



Arboricultural Impact Assessment

REPORT COMMISSIONED BY:

David Natale Design Objects

DATE OF ASSESSMENT:

Monday, November 16, 2020

SUBJECT SITE:

15 King Street, Dandenong VIC 3175

DATE OF REPORT:

Friday, March 26, 2021

REPORT PREPARED BY:

Ira Francis
Consulting Arborist
Graduate Certificate Arboriculture

VERSION 2

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

TMC REPORTS

ARBORICULTURAL CONSULTING SERVICES

ABN

13 601 685 223

PHONE

0401 442 604

EMAIL

nick@tmcreports.com.au

WEBSITE

www.tmcreports.com.au

Contents

1	Assignment	2
1.1	Author / Consulting Arborist	2
1.2	Client	2
1.3	Brief	2
2	Data collection	3
2.1	Site visit	3
2.2	Method of data collection	3
2.2.1	Documents viewed	3
3	Site description	4
4	Tree data	5
4.1	Photographic evidence	10
5	Site maps	14
5.1	Existing conditions	14
5.2	Ground level plan	15
5.3	Basement level plan	16
6	Discussion	17
6.1	Tree protection zone	17
6.2	Structural root zone	17
6.3	Designing around trees	17
6.3.1	Minor encroachment	17
6.3.2	Major encroachment	17
6.3.3	Root investigation	18
7	Conclusion	19
7.1	Tree retention value	19
7.1.1	Council owned trees	19
7.1.2	Low retention value	19
7.1.3	Neighbouring trees	19
7.2	Permit requirements	19
7.3	Street tree policy	19
7.4	Impact assessment	20
7.4.1	No encroachment	21
7.4.2	Minor encroachment	21
7.4.3	Major encroachment	21
8	Recommendations	31
8.1	Tree retention	31
8.2	Tree removal	31
8.2.1	Permit requirements for trees that are proposed to be removed	31
8.3	Less invasive construction measures	32
8.3.1	Basement (Tree 10)	32
8.3.2	Basement (Tree 22)	32
8.3.3	Site cut & retaining wall (Trees 21 & 24)	32
8.4	Tree protection measures	33
8.4.1	Pruning	33
8.4.2	Tree protection fencing	33
8.4.3	Tree protection signage	33
8.4.4	Ground protection	34
8.4.5	Scaffolding	34
8.4.6	Site storage	34
8.4.7	Prohibitions within the TPZ	34
8.4.8	Drains and services	35
9	Limitation of liability	36
10	Definition of terms	37
10.1	Tree health	37
10.2	Structure	37
10.3	Useful life expectancy (ULE)	38
10.4	Tree retention value	38
10.5	Age	39
10.6	Amenity value	39
10.7	Terms within tree data table	39

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

1 Assignment

1.1 Author / Consulting Arborist

Name	Phone
Ira Francis	0401 442 604
Consulting Arborist	Email
Graduate Certificate Arboriculture	nick@tmcreports.com.au
Company	
TMC Reports	

1.2 Client

Name	Intended Audience
David Natale Design Objects	<ul style="list-style-type: none">○ The property/tree owner(s)
Site Address	<ul style="list-style-type: none">○ The development project manager and associated construction staff
15 King Street, Dandenong VIC 3175	<ul style="list-style-type: none">○ Council Planning Department

1.3 Brief

The purpose of this report is to provide an independent arboricultural assessment of prominent trees that are located within the subject site and within five metres of the site boundary lines.

Detail has been requested in relation to the following instructions:

- To provide an objective assessment of the overall condition of the subject trees.
- To provide an objective assessment of the retention value of the subject trees.
- To determine the Tree Protection Zones (TPZ) and Structural Root Zones (SRZ) of the subject trees.
- To determine whether the subject trees are expected to remain viable following the proposed development.
- To propose recommendations that are expected to ensure that the subject trees would remain viable post construction.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

2 Data collection

2.1 Site visit

- Ira Francis, of TMC Reports, visited the site for an arboricultural assessment on Monday the 16th of November 2020 at 7:30am.

2.2 Method of data collection

- The subject trees were assessed from observations made as viewed from ground level.
- Access to neighbouring properties was not permitted. Assessment was therefore limited only to parts of the trees that were visible from within the subject site.
- A digital camera was used at ground level to obtain photographs within this report.
- The height of the trees was measured by using a Nikon Forestry Pro 2 Laser Range Finder.
- A circumference tape measure was used to determine the trunk dimensions of Trees 1 – 6, 9, 12 – 20, 25 & 26.
- Trunk dimensions of neighbouring trees (Trees 7, 8, 10, 11, 21 – 24) were estimated due to restricted access.
- Encroachment percentages have been calculated via ArborCAD.

2.2.1 Documents viewed

- Proposed plans (23/12/2020)
- Greater Dandenong Council Planning Scheme
- Australian Standard AS4970 – 2009 ‘Protection of Trees on Development Sites’
- Australian Standard AS4373 – 2007 ‘Pruning of Amenity Trees’

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

3 Site description

- The subject site is located in a Residential Growth Zone – Schedule 1 (RGZ1) within the Greater Dandenong Council.
- An existing residential dwelling is located within the subject site.
- The terrain of the site appeared to be predominantly flat.
- The subject trees are all located within the subject site, the front nature strip and adjoining properties (17 King Street and 2 Edith Street).
- No additional prominent vegetation was observed within five metres of the site boundary lines.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

4 Tree data

Tree No.	Botanical Name & Common Name	Age	Origin	Height	Canopy Spread N-S E-W	DBH CA1 DAB	Health	Structure	ULE	Amenity Value	Retention Value	TPZ Radius	SRZ Radius	Comments
1	<i>Lophostemon confertus</i>	Mature	Native QLD NSW	6.0 m	N-S 5 m	0.28 m	Good	Fair	20+ years	Moderate	Council Owned Tree	3.4 m	2.2 m	Council owned tree located within the front nature strip.
	E-W 7 m				0.88 m	0.38 m								
2	<i>Bambuseae</i> sp.	Mature	Exotic	3.0 m	N-S 1 m	N/A	Fair	Fair	20+ years	Low	Low	2.0 m	N/A	Too many stems to practically measure or estimate. TPZ adjusted in accordance with section 3.2 of AS4970-2009. SRZ not required in accordance with section 3.3.5 of AS4970-2009.
	E-W 1 m				N/A	N/A								
3	<i>Syzygium smithii</i>	Mature	Exotic	7.7 m	N-S 5 m	0.40 m	Good	Fair	10-20 years	Low	Low	4.8 m	2.3 m	Multi-stemmed at ground level. DBH & CA1 measured at ground level. Tree may therefore tolerate a slightly greater than 10% encroachment into the TPZ.
	E-W 5 m				1.26 m	0.40 m								
4	<i>Platycladus orientalis</i>	Mature	Exotic	3.1 m	N-S 2 m	0.20 m	Good	Good	20+ years	Low	Low	2.4 m	1.7 m	Multi-stemmed at ground level. DBH & CA1 measured at ground level. Tree may therefore tolerate a slightly greater than 10% encroachment into the TPZ.
	E-W 2 m				0.63 m	0.20 m								
5	Mixed sp.	Semi Mature	Exotic	4.2 m	N-S 2 m	0.08 m	Good	Fair	10-20 years	Low	Low	2.0 m	1.5 m	Mixed vegetation comprised of the following species: - x2 <i>Cotoneaster</i> sp. - x3 <i>Ligustrum lucidum</i> . Tree dimensions have been averaged.
	E-W 2 m				0.25 m	0.08 m								
6	<i>Ficus carica</i> cv.	Mature	Exotic	3.5 m	N-S 4 m	0.20 m	Good	Fair	20+ years	Low	Low	2.4 m	1.7 m	Multi-stemmed at ground level. DBH & CA1 measured at ground level. Tree may therefore tolerate a slightly greater than 10% encroachment into the TPZ.
	E-W 3 m				0.63 m	0.20 m								

Tree No.	Botanical Name & Common Name	Age	Origin	Height	Canopy Spread N-S E-W	DBH CA1 DAB	Health	Structure	ULE	Amenity Value	Retention Value	TPZ Radius	SRZ Radius	Comments	
7	<i>Grevillea robusta</i>	Mature	Native QLD NSW	11.0 m	N-S 8 m	0.28 m	Good	Good	10-20 years	Moderate	Neighbouring Tree	3.4 m	2.1 m	Neighbouring tree located within the eastern adjoining property (17 King Street). Existing concrete driveway within TPZ.	
	0.94 m														
	Silky oak				E-W 8 m	0.35 m									
8	Mixed sp.	Young	Exotic	3.2 m	N-S 1.5 m	N/A	Good	Fair	10-20 years	Low	Neighbouring Tree	2.0 m	1.5 m	Neighbouring trees located within the eastern adjoining property (17 King Street). Existing concrete driveway within TPZ. Mixed vegetation comprised of the following species: - x1 <i>Syzygium smithii</i> - x2 <i>Ligustrum lucidum</i> Tree dimensions have been averaged.	
	N/A														
	Mixed vegetation				E-W 1.5 m	N/A									
9	<i>Camellia</i> sp.	Mature	Exotic	3.0 m	N-S 1.5 m	0.07 m	Good	Good	10-20 years	Low	Low	2.0 m	1.5 m	Multi-stemmed at ground level. DBH & CA1 measured at ground level.	
	0.07 m (0.09 m)														
	Camellia				E-W 1.5 m	0.09 m									
10	<i>Ligustrum lucidum</i>	Mature	Exotic	8.3 m	N-S 8 m	0.43 m	Good	Good	10-20 years	Low	Neighbouring Tree	5.2 m	2.5 m	Neighbouring tree located within the eastern adjoining property (17 King Street). Existing concrete driveway and garage within TPZ. Canopy extends into subject site by 3m at a height of 4m above ground level.	
	1.41 m														
	Broad-leaf privet				E-W 8 m	0.50 m									
11	<i>Melaleuca bracteata</i> 'Revolution Gold'	Mature	Native WA NT QLD NSW	7.0 m	N-S 4 m	0.20 m	Fair	Fair	10-20 years	Low	Neighbouring Tree	2.4 m	1.7 m	Neighbouring tree located within the eastern adjoining property (17 King Street). Existing garage within TPZ. Overshadowed by tree 10, uneven canopy.	
	0.63 m														
	Melaleuca Revolution Gold				E-W 4 m	0.20 m									

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright.

Tree No.	Botanical Name & Common Name	Age	Origin	Height	Canopy Spread N-S E-W	DBH CA1 DAB	Health	Structure	ULE	Amenity Value	Retention Value	TPZ Radius	SRZ Radius	Comments
12	<i>Ligustrum lucidum</i>	Mature	Exotic	5.5 m	N-S 3 m	0.10 m	Fair	Fair	5-10 years	Low	Low	2.0 m	1.5 m	Multi-stemmed at ground level. DBH & CA1 measured at ground level.
	E-W 2 m				0.31 m									
	Broad-leaf privet					0.10 m								
13	<i>Prunus</i> sp.	Mature	Exotic	5.2 m	N-S 3 m	0.15 m	Fair	Fair	5-10 years	Low	Low	2.0 m	1.5 m	Multi-stemmed at ground level. DBH & CA1 measured at ground level.
	E-W 2 m				0.47 m									
	Cherry plum					0.15 m								
14	<i>Prunus</i> sp.	Mature	Exotic	4.9 m	N-S 4 m	0.40 m	Very poor	Fair	0-5 years	Low	Low	4.8 m	2.3 m	Multi-stemmed at ground level. DBH & CA1 measured at ground level. Tree may therefore tolerate a slightly greater than 10% encroachment into the TPZ. Major deadwood throughout tree. Concrete retaining wall 0.5m high surrounded tree, existing concrete paving beyond retaining wall.
	E-W 4 m				1.26 m									
	Cherry plum					0.40 m								
15	<i>Ligustrum lucidum</i>	Mature	Exotic	4.9 m	N-S 5 m	N/A	Fair	Fair	10-20 years	Low	Low	3.0 m	2.0 m	Concrete retaining wall 0.5m high surrounded tree, existing concrete paving beyond retaining wall. Too many stems to practically measure or estimate. TPZ & SRZ have therefore been estimated.
	E-W 5 m				N/A									
	Broad-leaf privet					N/A								
16	<i>Ligustrum lucidum</i>	Semi Mature	Exotic	4.5 m	N-S 6 m	N/A	Good	Fair	10-20 years	Low	Low	3.0 m	2.0 m	Thicket of trees which appeared self-sown. Too many stems to practically measure or estimate. TPZ & SRZ have therefore been estimated.
	E-W 6 m				N/A									
	Broad-leaf privet					N/A								
17	<i>Ligustrum lucidum</i>	Semi Mature	Exotic	3.9 m	N-S 3 m	N/A	Good	Fair	10-20 years	Low	Low	2.5 m	1.8 m	Thicket of trees which appeared self-sown. Too many stems to practically measure or estimate. TPZ & SRZ have therefore been estimated.
	E-W 3 m				N/A									
	Broad-leaf privet					N/A								

Tree No.	Botanical Name & Common Name	Age	Origin	Height	Canopy Spread N-S E-W	DBH CA1 DAB	Health	Structure	ULE	Amenity Value	Retention Value	TPZ Radius	SRZ Radius	Comments
18	<i>Bambuseae</i> sp.	Mature	Exotic	4.8 m	N-S 1.5 m	N/A	Good	Good	10-20 years	Low	Low	2.0 m	N/A	Too many stems to practically measure or estimate. TPZ adjusted in accordance with section 3.2 of AS4970-2009. SRZ not required in accordance with section 3.3.5 of AS4970-2009.
	Bamboo				E-W 1.5 m	N/A								
19	<i>Pyrus communis</i> subsp. <i>communis</i>	Semi Mature	Exotic	6.5 m	N-S 6 m	0.45 m	Fair	Fair	10-20 years	Low	Low	5.4 m	2.4 m	Multi-stemmed at ground level. DBH & CA1 measured at ground level. Tree may therefore tolerate a slightly greater than 10% encroachment into the TPZ. Moderate vine on trunk.
	European pear				E-W 6 m	0.45 m								
20	<i>Ligustrum lucidum</i>	Semi Mature	Exotic	7.0 m	N-S 6 m	N/A	Fair	Fair	10-20 years	Low	Low	2.5 m	1.8 m	Thicket of trees which appeared self-sown. Too many stems to practically measure or estimate. TPZ & SRZ have therefore been estimated.
	Broad-leaf privet				E-W 6 m	N/A								
21	<i>Syzygium smithii</i>	Mature	Exotic	7.1 m	N-S 6 m	0.40 m	Good	Fair	10-20 years	Low	Neighbouring Tree	4.8 m	2.3 m	Neighbouring tree located within the eastern adjoining property (17 King Street).
	Lilly Pilly				E-W 6 m	0.40 m								
22	<i>Ligustrum lucidum</i> 'Tricolor'	Mature	Exotic	6.0 m	N-S 7 m	0.45 m	Good	Fair	10-20 years	Low	Neighbouring Tree	5.4 m	2.4 m	Neighbouring tree located within the eastern adjoining property (17 King Street). Multi-stemmed at ground level. DBH & CA1 measured at ground level. Tree may therefore tolerate a slightly greater than 10% encroachment into the TPZ. Canopy extends into subject site by 3m at a height of 4m above ground level.
	Variegated broad-leaf privet				E-W 7 m	0.45 m								

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Tree No.	Botanical Name & Common Name	Age	Origin	Height	Canopy Spread N-S E-W	DBH CA1 DAB	Health	Structure	ULE	Amenity Value	Retention Value	TPZ Radius	SRZ Radius	Comments	
23	<i>Ligustrum lucidum</i>	Mature	Exotic	4.8 m	N-S 4 m	0.20 m	Good	Fair	10-20 years	Low	Neighbouring Tree	2.4 m	1.7 m	Neighbouring tree located within the eastern adjoining property (17 King Street). Multi-stemmed at ground level. DBH & CA1 measured at ground level. Tree may therefore tolerate a slightly greater than 10% encroachment into the TPZ. Canopy extends into subject site by 2m at a height of 4m above ground level.	
	0.57 m														
	Broad-leaf privet				E-W 4 m	0.20 m									
24	<i>Syzygium smithii</i>	Mature	Exotic	8.6 m	N-S 6 m	0.40 m	Good	Fair	10-20 years	Low	Neighbouring Tree	4.8 m	2.3 m	Neighbouring tree located within the northern adjoining property (2 Edith Street).	
	1.10 m														
	Lilly Pilly				E-W 6 m	0.40 m									
25	<i>Ligustrum lucidum</i>	Semi Mature	Exotic	3.3 m	N-S 1 m	N/A	Good	Good	10-20 years	Low	Low	2.0 m	1.5 m	Thicket appearing self-sown. Too many stems to practically measure or estimate. TPZ & SRZ have therefore been estimated.	
	N/A														
	Broad-leaf privet				E-W 1 m	N/A									
26	<i>Corymbia maculata</i>	Mature	Native NSW VIC	14.8 m	N-S 12 m	0.65 m	Good	Good	20+ years	High	Council Owned Tree	7.8 m	3.0 m	Council owned tree located within the nature strip in front of the eastern adjoining property (17 King Street).	
	2.10 m														
	Spotted gum				E-W 12 m	0.80 m									

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

4.1 Photographic evidence



Tree 1



Tree 2



Tree 3



Tree 4



Tree 5



Tree 6



Tree 7



Tree 8



Tree 10



Tree 11

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright



Tree 12



Tree 13



Tree 14



Tree 15



Tree 16



Tree 17



Tree 18



Tree 19



Tree 20



Tree 21

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright



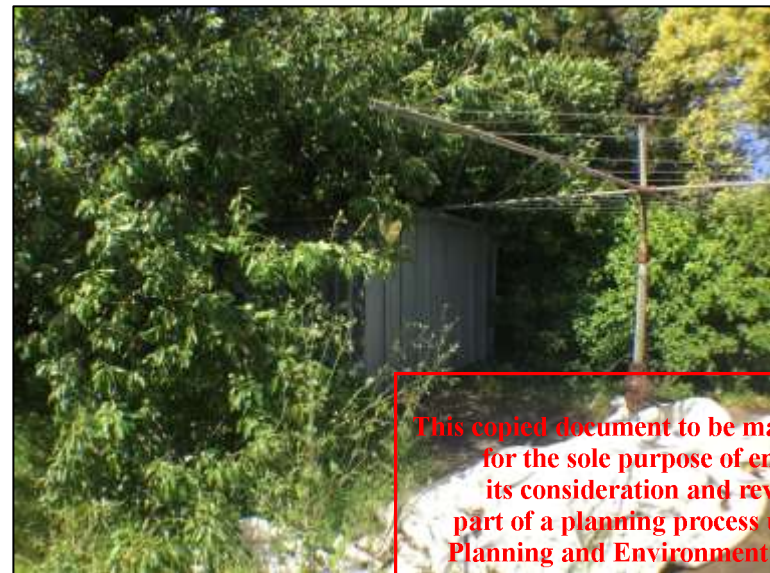
Subject site as viewed from King St



Existing driveway and eastern border



Front yard viewed from east



North-east corner of rear yard

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright



North-west corner of rear yard



Rear yard viewed from north



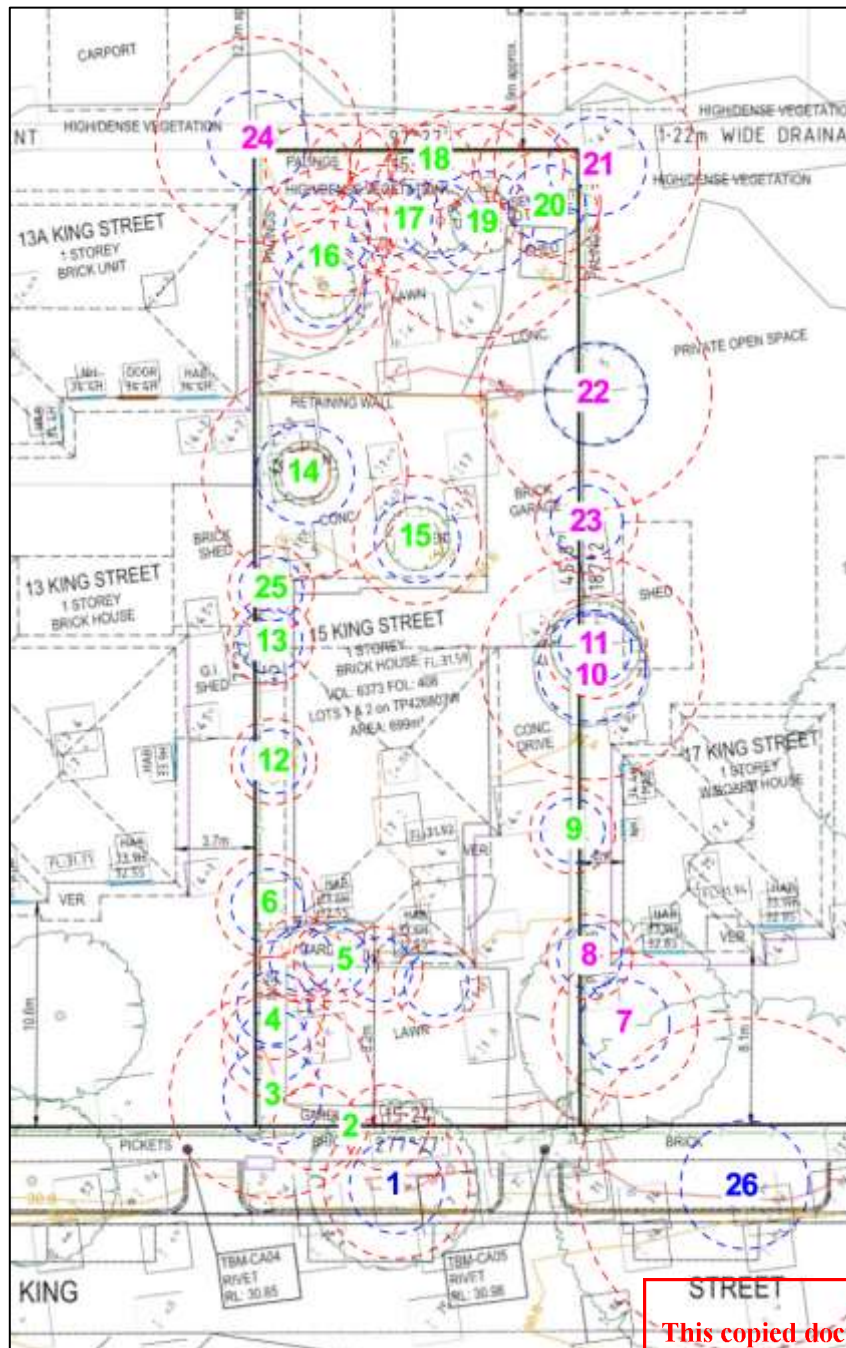
Rear yard viewed from south-west

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

5 Site maps

5.1 Existing conditions

The following map indicates the tree locations in relation to the existing conditions:



LEGEND

- LOW RETENTION VALUE
- MODERATE RETENTION VALUE
- HIGH RETENTION VALUE
- OTHER PERSONS TREE
- COUNCIL OWNED TREE
- PROPOSED ENCROACHMENT

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

5.2 Ground level plan

The following map indicates the tree locations in relation to the proposed ground level plans:



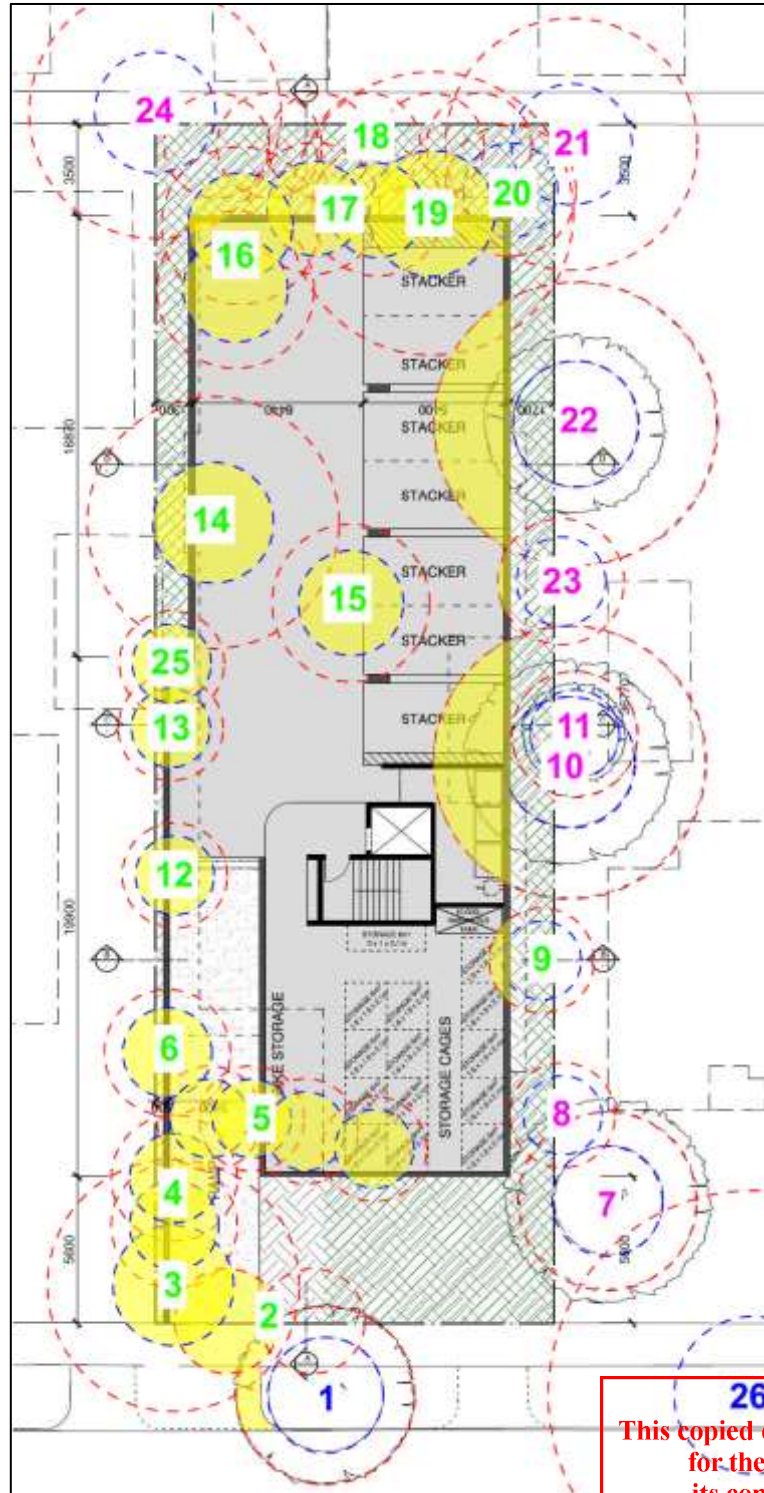
LEGEND

- LOW RETENTION VALUE
- HIGH RETENTION VALUE
- COUNCIL OWNED TREE
- MODERATE RETENTION VALUE
- OTHER PERSON'S TREE
- PROPOSED ENCROACHMENT

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

5.3 Basement level plan

The following map indicates the tree locations in relation to the proposed basement level plans:



LEGEND

- LOW RETENTION VALUE
- MODERATE RETENTION VALUE
- HIGH RETENTION VALUE
- OTHER PERSON'S TREE
- COUNCIL OWNED TREE
- PROPOSED ENCROACHMENT

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

6 Discussion

6.1 Tree protection zone

The tree protection zone (TPZ) is determined by multiplying the trunk diameter of the tree at breast height, 1.4m from ground level, by 12. A 10% encroachment on one side of this zone is acceptable without investigation into root distribution or offset of the lost area.

Section 3.2 of the Australian Standard AS4970 – 2009 Protection of Trees on Development Sites states that the TPZ of Palms, other monocots, cycads and tree ferns should not be less than 1 m outside the crown projection.

6.2 Structural root zone

The structural root zone (SRZ) is the setback required to avoid damage to stabilising structural roots. The loss of roots within the SRZ must be avoided. The SRZ is determined by applying the following formula: $(D \times 50) 0.42 \times 0.64$ where D = trunk diameter in metres.

6.3 Designing around trees

It may be possible to encroach into or make variations to the TPZ of the trees that must be retained. Encroachment includes excavation, compacted fill and machine trenching.

The following is referenced from section 3.3.3 of the Australian Standards AS4970 – 2009 Protection of Trees on Development Sites:

6.3.1 Minor encroachment

If the proposed encroachment is less than 10% of the area of the TPZ and is outside the SRZ, detailed root investigations should not be required. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ.

6.3.2 Major encroachment

If the proposed encroachment is greater than 10% of the TPZ or inside the SRZ the project arborist must demonstrate that the trees would remain viable. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ. This may require root investigation by non-destructive methods.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

6.3.3 Root investigation

Where it is proposed that development is considered to be a major encroachment, a non-destructive root exploratory investigation may be required within the alignment of the proposed encroachment.

By undertaking a non-destructive root exploratory investigation, the extent of roots within that particular area may be determined. If a negligible amount of roots are required to be removed or damaged in order to construct the proposed development, the tree may remain viable. If a significant amount of roots are proposed to be removed or damaged in order to construct the proposed development, the tree may not remain viable.

Obstructions (paving, vegetation, structures) within the alignment of proposed encroachments may be required to be removed prior to the non-destructive root exploratory investigation occurring.

The non-destructive root exploratory investigation report should:

- Be undertaken by a suitably qualified Arborist (AQF Level 5 Arboriculture).
- Detail the total distance of each excavation line.
- Detail the closest distance from the trunk centre to the excavation line.
- The size (diameter) and number of roots discovered and the depth of roots (where relevant).
- Include photographs of the subject tree(s) trenches and roots.
- Include a discussion of the findings of the root investigation and the impact of the proposed works on the long-term health/ structural stability of the tree(s).

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

7 Conclusion

7.1 Tree retention value

7.1.1 Council owned trees

The following trees belong to Greater Dandenong City Council:

- Tree 1
- Tree 26

7.1.2 Low retention value

The following trees are considered to be of low retention value as they are relatively small specimens that are insignificant to the landscape:

- Tree 2
- Tree 3
- Tree 4
- Tree 5
- Tree 6
- Tree 9
- Tree 12
- Tree 13
- Tree 14
- Tree 15
- Tree 16
- Tree 17
- Tree 18
- Tree 19
- Tree 20
- Tree 25

7.1.3 Neighbouring trees

The following trees do not belong to the property owner:

- Tree 7
- Tree 8
- Tree 10
- Tree 11
- Tree 21
- Tree 22
- Tree 23
- Tree 24

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

7.2 Permit requirements

The site is not subject to any local law or overlay in relation to tree protection.

The following trees belong to Greater Dandenong council and must only be maintained by Council staff or contractors:

- Tree 1
- Tree 26

7.3 Street tree policy

Proposed crossings to be constructed 3.0m clear from existing street tree greater than 100mm diameter and 2.0m clear of tree less than 100mm diameter, this may be subject to tree protection conditions. The applicant is to seek advice from the Council Arborist prior to applying for a permit.

7.4 Impact assessment

The following table represents the encroachments of the proposed development:

Tree No.	Encroachment	TPZ encroachment	SRZ encroachment	Encroachment category	Proposed retention
1	New crossover	6.1%	0%	Minor	Retain
2	Driveway and path	Entire tree	Entire tree	Major	Remove
3	Driveway	Entire tree	Entire tree	Major	Remove
4	Driveway	Entire tree	Entire tree	Major	Remove
5	Driveway and basement	Entire tree	Entire tree	Major	Remove
6	Driveway	Entire tree	Entire tree	Major	Remove
7	N/A	0%	0%	N/A	Retain
8	N/A	0%	0%	N/A	Retain
9	Ground floor	26.7%	20.9%	Major	Remove
	Basement	14.0%	5.3%	Major	
	TOTAL (accounting for overlap)	26.7%	20.9%	Major	
10	Basement	23.1%	1.8%	Major	Retain
	Ground floor	11.4%	0.3%	Major	
	Paving	10.3%	2.3%	Major	
	TOTAL (accounting for overlap)	23.1%	4%	Major	
11	Paving	0.7%	0%	Minor	Retain
12	Basement	Entire tree	Entire tree	Major	Remove
13	Basement	Entire tree	Entire tree	Major	Remove
14	Basement	Entire tree	Entire tree	Major	Remove
15	Basement	Entire tree	Entire tree	Major	Remove
16	Basement	Entire tree	Entire tree	Major	Remove
17	Basement	Entire tree	Entire tree	Major	Remove
18	Site cut & retaining wall	Entire tree	Entire tree	Major	Remove
19	Basement	Entire tree	Entire tree	Major	Remove
20	Basement	Entire tree	Entire tree	Major	Remove
21	Site cut & retaining wall	18.3%	11.1%	Major	Retain
	Basement	2.0%	0%	Minor	
	TOTAL (accounting for overlap)	18.3%	11.1%	Major	
22	Ground floor	24.6%	1.7%	Major	Retain
	Basement	21.5%	0%	Major	
	TOTAL (accounting for overlap)	24.6%	1.7%	Major	
23	Ground floor	13.5%	2.8%	Major	Retain
	Basement	4.7%	0%	Minor	
	TOTAL (accounting for overlap)	13.5%	2.8%	Major	
24	Site cut & retaining wall	15.8%	7.6%	Major	Retain
	Basement	0.9%	0%	Minor	
	TOTAL (accounting for overlap)	15.8%	7.6%	Major	
25	Basement	Entire tree	Entire tree	Major	Remove
26	N/A	0%	0%	N/A	Retain

Note: encroachment calculations are approximate and do not consider over excavation

This document is for the purpose of enabling its consideration and review as part of the process under the Environment Act 1987. The information contained herein is not to be used for any purpose which may breach any copyright.

7.4.1 No encroachment

Development is not proposed to encroach into the TPZ or SRZ of the following trees:

- Tree 7
- Tree 8
- Tree 26

The proposed development is not expected to compromise the long-term viability of the above-mentioned trees.

Less invasive construction measures or development redesign is therefore not required to ensure that these trees would remain viable post construction.

7.4.2 Minor encroachment

The proposed development is considered to be a minor encroachment according to section 3.3.2 of the Australian Standard AS4970 – 2009 'Protection of Trees on Development Sites' of the following trees:

- Tree 1
- Tree 11

The proposed development is not expected to compromise the health and/or structural integrity of the above-mentioned trees.

Less invasive construction measures or development redesign is therefore not required to ensure that these trees remain viable post construction.

7.4.3 Major encroachment

The proposed development is considered to be a major encroachment according to section 3.3.3 of the Australian Standard AS4970 – 2009 'Protection of Trees on Development Sites' of the following trees:

- | | | | |
|----------|-----------|-----------|-----------|
| ○ Tree 2 | ○ Tree 10 | ○ Tree 17 | ○ Tree 23 |
| ○ Tree 3 | ○ Tree 12 | ○ Tree 18 | ○ Tree 24 |
| ○ Tree 4 | ○ Tree 13 | ○ Tree 19 | ○ Tree 25 |
| ○ Tree 5 | ○ Tree 14 | ○ Tree 20 | |
| ○ Tree 6 | ○ Tree 15 | ○ Tree 21 | |
| ○ Tree 9 | ○ Tree 16 | ○ Tree 22 | |

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Tree 2

- These trees are located within the proposed footprint of the driveway and path.
- These trees are required to be removed in order to construct the proposed development.
- These trees are of low retention value.
- No permit requirements apply to these trees.
- In the event of removal, less invasive construction measures or development redesign is not required.

Tree 3

- The tree is located within the proposed footprint of the driveway.
- The tree is required to be removed in order to construct the proposed development.
- This tree is of low retention value.
- No permit requirements apply to this tree.
- In the event of removal, less invasive construction measures or development redesign is not required.

Tree 4

- The tree is located within the proposed footprint of the driveway.
- The tree is required to be removed in order to construct the proposed development.
- This tree is of low retention value.
- No permit requirements apply to this tree.
- In the event of removal, less invasive construction measures or development redesign is not required.

Tree 5

- The tree is located within the proposed footprint of the driveway and basement.
- The tree is required to be removed in order to construct the proposed development.
- This tree is of low retention value.
- No permit requirements apply to this tree.
- In the event of removal, less invasive construction measures or development redesign is not required.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Tree 6

- The tree is located within the proposed footprint of the driveway.
- The tree is required to be removed in order to construct the proposed development.
- This tree is of low retention value.
- No permit requirements apply to this tree.
- In the event of removal, less invasive construction measures or development redesign is not required.

Tree 9

Ground floor

- The ground floor is considered to be a major encroachment (6.3.2) of 26.7% of the TPZ and 20.9% of the SRZ.
- Individually, the construction of the ground floor has the potential to compromise the tree's long-term viability.

Basement

- The basement is considered to be a major encroachment (6.3.2) of 14.0% of the TPZ and 5.5% of the SRZ.
- Individually, the construction of the proposed basement has the potential to compromise the tree's long-term viability.

Overview

- The total encroachment of the ground floor and basement is 26.7% of the TPZ and 20.9% of the SRZ which is considered to be major (6.3.2).
- The construction of the proposed ground floor and basement both have the potential to compromise the tree's long-term viability.
- This tree is of low retention value.
- This tree is proposed to be removed.
- No permit requirements apply to this tree.
- In the event of removal, less invasive construction measures or development redesign are not required.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Tree 10

Ground floor

- The ground floor is considered to be a major encroachment (6.3.2) of 11.4% of the TPZ and 0.3% of the SRZ.
- Individually, the construction of the ground floor has the potential to compromise the tree's long-term viability.

Basement

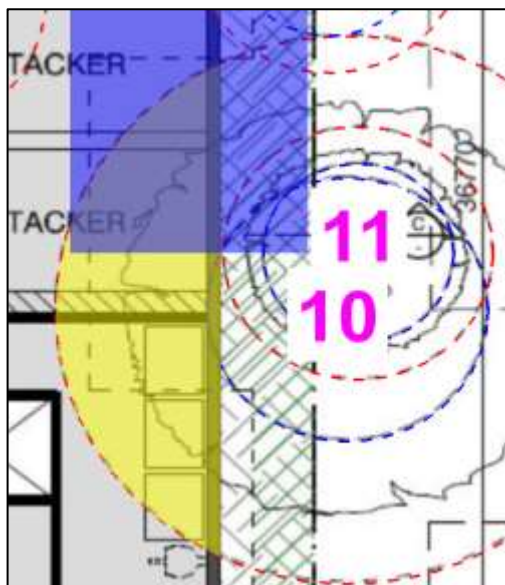
- The basement is considered to be a major encroachment (6.3.2) of 23.1% of the TPZ and 1.8% of the SRZ.
- Individually, the construction of the proposed basement has the potential to compromise the tree's long-term viability.

Pavement

- The pavement is considered to be a major encroachment (6.3.2) of 10.3% of the TPZ and 2.3% of the SRZ.
- Individually, the construction of the proposed paving has the potential to compromise the tree's long-term viability.

Overview

- The total encroachment of the ground floor, basement and paving is 23.1% of the TPZ and 4.0% of the SRZ which is considered to be major (6.3.2).
- An existing garage is located within a section of the footprint of the proposed encroachment.
- The excavation for the basement is expected to be significantly deeper than any existing footings.
- The proposed encroachment is greater than the existing encroachment by 15.4% of the TPZ and 2.2% of the SRZ, as shown below:



Tree 10

- Encroachment of existing garage
 - Additional proposed encroachments
- This copied document to be made available for the sole purpose of enabling its consideration and review as part of the planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright**

- The construction of the proposed basement has the potential to
- This is a neighbouring tree that is proposed to be retained.
- No permit requirements apply to this tree.
- Recommendations within section 8.3 and 8.4 of this report are required to ensure that this tree would remain viable post construction.

Tree 12

- The tree is located within the proposed footprint of the basement.
- The tree is required to be removed in order to construct the proposed development.
- This tree is of low retention value.
- No permit requirements apply to this tree.
- In the event of removal, less invasive construction measures or development redesign is not required.

Tree 13

- The tree is located within the proposed footprint of the basement.
- The tree is required to be removed in order to construct the proposed development.
- This tree is of low retention value.
- No permit requirements apply to this tree.
- In the event of removal, less invasive construction measures or development redesign is not required.

Tree 14

- The tree is located within the proposed footprint of the basement.
- The tree is required to be removed in order to construct the proposed development.
- This tree is of low retention value.
- No permit requirements apply to this tree.
- In the event of removal, less invasive construction measures or development redesign is not required.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Tree 15

- The tree is located within the proposed footprint of the basement.
- The tree is required to be removed in order to construct the proposed development.
- This tree is of low retention value.
- No permit requirements apply to this tree.
- In the event of removal, less invasive construction measures or development redesign is not required.

Tree 16

- The tree is located within the proposed footprint of the basement.
- The tree is required to be removed in order to construct the proposed development.
- This tree is of low retention value.
- No permit requirements apply to this tree.
- In the event of removal, less invasive construction measures or development redesign is not required.

Tree 17

- The tree is located within the proposed footprint of the basement.
- The tree is required to be removed in order to construct the proposed development.
- This tree is of low retention value.
- No permit requirements apply to this tree.
- In the event of removal, less invasive construction measures or development redesign is not required.

Tree 18

- These trees are located within the proposed footprint of the site cut & retaining wall.
- These trees are required to be removed in order to construct the proposed development.
- These trees are of low retention value.
- No permit requirements apply to these trees.
- In the event of removal, less invasive construction measures or development redesign is not required.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Tree 19

- The tree is located within the proposed footprint of the basement.
- The tree is required to be removed in order to construct the proposed development.
- This tree is of low retention value.
- No permit requirements apply to this tree.
- In the event of removal, less invasive construction measures or development redesign is not required.

Tree 20

- The tree is located within the proposed footprint of the basement.
- The tree is required to be removed in order to construct the proposed development.
- This tree is of low retention value.
- No permit requirements apply to this tree.
- In the event of removal, less invasive construction measures or development redesign is not required.

Tree 21

Basement

- The basement is considered to be a minor encroachment (6.3.1) of 2.0% of the TPZ and 0% of the SRZ.
- Individually, the construction of the proposed basement is not expected to compromise the tree's long-term viability.

Site cut & retaining wall

- The site cut & retaining wall is considered to be a major encroachment (6.3.2) of 18.3% of the TPZ and 11.1% of the SRZ.
- Individually, the excavation for the proposed site cut & retaining wall has the potential to compromise the tree's long-term viability.

Overview

- The total encroachment of the basement and site cut & retaining wall is 18.3% of the TPZ and 11.1% of the SRZ which is considered to be major (6.3.2).
- The excavation for the proposed site cut & retaining wall has the potential to compromise the tree's long-term viability.
- This is a neighbouring tree that is proposed to be retained.
- No permit requirements apply to this tree.
- Recommendations within section 8.3 and 8.4 of this report are required to ensure that this tree would remain viable post construction.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Tree 22

Ground floor

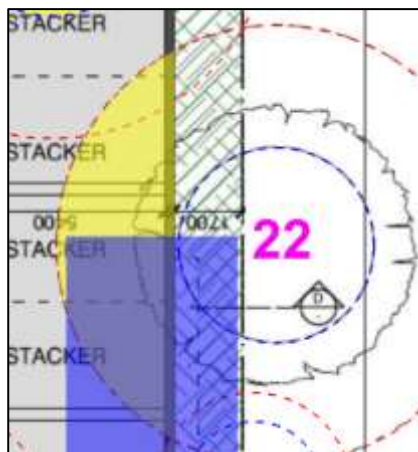
- The ground floor is considered to be a major encroachment (6.3.2) of 24.6% of the TPZ and 1.7% of the SRZ.
- Individually, the construction of the ground floor has the potential to compromise the tree's long-term viability.

Basement

- The basement is considered to be a major encroachment (6.3.2) of 21.5% of the TPZ and 0% of the SRZ.
- Individually, the construction of the proposed basement has the potential to compromise the tree's long-term viability.

Overview

- The total encroachment of the ground floor and basement is 24.6% of the TPZ and 1.7% of the SRZ which is considered to be major (6.3.2).
- An existing garage is located within a section of the footprint of the proposed encroachment.
- The excavation for the basement is expected to be significantly deeper than any existing footings.
- The proposed encroachment is greater than the existing encroachment by 10.2% of the TPZ and 0% of the SRZ, as shown below:



Tree 22

- Encroachment of existing garage
- Additional proposed encroachment

- The construction of the proposed basement has the potential to compromise the tree's long-term viability.
- This is a neighbouring tree that is proposed to be retained.
- No permit requirements apply to this tree.
- Recommendations within section 8.3 and 8.4 of this report are required to ensure that this tree would remain viable post construction.

This copied document to be made available to the public for enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Tree 23

Ground floor

- The ground floor is considered to be a major encroachment (6.3.2) of 13.5% of the TPZ and 2.8% of the SRZ.
- Individually, the construction of the ground floor has the potential to compromise the tree's long-term viability.

Basement

- The basement is considered to be a minor encroachment (6.3.1) of 4.7% of the TPZ and 0% of the SRZ.
- Individually, the construction of the proposed basement is not expected to compromise the tree's long-term viability.

Overview

- The total encroachment of the ground floor and basement is 13.5% of the TPZ and 2.8% of the SRZ which is considered to be major (6.3.2).
- An existing garage is located within the footprint of the proposed encroachment.
- Although this is considered to be a major encroachment, the tree is expected to remain viable due to the following factors:
 - The tree is of a hardy species that generally responds well to root disturbance.
 - This is a small tree that is expected to have a small and vigorous root system.
 - The existing conditions (existing garage) are expected to have restricted root growth to within the area of the proposed encroachment.
- This is a neighbouring tree that is proposed to be retained.
- No permit requirements apply to this tree.
- Less invasive construction measures are not required to ensure that this tree would remain viable post construction.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Tree 24

Basement

- The basement is considered to be a minor encroachment (6.3.1) of 0.9% of the TPZ and 0% of the SRZ.
- Individually, the construction of the proposed basement is not expected to compromise the tree's long-term viability.

Site cut & retaining wall

- The site cut & retaining wall is considered to be a major encroachment (6.3.2) of 15.8% of the TPZ and 7.6% of the SRZ.
- Individually, the excavation for the proposed site cut & retaining wall has the potential to compromise the tree's long-term viability.

Overview

- The total encroachment of the basement and site cut & retaining wall is 15.8% of the TPZ and 7.6% of the SRZ which is considered to be major (6.3.2).
- The excavation for the proposed site cut & retaining wall has the potential to compromise the tree's long-term viability.
- This is a neighbouring tree that is proposed to be retained.
- No permit requirements apply to this tree.
- Recommendations within section 8.3 and 8.4 of this report are required to ensure that this tree would remain viable post construction.

Tree 25

- The tree is located within the proposed footprint of basement.
- The tree is required to be removed in order to construct the proposed development.
- This tree is of low retention value.
- No permit requirements apply to this tree.
- In the event of removal, less invasive construction measures or development redesign is not required.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

8 Recommendations

8.1 Tree retention

The following Council owned trees are proposed to be retained:

- Tree 1
- Tree 26

The following neighbouring trees are proposed to be retained:

- Tree 7
- Tree 8
- Tree 10
- Tree 11
- Tree 21
- Tree 22
- Tree 23
- Tree 24

The following is recommended in order to ensure that trees that are proposed to be retained would remain viable post construction:

- Comply with less invasive construction measures (8.3)
- Comply with tree protection measures (8.4)

8.2 Tree removal

The following trees of low retention value are proposed to be removed:

- Tree 2
- Tree 3
- Tree 4
- Tree 5
- Tree 6
- Tree 9
- Tree 12
- Tree 13
- Tree 14
- Tree 15
- Tree 16
- Tree 17
- Tree 18
- Tree 19
- Tree 20
- Tree 25

In the event of tree removal, the following is recommended:

- Tree removal should be undertaken prior to construction commencing (including demolition).
- Written consent from the responsible authority must be obtained prior to tree removal (if required).

8.2.1 Permit requirements for trees that are proposed to be removed

- Trees that are proposed to be removed are not protected under a local law or overlay.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

8.3 Less invasive construction measures

8.3.1 Basement (Tree 10)

Option 1

- Redesign so that the proposed basement does not encroach into the TPZ of Tree 10 by greater than 10% and does not encroach into the SRZ, unless a root investigation (6.3.3) determines that the tree would remain viable post construction.

Option 2

- Engage with neighbouring owner to remove Tree 10 or accept consequences (tree mortality or instability) of the major encroachment.
- This tree does not require a permit for removal.

8.3.2 Basement (Tree 22)

Option 1

- Engage suitably qualified arborist (AQF Level 4) to supervise demolition of the existing garage within the TPZ of Tree 22.
- Engage suitably qualified arborist (AQF Level 4) to supervise excavation for the basement within the TPZ of Tree 22.
- The supervising arborist should prune any roots that are encountered in accordance with section 9 of AS4373-2007 'Pruning of Amenity Trees'.

Option 2

- Engage with neighbouring owner to remove Tree 22 or accept consequences (tree mortality or instability) of the major encroachment.
- This tree does not require a permit for removal.

8.3.3 Site cut & retaining wall (Trees 21 & 24)

Option 1

- Redesign so that the proposed site cut & retaining wall do not encroach into the TPZ of Trees 21 & 24 by greater than 10% and does not encroach into the SRZ, unless a root investigation (6.3.3) determines that these trees would remain viable post construction.

Option 2

- Engage with neighbouring owner to remove Trees 21 & 24 or accept consequences (tree mortality or instability) of the major encroachment.
- These trees do not require a permit for removal.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

8.4 Tree protection measures

8.4.1 Pruning

- Trees 10, 22 and 23 require pruning back to the boundary and to a height of 8m above ground level for clearance purposes.
- Only the minimum amount necessary for clearance in order to complete construction should be removed.
- Pruning should be undertaken by a suitably qualified Arborist (minimum AQF level 3).
- The pruning should be undertaken in accordance with the Australian Pruning Standard AS 4373 - 2007.
- Pruning should be undertaken prior to machinery being brought onto site.

8.4.2 Tree protection fencing

- Tree protection fencing (TPF) should be installed for Trees 1, 21 & 24.
- TPF should be installed as close to the TPZ as practically possible provided that it does not encroach onto the road, footpath, crossover or proposed works.
- The existing site perimeter fencing may be used as TPF for neighbouring trees.
- TPF should be installed prior to machinery being brought onsite for the demolition of the existing dwelling.
- TPF should be a minimum 1.8m high and comprised of wire mesh (or similar) supported by concrete feet (or similar).
- TPF should remain intact for the duration of the project.
- TPF should only be removed or shifted with the approval of the Project Arborist and the Responsible Authority.

8.4.3 Tree protection signage

- The signage on the TPF should be placed on TPZ fencing at regular intervals so that it is visible from any angle outside the TPZ.
- Signage should state 'Tree Protection Zone, No Access' or similar.
- Signage should be greater than 600mm X 400mm in size.
- The contact details of the project arborist and site manager should be written clearly on the sign.



This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

8.4.4 Ground protection

- Ground protection should be installed within the TPZ of Trees 8, 10, 11 & 22 that are located outside of the building footprint.
- Ground protection should be comprised of rumble boards with 100mm of mulch underneath.

8.4.5 Scaffolding

- When scaffolding must be erected within Tree Protection Zones, cover the ground with a 10cm layer of mulch, and then cover this with boards and plywood to prevent soil compaction.

8.4.6 Site storage

- A designated storage area where building materials, chemicals etc. can be stored should be located outside the TPZ of retained trees.

8.4.7 Prohibitions within the TPZ

The following activities are prohibited within the TPZ:

- Machine excavation including trenching (unless approved by the Project Arborist, Arborist supervision may be required)
- Cultivation
- Storage
- Preparation of chemicals, including cement products
- Parking of vehicles
- Refuelling
- Dumping of waste
- Wash down and cleaning of equipment
- Placement of fill
- Lighting of fires
- Physical damage to the tree
- Pruning or damaging of roots greater than 30mm in diameter

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

8.4.8 Drains and services

In the event that any drains or services are included in a greater than 10% encroachment into the TPZ or encroach into the SRZ of trees that are proposed to be retained, the following should be undertaken:

- Drains or services should be installed by non-root destructive means such as horizontal boring at greater than 1100mm in depth **or** by low pressure hydro-excavation to ensure that the bark of the roots remain intact, unless a root investigation determines that the tree(s) would remain viable.

Note: encroachment calculations must consider additional encroachments e.g. site cuts, retaining walls, building footprint.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

9 Limitation of liability

TMC Reports and their employees are tree specialists who use their qualifications, education, knowledge, training, diagnostic tools and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of this assessment and report.

Trees are living organisms that fail in ways the arboriculture industry does not fully understand. Conditions are often hidden within trees and below ground. Unless otherwise stated, observations have been made from ground level and limited to accessible components without dissection, excavation or probing. There is no guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of this report, such as property boundaries and ownership, disputes between neighbours, sight lines, landlord-tenant matters, and related incidents. Such issues cannot be taken into account unless complete and accurate information is given prior to or at the time of site inspection.

Information contained in this report covers those items that were examined and reflect the condition of those items at the time of inspection. There is no warranty or guarantee expressed or implied that the problems or deficiencies of the trees or property in question may not arise in the future. Trees can be managed, but they cannot be controlled. To live or work near a tree involves a degree of risk. The only way to eliminate all risks involved with a tree is to eliminate the tree.

All written reports must be read in their entirety, at no time shall part of the written assessment be referred to unless taken in full context of the whole written report.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

10 Definition of terms

10.1 Tree health

- Good
- Fair
- Poor
- Very poor
- Dead

Good: The tree is demonstrating good or exceptional growth for the species. The tree should exhibit a full canopy of foliage and have only minor pest or disease problems. Foliage colour size and density should be typical of a health specimen of that species.

Fair: The tree is in reasonable condition and growing well for the species. The tree should exhibit an adequate canopy of foliage. There may be some dead wood in the crown, some grazing by insect or animals may be evident, and/or foliage colour, size or density may be atypical for a healthy specimen of that species.

Poor: The tree is not growing to its full capacity. Extension growth of the laterals may be minimal. The canopy may be thinning or sparse. Large amounts of dead wood may be evident throughout the crown, as well as significant pest and disease problems. Other symptoms of stress indicating tree decline may be present.

Very poor: The tree appears to be in a state of decline, and the canopy may be very thin and sparse. A significant volume of dead wood may be present in the canopy, or pest and disease problems may be causing a severe decline in tree health.

Dead: The tree is no longer alive.

10.2 Structure

- Good
- Fair
- Poor
- Very poor
- Failed

The definition of structure is the likelihood of the tree to fail under normal condition. A tree with good structure is highly unlikely to suffer any significant failure, while a tree with poor to very poor structure is likely or very likely to fail.

Good: The tree has a well-defined and balanced crown. Branch unions appear to be strong, with no defects evident in the trunks or the branches. Major limbs are well defined. The tree would be considered a good example for the species. Probability of significant failure is highly unlikely.

Fair: The tree has some minor problems in the structure of the crown. The crown may be slightly out of balance at some branch unions or branches may be exhibiting minor structural faults. If the tree has a single trunk, this may be on a slight lean, or be exhibiting minor defects. Probability of significant failure is low.

Poor: The tree may have a poorly structured crown, the crown may be unbalanced, or exhibit large gaps. Major limbs may not be well defined; branches may be rubbing or crossing over. Branch unions may be poor or faulty at the point of attachment. The tree may have suffered major root damage. Probability of significant failure is moderate.

Very poor: The tree has a poorly structured crown. The crown is unbalanced, or exhibits large gaps. Major limbs are not well defined. Branch unions may be poor or faulty at the point of attachment. A section of the tree has failed, or is in imminent danger of failure. Active failure may be present, or failure is probably in the immediate future.

Failed: A significant section of the tree or the whole tree has failed.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

10.3 Useful life expectancy (ULE)

- Unsafe or 0 years
- Less than 5 years
- 5 to 10 years
- 10 to 20 years
- 20 +

Useful life expectancy is approximately how long a tree can be retained safely and usefully in the landscape providing site conditions remain unchanged and the recommended works are completed.

It is based on the principals of safety and usefulness in the landscape and should not reflect personal opinions on species suitability.

Unsafe or 0 years: The tree is considered dangerous in the location and/or no longer provides any amenity value.

Less Than 5 years: The tree under normal circumstances and without extra stress should be safe and have value of maximum of 5 years. The tree will need to be replaced in the short term. Replacement plants should be established as soon as possible if there is efficient space, or consideration should be given to the removal of the tree to facilitate replanting.

5 to 10 Years: The tree under normal circumstances and without extra stress should be safe and have value of maximum of 10 years. Trees in this category may require regular inspections and maintenance particularly if they are large specimens. Replacement plants should be established in the short term if there is sufficient space, or consideration should be given to the removal of the tree to facilitate replanting.

10 to 20 Years: The tree under normal circumstances and without extra stress should be safe and of value of up to 20 years. During this period, regular inspections and maintenance will be required.

20 + Years: The tree under normal circumstances and without extra stress should be safe and of value of more than years. During this period, regular inspections and maintenance will be required.

10.4 Tree retention value

- High
- Moderate
- Low
- Neighbouring tree
- Council Owned Tree

High: The tree may be significant in the landscape, offer shade and other amenities such as screening. The tree may assist with erosion control, offer a windbreak or perform a vital function in the location (e.g. habitat, shade, flowers or fruit). The tree is free from structural defects and is vigorous. Consider the retention of the tree and designing the development to accommodate the tree.

Moderate: The tree may offer some screening in the landscape or serve a particular function in the location and have minor structural defects. The tree may be entering the mature stage of its life cycle. The tree may be retained if it does not hamper the design intent.

Low: The tree offers very little in the way of screening or amenity and may have significant structural defects. The tree may also be mature and entering the senescent stage of its life cycle. The tree may be removed if necessary.

Neighbouring tree: The tree is located within an adjoining private property/land. The tree is to be protected unless written consent from the tree owner(s) and/or responsible authority is obtained. Consider the retention of the tree unless written consent is obtained from the tree owner and/or responsible authority.

Council Owned Tree: The tree is located within Council owned land. The tree is to be protected unless written consent from the responsible authority is obtained. Consider the retention of the tree unless written consent is obtained from the tree owner and/or responsible authority.

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

10.5 Age

- Young
- Semi Mature
- Mature
- Senescent

Young: Juvenile or recently planted approximately 1-7 years.

Semi Mature: Tree actively growing.

Mature: Tree has reached expected size in situation.

Senescent: Tree is over mature and has started to decline.

10.6 Amenity value

- Very low
- Low
- Moderate
- High

Very Low: Tree makes little or no amenity value to the site or surrounding areas. In some cases the tree might be detrimental to the areas amenity value (e.g. unsightly, risk of weed spread)

Low: Tree makes some contribution of amenity value to the site but makes no contribution to the amenity value of surrounding areas. The removal of the tree may result in little loss of amenity. Juvenile trees, including street trees are generally included in this category. However, they may have the potential to supply increased amenity in the future.

Moderate: The tree makes a moderate contribution to the amenity of the site and/or may contribute to the amenity of the surrounding area.

High: The tree makes a significant contribution to the amenity value of the site, or the tree makes a moderate contribution to the amenity value of the larger landscape.

The amenity value rating considered the impact that the tree has on any neighbouring sites as being equally important to that supplied to the subject site. However, trees that contribute to the general area (e.g. streetscape) are given a greater weight.

10.7 Terms within tree data table

- DBH
- DAB
- CA1
- TPZ
- SRZ

DBH: Diameter at breast height (1.4m from ground level)

DAB: Diameter at base of tree

CA1: Circumference of trunk at 1m from ground level

TPZ: Tree Protection Zone

SRZ: Structural Root Zone

This copied document to be made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright