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Preliminary Tree Assessment

Site: Flemington Street, Glenside

Date: Wednesday, 16 June 2021

ATS6309-FleStPTA

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Report Reference Number: ATS6309-FLESTPTA

Report prepared for
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Executive Summary

Arborman Tree Solutions was engaged by URPS to undertake Preliminary Tree Assessment of the trees within the identified survey area at Flemington Street, Glenside. The purpose of this assessment is to evaluate tree suitability for retention through a Tree Retention Rating system and provide Preliminary Tree Protection advice for trees to be retained. This assessment provides information in accordance with Australian Standard *AS4970-2009 Protection of trees on development sites* (AS4970-2009) and relevant legislation.

The assessment considered nine trees which are identified as *Pinus canariensis* (Canary Island Pine), Trees 1-4, *Eucalyptus camaldulensis* (River Red Gum), Tree 5, and *Corymbia citriodora* (Lemon Scented Gum), Trees 6-9. The majority of the trees are considered to be in Good overall condition and have extended useful life expectancies; only Trees 2, 3, 6 and 9 display Fair overall condition as evidenced by moderate levels of health and/or structural decline.

The assessment has identified Tree 5 as having a High Retention Rating. It is my opinion, as a Regulated Tree with a High Retention Rating, this tree displays one or more attributes described within the *Planning, Development and Infrastructure Act 2016*, that warrant their retention. The removal of this tree is unlikely to be approved unless it can be demonstrated that:

- a. it is substantially restricting an otherwise reasonable and expected development, and
- b. alternative design solutions that retain the tree and achieve any form of reasonable and expected development are not available.

The Tree Protection Zone for this tree has been calculated to have a radius of 9.6 metres as measured from the centre of the trunk; alterations to the area around this tree should be restricted in accordance with the guidelines of AS4970-2009. It is recommended the design of any future development consider the extent of the TPZ and minimise all potential encroachments to ensure this tree is not impacted.

The remaining trees achieve a Moderate Retention Rating indicating they are worthy of consideration for retention if they can be adequately protected in an otherwise reasonable and expected development.

A Project Arborist should be appointed to assist in the design around trees to be retained; the development impacts and tree protection requirements are to be included in a Development Impact Report and a Tree Protection Plan as identified in Australian Standard *AS4970 2009 Protection of trees on development sites*.

Brief

Arborman Tree Solutions was engaged by URPS to undertake a Preliminary Tree Assessment of the trees within the identified survey area at Flemington Street, Glenside. The purpose of a Preliminary Tree Assessment is to evaluate trees' suitability for retention through a Tree Retention Rating system and provide Preliminary Tree Protection advice for trees to be retained.

In accordance with section 2.2 of the Australian Standard *AS4970-2009 Protection of trees on development sites* (2.2) the following information is provided:

- Identification of the species of each tree and assessment of their health and structure.
- Identification of the legislative status of trees as defined in the *Planning, Development and Infrastructure Act 2016 (PDI Act 201)*
- Tree Retention Rating for each tree, this has been applied to all trees regardless of legislative status.
- Identify the Tree Protection Zone for each tree.

Note: This report is intended to provide preliminary advice to assist with determining scope for development and guide design. The City Council may require further information to approve the removal of any Significant/Regulated Trees.

Documents and Information Provided

The following information was provided for the preparation of this assessment

- Email instruction on scope of works
- Site Plan identifying the area to be assessed

Method

A site inspection was undertaken on Tuesday, 20 April 2021. Trees in this report were mapped using a Trimble Geo7X handheld and assigned a unique tree number. Individual tree findings were recorded using the Tree Assessment Form (TAF©). Tree Health Indicator (THI©), Tree Structure Assessment (TSA©) and Useful Life Expectancy (ULE), were assessed using the methodology described in Appendix A. Legislative Status was identified for all trees controlled under the relevant legislation.

Each tree's suitability for retention was determined by reviewing principles under the *PDI Act 2016* or relevant authority and applying these findings in the Tree Retention Rating (TRR©) method, as described within Appendix A. Tree Protection Zones were calculated using the Australian Standard *AS4970-2009* (Section 3.2). Mapping was performed using GIS and CAD software.

Limitations: Tree management options such as pruning, soil amelioration, pathogen treatment are not part of this report; these should be considered in relation to any proposed development.

Site Location

Figure 1: Survey Area - Flemington Street, Glenside



Assessment

Arborman Tree Solutions was engaged by URPS to undertake Preliminary Tree Assessment of the trees within the identified survey area at Flemington Street, Glenside. The purpose of this assessment is to evaluate tree suitability for retention through a Tree Retention Rating system and provide Preliminary Tree Protection advice for trees to be retained. This assessment provides information in accordance with Australian Standard AS4970-2009 *Protection of trees on development sites* (AS4970-2009) and relevant legislation.

Tree Assessment

The assessment considered nine trees which are identified as *Pinus canariensis* (Canary Island Pine), Trees 1-4, *Eucalyptus camaldulensis* (River Red Gum), Tree 5, and *Corymbia citriodora* (Lemon Scented Gum), Trees 6-9. The majority of the trees are considered to be in Good overall condition and have extended useful life expectancies; only Trees 2, 3, 6 and 9 display Fair overall condition as evidenced by moderate levels of health and/or structural decline.

Corymbia citriodora (Lemon Scent Gum) is a tall, graceful tree usually 20-30 metres in ornamental plantings, although significantly taller (40 metres or more) in its natural habitat. It prefers medium to sandy loams or well-drained gravels with additional irrigation during the drier seasons. Lemon Scent Gum is most suited to parks, large gardens and avenues where it is able to grow to its full potential unhindered by the constraints of generally smaller urban blocks. Indigenous to central Queensland Lemon Scent Gum has become popular throughout many areas of Australia and is relatively common in Adelaide. This species has developed a reputation as a tree likely to drop branches, this reputation appears to be related to stock of poor genetic quality which is prone to forming included bark unions and therefore has a higher than average incidence of limb failure; modern seed collection and nursery reproduction practices are eliminating this as a problem.

Eucalyptus camaldulensis (River Red Gum) is a large tree reaching 25-35 metres in height with a broad spreading crown, as the tree matures it can develop buttress roots from its very thick trunk. This species is the most widespread and best known of the Australian eucalypts. As the common name would suggest it is generally found along waterways and on floodplains, despite this it is a very adaptable tree and will grow in a wide variety of soils and conditions. An advantage of this species heritage as a floodplain tree for the urban environment is that it is able to adapt to changes in soil levels and moisture content to a much greater extent than many other eucalypts being able to withstand changes in soil level, drought and water logging for extended periods. This is at least partially due to the species characteristic of deep sinker roots within two to three metres of the trunk that can extend considerable depths into the soil to areas of permanent water.

Pinus canariensis (Canary Island Pine) is from the Canary Islands, off the West Coast of North Africa. The trees native habitat is confined to the elevated sites on the islands. The timber is used in building construction and boat building. It is a large evergreen tree, maturing at 20-30 metres with a mast like trunk to about one metre thick and irregularly conical crown, often dense and pendulous. Trunk bark is dull reddish brown broken into large scaly plates separated by blackish fissures. It is a handsome tree when grown on a favourable site in a warm, fairly dry climate.

Legislative Assessment

The assessment has identified Tree 2 as a Significant Tree, and Trees 1 and 3-9, are Regulated Trees as defined in the *Planning, Development and Infrastructure Act 2016*. Significant and Regulated Trees should be preserved if they meet aesthetic and/or environmental criteria as described in the *Planning, Development and Infrastructure (General) Regulations 2017*. Tree 5 is considered to provide 'important' aesthetic and/or environmental benefit which would warrant its protection; the remaining trees whilst providing benefit in this regard do not do so to a level that would be considered to be 'important'.

Table 1 - Legislative Status

Legislative Status	Number of Trees	Tree Numbers
Significant	1	2
Regulated	8	1 and 3-9

Retention Assessment

Trees that provide an environmental and/or aesthetic contribution to the area, are in good condition will achieve a High or Moderate Retention Rating and conservation of these trees is encouraged. Trees that do not provide this contribution and/or are in poor condition will achieve a Low Retention Rating; these trees will display one or more of the following or similar attributes:

- a) are in poor condition due to health and/or structural decline,
- b) have poor form that impacts their aesthetic value,
- c) provide limited environmental and/or aesthetic benefit,
- d) are a short lived species and/or have a short Useful Life Expectancy,
- e) represent a material risk to persons or property,
- f) are identified as causing or threatening to cause substantial damage to a structure of value,

The assessment has identified Tree 5 as having a High Retention Rating. It is my opinion, as a Regulated Tree with a High Retention Rating, this tree displays one or more attributes described within the *Planning, Development and Infrastructure Act 2016*, that warrants its retention.

The remaining trees achieved a Moderate Retention Rating indicating they are worthy of consideration for retention if they can be adequately protected in an otherwise reasonable and expected development. However, tree removal could be considered to achieve development if they are preventing an otherwise reasonable and expected development.

Tree Protection Assessment

Australian Standard AS4970-2009 *Protection of trees on development sites* prescribes the use of a Tree Protection Zone (TPZ) as the principle means of protecting trees throughout the development process. If encroachment is required within any TPZ, the Project Arborist should be consulted to identify impacts and recommend mitigation measures. The Tree Protection Zones should be used to inform any future development of the site, maintaining these areas as open space. The Tree Protection Zone radii are included in Table 4 and Appendix D - Tree Assessment Summary.

The Tree Protection Zone radii for these trees, as measured from the centre of the trunk, have been calculated and are shown below in Table 2; alterations to the area around these trees should be restricted in accordance with the guidelines of AS4970-2009.

Table 2 – Tree Protection Zones

Tree Number	TPZ Radius
1	8.52 metres
2	13.32 metres
3	8.76 metres
4	11.16 metres
5	9.60 metres
6	9.84 metres
7	7.92 metres
8	8.28 metres
9	8.52 metres

Conclusion

The assessment has identified Tree 5 as having a High Retention Rating. It is my opinion, as a Regulated Tree with a High Retention Rating, this tree displays one or more attributes described within the *Planning, Development and Infrastructure Act 2016*, that warrant their retention. The removal of this tree is unlikely to be approved unless it can be demonstrated that:

- c. it is substantially restricting an otherwise reasonable and expected development, and
- d. alternative design solutions that retain the tree and achieve any form of reasonable and expected development are not available.

The Tree Protection Zone for this tree has been calculated to have a radius of 9.6 metres as measured from the centre of the trunk; alterations to the area around this tree should be restricted in accordance with the guidelines of AS4970-2009. It is recommended the design of any future development consider the extent of the TPZ and minimise all potential encroachments to ensure this tree is not impacted.

The remaining trees achieve a Moderate Retention Rating indicating they are worthy of consideration for retention if they can be adequately protected in an otherwise reasonable and expected development.

The Regulated and Significant Trees require Development Approval prior to any tree damaging activity occurring. This includes development activities within the TPZ, tree removal and potentially pruning.

A Project Arborist should be appointed to assist in the design around trees to be retained; the development impacts and tree protection requirements are to be included in a Development Impact Report and a Tree Protection Plan as identified in Australian Standard *AS4970 2009 Protection of trees on development sites*.

Thank you for the opportunity to provide this report. Should you require further information, please contact me and I will be happy to be of assistance.

Yours sincerely



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Definitions

Circumference:	trunk circumference measured at one metre above ground level. This measurement is used to determine the status of the tree in relation to the <i>Planning, Development and Infrastructure Act 2016</i> .
Diameter at Breast Height (DBH):	trunk diameter measured at 1.4 metres above ground level used to determine the Tree Protection Zone as described in Australian Standard AS4970-2009 <i>Protection of trees on development sites</i> .
Diameter at Root Buttress (DRB):	trunk diameter measured just above the root buttress as described in Australian Standard AS4970-2009 <i>Protection of trees on development sites</i> and is used to determine the Structural Root Zone.
Tree Damaging Activity	Tree damaging activity includes those activities described within the <i>Planning, Development and Infrastructure Act 2016</i> such as removal, killing, lopping, ringbarking or topping or any other substantial damage such as mechanical or chemical damage, filling or cutting of soil within the TPZ. Can also include forms of pruning above and below the ground.
Tree Protection Zone (TPZ):	area of root zone that should be protected to prevent substantial damage to the tree's health.
Structural Root Zone (SRZ):	calculated area within the tree's root zone that is considered essential to maintain tree stability.
Project Arborist	A person with the responsibility for carrying out a tree assessment, report preparation, consultation with designers, specifying tree protection measures, monitoring and certification. The Project Arborist must be competent in arboriculture, having acquired through training, minimum Australian Qualification Framework (AQTF) Level 5, Diploma of Horticulture (Arboriculture) and/or equivalent experience, the knowledge and skills enabling that person to perform the tasks required by this standard.
Important:	<p>The following definition of important was described by Commissioner Nolan of the Environment, Resource and Development Court in the case of <i>Savoy Developments Pty Ltd v Town of Gawler</i> [2013] SAERDC 32.</p> <p><i>"In my view, for habitat to be raised to the level of 'important' (as sought by Objective 2(d)), it must be beyond that likely to be expected in any mature tree of indigenous origins – that is, it is beyond the normal level that might be expected or that it is so unique or special that it may be considered important. From the evidence before me I do not consider the trees to provide "important habitat for native fauna"."</i></p> <p>This definition of important, whilst in this case relating to Habitat Value, has been related when looking at all Objectives that use the term "Important".</p>
Notable:	The <i>Planning, Development and Infrastructure Act 2016</i> and local Development Plan also use the term "notable" when assessing the visual contribution of a tree. The Environment, Resource and Development Court does not appear to have defined the term "notable" as applied in the <i>Planning, Development and Infrastructure Act 2016</i> however, when researching definitions it is clear that this term bears equal or similar weight as the term "important" and as such for a tree to be "notable" it has to have a similar level of attributes to an important tree. When compared to a typical example of the species for a tree to be described as "notable" it would also be considered to be a noteworthy, remarkable, outstanding, momentous, memorable, impressive, extraordinary or an exceptional example of the species or of greater importance in regard to its value as a visual element than other similar sized example of the species.
PDI Act 2016:	the <i>Planning, Development and Infrastructure Act 2016</i> and associated <i>Planning, Development and Infrastructure (General) Regulations 2017</i> includes provisions for the control of Regulated and Significant Trees within the 18 metropolitan Adelaide councils, townships in the Adelaide Hills Council and parts of the Mount Barker Council; these provisions do not apply in areas outside of these councils.
Regulated Tree:	is recognised as any tree in the prescribed council areas with a trunk circumference of two metres or more. In the case of trees with multiple trunks, those with trunks with a total circumference of two metres or more and an average circumference 625 mm or more. The circumference is measured at a point one metre above natural ground level.
Significant Tree:	The <i>Planning, Development and Infrastructure Act 2016</i> identifies a Significant Tree as any tree in Metropolitan Adelaide or townships in the Adelaide Hills Council or parts of the Mount Barker Council with a trunk circumference of three metres or more. In the case of trees with multiple trunks, those with trunks with a total circumference of three metres or more and an average circumference 625 mm or more. The circumference is measured at a point one metre above natural ground level.
Unregulated or Exempt Tree:	unregulated and/or exempt trees have a trunk circumference of less than two metres and/or are excluded from control due to species, proximity to a structure or other reason as defined in the <i>Planning, Development and Infrastructure (General) Regulations 2017</i> .
Native Vegetation Act 1991:	Native vegetation refers to any naturally occurring local plant species that is indigenous to South Australia, from small ground covers and native grasses to large trees and water plants. It also includes naturally occurring regrowth and in certain circumstances, dead trees. In some circumstances, the management of native vegetation is protected by legislation.

References

- Australian Standard AS4970–2009 **Protection of trees on development sites**: Standards Australia.
- Matheny N. Clark J. 1998: **Trees and Development a Technical Guide to Preservation of Trees During Land Development**. International Society of Arboriculture, Champaign, Illinois, USA.
- Dunster J.A., Smiley E.T., Metheny N. and Lilly S. 2013. **Tree Risk Assessment Manual**. International Society of Arboriculture, Champaign, Illinois USA.

Appendix A - Tree Assessment Methodology

Tree Assessment Form (TAF©)

Record	Description
Tree	In botanical science, a tree is a perennial plant which consists of one or multiple trunks which supports branches and leaves. Trees are generally taller than 5 metres and will live for more than ten seasons, with some species that live for hundreds or thousands of seasons.
Genus and Species	<p>Botanical taxonomy of trees uses the binominal system of a genus and species, often there are subspecies and subgenus as well as cultivars. When identifying tree species, identification techniques such as assessing the tree's form, flower, stem, fruit and location are used. Identifying the right species is critical in assessing the tree's legalisation and environmental benefit. All efforts are made to correctly identify each tree to species level, where possible.</p> <p>Genus is the broader group to which the tree belongs e.g. <i>Eucalyptus</i>, <i>Fraxinus</i> and <i>Melaleuca</i>. Species identifies the specific tree within the genus e.g. <i>Eucalyptus camaldulensis</i>, <i>Fraxinus griffithi</i> or <i>Melaleuca styphelioides</i>. Trees will also be assigned the most commonly used Common Name. Common Names are not generally used for identification due to their nonspecific use, i.e. <i>Melia azedarach</i> is commonly known as White Cedar in South Australia but is also called Chinaberry Tree, Pride of India, Bead-tree, Cape Lilac, Syringa Berrytree, Persian Lilac, and Indian Lilac; equally similar common names can refer to trees from completely different Genus e.g. Swamp Oak, Tasmanian Oak and English Oak are from the <i>Casuarina</i>, <i>Eucalyptus</i> and <i>Quercus</i> genus's respectively.</p>
Height	Tree height is estimated by the arborist at the time of assessment. Tree height is observed and recorded in the following ranges; <5m, 5-10m, 10-15m and >20m.
Spread	Tree crown spread is estimated by the arborist at the time of assessment and recorded in the following ranges <5m, 5-10m, 10-15m, 15-20m, >20m.
Health	Tree health is assessed using the Arborman Tree Solutions - Tree Health Assessment Method that is based on international best practice.
Structure	Tree structure is assessed using Arborman Tree Solutions - Tree Structure Assessment Method that is based on international best practice.
Tree Risk Assessment	Tree Risk is assessed using Tree Risk Assessment methodology. The person conducting the assessment has been trained in the International Society of Arboriculture Tree Risk Assessment Qualification (TRAQ), Quantified Tree Risk Assessment (QTRA) and/or VALID Tree Risk Assessment (VALID). Refer to the Methodology within the report for additional information.
Legislative Status	Legislation status is identified through the interpretation of the <i>Development Act 1993</i> , the <i>Natural Resource Management Act 2004</i> , the <i>Native Vegetation Act 1991</i> and/or any other legislation that may apply.
Mitigation	Measures to reduce tree risk, improve tree condition, remove structural flaws, manage other conditions as appropriate may be recommended in the form of pruning and is listed in the Tree Assessment Findings (Appendix B). Tree pruning is recommended in accordance with AS4373-2007 <i>Pruning amenity trees</i> where practicable. Where measures to mitigate risk is not possible and the risk is unacceptable, then tree removal or further investigation is recommended.

Useful Life Expectancy (ULE)

ULE Rating	Definition
Surpassed	The tree has surpassed its Useful Life Expectancy. Trees that achieve a surpassed ULE may do so due to poor health, structure or form. Additionally, trees that are poorly located such as under high voltage powerlines or too close to structures may also achieve a surpassed ULE. Trees that achieve this status will be recommended for removal as there are no reasonable options to retain them.
<10 years	The tree displays either or both Poor Health and/or Structure and is considered to have a short Useful Life Expectancy of less than ten years. Some short-lived species such as <i>Acacia sp.</i> may naturally achieve a short ULE.
>10 years	The tree displays Fair Health or Structure and Good Health or Structure and is considered to have a Useful Life Expectancy of ten years or more. Trees identified as having a ULE of >10, will require mitigation such as pruning, stem injections or soil amelioration to increase their ULE.
>20 years	The tree displays Good Health and Structure and is considered to have an extended Useful Life Expectancy of more than twenty years.

Maturity (Age)

Age Class	Definition
Senescent	The tree has surpassed its optimum growing period and is declining and/or reducing in size. May be considered as a veteran in relation to its ongoing management. Tree will have generally reached greater than 80% of its expected life expectancy.
Mature	A mature tree is one that has reached its expected overall size, although the tree's trunk is still expected to continue growing. Tree maturity is also assessed based on species; as some trees are much longer lived than others. Tree will have generally reached 20-80% of its expected life expectancy.
Semi Mature	A tree which has established but has not yet reached maturity. Normally tree establishment practices such as watering will have ceased. Tree will generally not have reached 20% of its expected life expectancy.
Juvenile	A newly planted tree or one which is not yet established in the landscape. Tree establishment practices such as regular watering will still be in place. Tree will generally be a newly planted specimen up to five years old; this may be species dependant.

Tree Health Assessment (THA©)

Category	Description
Good	Tree displays normal vigour, uniform leaf colour, no or minor dieback (<5%), crown density (>90%). When a tree is deciduous, healthy axillary buds and typical internode length is used to determine its health. A tree with good health would show no sign of disease and no or minor pest infestation was identified. The tree has little to no pest and/or disease infestation.
Fair	Tree displays reduced vigour abnormal leaf colour, a moderate level of dieback (<15%), crown density (>70%) and in deciduous trees, reduced axillary buds and internode length. Minor pest and/or disease infestation potentially impacting on tree health. Trees with fair health have the potential to recover with reasonable remedial treatments.
Poor	Tree displays an advanced state of decline with low or no vigour, chlorotic or dull leaf colour, with high crown dieback (>15%), low crown density (<70%) and/or in deciduous trees, few or small axillary buds and shortened internode length. Pest and or disease infestation is evident and/or widespread. Trees with poor health are highly unlikely to recover with any remedial treatments; these trees have declined beyond the point of reversal.
Dead	The tree has died and has no opportunity for recovery.

Tree Structural Assessment (TSA©)

Category	Description
Good	Little to no branch failure observed within the crown, well-formed unions, no included bark, good branch and trunk taper present, root buttressing and root plate are typical. Trees that are identified as having good health display expected condition for their age, species and location.
Fair	The tree may display one or more of the following a history of minor branch failure, included bark unions may be present however, are stable at this time, acceptable branch and trunk taper present, root buttressing and root plate are typical. Trees with fair structure will generally require reasonable remediation methods to ensure the tree's structure remains viable.
Poor	History of significant branch failure observed in the crown, poorly formed unions, unstable included bark unions present, branch and/or trunk taper is abnormal, root buttressing and/or root plate are atypical.
Failed	The structure of the tree has or is in the process of collapsing.

Tree Form Assessment (TFA©)

Category	Description
Good	Form is typical of the species and has not been altered by structures, the environment or other trees.
Fair	The form has minor impacts from structures, the environment or adjacent trees which has altered its shape. There may be slight phototropic response noted or moderate pruning which has altered the tree's form.
Poor	The tree's form has been substantially impacted by structures, the environment, pruning or other trees. Phototropic response is evident and unlikely to be corrected.
Atypical	Tree form is highly irregular due to structures or other trees impacting its ability to correctly mature. Extreme phototropic response is evident; or the tree has had a substantially failure resulting in its poor condition, or extensive pruning has altered the tree's form irreversibly.

Priority

Category	Description
Low	Identified works within this priority should be carried out within 12 months.
Medium	Identified works within this priority should be carried out within 6 months.
High	Identified works within this priority should be carried out within 3 months.
Urgent	Identified works within this priority should be carried out immediately. Works within this priority rating will be brought to attention of the responsible person at the time of assessment.

Tree Retention Rating (TRR)

The Tree Retention Rating is based on a number of factors that are identified as part of the standard tree assessment criteria including Condition, Size, Environmental, Amenity and Special Values. These factors are combined in a number of matrices to provide a Preliminary Tree Retention Rating and a Tree Retention Rating Modifier which combine to provide a Tree Retention Rating that is measurable, consistent and repeatable

Preliminary Tree Retention Rating

The Preliminary Tree Retention Rating is conducted assessing Tree Health and Structure to give an overall Condition Rating and Height and Spread to give an overall Size Rating. The following matrices identify how these are derived.

Condition Matrix				
Structure	Health			
	Good	Fair	Poor	Dead
Good	C1	C2	C3	C4
Fair	C2	C2	C3	C4
Poor	C3	C3	C4	C4
Failed	C4	C4	C4	C4

Size Matrix					
Spread	Height				
	>20	15-20	10-15	5-10	<5
>20	S1	S1	S1	S2	S3
15-20	S1	S1	S2	S3	S3
10-15	S1	S2	S2	S3	S4
5-10	S2	S3	S3	S4	S5
<5	S3	S3	S4	S5	S5

The results from the Condition and Size Matrices are then placed in the Preliminary Tree Retention Rating Matrix.

Preliminary Tree Retention Rating				
Size	Condition			
	C1	C2	C3	C4
S1	High	Moderate	Low	Low
S2	Moderate	Moderate	Low	Low
S3	Moderate	Moderate	Low	Low
S4	Moderate	Moderate	Low	Low
S5	Low	Low	Low	Low

The Preliminary Tree Retention Rating gives a base rating for all trees regardless of other environmental and/or amenity factors and any Special Value considerations. The Preliminary Tree Retention Rating can only be modified if these factors are considered to be of high or low enough importance to warrant increasing or, in a few cases, lowering the original rating.

Tree Retention Rating Modifier

The Preliminary Tree Retention Rating is then qualified against the recognised Environmental and Amenity benefits that trees present to the community thereby providing a quantitative measure to determine the overall Tree Retention Rating. Data is collected in relation to Environmental and Amenity attributes which are compared through a set of matrices to produce a Tree Retention Rating Modifier.

Environmental Matrix				
Origin	Habitat			
	Active	Inactive	Potential	No Habitat
Indigenous	E1	E1	E2	E3
Native	E1	E2	E3	E3
Exotic	E2	E3	E3	E4
Weed	E3	E3	E4	E4

Amenity Matrix				
Character	Aesthetics			
	High	Moderate	Low	None
Important	P1	P1	P2	P3
Moderate	P1	P2	P3	P3
Low	P2	P3	P3	P4
None	P3	P3	P4	P4

Tree Retention Rating Modifier				
Amenity	Environment			
	E1	E2	E3	E4
P1	High	High	Moderate	Moderate
P2	High	Moderate	Moderate	Moderate
P3	Moderate	Moderate	Moderate	Moderate
P4	Moderate	Moderate	Moderate	Low

Tree Retention Rating

The results of the Preliminary Tree Retention Rating and the Tree Retention Rating Modifier matrices are combined in a final matrix to give the actual Tree Retention Rating.

Tree Retention Rating Matrix			
Tree Retention Rating Modifier	Preliminary Tree Retention Rating		
	High	Moderate	Low
High	Important	High	Moderate
Moderate	High	Moderate	Low
Low	Moderate	Low	Low

Special Value Trees

There are potentially trees that have Special Value for reasons outside of normal Arboricultural assessment protocols and therefore would not have been considered in the assessment to this point; to allow for this a Special Value characteristic that can override the Tree Retention Rating can be selected. Special Value characteristics that could override the Tree Retention Rating would include factors such as the following:

Cultural Values

Memorial Trees, Avenue of Honour Trees, Aboriginal Heritage Trees, Trees planted by Dignitaries and various other potential categories.

Environmental Values

Rare or Endangered species, Remnant Vegetation, Important Habitat for rare or endangered wildlife, substantial habitat value in an important biodiversity area and various other potential categories.

Where a tree achieves one or more Special Value characteristics the Tree Retention Rating will automatically be overridden and assigned the value of Important.

Tree Retention Rating Definitions

- Important** These trees will in all instances be required to be retained within any future development/redevelopment. It is highly unlikely that trees that achieve this rating would be approved for removal or any other tree damaging activity. Trees will be either remnant, or naturally occurring species with environmental value, will have active hollows and be in good overall condition.
- High** These trees will in most instances be required to be retained within any future development/redevelopment. It is unlikely that trees that achieve this rating would be approved for removal or any other tree damaging activity. Trees will be either remnant, or naturally occurring species with environmental value but are starting to decline or will be a planted native and have active hollows and be in good condition. Or may provide a high aesthetic contribution to an area and be in good overall condition
- Moderate** Trees with a moderate retention rating provide limited environmental benefit and amenity to the area. These trees may be semi mature or exotic species with limited environmental value. Moderate trees may also be large trees that display fair overall condition.
- Low** These trees may not be considered suitable for retention in a future development/redevelopment. These trees will either be young trees that are easily replaced. or in poor overall condition. Trees in this category do not warrant special works or design modifications to allow for their retention. Trees in this category are likely to be approved for removal and/or other tree damaging activity in an otherwise reasonable and expected development. Protection of these trees, where they are identified to be retained, should be consistent with Australian Standard AS4970-2009 *Protection of trees on development sites*.

Appendix B - Tree Assessment Findings

Canary Island Pine

Inspected:	20 April 2021
Height:	>20 metres
Spread:	10-15 metres
Health:	Good
Structure:	Good
Form:	Poor
Trunk Circumference:	>2 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone:	8.52 metres



Observations

The health and structure of this tree indicate it is in good overall condition and has adapted to its local environment.

Legislative Status	Regulated
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This tree has a trunk circumference greater than two metres and is not subject to any exemption from regulation and therefore it is identified as a Regulated Tree as defined in the Planning, Development and Infrastructure Act 2016.

Retention Rating	Moderate
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This tree has a Moderate Retention Rating and could be considered for retention in any future development.

Recommendation	Could be Retained
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This tree has a Moderate Retention Rating and is worthy of consideration for retention if suitable design and protection opportunities are available.

Canary Island Pine

Inspected:	20 April 2021
Height:	>20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Fair
Form:	Good
Trunk Circumference:	>3 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone:	13.32 metres



Observations

This tree is considered to be in fair overall condition due to the presence of a currently stable included bark union in the primary trunk division.

Legislative Status	Significant
--------------------	-------------

This tree has a trunk circumference greater than three metres and is not subject to any exemption from regulation and therefore it is identified as a Significant Tree as defined in the Planning, Development and Infrastructure Act 2016.

Retention Rating	Moderate
------------------	----------

This tree has a Moderate Retention Rating and could be considered for retention in any future development.

Recommendation	Could be Retained
----------------	-------------------

This tree has a Moderate Retention Rating and is worthy of consideration for retention if suitable design and protection opportunities are available.

Canary Island Pine

Inspected:	20 April 2021
Height:	>20 metres
Spread:	5-10 metres
Health:	Fair
Structure:	Good
Form:	Good
Trunk Circumference:	>2 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone:	8.76 metres



Observations

This tree is considered to be in fair overall condition due to the reduced foliage density and level of dieback throughout the crown.

Legislative Status	Regulated
--------------------	-----------

This tree has a trunk circumference greater than two metres and is not subject to any exemption from regulation and therefore it is identified as a Regulated Tree as defined in the Planning, Development and Infrastructure Act 2016.

Retention Rating	Moderate
------------------	----------

This tree has a Moderate Retention Rating and could be considered for retention in any future development.

Recommendation	Could be Retained
----------------	-------------------

This tree has a Moderate Retention Rating and is worthy of consideration for retention if suitable design and protection opportunities are available.

Canary Island Pine

Inspected:	20 April 2021
Height:	>20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Form:	Good
Trunk Circumference:	>2 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone:	11.16 metres



Observations

The health and structure of this tree indicate it is in good overall condition and has adapted to its local environment.

Legislative Status	Regulated
--------------------	-----------

This tree has a trunk circumference greater than two metres and is not subject to any exemption from regulation and therefore it is identified as a Regulated Tree as defined in the Planning, Development and Infrastructure Act 2016.

Retention Rating	Moderate
------------------	----------

This tree has a Moderate Retention Rating and could be considered for retention in any future development.

Recommendation	Could be Retained
----------------	-------------------

This tree has a Moderate Retention Rating and is worthy of consideration for retention if suitable design and protection opportunities are available.

River Red Gum

Inspected: 20 April 2021
 Height: 15-20 metres
 Spread: 15-20 metres
 Health: Good
 Structure: Good
 Form: Good
 Trunk Circumference: >2 metres
 Useful Life Expectancy: >20 years
 Tree Protection Zone: 9.60 metres



Observations

The health and structure of this tree indicate it is in good overall condition and has adapted to its local environment.

Legislative Status	Regulated
--------------------	-----------

This tree has a trunk circumference greater than two metres and is not subject to any exemption from regulation and therefore it is identified as a Regulated Tree as defined in the Planning, Development and Infrastructure Act 2016.

Retention Rating	High
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This tree has a High Retention Rating and should be protected in any future development.

Recommendation	Should be Retained
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This tree has a High Retention Rating and all reasonable design considerations should be employed to retain the tree wherever possible.

Lemon Scented Gum

Inspected:	20 April 2021
Height:	>20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Fair
Form:	Fair
Trunk Circumference:	>2 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone:	9.84 metres



Observations

This tree is considered to be in fair overall condition due to the presence of a currently stable included bark union in the primary trunk division.

Legislative Status	Regulated
--------------------	-----------

This tree has a trunk circumference greater than two metres and is not subject to any exemption from regulation and therefore it is identified as a Regulated Tree as defined in the Planning, Development and Infrastructure Act 2016.

Retention Rating	Moderate
------------------	----------

This tree has a Moderate Retention Rating and could be considered for retention in any future development.

Recommendation	Could be Retained
----------------	-------------------

This tree has a Moderate Retention Rating and is worthy of consideration for retention if suitable design and protection opportunities are available.

Lemon Scented Gum

Inspected:	20 April 2021
Height:	15-20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Form:	Good
Trunk Circumference:	>2 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone:	7.92 metres



Observations

The health and structure of this tree indicate it is in good overall condition and has adapted to its local environment.

Legislative Status	Regulated
This tree has a trunk circumference greater than two metres and is not subject to any exemption from regulation and therefore it is identified as a Regulated Tree as defined in the Planning, Development and Infrastructure Act 2016.	
Retention Rating	Moderate
This tree has a Moderate Retention Rating and could be considered for retention in any future development.	
Recommendation	Could be Retained
This tree has a Moderate Retention Rating and is worthy of consideration for retention if suitable design and protection opportunities are available.	

Lemon Scented Gum

Inspected:	20 April 2021
Height:	>20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Good
Form:	Fair
Trunk Circumference:	>2 metres
Useful Life Expectancy:	>20 years
Tree Protection Zone:	8.28 metres



Observations

The health and structure of this tree indicate it is in good overall condition and has adapted to its local environment.

Legislative Status	Regulated
--------------------	-----------

This tree has a trunk circumference greater than two metres and is not subject to any exemption from regulation and therefore it is identified as a Regulated Tree as defined in the Planning, Development and Infrastructure Act 2016.

Retention Rating	Moderate
------------------	----------

This tree has a Moderate Retention Rating and could be considered for retention in any future development.

Recommendation	Could be Retained
----------------	-------------------

This tree has a Moderate Retention Rating and is worthy of consideration for retention if suitable design and protection opportunities are available.

Lemon Scented Gum

Inspected:	20 April 2021
Height:	>20 metres
Spread:	15-20 metres
Health:	Good
Structure:	Fair
Form:	Fair
Trunk Circumference:	>2 metres
Useful Life Expectancy:	>10 years
Tree Protection Zone:	8.52 metres



Observations

This tree is considered to be in fair overall condition due to the presence of a currently stable included bark union in the primary trunk division.

Legislative Status	Regulated
--------------------	-----------

This tree has a trunk circumference greater than two metres and is not subject to any exemption from regulation and therefore it is identified as a Regulated Tree as defined in the Planning, Development and Infrastructure Act 2016.

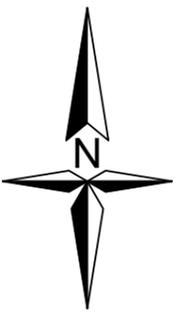
Retention Rating	Moderate
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This tree has a Moderate Retention Rating and could be considered for retention in any future development.

Recommendation	Could be Retained
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This tree has a Moderate Retention Rating and is worthy of consideration for retention if suitable design and protection opportunities are available.

Appendix C - Mapping



Legislative Status

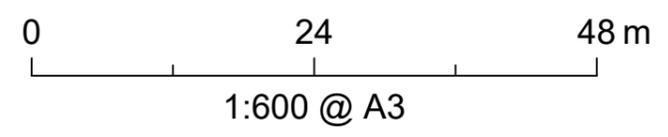
- S Significant
- R Regulated
- U Unregulated
- E Exempt
- NV Nat Veg Act

Retention Rating

-  Important
-  High
-  Moderate
-  Low

Date: 22/04/2021
 Ref: ATS6309-FleStPTA
 Arborman Tree Solutions
 23 Aberdeen Street
 Port Adelaide SA 5015
 0418 812 967
www.arborman.com.au

Preliminary Tree Assessment Flemington Street, Glenside



Appendix D - Tree Assessment Summary

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	Retention Rating	TPZ Radius	Observations	Recommendation
1	<i>Pinus canariensis</i>	Regulated	Moderate	8.52 metres	The health and structure of this tree indicate it is in good overall condition and has adapted to its local environment.	Could be Retained
2	<i>Pinus canariensis</i>	Significant	Moderate	13.32 metres	This tree is considered to be in fair overall condition due to the presence of a currently stable included bark union in the primary trunk division.	Could be Retained
3	<i>Pinus canariensis</i>	Regulated	Moderate	8.76 metres	This tree is considered to be in fair overall condition due to the reduced foliage density and level of dieback throughout the crown.	Could be Retained
4	<i>Pinus canariensis</i>	Regulated	Moderate	11.16 metres	The health and structure of this tree indicate it is in good overall condition and has adapted to its local environment.	Could be Retained
5	<i>Eucalyptus camaldulensis</i>	Regulated	High	9.60 metres	The health and structure of this tree indicate it is in good overall condition and has adapted to its local environment.	Should be Retained
6	<i>Corymbia citriodora</i>	Regulated	Moderate	9.84 metres	This tree is considered to be in fair overall condition due to the presence of a currently stable included bark union in the primary trunk division.	Could be Retained
7	<i>Corymbia citriodora</i>	Regulated	Moderate	7.92 metres	The health and structure of this tree indicate it is in good overall condition and has adapted to its local environment.	Could be Retained

Tree Assessment Summary

Tree Number	Botanic Name	Legislative Status	Retention Rating	TPZ Radius	Observations	Recommendation
8	<i>Corymbia citriodora</i>	Regulated	Moderate	8.28 metres	The health and structure of this tree indicate it is in good overall condition and has adapted to its local environment.	Could be Retained
9	<i>Corymbia citriodora</i>	Regulated	Moderate	8.52 metres	This tree is considered to be in fair overall condition due to the presence of a currently stable included bark union in the primary trunk division.	Could be Retained