

Birds Tree Consultancy

Consulting Arborist AQF5 • Horticultural Consultancy • Project Management • Resistograph Testing

**189 Macquarie Street
PARRAMATTA**

TREE REPORT and ARBORICULTURAL IMPACT ASSESSMENT

12 February 2013

Prepared for

Toplace

Prepared by

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Executive Summary

This Tree Report has been commissioned in order to provide a report on 23 trees that are within the site or adjacent to the proposed development at 189 Macquarie Street Parramatta.

All the subject trees with the exception of trees 5, 20, 21, 22, 23 will be required to be removed in order to accommodate the excavation required for the proposed basement car park.

Tree 4 is recommended for removal regardless of the development due to structural defects present in a leaning trunk and the high amount of elite epicormic branches in the upper canopy. This places this tree at an elevated risk of failure in an area of high pedestrian and vehicular traffic.

Trees 5, 6, 20, 21, 22, 23 are all exempt from Parramatta City Council Tree Preservation Order (TPO).

Trees 5, 20, 21, 22 and 23 are on neighbouring properties and therefore are required to be retained and protected, however trees 20, 21, 22, 23 are in close proximity to a vacant, fire damaged house and are also immediately adjacent to the boundary. It is recommended that this opportunity is taken to seek approval for the removal of these trees during the construction process.

The major encroachment into the TPZ of tree 5 reduces the viability of this tree. Hand excavation is required under the supervision of an AQF Level 5 Arborist during the excavation works in order to minimise this impact on this tree. Alternatively the owner may remove this tree as it is exempt from Parramatta City Council TPO.

Tree Retention, Removal and Replacement

Based on the issues identified in 2.0 and the impact of the proposed development as outlined in 3.0, we would make the following recommendations for the retention or removal of trees and include the status of each tree under Parramatta City Council Tree Preservation Order (TPO).

Tree no.	Species	Recommendation	Comments	Parramatta City Council TPO Status
1	Corymbia citriodora	Remove	Required to be removed due to development.	Preserved
2	Corymbia maculata	Remove	Required to be removed due to development.	Preserved
3	Pyrus calleryana	Remove	Required to be removed due to development.	Preserved
4	Castenospermum australe	Remove	existing bark inclusion with	Preserved

			leaning co dominant trunk. Entire canopy elite epicormic shoots	
5	Morus spp.	Retain	On neighbouring property	Exempt
6	Lagunaria patersonii	Remove	Required to be removed due to development.	Exempt
7	Camphora cinnamomum	Remove	Required to be removed due to development.	Preserved
8	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
9	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
10	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
11	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
12	Melia azedarach	Remove	Required to be removed due to development.	Preserved
13	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
14	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
15	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
16	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
17	Melia azedarach	Remove	Required to be removed due to development.	Preserved
18	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
19	Casuarina spp	Remove	Required to be removed due to development.	Preserved
20	Ligustrum lucidum	Remove	On neighbouring property however removal	Exempt

			recommended	
21	Camphora cinnamomum	Remove	On neighbouring property however removal recommended	Exempt
22	Camphora cinnamomum	Remove	On neighbouring property however removal recommended	Exempt
23	Camphora cinnamomum	Remove	On neighbouring property however removal recommended	Exempt

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1.0 Scope of Works

This Tree Assessment Report has been commissioned by Toplace to report on trees that are within the site of the proposed Development at 189 Macquarie Street Parramatta. This Tree Report will outline the health, condition, stability of these trees as well as the impact that the development will have on the viability of these trees.

On 11 February 2013, Glenn Bird of Birds Tree Consultancy attended site and inspected the subject trees from the ground. There was no aerial inspection carried out. We undertook a Visual Tree Assessment (VTA) (Mattheck & Breloer, 1994). Tree heights are measured using a Nikon Forestry 550 Heightmeter.

2.0 Site Analysis

2.1 Site

The subject site is an existing car park that is proposed for redevelopment. The entire site is taken up as asphalt paving with the exception of a narrow garden strip along the western boundary and at the northern entrance. Refer to Toplace Architectural Plans for further details of the site and the proposed development.

2.2 Topography

The site slopes gradually from the highest point on the southern boundary evenly down to the northern boundary on Macquarie Street.

2.3 Identification

Trees 1 to 23 as identified in the attached inspection forms Appendix B and on Tree Location Plan A01 in Appendix C.

2.4 Soils

Soil material and horizons were not tested for this report.

2.5 Existing Trees

The following trees were inspected from the ground and the following items identified. Please refer also to the attached inspection data in appendix C.

2.5.1 Tree 1 – *Corymbia citriodora*

This tree is a mature *Corymbia citriodora* and is approximately 25m tall with canopy spread of 14m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has a single trunk with a diameter at breast height of 625mm. This tree is in a small planter bed and is approximately 1m from the car park kerb and sealed paving.

2.5.2 Tree 2 – *Corymbia citriodora*

This tree is a mature *Corymbia citriodora* and is approximately 25m tall with canopy spread of 14m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has a single trunk with a diameter at breast height of

525mm. This tree is in a small planter bed and is approximately 1m from the car park kerb and sealed paving.

2.5.3 Tree 3 – *Pyrus calleryana*.

This tree is a mature *Pyrus calleryana* and is approximately 7.5m tall with canopy spread of 8m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has a single trunk with a diameter at breast height of 385mm. This tree is in a small planter bed and is approximately 1m from the car park kerb and sealed paving.



Figure 1 - Tree 3 showing proximity to kerb

2.5.4 Tree 4 – *Castenospermum australe*.

This tree is a mature *Castenospermum australe* and is approximately 10.4m tall with canopy spread of 14m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has a single trunk with a diameter at breast height of 530mm. This tree has a bark inclusion at the base of a leaning trunk and has a canopy almost entirely made up of elite epicormic shoots. Recommend removal of this tree.



Figure 2 - Tree 4 showing bark inclusion in main junction



Figure 3 - Elite epicormic branches in tree 4

2.5.5 Tree 5 – *Morus spp.*

This tree is a mature *Morus* and is approximately 9m tall with canopy spread of 14m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has a single trunk with a diameter at breast height of 500mm. This tree is exempt from Parramatta City Council Tree Preservation Order and is immediately on the neighbouring property.

2.5.6 Tree 6 – *Lagunaria patersonii*.

This tree is a mature *Lagunaria patersonii* and is approximately 11m tall with canopy spread of 12m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has a single trunk with a diameter at breast height of 500mm. This tree is exempt from Parramatta City Council Tree Preservation Order.

2.5.7 Tree 7 – *Camphora cinnamomum*

This tree is a mature *Camphora cinnamomum* and is approximately 8.2m tall with canopy spread of 12m. The tree is in good health and condition with minimal deadwood

or epicormic growth. This tree has a single trunk with a diameter at breast height of 315mm. This tree is surrounded by sealed asphalt paving.

2.5.8 Tree 8 – *Callistemon citrinus*.

This tree is a mature *Callistemon citrinus* and is approximately 6m tall with canopy spread of 5m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has a single trunk with a diameter at breast height of 120mm. This tree is in a small planter bed less than 1m wide and is between the car park kerb and a concrete retaining wall on the boundary.

2.5.9 Tree 9 – *Callistemon citrinus*.

This tree is a mature *Callistemon citrinus* and is approximately 6m tall with canopy spread of 5m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has a single trunk with a diameter at breast height of 120mm. This tree is in a small planter bed less than 1m wide and is between the car park kerb and a concrete retaining wall on the boundary.

2.5.10 Tree 10 – *Callistemon citrinus*.

This tree is a mature *Callistemon citrinus* and is approximately 6m tall with canopy spread of 5m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has a single trunk with a diameter at breast height of 120mm. This tree is in a small planter bed less than 1m wide and is between the car park kerb and a concrete retaining wall on the boundary.

2.5.11 Tree 11 – *Callistemon citrinus*.

This tree is a mature *Callistemon citrinus* and is approximately 6m tall with canopy spread of 5m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has a single trunk with a diameter at breast height of 120mm. This tree is in a small planter bed less than 1m wide and is between the car park kerb and a concrete retaining wall on the boundary.

2.5.12 Tree 12 – *Melia azedarach*.

This tree is a mature *Melia azedarach* and is approximately 9m tall with canopy spread of 9m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has a single trunk with a diameter at breast height of 230mm. This tree is in a small planter bed less than 1m wide and is between the car park kerb and a concrete retaining wall on the boundary.

2.5.13 Tree 13 – *Callistemon citrinus*.

This tree is a mature *Callistemon citrinus* and is approximately 6m tall with canopy spread of 5m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has twin co dominant trunk from the base with a diameter at breast height of 120mm.

2.5.14 Tree 14 – *Callistemon citrinus*.

This tree is a mature *Callistemon citrinus* and is approximately 6m tall with canopy spread of 5m. The tree is in good health and condition with minimal deadwood or

epicormic growth. This tree has multiple co dominant trunks from the base with an n aggregate diameter at breast height of 120mm.

2.5.15 Tree 15 – *Callistemon citrinus*.

This tree is a mature *Callistemon citrinus* and is approximately 6m tall with canopy spread of 5m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has a single trunk with a diameter at breast height of 120mm.

2.5.16 Tree 16 – *Callistemon citrinus*.

This tree is a mature *Callistemon citrinus* and is approximately 6m tall with canopy spread of 5m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has twin co dominant trunk from the base with a diameter at breast height of 120mm.

2.5.17 Tree 17 – *Melia azedarach*.

This tree is a mature *Melia azedarach* and is approximately 10m tall with canopy spread of 9m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has a single trunk with a diameter at breast height of 230mm. This tree is in a small planter bed less than 1m wide and is between the car park kerb and a concrete retaining wall on the boundary.

2.5.18 Tree 18 – *Callistemon citrinus*.

This tree is a mature *Callistemon citrinus* and is approximately 6m tall with canopy spread of 5m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has multiple co dominant trunks from the base with an n aggregate diameter at breast height of 120mm. This tree is in a small planter bed less than 1m wide and is between the car park kerb and a concrete retaining wall on the boundary.

2.5.19 Tree 19 – *Casuarina spp.*

This tree is a mature *Casuarina* and is approximately 10m tall with canopy spread of 9m. The tree is in good health and condition with minimal deadwood and epicormic growth. This tree has single trunk with a diameter at breast height of 250mm.

2.5.20 Tree 20 – *Ligustrum lucidum*.

This tree is a mature Broad leaf Privet and is approximately 10m tall with canopy spread of 8m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has multiple co dominant trunks from the base with an approximate aggregate diameter at breast height of 500mm. This tree is exempt from Parramatta City Council Tree Preservation Order. This tree is immediately over the boundary on a neighbouring property and is less than 2m from a vacant fire damaged building.

2.5.21 Tree 21 – *Camphora cinnamomum*.

This tree is a mature Camphor laurel and is approximately 15m tall with canopy spread of 12m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has multiple co dominant trunks from the base with an approximate aggregate diameter at breast height of 500mm. This tree is exempt from Parramatta City

Council Tree Preservation Order. This tree is immediately over the boundary on a neighbouring property and is less than 2m from a vacant fire damaged building.

2.5.22 Tree 22 – *Camphora cinnamomum*.

This tree is a mature Camphor laurel and is approximately 10m tall with canopy spread of 8m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has multiple co dominant trunks from the base with an approximate aggregate diameter at breast height of 500mm. This tree is exempt from Parramatta City Council Tree Preservation Order. This tree is immediately over the boundary on a neighbouring property and is less than 2m from a vacant fire damaged building.

2.5.23 Tree 23 – *Camphora cinnamomum*.

This tree is a mature Camphor laurel and is approximately 10m tall with canopy spread of 18m. The tree is in good health and condition with minimal deadwood or epicormic growth. This tree has multiple co dominant trunks from the base with an approximate aggregate diameter at breast height of 500mm. This tree is exempt from Parramatta City Council Tree Preservation Order. This tree is immediately over the boundary on a neighbouring property and is less than 2m from a vacant fire damaged building.



Figure 4 Trees 20 to 23

3.0 Impacts of Proposed Development

Based on the drawings of the proposed development, examination of the excavation works on site, we are able to identify that the proposed development will impact upon the subject trees as follows:

3.1 Tree Protection Zones

The tree protection zones (TPZ) required for the subject trees have been taken as a circular area with a radius 12 x the diameter at breast height of the tree. This requirement is in line with Australia Standard AS 4970-2009 Protection of Trees on Development Sites. This standard defines a maximum of 10% encroachment to be minimal encroachment. Any encroachment over 10% requires the site arborist to give consideration as to the viability of the tree due to the proposed development. The tree protection zones for the subject trees have been outlined in Appendix C – Drawing A02 Tree Protection Plan. The Tree Protection Zones are summarised as follows:

Tree No.	Species	Tree Protection Zone (TPZ) radius in m.	Encroachment inTPZ %
1	Corymbia citriodora	7.5	100%
2	Corymbia maculata	6.3	100%
3	Pyrus calleryana	4.62	100%
4	Castenospermum australe	6.36	100%
5	Morus spp.	6	40%
6	Lagunaria patersonii	6	100%
7	Camphora cinnamomum	3.78	100%
8	Callistemon citrinus	2	100%
9	Callistemon citrinus	2	100%
10	Callistemon citrinus	2	100%
11	Callistemon citrinus	2	100%
12	Melia azedarach	2.76	100%
13	Callistemon citrinus	2	100%
14	Callistemon citrinus	2	100%
15	Callistemon citrinus	2	100%
16	Callistemon citrinus	2	100%
17	Melia azedarach	2.76	100%
18	Callistemon citrinus	2	100%
19	Casuarina spp	3	100%
20	Ligustrum lucidum	6	40%
21	Camphora cinnamomum	6	40%
22	Camphora cinnamomum	6	40%
23	Camphora cinnamomum	6	40%

3.2 Impact of Proposed Development

The proposed development requires the excavation for a basement car park which has a footprint the full extent of the property, that is the excavation extends from boundary to boundary. As a result, all trees identified in this report with the exception of trees 5, 20, 21, 22, 23 will be required to be removed in order to make way for this excavation.

Trees 5, 20, 21, 22 and 23 are all on neighbouring properties and the proposed excavation will encroach the Tree Protection Zones as defined by AS4970-2009 by between 40-50% which is a major encroachment that will impact upon the viability of these trees. Trees 5, 20, 21, 22 and 23 are exempt from Parramatta City Council Tree Preservation Order and in the case of trees 20-23 it is recommended that this opportunity is taken to remove these trees.

4.0 Recommendations

4.1 General Recommendation

All the subject trees with the exception of trees 5, 20, 21, 22, 23 will be required to be removed in order to accommodate the excavation required for the proposed basement car park.

Tree 4 is recommended for removal regardless of the development due to structural defects present in a leaning trunk and the high amount of elite epicormic branches in the upper canopy. This places this tree at an elevated risk of failure in an area of high pedestrian and vehicular traffic.

Trees 5, 6, 20, 21, 22, 23 are all exempt from Parramatta City Council Tree Preservation Order (TPO).

Trees 5, 20, 21, 22 and 23 are on neighbouring properties and therefore are required to be retained and protected, however trees 20, 21, 22, 23 are in close proximity to a vacant, fire damaged house and are also immediately adjacent to the boundary. It is recommended that this opportunity is taken to seek approval for the removal of these trees during the construction process.

The major encroachment into the TPZ of tree 5 reduces the viability of this tree. Hand excavation is required under the supervision of an AQF Level 5 Arborist during the excavation works in order to minimise this impact on this tree. Alternatively the owner may remove this tree as it is exempt from Parramatta City Council TPO.

Tree Retention, Removal and Replacement

Based on the issues identified in 2.0 and the impact of the proposed development as outlined in 3.0, we would make the following recommendations for the retention or removal of trees and include the status of each tree under Parramatta City Council Tree Preservation Order (TPO).

Tree	Species	Recommendation	Comments	Parramatta City
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no.				Council TPO Status
1	Corymbia citriodora	Remove	Required to be removed due to development.	Preserved
2	Corymbia maculata	Remove	Required to be removed due to development.	Preserved
3	Pyrus calleryana	Remove	Required to be removed due to development.	Preserved
4	Castenospermum australe	Remove	Existing bark inclusion with leaning co dominant trunk. Entire canopy elite epicormic shoots	Preserved
5	Morus spp.	Retain	On neighbouring property	Exempt
6	Lagunaria patersonii	Remove	Required to be removed due to development.	Exempt
7	Camphora cinnamomum	Remove	Required to be removed due to development.	Preserved
8	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
9	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
10	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
11	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
12	Melia azedarach	Remove	Required to be removed due to development.	Preserved
13	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
14	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
15	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
16	Callistemon citrinus	Remove	Required to be removed due to	Preserved

			development.	
17	Melia azedarach	Remove	Required to be removed due to development.	Preserved
18	Callistemon citrinus	Remove	Required to be removed due to development.	Preserved
19	Casuarina spp	Remove	Required to be removed due to development.	Preserved
20	Ligustrum lucidum	Remove	On neighbouring property however removal recommended	Exempt
21	Camphora cinnamomum	Remove	On neighbouring property however removal recommended	Exempt
22	Camphora cinnamomum	Remove	On neighbouring property however removal recommended	Exempt
23	Camphora cinnamomum	Remove	On neighbouring property however removal recommended	Exempt

5.0 Pre-Construction Tree Protection Measures

5.1 General

All tree protection works shall be carried out before any further excavation, grading and site works commence. Tree protection works shall be inspected and approved by a Consulting Arborist meeting AQF Level 5 prior to construction works commencing.

Storage of materials, mixing of materials, vehicle parking, disposal of liquids, machinery repairs and refueling, site office and sheds, and the lighting of fires, stockpiling of soil, rubble or any debris shall not be carried out within the tree protection zone of existing trees. No backfilling shall occur within the tree protection zone of existing trees. Trees shall not be removed or lopped unless specific instruction is given in writing by the Superintendent.

5.2 Identification

All trees to be protected shall be clearly identified and all tree protection zones surveyed.

5.3 Protective Fence

Fencing is to be erected around existing trees to be retained. In addition to this protective fencing within the site, Protective Fencing is to be installed to the full extent of the tree protection zones within the site. This fencing is to be erected prior to any

materials being brought on site or before any site, civil works or construction works commence. The fence shall enclose a sufficient area so as to prevent damage to the Tree Protection Zone (TPZ) as defined on Appendix C Tree Protection Plan and as defined in 4.1 above. Fence to comprise 1800mm high chain wire mesh fixed to 50mm dia. Galvanised steel posts. Panels should be securely fixed top and bottom to avoid separation. No storage of building materials, tools, paint, fuel or contaminants and the like shall occur within the fenced area.

5.4 Mulching

Install mulch to the extent of all tree protection fencing. Use a leaf mulch conforming to AS 4454 which is free of deleterious and extraneous matter such as soil, weeds, sticks and stones and consisting of a minimum of 90% recycled content compliant with AS 4454 (1999) and AS 4419 (1998). All trees marked as to be removed on the proposed development are to be chipped and reused for this purpose. Place mulch evenly and to a depth of 100mm.

5.5 Existing Site Spoil Stockpiles

All existing site spoil stockpiles are to be removed from within the Tree Protection Zones as defined by the table in 4.0 and as shown on A02 in Appendix C. All removal is to be carried out by hand in order to prevent further compaction of soil within the TPZ or removal of surface roots within the TPZ. No plant traffic is permitted within the TPZ of the existing trees.

6.0 Site Management Issues

6.1 Soil Compaction

Plant and pedestrian traffic during the construction period will cause significant soil compaction. This will be exacerbated by increased water expected on these soils as result of adjacent construction and weather. Compaction of the soil within the Tree Protection Zone will reduce the voids between soil peds or particles therefore will reduce the gaseous exchange capacity of the root system which will slow critical metabolic processes such as respiration which produces Adenosine Triphosphate (ATP) which provides energy for the photosynthesis, which in turn provides photosynthates such as glucose. These photosynthates provide the carbohydrates required for tree extension growth, girth expansion, reproduction and pest and disease resistance. No pedestrian or plant access is permissible to the TPZ.

6.2 Site Access

Sufficient access is required to enable efficient construction. It is essential to delineate access zones or corridors which will provide suitable access without damaging the existing trees to be retained or causing compaction to the root zone.

6.3 Excavation within Tree Protection Area

No excavation is to be carried out within the tree protection zones of retained trees without the permission and supervision of the site arborist (AQF5)

6.4 Possible Contamination / Storage of Materials

The construction site will require the use of many chemicals and materials that are possible contaminants which if not managed will pose a risk to the existing trees. These possible contaminants include fuels, herbicides, solvents and the like. A site specific Environmental Management Plan shall be provided and this specific risk identified and addressed.

7.0 Tree Protection Measures During Construction

7.1 Maintenance of Pre-Construction Tree Protection Measures

The Pre-Construction Tree Protection Measures identified in 5.0 above are to be maintained in good and serviceable condition throughout the construction period.

7.2 Possible Contaminants

Do not store or otherwise place bulk materials and harmful materials under or near trees. Do not place spoil from excavations within the tree protection zones. Prevent wind-blown materials such as cement from harming trees. All possible contaminants are to be stored in a designated and appropriate area with secure chemical spill measures such as a bund in place.

7.3 Physical Damage

Prevent damage to tree. Do not attach stays, guys and the like to trees. No personnel, plant, machinery or materials are to be allowed within the tree protection fencing.

7.4 Compaction

No filling or compaction shall occur over tree roots zones within tree protection fenced areas. Where construction occurs close to or the Tree Protection Zone of trees to be retained it shall be necessary to install protection to avoid compaction of the ground surface. This protection is to be planks supported clear of the ground fixed to scaffolding.

7.5 Trenching:

No Trenching should be necessary within the Tree Protection Zones or within tree protection fencing.

No further trenching is to be carried out without the approval of the Superintendent. Should any further trenching be required within the tree protection zones identified, this work is to be carried out by hand and under the supervision of a qualified Arborist.

7.6 Irrigation/Watering

Contractor is to install an automatic temporary irrigation system to ensure that soil moisture levels are adequately maintained. Apply water at an appropriate rate suitable for the species during periods of little or no rainfall. This automatic system is to comply with prevailing water restrictions.

7.7 Site Sheds / Amenities/ Storage

Site sheds, site amenities, ablutions and site storage shall be in the area clear of all TPZ. Chemicals and potential contaminants are to be stored appropriately and this storage area is to be enclosed by a chemical spill bund to prevent the potential run off of contaminants in the event of a spillage or accident.

8.0 REFERENCES

Mattheck, C. Breloer, K. 1993, The Body Language of Trees: A Handbook for Failure Analysis, 12th Impression 2010 The Stationery Office

9.0 Disclaimer

This Appraisal has been prepared for the exclusive use of the Client and Birds Tree Consultancy. Birds Tree Consultancy accepts no responsibility for its use by other persons. The Client acknowledges that this Appraisal, and any opinions, advice or recommendations expressed or given in it, are based on the information supplied by the Client and on the data inspections, measurements and analysis carried out or obtained Birds Tree Consultancy and referred to in the Appraisal. The Client should rely on the Appraisal, and on its contents, only to that extent.

Every effort has been made in this report to include, assess and address all defects, structural weaknesses, instabilities and the like of the subject trees. All inspections were made from ground level using only visual means and no intrusive or destructive means of inspection were used. For many structural defects such as decay and inclusions, internal inspection is required by means of resistograph or similar. No such investigation has been made in this case. Trees are living organisms and are subject to failure through a variety of causes not able to be identified by means of this inspection and report.

Appendix A - Visual Tree Assessment (VTA) Process from Mattheck & Breloer (1994)



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Consulting Arborist • Project Management • Horticultural Consultancy • Landscape Management

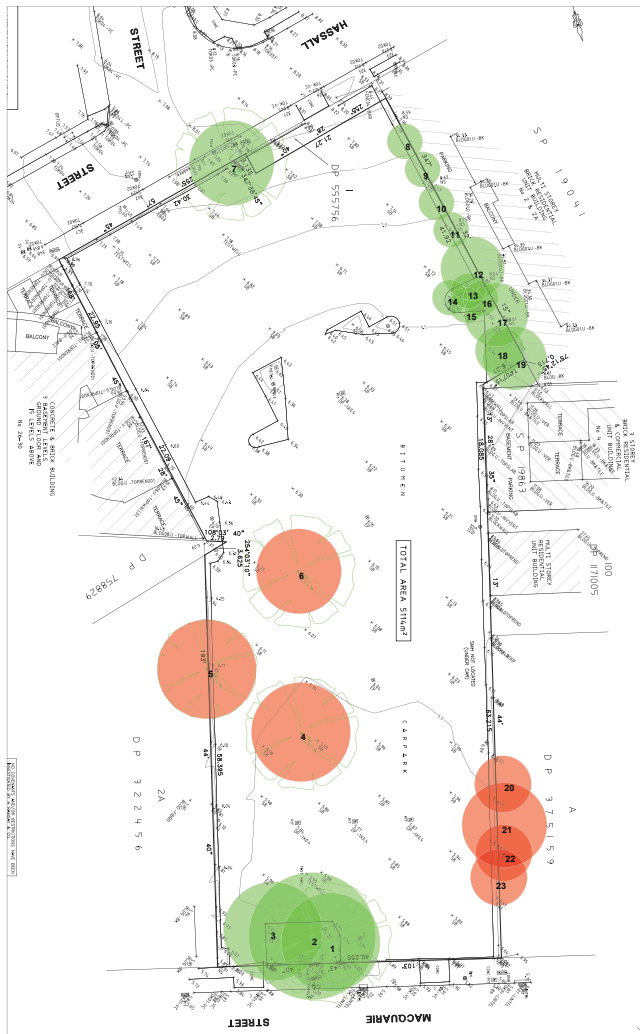
Inspection Data
189 Macquarie Street Parramatta

11-Feb-13

Tree no.	Species	Height (m)	Spread(m)	DBH (mm)	TPZ radius (m)	Maturity	Trunk (single, twin, multiple @)	Trunk lean	Form/Crown shape	Branching Habit	Crown Distribution	Distortion Due	Stability	Branching Structure
1	Corymbia citriodora	25	14	625	7.5	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable
2	Corymbia maculata	22	18	525	6.3	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable
3	Pyrus calleryana	7.5	8	385	4.62	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable
4	Castenospermum australe	10.4	14	530	6.36	Mature	Single	Prominent N	Normal	Normal	Balanced		Suspect	Bark inclusion , Suspect
5	Morus spp.	9	14	500	6	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable
6	Lagunaria patersonii	11	12	500	6	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable
7	Camphora cinnamomum	8.2	12	315	3.78	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable
8	Callistemon citrinus	6	5	120	1.44	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable
9	Callistemon citrinus	6	5	120	1.44	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable
10	Callistemon citrinus	6	5	120	1.44	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable
11	Callistemon citrinus	6	5	120	1.44	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable
12	Melia azedarach	9	9	230	2.76	Mature	Single	Prominent S	Normal	Normal	SE	Crowding	Stable	Stable
13	Callistemon citrinus	6	5	120	1.44	Mature	Twin @ base	NIL	Normal	Normal	Balanced		Stable	Stable
14	Callistemon citrinus	6	5	120	1.44	Mature	Multiple (3) @ base	NIL	Normal	Normal	Balanced		Stable	Stable
15	Callistemon citrinus	6	5	120	1.44	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable
16	Callistemon citrinus	6	5	120	1.44	Mature	Twin @ base	NIL	Normal	Normal	Balanced		Stable	Stable
17	Melia azedarach	10	9	230	2.76	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable
18	Callistemon citrinus	6	5	120	1.44	Mature	Multiple (3) @ base	NIL	Normal	Normal	Balanced		Stable	Stable
19	Casuarina spp	10	9	250	3	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable
20	Privet broad leaf	10	8	500	6	Mature	Multiple (4) @ base	NIL	Normal	Normal	Balanced		Stable	Stable
21	Camphora cinnamomum	15	12	500	6	Mature	Multiple (4) @ base	NIL	Normal	Normal	Balanced		Stable	Stable
22	Camphora cinnamomum	10	8	500	6	Mature	Twin @ base	NIL	Normal	Normal	Balanced		Stable	Stable
23	Camphora cinnamomum	10	8	500	6	Mature	Single	NIL	Normal	Normal	Balanced		Stable	Stable

Tree no.	Species	Pruning History	Defects	Damage	Overall Health & Vigour	Canopy Density	Foliage	Deadwood	Epicormic Growth	Pest Infestation	Disease	Life expectancy	Env. & Landscape significance	Retention Value	Notes/Comments
1	Corymbia citriodora	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High	Approx 1m from kerb
2	Corymbia maculata	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High	Approx 1m from kerb
3	Pyrus calleryana	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High	Approx 1m from kerb
4	Castenospermum australe	Crown lifting	Bark inclusion, Elite epicormic sprouts	Mechanical damage, Wound	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	Low	Bark inclusion at base. Majority of canopy elite epicormic due to pollarding
5	Morus spp.	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Low	Low	Immediately on neighbouring property
6	Lagunaria patersonii	No evidence	Evidence of decay	Nil	Good	Normal	Normal	<5%	40%	No evidence	No evidence	5-15y	Moderate	Moderate	Large amount of epicormic growth. Decay in main trunk
7	Camphora cinnamomum	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Environmental pest	Environmental pest	Camphor laurel in pavement
8	Callistemon citrinus	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	5-15y	High	High	Immediately adj retaining wall and carpark kerb
9	Callistemon citrinus	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	5-15y	High	High	Immediately adj retaining wall and carpark kerb
10	Callistemon citrinus	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	5-15y	High	High	Immediately adj retaining wall and carpark kerb
11	Callistemon citrinus	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	5-15y	High	High	Immediately adj retaining wall and carpark kerb
12	Melia azedarach	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	5-15y	High	High	Immediately adj retaining wall and carpark kerb
13	Callistemon citrinus	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	5-15y	High	High	Immediately adj retaining wall and carpark kerb
14	Callistemon citrinus	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	5-15y	High	High	Immediately adj retaining wall and carpark kerb
15	Callistemon citrinus	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	5-15y	High	High	Immediately adj retaining wall and carpark kerb
16	Callistemon citrinus	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	5-15y	High	High	Immediately adj retaining wall and carpark kerb
17	Melia azedarach	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	High	High	Immediately adj retaining wall and carpark kerb
18	Callistemon citrinus	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	5-15y	High	High	Immediately adj retaining wall and carpark kerb
19	Casuarina spp	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	5-15y	High	High	Immediately adj retaining wall and carpark kerb
20	Privet broad leaf	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Environmental pest	Environmental pest	Immediately adj neighbouring derelict house and carpark kerb
21	Camphora cinnamomum	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Environmental pest	Environmental pest	Immediately adj neighbouring derelict house and carpark kerb
22	Camphora cinnamomum	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Environmental pest	Environmental pest	Immediately adj neighbouring derelict house and carpark kerb
23	Camphora cinnamomum	No evidence	Nil	Nil	Good	Normal	Normal	<5%	<5%	No evidence	No evidence	15-40y	Environmental pest	Environmental pest	Immediately adj neighbouring derelict house and carpark kerb

Appendix B - Tree Inspection Data

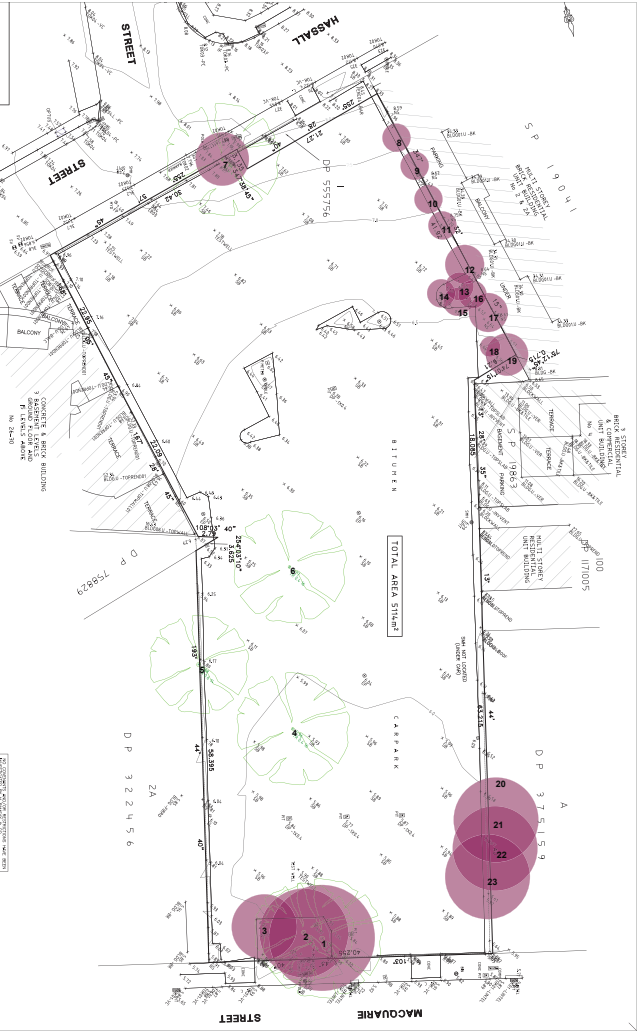


Legend

-  Subject Tree
-  Tree Recommended for Removal or exempt from Parramatta City Council Tree Preservation Order
-  Tree Protection Zone in accordance with AS4970-2009

Birds Tree Consultancy
 0438 892 634
glenn@birdstreets.com.au
www.birdstreets.com.au

Project: 189 Macquarie Street Parramatta
 Client: Toplace
 DWG: A01
 Plan: Tree Location Plan
 Date: 11 February 2013
 Scale : Not to Scale



Legend



Subject Tree



Tree Recommended for Removal or exempt
from Parramatta City Council Tree Preservation Order



Tree Protection Zone in accordance with
AS4970-2009

Birds Tree Consultancy

0438 892 634
glenn@birdstreets.com.au
www.birdstreets.com.au

Project: 189 Macquarie Street Parramatta
Client: Toplace
DWG: A02
Plan: Tree Protection Plan
Date: 11 February 2013
Scale : Not to Scale