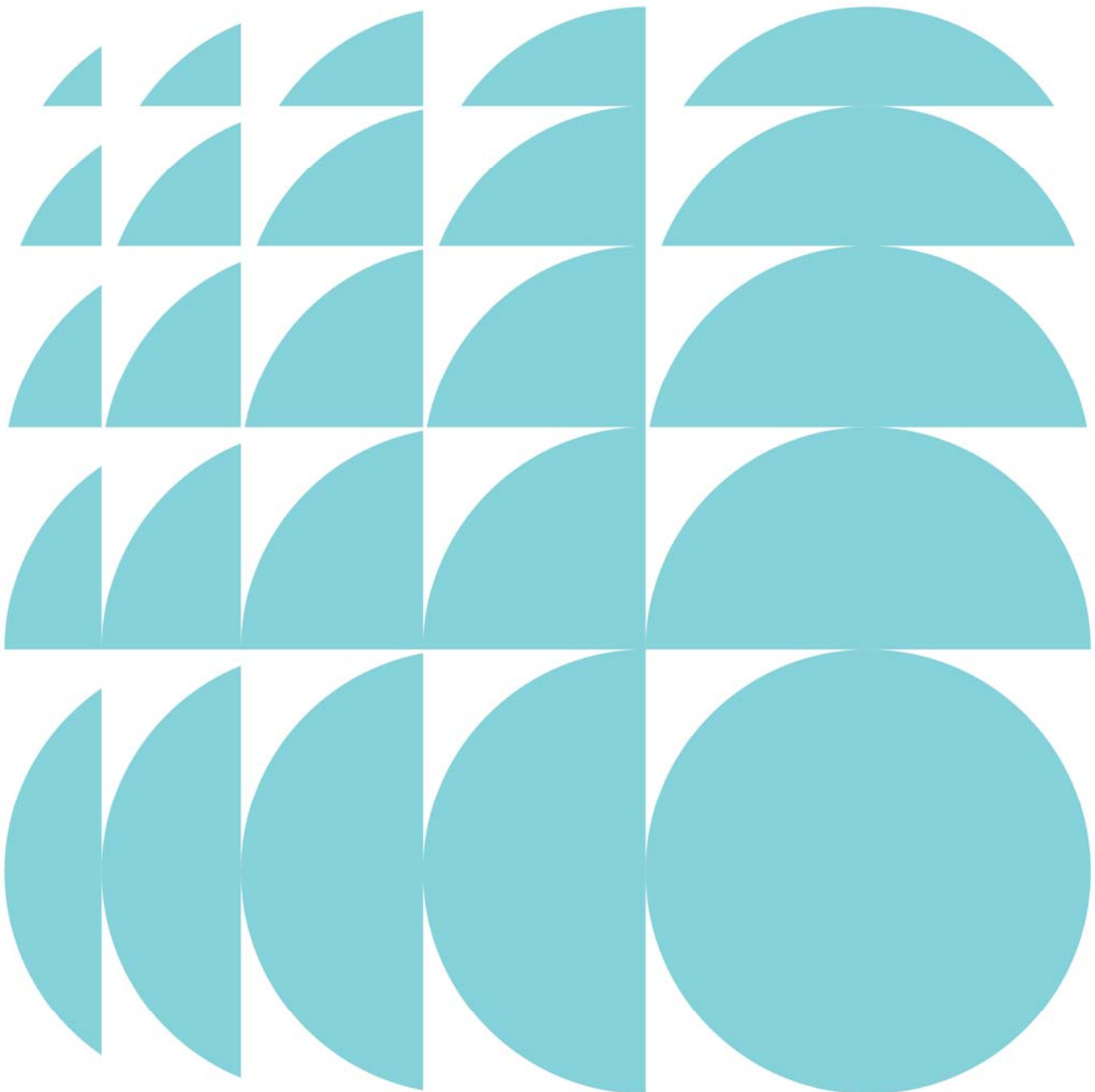
Expert Evidence

Whitehorse Planning Scheme
Amendment C219

Panel Hearing

Maddocks on behalf of
Whitehorse City Council

22 November 2019 | 3190367



CONTACT

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This document has been prepared by:



James Reid

22 November 2019

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1.0 Introduction

1.1 Name and address

1. My name is James Stuart Reid (formerly Larmour-Reid) and I am a Planning Director at Ethos Urban, a development consultancy located at Level 8, 30 Collins Street, Melbourne.

1.2 Qualifications and experience

2. My qualifications are as follows, both attained at the University of Melbourne:
 - Bachelor of Planning and Design
 - Bachelor of Town and Regional Planning.
3. I am a qualified town planner with 30 years' experience in a variety of planning and management roles, including:
 - Ten years' experience in local government as a statutory and strategic planner, culminating in a management position; at the Cities of Melbourne and Devonport, Surf Coast Shire and the City of Bayside.
 - Four and a half years' experience as a senior planning consultant and manager undertaking both statutory and strategic planning projects at Hansen Partnership and Earth Tech.
 - Four and a half years' experience in senior management positions, which included strategic and statutory planning portfolios; at the National Capital Authority and Shire of Yarra Ranges.
 - Ten years as a Director of Planisphere Pty Ltd, now Ethos Urban Pty Ltd.
4. I am a Fellow of the Planning Institute of Australia (PIA), Registered Planner, and former President of the Victorian Committee.
5. I am a Member of the Victorian Planning and Environmental Law Association.

1.3 Area of expertise

6. I have substantial experience in strategic and statutory planning, including the preparation and implementation of strategic plans and planning scheme amendments, and the preparation and assessment of planning permit applications.

1.4 Other contributors

7. I was assisted in the preparation of this statement by Sean Brien, Senior Urbanist; and Juan Bueno, Urbanist of Ethos Urban. Sean is a qualified urban planner. Juan is a GIS Specialist.

1.5 Instructions

8. On 16 September 2019 I received instruction from Maddocks to prepare an expert witness statement for the purposes of the Amendment C219 Panel Hearing which provides summaries of the proposed reference documents, namely:
 - *Municipal Wide Tree Study Discussion Paper, March 2016*

- *Municipal Wide Tree Study Options and Recommendations Report, June 2016*
- *Municipal Wide Tree Study Part 2: Additional Analysis in Garden Suburban and Bush Suburban Character Precincts, March 2019*

9. In addition, I was asked to:

- provide analysis of the amendment focussing on planning matters including the impact and effects the Amendment will have on the affected areas; and
- respond to relevant submissions.

1.6 Facts, matters and assumptions

10. In preparing this statement I made reference to and relied upon:

- *Municipal Wide Tree Study Discussion Paper, March 2016* ['the **Discussion Paper**']
- *Municipal Wide Tree Study Options and Recommendations Report, June 2016* ['the **Options Report**']
- *Municipal Wide Tree Study Part 2: Additional Analysis in Garden Suburban and Bush Suburban Character Precincts, March 2019* ['the **Additional Analysis**']
- *Whitehorse Housing and Neighbourhood Character Review 2014* comprising the *Whitehorse Housing Strategy 2014* and the *Whitehorse Neighbourhood Character Study 2014* ['the **Housing & Character Review**']
- *Where Are All the Trees?: An Analysis for Tree Canopy Cover in Australia* (2014) Institute for Sustainable Futures ['the **ISF Report**'].
- *Whitehorse Planning Scheme* ['the **Planning Scheme**'].

1.7 Previous involvement with the subject matter of Panel Hearing

11. I was Ethos Urban's Project Director, responsible for the preparation of the Additional Analysis. I was involved in client workshops, oversaw additional analysis, authored parts of the report, and prepared the draft planning scheme provisions.

12. Although employed by Planisphere at the relevant time, I was not involved in the preparation of either the Housing & Character Review, the Discussion Paper or the Options Report in any substantive way.

1.8 Declaration

13. I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Panel.

2.0 Summary of opinion

14. Amendment C219 is underpinned by an extensive body of research and analysis that originated from the findings of the *Housing and Neighbourhood Character Review 2014 (Housing & Character Review)*. That review, which formed the basis of the current suite of residential zones in Whitehorse, identified that canopy tree coverage is fundamental to neighbourhood character across the municipality.
15. Additional analysis undertaken following the introduction of the interim SLO9 examined the impact of the overlay on both Council and community. It concluded that the SLO remained the most appropriate tool to achieve Council's vegetation protection and enhancement objectives but recommended the introduction of additional exemptions to reduce the number of permits triggered, particularly for removal of individual trees.
16. In preparing for this panel hearing, Ethos Urban undertook further analysis in order to evaluate how many properties may contain trees that would trigger a permit for removal under SLO9. Key findings of this analysis were:
 - Canopy trees are ubiquitous and widely spread across the residential landscape of Whitehorse, reinforcing the conclusion of the Neighbourhood Character Study that they make an integral contribution to neighbourhood character in all character precincts.
 - Canopy tree coverage appears to have played a role in defining the character areas, with the limited change areas (zoned NRZ) containing the highest proportion of lots with canopy trees, followed by the natural change areas (zoned GRZ) and then the substantial change areas (zoned RGZ).
 - In all zones, it is the larger lots (>=800sqm) that are more likely to contain canopy trees than smaller lots (<800sqm).
 - It was apparent during the analysis that many multi-dwelling developments do not preserve sufficient space for the establishment of canopy trees.
 - Due to the prevalence of canopy trees on larger sites compared to smaller sites, the greatest threat to overall canopy cover is more likely to be the redevelopment of these sites rather than the removal of individual trees for other reasons.
 - The prevalence of canopy trees on larger lots suggests that the majority of future multi-dwelling development applications will need to consider issues related to tree removal, provision or protection. It is worth noting that these proposals will require a planning permit notwithstanding the existence of SLO9.
17. Previous analysis considered the question as to whether the introduction of a permanent SLO9 could potentially impact on Whitehorse's capacity to accommodate housing growth. That analysis found:
 - The **Housing & Character Review** concluded that the total residential capacity within the municipality was substantially in excess of projected growth requirements to 2031.
 - SLO9 does not apply to commercial areas or Neighbourhood Activity Centres.
 - SLO9 is unlikely to have any impact on dwelling yield in the RGZ due to tree removal exemptions outside the front setback areas coupled with the purpose of the zone, which is intended to accommodate growth.

- SLO9 is likely to have negligible impact on dwelling yield in the NRZ given the conservative development assumptions applied to the zone (a 2 dwelling per lot restriction applied at the time) and the fact that SLO1-8 already applies to the most heavily vegetated areas of the municipality.
- SLO9 is likely to have some impact on dwelling yield within the GRZ, noting that the zone schedules require additional open space and tree planting in any case.

18. In order to examine how the SLO9 was actually being applied in practice, a small sample of 22 recent planning permit applications was reviewed across all residential zone schedules affected by the overlay. Among other things, I concluded from this evaluation:

- Council's planners and arborists are interpreting the SLO in a consistent, pragmatic and balanced manner. The removal of trees that have poor health and structure, or which are environmental weeds, is generally supported.
- The planting of new canopy trees tends to be based on the modified ResCode standards contained in the residential zone schedules, rather than applying a tree replacement ratio.
- In the case of multiple dwelling proposals, SLO9 does not appear to introduce any significant additional burden on applicants as a planning permit is already required for development and Council has traditionally required arborists reports where existing trees may be affected.
- The permit triggers and decision guidelines of the SLO9 do appear to be having the effect of increasing the emphasis placed on tree canopy retention and perpetuation, compared to a standard ResCode assessment.

19. In my opinion the Significant Landscape Overlay is the most appropriate tool for achieving Whitehorse's tree preservation and establishment objectives:

- The purpose of the SLO addresses the landscape as a whole, whereas the VPO is more narrowly focussed on vegetation alone. This broader ambit has the potential to accommodate a more robust approach to dealing with change than the VPO, whose purpose includes ensuring that 'development minimises loss of vegetation.'
- Similarly, the SLO provides for a broader consideration of the value of vegetation with respect to neighbourhood character and aesthetics, recognising the interplay of built form and vegetation in defining character. The VPO elevates the significance of vegetation itself above other determinants of character or aesthetic value.
- The SLO not only protects vegetation directly, but also indirectly by requiring a planning permit for buildings, works and subdivision in circumstances where such development may impact on the future survival or vitality of an existing tree. Further, it enables the same considerations to be applied to the provision of space for the regeneration of new or replacement trees.
- The indirect protection afforded by the SLO applies to buildings that may impact upon both trees within the development site and those on adjoining properties that are also within the SLO.
- The concurrent buildings and works, and vegetation removal provisions in the SLO empower responsible authorities to require modifications to the design, layout or location of buildings and works in order to protect an existing tree or provide sufficient space for a new tree to thrive. The VPO

decision guidelines do allow for consideration of the impact of buildings, work and subdivision on tree protection, but are only effective in this regard if a planning permit is triggered by another provision.

20. Finally, I have addressed a number of additional planning issues raised by the panel. In doing so, I reach the following conclusions and recommendations:

- The large number of vegetation removal permit applications triggered by the introduction of SLO9 is an indicator of the prevalence of canopy trees in the Whitehorse landscape, reinforcing the observations made in the **Housing & Character Review** about their definitive contribution to character.
- In my opinion if vegetation controls revert to being confined to the pre-existing SLO1-8 areas there will be no meaningful means of slowing the decline of canopy vegetation cover in Whitehorse, less still of achieving Council's **Urban Forest Strategy** objectives.
- Nevertheless, given the expansive extent of SLO9 compared to the other SLO areas, more generous permit thresholds and exemptions are warranted in order to ensure that an appropriate balance is struck between vegetation protection and other planning objectives.
- The intent of the proposed modification to the local policy is to reinstate the policy provisions that formerly applied to the SLO9 areas, which differ from those that apply to SLO1-8. I see this as a practical response to an inadvertent policy tension created with the introduction of interim SLO9.
- I do not have any doubt that making SLO9 permanent would provide a strong discouragement to the speculative moonscaping of residential lots, whether for single or multi-dwelling developments.

3.0 Introduction

3.1 Structure of this statement

21. This evidence comprises:

- **Part 4** - A summary of the *Municipal Wide Tree Study Discussion Paper, March 2016* ['the **Discussion Paper**']
- **Part 5** - A summary of the *Municipal Wide Tree Study Options and Recommendations Report, June 2016* ['the **Options Report**']
- **Part 6** - A summary of the *Municipal Wide Tree Study Part 2: Additional Analysis in Garden Suburban and Bush Suburban Character Precincts, March 2019* ['the **Additional Analysis**']
- **Part 7** - Further analysis on the impact and effect of SLO9 undertaken in the preparation of this evidence
- **Part 8** - A discussion regarding key planning questions raised by the Panel in its directions.

4.0 The Discussion Paper

4.1 Introduction

22. Whitehorse City Council engaged Planisphere (now Ethos Urban) to prepare the *Municipal Wide Tree Study Discussion Paper, March 2016* ['the **Discussion Paper**'].

23. The preparation of the Discussion Paper followed on from the findings of the *Whitehorse Housing Strategy 2014* and the *Whitehorse Neighbourhood Character Study 2014* ['**Housing & Character Review**']. These documents highlighted the challenge of managing substantial population growth through multi-dwelling development, while seeking to retain valued neighbourhood character.

24. The **Discussion Paper** noted that '*trees are the most significant determinant of the character of the various areas within the City of Whitehorse, with upper tree canopy covering a significant proportion of the city.*' (p. 2). It was commissioned in order to examine the strategic framework for vegetation protection across the municipality and determine how best to address this challenge.

25. The **Discussion Paper** was the initial deliverable of this project. It presented the results of desktop analysis, field surveys, a review of background material and new research. The broad implications of retaining and improving canopy tree coverage and the various controls and actions available were also considered. The Paper was designed to prompt feedback from Council and relevant Stakeholders.

4.2 Policy and background review

26. The policy and background review was undertaken to understand how protection and management of tree coverage was occurring in Whitehorse. Approaches adopted by similar municipalities were considered in order to evaluate the effectiveness of available vegetation protection tools.

27. The review found that there are social, economic and environmental benefits to canopy tree coverage that extend beyond neighbourhood character, these include:

- Contributing to character and visual amenity;
 - Mitigating the urban heat island effect;
 - Stormwater management;
 - Improving air quality and energy efficiency;
 - Supporting biodiversity and conservation;
 - Contributing positively to property values;
 - Improving the lifespan of asphalt pavements;
 - Contributing positively to health and wellbeing; and
 - Providing social benefits through placemaking. (pp. 12-15)
28. The plans, strategies and policies which were considered at that time recognised many of these benefits and generally sought the protection and enhancement of vegetation and green spaces in Whitehorse. This is reflected in the MSS and LPP of the *Whitehorse Planning Scheme*.
29. Vegetation controls in the *Whitehorse Planning Scheme* at that time comprised:
- The **Vegetation Protection Overlay (VPO)**, which had been applied to scattered, individual lots containing specimen(s) identified as being significant through tree studies;
 - The **Environmental Significance Overlay (ESO)**, which applied to two lots in the municipality and protects vegetation with high ecological conservation values;
 - The **Significant Landscape Overlay (SLO)**, which applies to some of the more heavily vegetated areas around Blackburn Lake and in Mitcham and Vermont (generally aligning with the Bush Environment Neighbourhood Character Precincts) and are designed to protect larger trees (measured by height and/or girth).
30. Complementing these specific controls, the report noted that the newly introduced residential zone schedules included variations to standard ResCode landscaping provisions aimed at promoting tree planting:
- **NRZ** – 5 out of the 6 schedules require all new developments to provide at least two canopy trees per dwelling that have the potential to reach 8 or 12 metres; with NRZ1-4 requiring those trees to be native or indigenous.
 - **GRZ** – 4 out of 6 schedules require all new developments to provide at least two canopy trees per dwelling that have the potential to reach 8 or 12 metres; and
 - **RGZ** – 2 out of 3 schedules require new development to provide at least one canopy tree that has the potential to reach 8 metres (p. 30).
31. The report provides an overview of the Panel Reports that addressed the introduction of the existing vegetation controls. The inter-relationship between neighbourhood character and landscape significance is mentioned in several summaries.

4.3 I-tree analysis

32. 'iTree' software was used to estimate the current percentage of tree cover across the municipality. The software differentiates between trees and other vegetation using satellite imagery and is a widely accepted tool developed by USDA Forest Service.
33. The iTree analysis in 2016 resulted in the following findings.
- **Bush Environment** character precincts had the highest canopy tree cover at 51.8% but make up the smallest proportion of Whitehorse's residential areas.
 - **Bush Suburban** character precincts (such as most of Mitcham, Vermont and Blackburn South) had a canopy coverage of 29.2%.
 - **Garden Suburban** character precincts, which take up the largest proportion of Whitehorse's residential areas, had the lowest canopy coverage at 23.6%.
 - The average canopy coverage for the **whole municipality** was 26.6%.
34. This conclusion was compared to a 2014 Institute for Sustainable Futures (**ISF Report**) estimation that Whitehorse had a tree cover of 22.9%. That estimate was also based on an i-Tree analysis (Discussion Paper, p. 51). The ISF analysis provided estimates of tree coverage across Melbourne, the outcomes for Whitehorse and nearby urban municipalities¹ are summarised in the following table (p. 51):

Municipality	% Vegetation Cover	Plan Melbourne Sub-Region
Manningham City	40.1%	Eastern
Maroondah City	32.5%	Eastern
Banyule City	29.6%	Northern
Boroondara City	28.1%	Inner South-East
Stonnington City	25.0%	Inner South-East
Knox City	24.2%	Eastern
Whitehorse City	22.9%	Eastern
Frankston City	22.3%	Southern
Bayside City	21.0%	Inner South-East
Glen Eira City	20.0%	Inner South-East
Monash City	19.4%	Eastern
↓ Bottom 5	↓	↓
Hobsons Bay City	7.6%	Western
Maribyrnong City	7.4%	Western
Melton City	6.3%	Western
Brimbank City	6.2%	Western
Wyndham City	3.1%	Western

¹ The Shires of Yarra Ranges, Nillumbik, Mornington Peninsula and Cardinia have been omitted from this table due to their large rural and green wedge areas.

35. In order to evaluate the change in vegetation cover over time the i-Tree analysis was repeated using aerial imagery from 2005, providing dates of comparison approximately a decade apart. The analysis found a decline in tree canopy cover of approximately 1-2% in all residential neighbourhood character areas. The decrease was found to be inversely proportionate to the additional amount of land covered by buildings during the same period. (p. 52).

4.4 Case studies

36. Five case studies were undertaken to compare neighbourhood character areas that were subject to vegetation controls (VPO, ESO and SLO) with those that were not (pp. 54-63).
37. The case studies led to the following observations.
38. Remnant trees in the front setbacks of new development sites indicate that the existing SLO (Bush Environment character precincts) provisions are effective in retaining significant trees, however these areas have also experienced fewer new developments than other residential areas (e.g. Mitcham North & Blackburn).
39. A relatively high number of moonscaped development sites in the Bush Suburban character precinct suggests that precinct based VPOs (Schedules 2 and 4) are having a minimal impact on the retention of canopy trees on private land, and large building envelopes are leaving little space for the planting of new canopy trees (e.g. Mitcham South).
40. Some areas in the Garden Suburban character precinct with VPO provisions that apply to individual tree specimens (i.e. a non-blanket approach to vegetation protection) have less consistent vegetation and limited retention on new development sites. These areas would benefit from additional planning controls to protect and enhance canopy tree coverage (e.g. Burwood East & Box Hill).

4.5 Key findings

41. Overall, the key findings of the **Discussion Paper** were as follows.
- Tree coverage is a vital characteristic of the greater eastern Melbourne region.
 - Tree coverage is essential to the Whitehorse established garden character.
 - Community education on the benefits of tree coverage is important to avoid moonscaping and to encourage tree planting.
 - Council policies and plans demonstrate an awareness of the importance of tree coverage, however there is an opportunity to strengthen council's position on retaining substantial trees.
 - Tree protection is clearly identified as being a priority in the SPPF. This is filtered down through the LPPF and planning scheme controls, however there is the opportunity to present a stronger stance on the importance of tree coverage to the City within the LPPF and through revised tree controls.
 - New residential zone schedules have recently been introduced that require the planting of canopy trees as part of development proposals and will provide greater space for tree planting within development sites.
 - Vegetation protection controls exist in some parts of the City; however, they generally apply to specific sites or small precincts.

- SLOs have been applied to areas of special neighbourhood character, due to significant tree coverage.
- VPOs exist on specific sites to assist in implementing the significant tree register and in two precincts. However, based on the case studies, it appears that the precinct VPOs are not effective as the SLOs in preventing moonscaping.
- Other councils have applied blanket VPOs or SLOs that require a permit to remove substantial trees and to develop land over a certain site coverage.
- i-Tree analysis shows that the City has a relatively high level of tree coverage compared to other municipalities, however this is decreasing over time with the increase of hard surfacing.
- Areas with tree protection controls have a significantly higher proportion of ground covered by trees.
- Moonscaping is a continued threat in any areas with no controls and individual sites protected by the existing VPOs.
- There are currently no controls that protect the retention of newly planted/smaller trees that have the potential to be large canopy trees at maturity.

5.0 The Options Report

5.1 Introduction

42. The **Options Report** was prepared as part of the same project as the **Discussion Paper** and followed a period of public consultation regarding the latter.
43. It contained: a gap analysis which examined issues raised during consultation, the definition of a canopy tree, the tools available for tree protection and enhancement, and the advantages and disadvantages of each of these options in addressing the identified gaps (pp. 6-38). A number of implementation options were also considered, and a recommendation was made (pp.39-57).

5.2 Defining 'canopy trees'

44. The definition of a canopy tree was identified as a gap. The report found that national and international definitions varied, but generally included some reference to height (between 3 – 5 metres) and other characteristics of the tree.
45. The report also examined statutory protection of canopy trees in other metropolitan Melbourne municipalities (Bayside, Banyule, Knox, Boroondara, Maroondah, Nillumbik) and found that canopy trees are usually protected at heights of 5 – 6 metres regardless of species. The girth of a tree was also a common threshold for protection, the most common measurement identified was a 0.5 metre circumference measured 1 metre above ground level (pp. 33-5).

5.3 Other gaps identified

46. A number of other gaps were also identified (pp. 33-38):
- Replacement trees – the Whitehorse Planning Scheme lacks replacement requirements, suggesting canopy coverage will continue to decline regardless of protection controls.

- Landscape Plans – incorporating tree protection zones ('**TPZ**') at maturity, monitoring and review.
- Buildings and works controls – only the SLO triggers a planning permit for buildings and works in close proximity to protected trees.
- Monitoring – trees are not being preserved after approval and construction and monitoring processes are not in place to ensure compliance with landscaping plans.
- Weed species – while the planting of weed species was not promoted, it was acknowledged that existing canopy trees that are regarded as environmental weeds do contribute to overall canopy cover, urban cooling and landscape values.

5.4 Options analysis

47. A number of options for enhancing tree canopy cover in Whitehorse were examined (pp. 40-50):

- Retention of the existing model, with a mix of overlays
- Extension of the SLO
- Extension of the VPO
- Introduction of a local law to protect significant trees
- Expansion of tree education.

5.5 Recommendations

48. The **Options Report** includes a suite of recommendations aimed at better protecting Whitehorse's tree canopy cover.

49. The most significant recommendation was to extend the Significant Landscape Overlay to cover all residential areas not currently protected by an SLO (including areas currently covered by a VPO), including consideration of:

- Neighbourhood character statements and objectives;
- Buildings and works within the TPZ and the protection of trees within the TPZ of a canopy tree;
- Buildings and works requirements that may not be covered within the residential schedules, such as setbacks from new/existing canopy trees and site coverage where it doesn't already apply;
- Exemptions for pruning as defined by Australian Standard AS4373-2007;
- Requirements for the removal or lopping of any canopy tree as defined in the Local Policy;
- Tree replacement requirements (p. 56).

50. Additional recommendations included:

- Improving the planning policy in the MSS and LPP;
- Strengthening the Council Plan;
- Strengthening the landscape plan review process;
- Extending education programs and include welcome packs;
- Enforcing s173 agreements on new subdivisions to require canopy tree planting on all sites;

- Continuing to advocate for an increase in fines for illegal tree removal;
- Providing incentives such as discounts or vouchers for canopy tree species at Council or community nurseries (p. 55).

6.0 The Additional Analysis

6.1 Introduction

51. The Additional Analysis was prepared as part of a supplementary project following the introduction of interim SLO9 via Whitehorse Amendment C191.
52. Amendment C191 introduced a new, expansive SLO schedule (SLO9) on an interim basis, while further work was undertaken to strategically justify the permanent application of the new controls.
53. The strategic justification of SLO9 formed the basis of the brief for the Additional Analysis, which:
 - Revisited the definition of a canopy tree in the context of Whitehorse;
 - Included a literature review of best practice examples of vegetation retention provisions and research related to the benefits of canopy trees;
 - Included a landscape assessment of the municipality to confirm, and where possible, build upon the findings of the **Housing & Character Review**;
 - Review feedback and submissions received in response to the introduction of Amendment C191;
 - Consider the tools available for vegetation protection in light of relevant changes to the VPP since 2016;
 - Assess recent approvals to evaluate the effectiveness of the SLO9; and
 - Review the proposed permanent planning controls and decision guidelines to ensure they include appropriate exemptions

6.2 Key findings

54. The Additional Analysis reinforced the importance of canopy cover to character and liveability. It found that canopy trees are vitally important for the role they play aesthetically, by reducing the urban heat island effect, providing habitat, and offering community wellbeing and health benefits. It found that the gradual loss of canopy coverage throughout the city will diminish its character, liveability and ecological sustainability.
55. The review of VPP tools available for vegetation protection and the examination of additional strategic documents prepared by Council (including the **Urban Forest Strategy**) concluded that the SLO is still the most effective tool available to achieve canopy tree protection. This is due to the ability of the SLO to holistically consider vegetation and the built form through triggers for buildings and works applications, and its inherent connection to neighbourhood character.
56. The introduction of SLO9 was found to have resulted in a substantial increase in the number of applications to remove, destroy or lop trees within the municipality. It was determined that a higher threshold and additional exemptions were appropriate in SLO9 relative to other SLOs in Whitehorse due to the expansive

area to which SLO9 applies. This approach, it concluded, would still support vegetation management controls in a strategic manner by applying more stringent controls in priority areas and having a lighter touch in areas where multi-dwelling development priorities must be balanced.

57. A risk assessment was undertaken to reconcile the competing objectives of housing growth and vegetation protection. The highest risk was identified in the Residential Growth Zone, which is mitigated by exemptions that limit tree protection to the front setback, where they have the greatest impact on the character of the streetscape.
58. The landscape assessment confirmed the findings of the **Housing & Character Review**, including the delineation of character precincts and the substantial contribution canopy trees make to character.
59. It was recommended that SLO9 should not be split into multiple schedules for each character area, as this would serve only to add complexity to the planning provisions. Schedules to the zoning provisions provide sufficient guidance without the need for further differentiation through SLO schedules.
60. Given the generous assumptions of the capacity assessment undertaken as part of the **Housing & Character Review** in 2014, the report concluded that it was not expected that SLO9 would have an unreasonable impact on the ability for Whitehorse to accommodate projected population and dwelling growth. While there may be some loss of canopy cover in areas earmarked for growth, there is potential to enhance canopy cover elsewhere to account for this (such as areas marked for limited change which currently have lower canopy coverage).

7.0 The impact and effect of SLO9

7.1 The number of properties affected

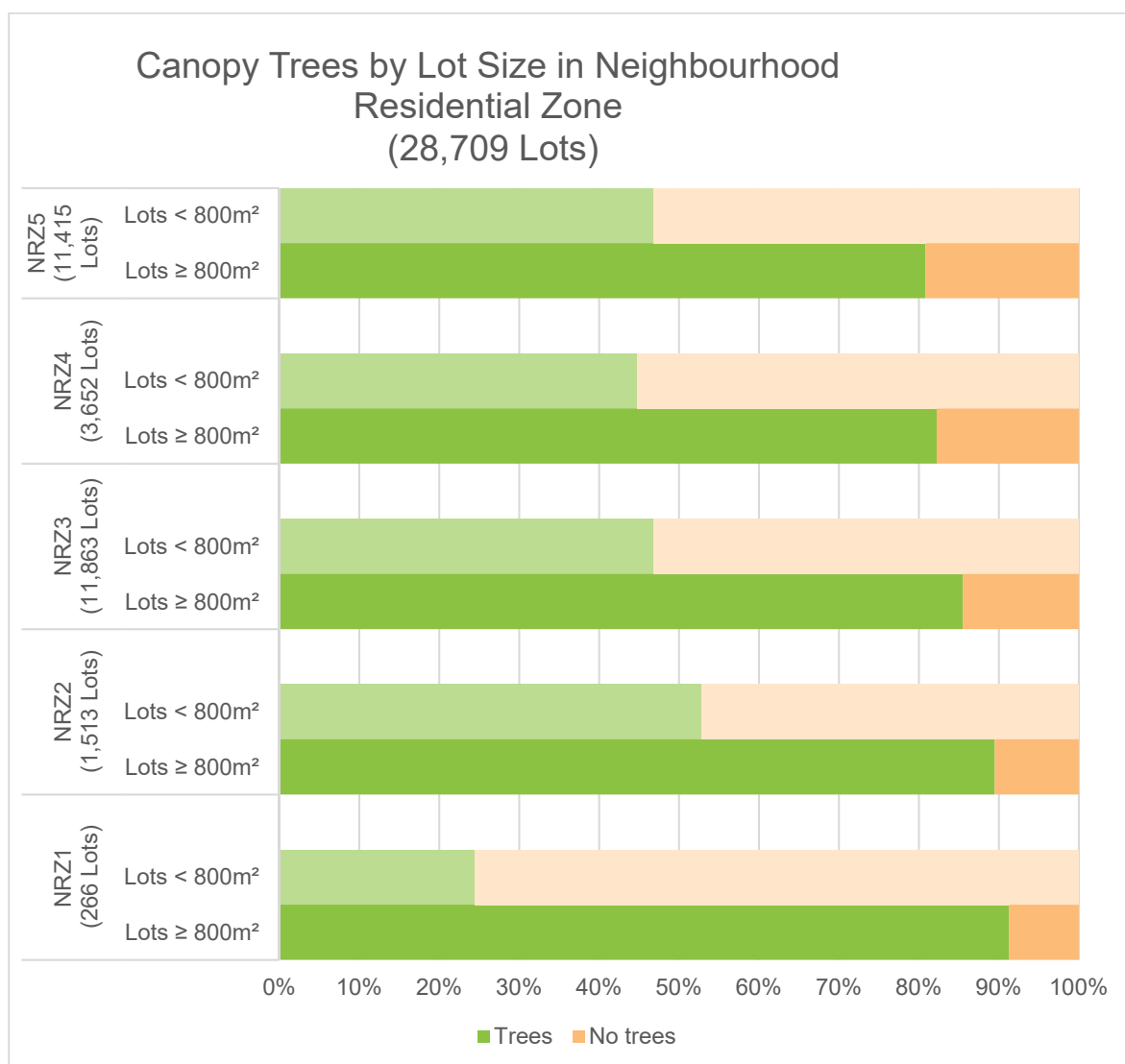
61. In the absence of pre-existing data with which to evaluate the number of properties containing large trees that may require a permit for removal under SLO9 a manual process of counting parcels containing trees with a height in excess of 5 metres above ground level ('**canopy trees**') was undertaken (refer to [Appendix B](#) for an explanation of the methodology).
62. I was assisted in this analysis by Sean Brien, a Senior Urbanist at Ethos Urban; and Juan Bueno, an Urbanist/GIS Analyst.
63. While the methodology includes some margin for error, particularly as there is no means of identifying which trees may fall within the various exemptions included in SLO9, the exercise is useful in gaining a general understanding of the extent of tree coverage within the SLO9 and the potential implications of the control for both development capacity and property maintenance.
64. The following graphs show the outcomes of the analysis:
 - Light green bars represent the proportion of properties of less than 800sqm in area that contain canopy trees;
 - Light orange bars represent the proportion of properties of less than 800sqm that do not contain canopy trees;
 - Dark green bars represent the proportion of properties of 800sqm or more in area that contain canopy trees;

- Dark orange bars represent the proportion of properties of 800sqm or more that do not contain canopy trees.

65. A threshold of 800sqm was applied to distinguish **larger lots** ($\geq 800\text{sqm}$) that have greater potential for multi-dwelling redevelopment compared to **smaller lots** ($< 800\text{sqm}$) that have less potential. Note that the larger lots may include schools and other non-residential uses that are included in the residential zones; and that smaller lots may include common property calculated as a 'lot'.

66. The first graph relates to the five schedules of the NRZ to which the SLO9 applies. It shows:

- A very high proportion of **larger lots** ($\geq 800\text{sqm}$) contain trees that may trigger the need for a permit under SLO9;
- With the exception of NRZ2, the majority of **smaller lots** in each zone schedule do not contain a canopy tree.



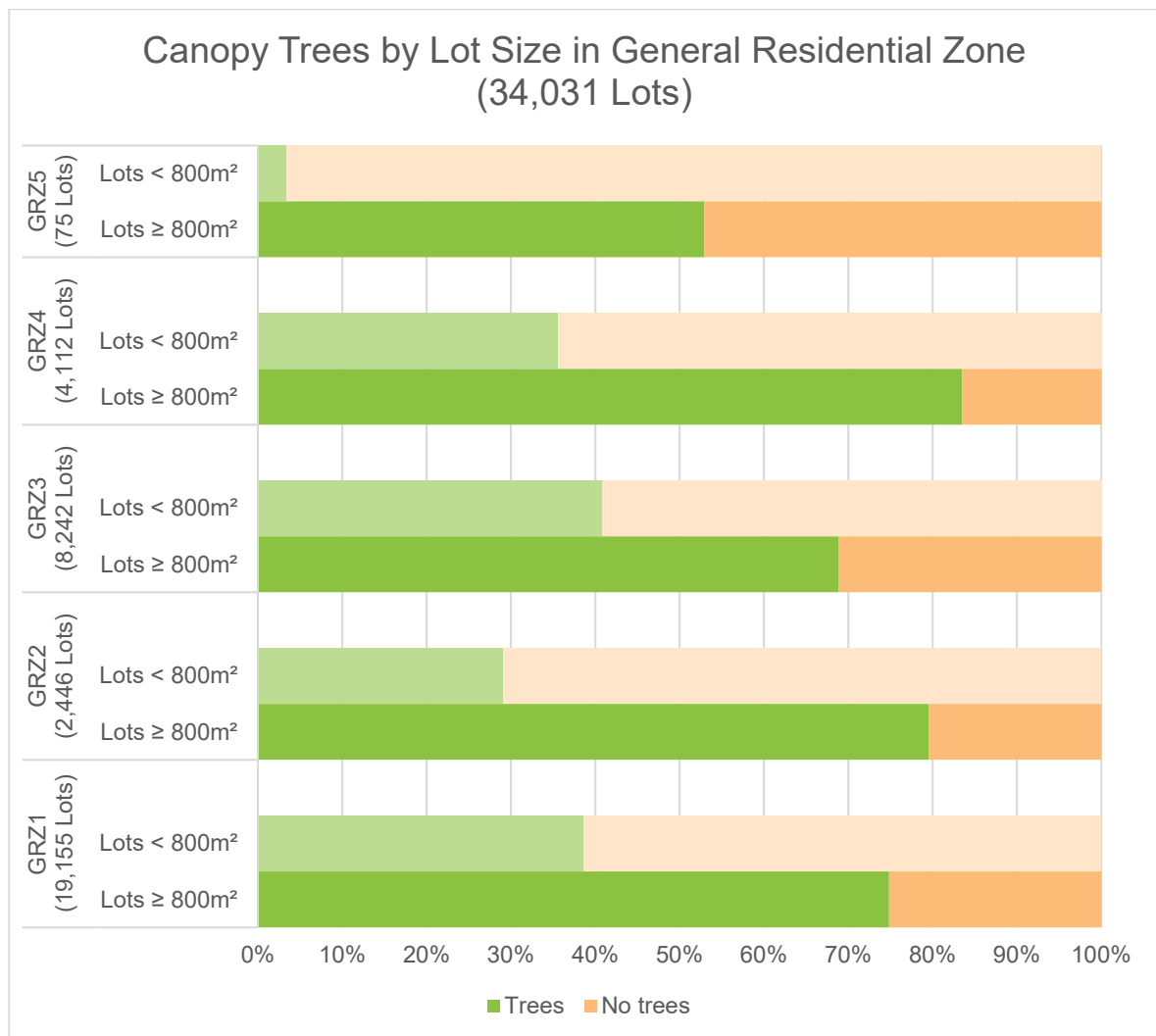
67. The second graph shows the same analysis for the General Residential Zone areas to which SLO9 applies:²

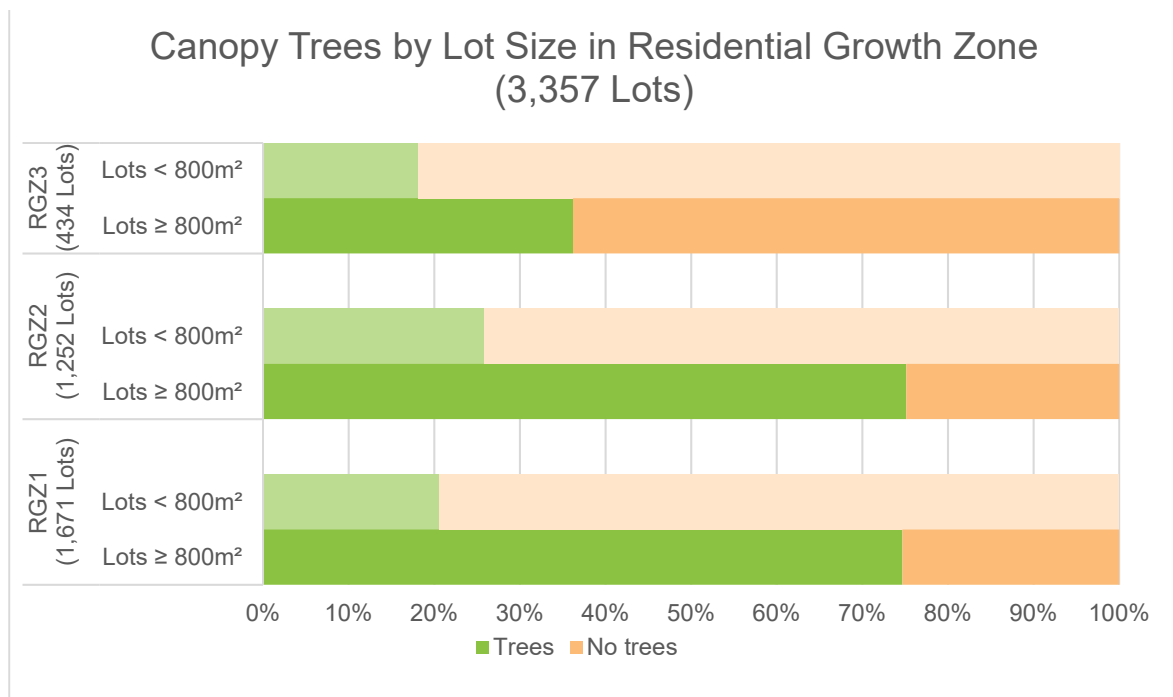
² Note that GRZ5 only applies to 75 properties. It includes the Healesville Freeway, the periphery of the Brickworks site, sites adjacent to the Box Hill Town Hall, and one property in Morack Road.

- The majority of **larger lots** contain canopy trees, although in each schedule the proportion is notably lower than in the NRZ;
- In the case of **smaller lots**, in none of the zone schedules did more than 40% of lots contain a canopy tree – again this was notably lower than the proportions in the NRZ.

68. The third graph shows the same analysis in relation to the Residential Growth Zone:

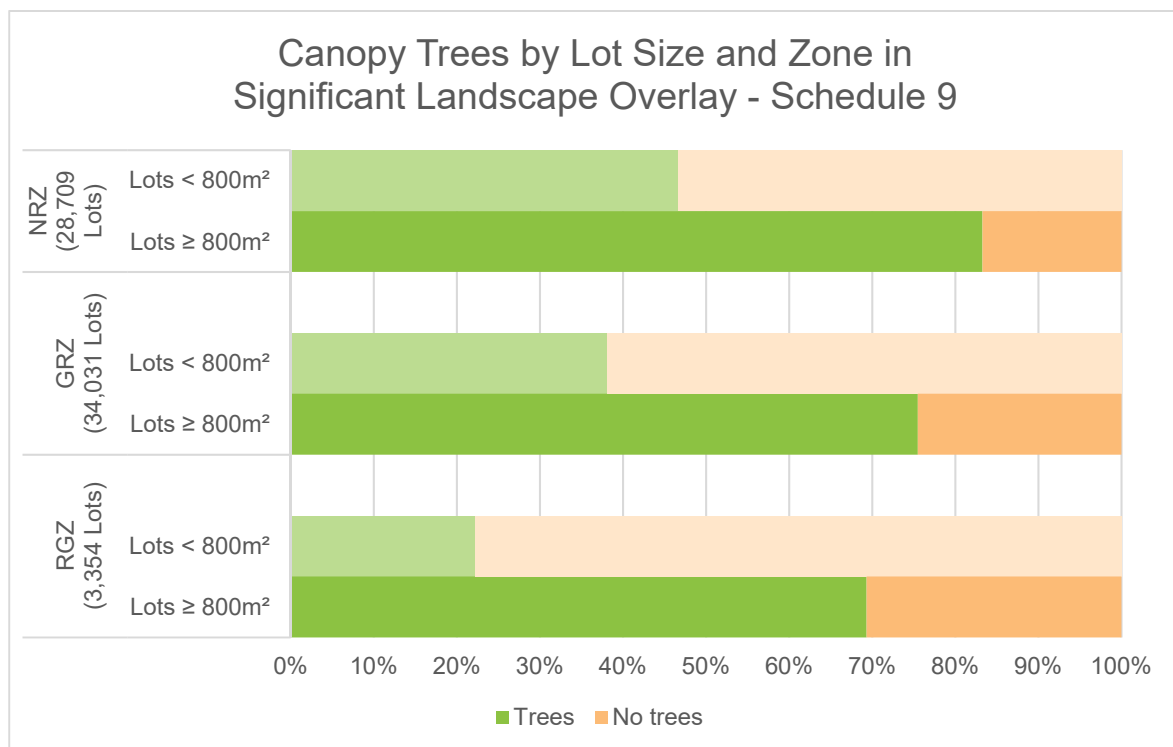
- The total number of lots is less than 10% of the total in the GRZ and just over 10% in the NRZ;
- The percentage of larger lots with canopy trees is comparable to but lower than the GRZ;
- Less than a quarter of smaller lots in all zone schedules contained a canopy tree.





69. The final graph (below) provides of canopy tree coverage across all three residential zones affected by SLO9. In line with the descriptions above, it highlights:

- **Larger lots** in the NRZ are more likely to contain canopy trees than those in the GRZ and in turn the RGZ;
- Conversely, **smaller lots** in the RGZ are less likely to contain canopy trees than those in the GRZ or in turn the NRZ.



70. In my opinion, several conclusions may be drawn from the above analysis:

- Canopy trees are ubiquitous and widely spread across the residential landscape of Whitehorse, reinforcing the conclusion of the **Housing & Character Review** that they make an integral contribution to neighbourhood character in all character precincts.
- Canopy tree coverage appears to have played a role in defining the character areas, with the limited change areas (zoned NRZ) containing the highest proportion of lots with canopy trees, followed by the natural change areas (zoned GRZ) and then the substantial change areas (zoned RGZ).
- In all zones, it is the larger lots that are more likely to contain canopy trees than smaller lots. It was apparent during the analysis that many multi-dwelling developments do not preserve sufficient space for the establishment of canopy trees.
- Due to the prevalence of canopy trees on larger sites compared to smaller sites, the greatest threat to overall canopy cover is more likely to be the redevelopment of these sites rather than the removal of individual trees for other reasons.
- The prevalence of canopy trees on larger lots suggests that the majority of future multi dwelling development applications will need to consider issues related to tree removal, provision or protection. It is worth noting that these proposals will require a planning permit notwithstanding the existence of SLO9.

7.2 The implications for dwelling yield

71. The **Additional Analysis** examined the intersection between the Whitehorse policy objectives of accommodating housing growth and vegetation protection. In the absence of detailed vegetation data, the analysis involved both a risk assessment of the potential for development constraints associated with vegetation protection; and an evaluation of the application of the SLO9 provisions on the development yield assumptions that underpinned the **Housing & Character Review**.

72. The key findings of the analysis were (p. 68):

- The **Housing & Character Review** concluded that the total residential capacity within the municipality was substantially in excess of projected growth requirements to 2031.
- SLO9 does not apply to commercial areas or Neighbourhood Activity Centres, which represented around 25% of available development capacity.
- SLO9 is unlikely to have any impact on dwelling yield in the RGZ due to tree removal exemptions outside the front setback areas coupled with the purpose of the zone, which is intended to accommodate growth – the RGZ represented almost 29% of capacity.
- SLO9 is likely to have negligible impact on dwelling yield in the NRZ given the conservative development assumptions applied to the zone and the fact that SLO1-8 applies to the most heavily vegetated areas of the municipality – the NRZ represented just under 20% of capacity at the time of review, however subsequent changes to the zone have increased the development potential in these areas.

- SLO9 is likely to have some impact on dwelling yield within the GRZ, noting that the zone schedules require additional open space and tree planting in any case – these areas represented approximately 26% of available capacity.

73. The report concluded that any potential impact on dwelling yield imposed by the permanent introduction of SLO9 would likely be limited to the GRZ and NRZ areas, but that this would not have an unreasonable impact on housing growth objectives in Whitehorse.
74. In addition to the above, I would add that in my opinion the **Housing & Character Review** did not fully anticipate the magnitude of development that has occurred in central Box Hill since the time of its adoption. The additional dwelling capacity accommodated in high rise development in Box Hill further mitigates against the likelihood of SLO9 having an unacceptable impact on housing growth in Whitehorse.

7.3 How the SLO9 is being applied

75. Additional analysis of a sample of planning permit applications was undertaken as part of the preparation of this statement. I was assisted in this analysis by Sean Brien, a Senior Urbanist at Ethos Urban.
76. In order to examine the practical application of SLO9 with respect to the relationship between vegetation and built form, a sample of multi-dwelling 22 recent applications was reviewed. The reason for focussing on multi-dwelling applications was to examine how SLO9 might be influencing decisions and whether this might in turn impact upon the capacity of Whitehorse to accommodate housing growth.
77. Council provided a list of all applications for planning permits made on land affected by SLO9 since the introduction of the interim control. Applications were filtered and selected with unbiased criteria to create a cross-section of applications to consider.
78. A total of 22 planning permit applications were reviewed. The selection criteria were as follows:
- Applications for more than one dwelling on a lot within the SLO9 area (regardless of whether a permit was triggered under SLO9 or not);
 - Planning permit applications (as opposed to secondary consents) where a final decision had been made by Council rather than VCAT;
 - The most recent decisions from each of the residential zone schedule areas (to a maximum of three per area).
79. In each case the delegate report and plans were reviewed, with the following questions in mind:
- Was a permit required under SLO9?
 - What was the outcome of the application?
 - Did SLO9 influence the outcome of the application?
 - Would any of the additional exemptions proposed by Amendment C219 have applied?
80. Although the sample was small, the analysis provided some noteworthy insights into the manner in which SLO9 interacts with the residential zones. A detailed summary of the analysis prepared by Sean Brien is provided in **Appendix C**.
81. I have subsequently reviewed the analysis and the applications, and my observations (acknowledging the small size of the sample) are as follows.

82. The responsible authority appears to be applying SLO9 appropriately in that its objectives are being considered alongside other planning objectives, such as accommodating dwelling growth. I saw no evidence of the provisions negatively impacting on dwelling yield or leading to the refusal of otherwise acceptable development applications.
83. Under the SLO9 vegetation protection and replacement is influencing built form outcomes, including modifications to building designs and layouts, structural modifications, and the layout of private open space.
84. Council's planners and arborists are interpreting the SLO in a consistent, pragmatic and balanced manner. The removal of trees that have poor health and structure, or which are environmental weeds, is generally supported.
85. The planting of new canopy trees tends to be based on the modified ResCode standards contained in the residential zone schedules, rather than applying a tree replacement ratio.
86. In the case of multiple dwelling proposals, SLO9 does not appear to introduce any significant additional burden on applicants as a planning permit is already required for development and Council has traditionally required arborists reports where existing trees may be affected.
87. The permit triggers and decision guidelines of the SLO9 do appear to be having the effect of increasing the emphasis placed on tree canopy retention and perpetuation, compared to a standard ResCode assessment.

8.0 Key planning issues

8.1 *An explanation of the 5.0 metre height limit and 1.0 metre trunk circumference that applies to the SLO9, why the difference with the SLO9 and other controls*

88. The definition of a canopy tree for the purposes of implementing planning controls in Whitehorse was examined in the **Options Report** (pp. 33-35). The report quoted definitions found in two Australian Standards and an international glossary of arboricultural terms. Those references defined trees as having one (or few) dominant stems or trunks and a minimum height of either 3 or 5 metres.
89. Planning controls in a number of metropolitan Melbourne municipalities were also examined, with most triggering the requirement for a planning permit based on measurements of minimum girth and height.
90. The report concluded:

Based on this benchmarking exercise, it can be seen that canopy trees are usually protected from 5 or 6m in height and for any species, whether it be indigenous or exotic. Based on this, it would be reasonable to suggest that a canopy tree in Whitehorse can be determined as a tree with a 0.5 metre circumference at 1.0 metre above the ground (being the most common measurement used in the existing Whitehorse controls and elsewhere) and/or a minimum height of 5-6 metres. (p. 35)
91. The Additional Analysis Report revisited this issue following the introduction of SLO9, adding:

Canopy trees with a height of at least 5 metres will, in most cases, provide a visible canopy above the roofline of a single storey house and the ground level of most buildings with two or more storeys. (p. 3).
92. Amendment C219 seeks to introduce several new planning permit exemptions for tree removal. However, it retains the primary exemption that appears in the current interim control, namely that a permit is not required to 'remove, destroy or lop':

A tree less than 5 metres in height and having a single trunk circumference of less than 1.0 metre at a height of 1.0 metre above ground level.

93. That is, a planning permit is only required to remove, destroy or lop a tree that is both at least 5 metres in height and 1.0 metres in girth (when measured 1.0m above ground level).
 94. This differs from Whitehorse SLO Schedules 1-8 which have a permit threshold of 0.5 metres circumference above ground level regardless of height.
 95. That **Additional Analysis** report notes that at the time the original SLO9 had been submitted for introduction it included a 0.5 metre trunk circumference provision in order to align it with Whitehorse's pre-existing SLOs. This threshold was changed by DEWLP upon introduction of the interim SLO9.
 96. The report notes that a 1.0 metre trigger was originally proposed by the **Options Report** and concludes that it was appropriate that a less burdensome trigger be applied in the expansive SLO9 area than in the more tightly defined SLO1-8 areas (pp. 3-4).
 97. The application of a different threshold for SLO9 raises several questions of policy balance:
 - Is the proposed threshold effective in protecting canopy trees?
 - Is it excessively burdensome for Council or landowners?
 - Is it confusing to apply a different threshold to the other SLO schedules?
 98. The SLO9 vegetation removal triggers have now been in place for since February 2018. Based on the further analysis described above, the (tree height) controls affect approximately 45% of properties in the SLO9 area and have triggered almost 1,000 permit applications for vegetation removal or buildings and works since their application.
 99. The additional exemptions proposed by Amendment C219 are generous and will have the effect of reducing the number of properties affected and applications required. This in turn will reduce the administrative burden on Council and relieve many landowners from the need to apply for a permit to remove exempt trees.
 100. The large number of vegetation removal permit applications triggered by the introduction of SLO9 is an indicator of the prevalence of canopy trees in the Whitehorse landscape, reinforcing the observations made in the **Housing & Character Review** about their definitive contribution to character.
 101. In my opinion if vegetation controls revert to being confined to the pre-existing SLO1-8 areas there will be no meaningful means of slowing the decline of canopy vegetation cover in Whitehorse, less still of achieving Council's **Urban Forest Strategy** objectives.
 102. Nevertheless, given the expansive extent of SLO9 compared to the other SLO areas, more generous permit thresholds and exemptions are warranted in order ensure that an appropriate balance is struck between vegetation protection and other planning objectives.
- 8.2 *An explanation of the rationale behind the 3 metre buildings and works setback that applies to the SLO9 and the setback that applies to the other SLOs and Vegetation Protection Overlays (VPO)***
103. The proposed modifications to the Tree Conservation Local Policy (Clause 22.04) propose to apply a different setback between a tree trunk and buildings and works in the SLO9 area (3 metres) compared to all other SLO and VPO areas (4 metres).

104. This differentiation already exists within the local policy, however the 4 metre setback requirement currently applies to SLO9 areas as well. This means that the 3 metre setback requirement applies as a matter of policy in relation to trees that are not protected by planning controls. The 3 metre setback could currently be applied, for example, in relation to a tree on public land when considering a ResCode application on adjoining land.
105. Prior to the introduction of the interim SLO9 the 3 metre setback provision therefore applied to all canopy trees in the area now covered by SLO9. The amendment can therefore be regarded as reinstating the policy provision that formerly applied to these trees.
106. The **Additional Analysis** report addressed this issue, stating that the reinstatement of the 3 metre threshold was reasonable given that the SLO9 applies to a much larger area and, generally speaking had smaller lot sizes, than the SLO1-8 areas. (p. 29)
107. The local policy notes that the 3 or 4 metre setbacks are intended as minimum setbacks that may need to be increased depending on the tree and buildings and works in question.

8.3 Clarification whether the SLO9 applies to areas covered by the VPOs including VPO Schedules 1, 3 or 5 and the proposed changes to Clause 22.04-4 Buildings and Works near existing trees

108. SLO9 currently applies in addition to several VPO schedules. VPO2 and 4 are proposed to be removed as part of the amendment.
109. In areas where both SLO9 and a VPO apply, Clause 22.04-4 is worded such that the 4 metre setback would apply to existing trees. This is because the 3 metre setback applies to areas *not included* in SLO1-8 or a VPO. As it does not make reference to SLO9 there is no ambiguity.

8.4 An explanation of the different minimum tree planting areas recommended for land in the bush environment character precinct and not in the bush environment character precinct

110. The Tree Conservation Local Policy (Clause 22.04) currently requires a minimum area the planting of new trees of 50sqm on land affected by an SLO and 35sqm for land not affected by an SLO.
111. The larger land area requirement therefore applies to SLO9 as well as SLO Schedules 1-8, to which it was originally intended to apply.
112. A requirement for a 50sqm minimum area for a newly planted tree is problematic in areas expected to experience dwelling growth because of the significant amount of land it would exclude from development. It also exceeds the private open space standards that apply in most of Whitehorse's residential zone schedules, which require an area of 35sqm.
113. The 'Bush Environment' character areas are defined in the Neighbourhood Character Review. These areas area all zoned NRZ and included in SLO Schedules 1-8. Due to their larger lot sizes, higher vegetation cover, predominance of large eucalypts and zone objectives, these areas are more capable of accommodating a 50sqm minimum tree planting area than other character precincts.
114. Finally, similar to the building setback provision, I note that the intent of this modification to the local policy is to reinstate the policy provisions that formerly applied to the SLO9 areas. I see this as a practical response to an inadvertent policy tension created with the introduction of interim SLO9.

115. For reasons of clarity, I recommend that the areas be distinguished according to whether they are within SLO1-8 (50sqm) or outside these schedule areas (35sqm), rather than by reference to the character precinct.

8.5 ***How the SLO9 will reduce the extent of 'moonscaping'***

116. The issue of 'moonscaping' of development sites was raised as a significant concern to residents during community consultation about Whitehorse's vegetation controls. These concerns were reinforced by both staff and Councillors during the preparation of the **Additional Analysis** report.
117. As I understand it, 'moonscaping' refers to the clearing of a property of all vegetation prior to redevelopment. This may coincide with the demolition of buildings, although not always.
118. In my experience moonscaping raises accentuated concern when it occurs prior to a planning permit being issued for redevelopment. The perception raised is that the site is being cleared in order to avoid the need to assess or remove large trees; and to maximise its development potential.
119. Moonscaping can be regarded as an attempt to circumvent the contribution of trees to neighbourhood character. This is particularly relevant in character areas where canopy trees play an important role in defining character, as is the case throughout Whitehorse.
120. In the absence of vegetation protection controls, there is no legal impediment to moonscaping. ResCode Clause 55.01-1 'Neighbourhood and Site Description' seeks to take into account recently removed vegetation, however its performance relies somewhat on the existence of some sort of record of the vegetation that was removed. It requires the neighbourhood and site description for a multi-dwelling application to show the:
- Location of significant trees existing on the site and any significant trees removed from the site 12 months prior to the application being made, where known.
121. While contemporary aerial photography may assist in identifying the location and scale of recently removed vegetation, a reactive response to vegetation removal can never be as effective a proactive decision-making process prior to removal.
122. The **Discussion Paper** examined the issue of moonscaping prior to the introduction of SLO9. It found that moonscaping was occurring both in areas where there were no tree controls and in VPO controlled areas. Conversely, it found that moonscaping was less of an issue in the SLO1-8 areas. Several reasons for this distinction between the SLO and VPO areas were identified, including the lack of vegetation replacement provisions in the VPOs (p. 66).
123. In my opinion, the permanent application of SLO9 across the balance of Whitehorse's residential areas has the potential to discourage moonscaping in several ways:
- It identifies vegetation protection as an important planning priority;
 - It creates the potential for compliance action under the *Planning and Environment Act 1987* if vegetation is removed without approval;
 - It necessitates assessment of the significance, health and safety of a tree and the weighing of these considerations against other planning criteria;
 - It establishes a nexus between vegetation protection and built form, requiring a more considered design response; and

- Where vegetation removal is permitted, it legitimises, and increases the importance of, ensuring that effective replacement planting is achieved.

124. The analysis of planning permit applications discussed previously identified Council will approve the clearing of substantial amounts of vegetation where this is warranted. Although the outcome may appear similar, in my view there is a significant distinction to be made between vegetation removal undertaken in the context of a planning permit application; and that which is done speculatively prior to application.
125. I do not have any doubt that making SLO9 permanent would provide a strong discouragement to the speculative moonscaping of residential lots, enabling vegetation to be properly considered in a development context.

8.6 ***An explanation of why the SLO is proposed as the appropriate control for tree control.***

126. The **Options Report** was commissioned to examine options for ensuring the future retention and regeneration of tree canopy in Whitehorse (p. 2). This report built upon the findings of the **Discussion Paper** and examined the strengths and weaknesses of the several approaches to vegetation protection and enhancement, including:
- Local planning policy framework
 - Vegetation Protection Overlay
 - Significant Landscape Overlay
 - Environmental Significance Overlay
 - Residential Zone Schedules
 - Native Vegetation Provisions
 - Local Law
 - Enforcement
 - Education programs.
127. A number of options were explored in detail, which were eventually narrowed down into an evaluation of the relative merits of expanding either the VPO or SLO in Whitehorse. The report concluded by recommending the application of the SLO to the balance of Council's residential areas. This conclusion was later reinforced in the **Additional Analysis** report, which stated:
- Amongst the various tools implemented in Whitehorse, the SLO provides the only mechanism that relates neighbourhood character to vegetation management, which assists in considering the impact beyond just the trees and property boundaries. The SLO also contains the ability to trigger a permit for buildings and carrying out works, which provides greater integration and focusses on developing to a sites' individual conditions.' (p. 17)
128. I concur that the Significant Landscape Overlay is the most appropriate planning tool for tree protection and replanting in Whitehorse. My reasons are as follows.
129. The purpose of the SLO addresses the landscape as a whole, whereas the VPO is more narrowly focussed on vegetation alone. This broader ambit has the potential to accommodate a more robust approach to dealing with change than the VPO, whose purpose includes ensuring that *'development minimises loss of vegetation.'*

130. Similarly, the SLO provides for a broader consideration of the value of vegetation with respect to neighbourhood character and aesthetics, recognising the interplay of built form and vegetation in defining character. The VPO elevates the significance of vegetation itself above other determinants of character or aesthetic value.
131. The SLO not only protects vegetation directly, but also indirectly by requiring a planning permit for buildings, works and subdivision in circumstances where such development may impact on the future survival or vitality of an existing tree. Further, it enables the same considerations to be applied to the provision of space for the regeneration of new or replacement trees.
132. The indirect protection afforded by the SLO applies to buildings that make impact upon both trees within the development site and those on adjoining properties that are also within the SLO.
133. The concurrent buildings and works, subdivision and vegetation removal provisions in the SLO empower responsible authorities to require modifications to the design, layout or location of buildings and works in order to protect an existing tree or provide sufficient space for a new tree to thrive. The VPO decision guidelines do allow for consideration of the impact of buildings, work and subdivision on tree protection, but are only effective in this regard if a planning permit for development is triggered by another provision.

9.0 Conclusion and recommendations

134. In my opinion Amendment C219 is strategically sound and supports State and Local planning policy objectives in relation to tree retention and neighbourhood character.
135. The additional exemptions included in the Schedule as part of the Amendment will reduce the number of planning permit applications triggered across the expansive area to which SLO9 applies. This will serve to reduce both costs to residents and the administrative burden on Council.
136. I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Panel.



James Reid, BPD, BTRP, FPIA, MVPELA
Planning Director
Ethos Urban

Appendix A. Curriculum vitae

James Reid

Regional Director, VIC — BTRP, BPD, FPIA, MVPELA



James is Ethos Urban's Regional Director in Victoria. He has over 25 years experience as a strategic and statutory planner, working on a diversity of projects in both urban and regional contexts. Throughout his career he has demonstrated a commitment to achieving planning and urban design outcomes that enhance sense of place, liveability, resilience and equity. He views planning as playing a crucial role in predicting, shaping and communicating about change.

Adopting an inquisitive, consultative and creative approach to all of his projects, he seeks to develop visions that inspire, processes that involve the right people, and strategies that are effective and achievable.

At Ethos Urban, James is responsible for a wide variety of strategic and statutory planning projects, many of which include a community engagement focus. In doing so, he draws on a breadth of experience gained both as a consultant and as a senior manager in local government. He leads multi-disciplinary teams on a diverse range of projects including structure plans, development plans, urban design frameworks, planning scheme reviews, planning applications, policy preparation, regional planning, community and economic development, and community engagement.

James has a strong reputation for professional leadership and advocacy. He plays a prominent role in the profession as the Planning Institute

of Australia's immediate past President in Victoria; and is a regular speaker and commentator on planning issues. Throughout his career he has been involved in a variety of community and civic organisations, including serving as a board member of the Victorian Local Governance Association.

James' main areas of expertise include strategic planning and policy development, development applications, advocacy and expert witness statements at planning tribunals and panels, management of complex strategic planning projects, economic and community development, community engagement and facilitation.

Some of James's recent projects include:

- **Monbulk Structure Plan** – Preparation of a plan to integrate growth opportunities with wastewater infrastructure upgrades in the township of Monbulk.
- **Casterton Structure Plan** – Preparation of a structure plan to guide growth, development and civic improvements in Casterton on behalf of Glenelg Shire Council.
- **Yarra River Corridor Strategy** – Led the final stages of the strategy, which resulted in the introduction of detailed development controls over the middle and lower Yarra River corridor.

Appendix B. Properties affected by SLO9

1. The following is a description of analysis undertaken by Juan Bueno, GIS Analyst, and Sean Brien, Senior Urbanist that was undertaken in preparation for the panel hearing. This analysis forms the basis of my commentary on the number of properties impacted by SLO9.

Site identification methodology

2. 3D GIS terrain and imagery (sourced from Google Earth) was used as a base map to determine ground levels and the vertical protrusion of buildings and trees.
3. An opaque plane was extended over all land subject to the SLO9 and elevated 5 metres above ground level. The elevation was parallel to the undulations of the ground level, rather than completely flat.
4. Roofs and tree canopies that were still visible above this plane were considered to be greater than 5 metres in height.
5. Properties were manually identified as either containing one or more trees over 5 metres in height, or not containing any trees 5 metres and over in height. The intention of this method of counting was to identify properties which could trigger a permit requirement under SLO9 and may therefore be affected by the proposed permanent controls. The following assumptions were relevant to counting properties:
 - The trunk of a tree was not visible using this method, so it was assumed to be at the centre of the visible canopy;
 - Only the property which was assumed to contain the trunk of the tree were counted. Properties that only contained canopy spread from trees assumed to be on neighbouring allotments were not counted;
 - Where a tree was identified in the common property of a multi-dwelling development, that common property was identified as a lot for the purpose of the assessment;
 - Lots were also considered by site area. Lots equal to or greater than 800m² were considered to have greater development potential and separated out from lots with an area of less than 800m².
6. Four categories of lot were identified for the purposes of the analysis:
 - Smaller sites (less than 800m²) with trees over 5m in height (potentially affected by SLO9) – these areas are shown in light green on the map;
 - Smaller sites (less than 800m²) without trees over 5m in height – these areas are shown in light orange;
 - Larger sites with more development potential (800m² or more) with trees over 5m in height (potentially affected by SLO9) – these sites are shown in darker green
 - Larger sites with more development potential (800m² or more) without trees over 5m in height – these areas are shown in darker orange.

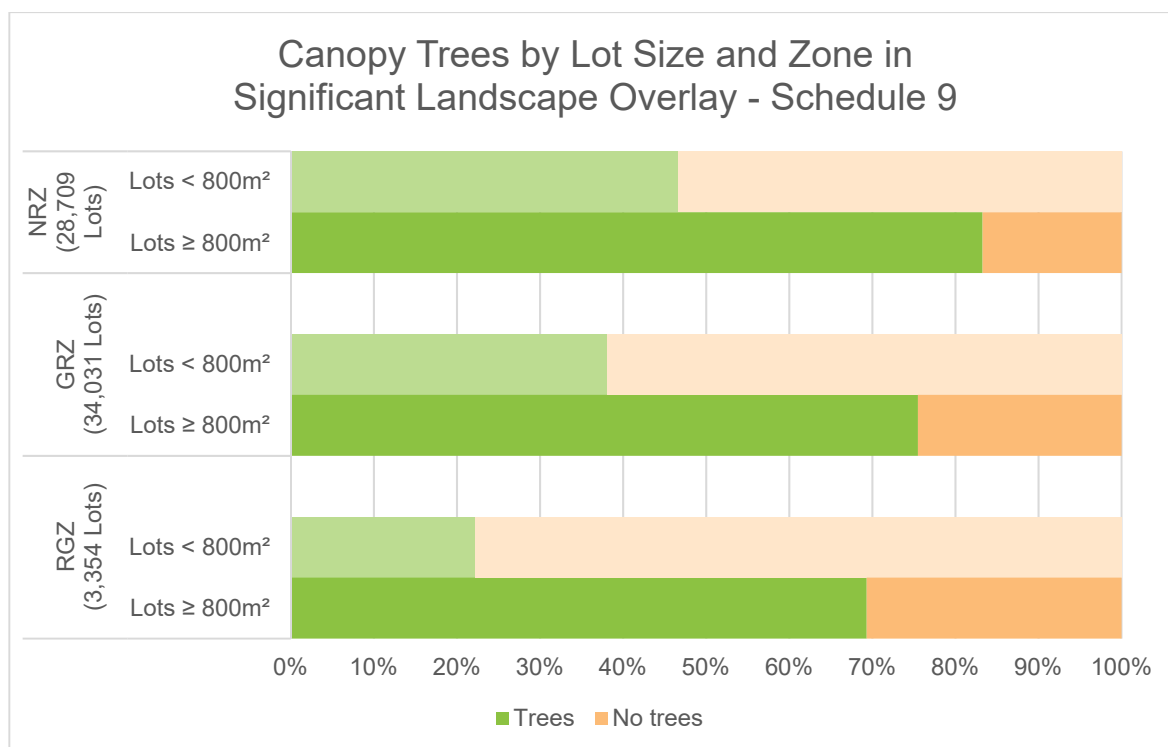
Data analysis

7. Alongside these maps, the data was interrogated to identify any trends or relationships between zone, lot size and potential SLO9 impact.

8. Data tables are structured as for the following example:

		Area (SLO9 / Zone / Schedule)	
		Count	Percent
Lots $\geq 800\text{m}^2$	No trees		Percentage of total
	Trees		Percentage of Lots $\geq 800\text{m}^2$
			Percentage of Lots $< 800\text{m}^2$
Lots $< 800\text{m}^2$	No trees		Percent of total
	Trees		Percentage of Lots $\geq 800\text{m}^2$
			Percentage of Lots $< 800\text{m}^2$
TOTAL	No trees		Total
	Trees		Percentage of Lots without trees
			Percentage of Lots with trees

9. Results are presented in graphs that divide smaller and larger lots and shows the percentage of these lots that did or did not contain trees over 5m in height. The categories correspond with those shown on the maps and are colour co-ordinated accordingly.
10. A count of the number of lots within each zone was included, showing there are far fewer lots in certain zones (e.g. the RGZ) and some individual zone schedules.
11. An example (of the overall zones) is presented below.



Observations

12. Observations made about the results of the data analysis are:
- A higher proportion (generally 50%+) of larger lots (equal to or greater than 800m^2) contained trees over 5m in height across all zones (and all zone schedules).
 - A lower proportion (generally less than 50%) of smaller lots (less than 800m^2) contained trees over 5m in height across all zones and schedules.

- The NRZ has the highest proportion of lots with trees over 5m in height across smaller and larger lots
- The RGZ has the lowest proportion of lots with trees over 5m in height across smaller and larger lots
- Smaller zone schedules including the GRZ3 (434 lots) and the GRZ5 (75 lots) had the lowest proportion of lots (both larger and smaller) that contained trees over 5m in height.



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LEGEND / NOTES

- NRZ
- Lots outside Study Area SLO9
- Lots with areas < 800 m²
- Lots with areas ≥ 800 m²
- Lots with areas < 800 m² with trees over 5m
- Lots with areas ≥ 800 m² with trees over 5m

ISSUE DATE REVISION REVISION BY APPROVED BY PROJECT

A 22.11.19 Final SB JR Maddocks Whitehorse C219 Panel

FINAL

1:35000 @ A3
0 0.25 0.5 1 2km

DRAWING

Tree coverage over 5m in SLO9

A-2.0
/A

JOB NO.	DWG NO.	ISSUE	DATE	DRAWN BY
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LEGEND / NOTES

- GRZ
- Lots outside Study Area SLO9
- Lots with areas < 800 m²
- Lots with areas ≥ 800 m²
- Lots with areas < 800 m² with trees over 5m
- Lots with areas ≥ 800 m² with trees over 5m

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FINAL

1:35000 @ A3
0 0.25 0.5 1 2km

DRAWING

Tree coverage over 5m in SLO9

A-1.0
/A

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LEGEND / NOTES

- RGZ
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- Lots with areas ≥ 800 m²
- Lots with areas < 800 m² with trees over 5m
- Lots with areas ≥ 800 m² with trees over 5m

ISSUE	DATE	REVISION	REVISION BY	APPROVED BY	PROJECT
A	22.11.19	Final	SB	JR	Maddocks Whitehorse C219 Panel
FINAL					

1:35000 @ A3

0 0.25 0.5 1 2km

JOB NO.	DWG NO.	ISSUE	DATE	DRAWN BY
3190367	A-3.0	A	22.11.19	JB

Tree coverage over 5m in SLO9

A-3.0
/A

Appendix C. Summary of planning permit analysis

1. The following is a summary of analysis undertaken by Sean Brien, Urbanist, of twenty-two planning permit applications for multi-dwelling developments considered under the current interim SLO9. This summary and my subsequent review of the applications assessed form the basis of my conclusions in the body of this evidence.
2. All 22 applications triggered a permit under the SLO provisions: 22 for buildings and works and 17 for vegetation removal.
3. Of the 22 applications for multiple dwellings:
 - 19 applications were approved (86%);
 - Of those 19 applications, 15 were approved with vegetation-related conditions (79%)
 - 3 applications were refused;
 - Of those 3 applications, an insufficient landscaping response (but not tree removal) was a ground for refusal in all cases.
4. The SLO9 influenced the decision in the following ways:
 - Conditions requiring landscape plans (64%);
 - Modifications to building layout or design (36%);
 - Conditions relating to building structure (18%);
 - A conclusion that the dwelling yield should be reduced (5%).
 - In only 3 of the 22 applications did the SLO9 have no apparent influence on the final decision.
5. The following are key observations from the analysis of 22 multi-dwelling applications in SLO9 and across a range of zone schedules and may not be applicable more generally across all applications of this type.
6. In applications where a permit is triggered under SLO9 for vegetation removal, it was common for Council's arborist to determine that all or most trees on the site had low or no retention value due to their health and structure and accordingly recommend removal.
7. In cases where a planning permit was required for vegetation removal, the number of canopy trees to be include in landscape plans was usually determined by the modified ResCode standard contained in the zone schedules rather than with the objective of replacing the trees removed.
8. Council prefers the use of native species in landscaping plans, whether or not the trees removed are exotics.
9. Environmental weeds are not exempt from the need for a permit under the current SLO9. These are generally regarded as having no retention value when proposed for removal; although arborists will recommend a standard tree protection zone where they exist on adjoining sites.
10. The SLO was used as the basis for recommending design changes in a number of instances, e.g.:
 - Layout and design changes to increase areas of open space available for tree planting;
 - Landscape plan changes to ensure canopy trees have enough space to mature and are unencumbered by easements;

- Structural changes, generally relating to the slab and/or footings, to ensure they are at or above grade and do not encroach more than 10% into the TPZ.
11. There were examples where a relatively large number of trees were approved for removal due to their low retention value. The requirement for a permit under the SLO empowered Council to require the planting of new canopy trees as conditions of permit.
 12. Permits were not granted for applications where the arborist permitted the removal of all trees (due to no or low retention value), however the planner determined there was not adequate and unencumbered space for the planting of canopy trees. This was based on the requirements of schedules to residential zones and the local policy, rather than SLO9. Design outcomes of these applications were generally poor and the more significant justification for refusal.
 13. The 'canopy enhancement' requirement of SLO9 was generally satisfied through a combination of applying the 'canopy trees per dwelling' rate found in the relevant residential zone schedule and providing space for each tree in accordance with the local policy.
 14. In one example, the 'per-dwelling' rate of canopy tree landscaping provisions required by the zone schedule were found to be too onerous in an application for five (5) dwellings in the GRZ2 (application WH/2018/486). The Council officer used discretion to achieve an acceptable outcome.
 15. In another example (WH/2018/374), an application for seven terrace town houses in RGZ1 was refused for various reasons, including the inadequate provision of space for planting canopy trees. In this instance tree removal was not a reason for refusal, as the arborist determined that all the trees to be removed had no or low retention value.

Table: Planning Permit Applications Reviewed

Application Number	Property Address	Description	Status	Application Date	Zone	N'hood Char.	SLO Area
WH/2019/233	256 Morack Road VERMONT SOUTH VIC 3133	Construction of two (2) double storey dwellings with associated tree removal and buildings and works within 4 metres of protected trees	Delegate Permit Issued	13/03/2019	NRZ5	GS7	SLO9
WH/2019/210	26 Winchester Road NUNAWADING VIC 3131	Buildings and works to existing dwelling and construction of a new double storey dwelling to the rear including associated buildings and works within 4 metres of protected SLO9 trees and tree removal	Delegate NOD Issued	7/03/2019	NRZ4	BS5	SLO9
WH/2019/205	32 Longbrae Avenue FOREST HILL VIC 3131	Construction of one additional dwelling on a lot & works within 4 metres of protected trees	Delegate NOD Issued	6/03/2019	GRZ1	GS6	SLO9
WH/2019/176	19 Dudley Street MITCHAM VIC 3132	Development of the land for three (3) double storey dwellings including associated buildings and works within 4 metres of trees and SLO9 tree removal	Delegate NOD Issued	26/02/2019	NRZ3	BS4	SLO9
WH/2019/17	7 Baranbali Drive VERMONT SOUTH VIC 3133	Construction of two double storey dwellings and tree removal	Delegate NOD Issued	10/01/2019	NRZ5	GS7	SLO9
WH/2018/1374	41 Parer Street BURWOOD VIC 3125	Development of the land for two (2) double storey dwellings including associated buildings and works within 4 metres of protected trees and tree removal	Delegate Permit Issued	14/12/2018	GRZ1	GS1	SLO9
WH/2018/1385	111 Koonung Road BLACKBURN NORTH VIC 3130	Construction of two double storey dwellings and buildings and works within 4m of protected trees	Delegate NOD Issued	14/12/2018	GRZ3	GS9	SLO9
WH/2018/1380	3 Charlton Street BLACKBURN NORTH VIC 3130	Development of the land for two (2) double storey dwellings including associated buildings and works within 4 metres of protected SLO9 tree and tree removal	Delegate NOD Issued	14/12/2018	GRZ3	GS9	SLO9
WH/2018/1361	80 Burwood Highway BURWOOD EAST VIC 3151	Buildings and works for the construction of six dwellings, alteration of access to a road zone category 1 and associated tree removal	Delegate Permit Issued	10/12/2018	RGZ1	GS5	SLO9
WH/2018/1345	15 William Street BOX HILL VIC 3128	Development of the land for two (2) double storey dwellings including associated buildings and works within 4 metres of protected trees and SLO9 tree removal	Delegate Permit Issued	6/12/2018	GRZ1	GS10	SLO9
WH/2018/1353	26 Park Road SURREY HILLS VIC 3127	Construction of two, double storey dwellings and associated vegetation removal within the Significance Landscape Overlay Schedule 9 (SLO9)	Delegate Permit Issued	6/12/2018	NRZ5	GS2	SLO9
WH/2018/1332	11 Francesca Street MONT ALBERT NORTH VIC 3129	Buildings and works for the construction of four double storey dwellings, associated tree removal, buildings and works within 4 metres of protected trees (SLO9)	Delegate Permit Issued	4/12/2018	GRZ4	GS8	SLO9
WH/2018/1199	108 Brunswick Road MITCHAM VIC 3132	Construction of 3 double storey dwellings and tree removal	Delegate Refusal Issued	29/10/2018	NRZ3	BS4	SLO9
WH/2018/1142	9 Devon Drive BLACKBURN NORTH VIC 3130	Development of the land for two (2) double storey dwellings, including associated buildings and works within 4 metres of protected trees and SLO9 tree removal.	Delegate Refusal Issued	18/10/2018	NRZ4	BS5	SLO9

Application Number	Property Address	Description	Status	Application Date	Zone	N'hood Char.	SLO Area
WH/2018/1104	7 Chapman Street BLACKBURN NORTH VIC 3130	Development of the land for two (2) double storey dwellings including associated buildings and works within 4 metres of protected trees, tree removal and alteration of side easement	Delegate Permit Issued	11/10/2018	GRZ3	GS9	SLO9
WH/2018/798	2 Woodhouse Grove BOX HILL NORTH VIC 3129	Development of the land for two new dwellings and associated building and works within 4m of trees protected under the Significant Landscape Overlay.	Delegate Permit Issued	30/07/2018	GRZ4	GS8	SLO9
WH/2018/705	24 Betula Avenue NUNAWADING VIC 3131	Development of the land for the construction of four double storey dwellings, with associated tree removal and buildings and works within 4 metres of protected trees	Delegate Permit Issued	16/07/2018	NRZ3	BS3	SLO9
WH/2018/688	452 Belmore Road MONT ALBERT NORTH VIC 3129	Construction of two double storey dwellings, buildings and works within 4 metres and removal of trees protected under the SLO9	Delegate Permit Issued	10/07/2018	GRZ4	GS8	SLO9
WH/2018/541	380 Middleborough Road BLACKBURN VIC 3130	Buildings and works associated with the construction of four three storey dwellings and associated tree removal	Delegate Permit Issued	12/06/2018	RGZ2	GS13	SLO9
WH/2018/486	6-8 Heather Grove NUNAWADING VIC 3131	Development of the land for five (5) dwellings, including associated buildings and works and tree removal.	Delegate Permit Issued	31/05/2018	GRZ2	BS2	SLO9
WH/2018/374	25 Watts Street BOX HILL VIC 3128	Construction of seven terrace houses, each unit has three storeys with basement parking, buildings and work, and associated tree removal	Delegate Refusal Issued	8/05/2018	RGZ1		SLO9
WH/2018/102	96 Middleborough Road BLACKBURN SOUTH VIC 3130	Development of four (4) dwellings above basement carpark, tree removal, works within 4 metres of a protected tree and alterations of access to a Road Zone Category 1	Delegate Permit Issued	28/02/2018	RGZ2	GS5	SLO9