ARBORICULTURAL REPORT

60-70 PARK STREET, SOUTH MELBOURNE

December 2024

PREPARED BY

[redacted]

JOHN PATRICK

LANDSCAPE ARCHITECTS
ENVIRONMENTAL HORTICULTURISTS
LANDSCAPE HERITAGE CONSULTANTS
CONSULTANT ARBORISTS

[redacted]

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1 INTRODUCTION

1.1 Park Street Development Partnership Pty. Ltd. has engaged John Patrick Landscape Architects – Arboricultural Consultants, to prepare an impact assessment report (Arboricultural Report) for 60-70 Park Street, South Melbourne.

1.2 Redevelopment of the site including demolition of existing multi-storey office buildings and construction of a mixed-use development is proposed.

2 OBJECTIVES

2.1 The intent of this report is to:

- Assess the condition of trees within the subject site and those on neighbouring land that may have their TPZ impacted by the proposed development and estimate the extent of any impact.
- Identify any trees worthy of retention and provide preliminary arboricultural advice to assist in their protection and retention.

2.2 The report will include the following;

- Botanic / Common names
- Tree Location
- Canopy width and height
- DBH (trunk diameter)
- Tree health & structure condition
- Useful Life Expectancy (ULE)
- Tree Protection Zones (TPZ's) in accordance with AS4970-2009
- Arboricultural value

3 METHODOLOGY

3.1 The site was visited on the 9th September 2024 and a visual tree assessment (VTA – Claus Mattheck) of the subject trees was undertaken by a suitably qualified and experienced arborist. Each tree was assigned an identification number for reference purposes, denoted on the attached Tree Location and Impact Assessment Plan (Section 5). Tree locations are based on the Feature and Level survey.

- Site trees identified with a DBH of 100mm or less (e.g. shrubs) were not assessed in this report unless rare or of unusual attributes.
- No aerial or diagnostic testing was undertaken as part of this assessment.
- The DBH of trees was measured using a diameter tape measure at 1.4m above ground level in accordance with AS4970-2009.
- Heights of canopies were measured using a laser range finder or estimated of previously established heights.
- Where access directly to the trees was not possible DBH, heights and widths were estimated.
- Tree protection zones (TPZ) were calculated in accordance with AS4970-2009.
- TPZ encroachments were calculated using Computer Aided Design (CAD) software.

DOCUMENTS VIEWED

3.2 This assessment is based on the documents identified in Table 1 below.

Table 1: Documents Viewed

Document	Reference No.	Revision/ Version	Prepared By	Date
Plan of Relocation, Features and Levels	24276/RFI	B	Reeds Consulting	14.06.2024
Ground Floor Plan	PA402		DKO	
Protection of trees on development sites	AS4970	2009	Standards Australia	2001

4 OBSERVATIONS

EXISTING CONDITIONS

4.1 The subject site is located on the northern side of Park Street, South Melbourne. Currently it exists as a commercial site occupied by multi-storey office buildings. A driveway providing access to the rear of the site is present next to the eastern site boundary. An existing concrete crossover, approximately 3m wide, is centrally aligned with the driveway. Three street trees are present, in cut-outs in the asphalt footpath.

Figure 1: August 2024 aerial view of the subject site (approximately indicated in yellow) and surrounds. Source: Nearmap.

TREE INFORMATION

4.2 A total of 3 trees were assessed, all street trees on Park Street. Information on these can be found in the following table.

TREE DATA

Tree No.	Botanic Name	Common Name	Size (m) HXW	DBH (cm)	TPZ (m)	Basal Trunk Diameter (cm)	SRZ (m)	Age	Health	Structure	ULE (Yrs.)	Arb Value	Comments
1	*Brachychiton populneus*	Kurrajong	10 x 11	49	5.9	62	2.7	Semi-mature	Good	Fair-poor	20+	Medium-Low	Leader pruned out for powerline clearance. Canopy asymmetry due to clearance/canyon pruning.
2	*Brachychiton acerifolius*	Flame Bottle Tree	5 x 3	23	2.8	33	2.1	Semi-mature	Good	Good	20+	Medium	Canopy slightly sparser than Tree 3.
3	*Brachychiton acerifolius*	Flame Bottle Tree	5.5 x 3	23	2.8	26	1.9	Semi-mature	Good	Good	20+	Medium	Good tree for this location.

IMAGES

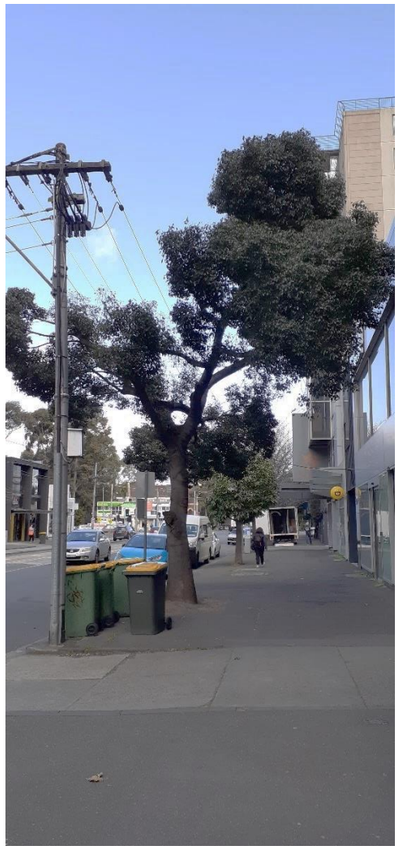


Figure 2: Tree 1, *Brachychiton populneus* (Kurrajong) street tree next to the existing vehicular crossover.

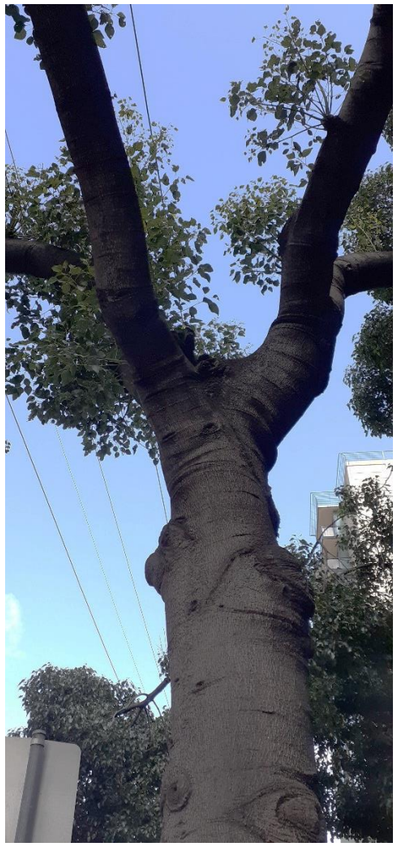


Figure 3: View of codominant stems of Tree 1, due to pruning for powerline clearance.

Figure 4: Tree 2, *Brachychiton acerifolius* (Flame Bottle Tree), street tree.

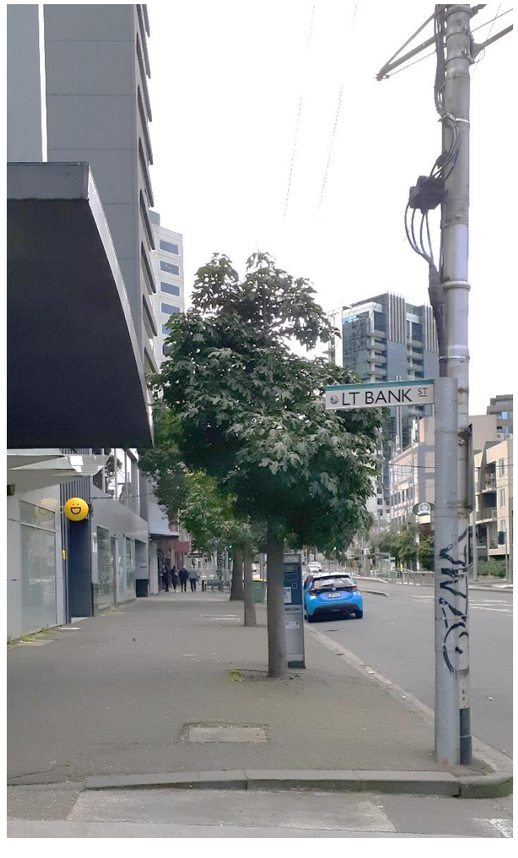


Figure 5: Tree 3, *Brachychiton acerifolius* (Flame Bottle Tree), street tree next to Little Bank Street.

VEGETATION CONTROLS

4.3 The scope of this tree assessment is limited to street trees on Park Street. As these are outside ownership of the subject site, controls on removal of vegetation on private land are not relevant.

5 DISCUSSION

5.1 This report assumes that the levels, dimensions and drawings provided by the surveyors and architects named within this report are correct as these have been used as the basis for this impact assessment.

STREET TREES

5.2 Street trees on Park Street comprise one **Kurrajong (*Brachychiton populneus*), Tree 1**, and two **Bottle Flame Trees (*Brachychiton acerifolius*), Trees 2 & 3**, growing in cut-outs in the asphalt footpath. These trees are all in good health, with useful life expectancies greater than 20 years.

5.3 Tree 1 has been pruned for powerline clearance, resulting in loss of a central leader stem. Given the location of the tree, this required pruning allows the tree to remain useful as a street tree, contributing amenity to the streetscape. The codominant stems appear stable and are considered unlikely to substantially reduce the useful life of the tree. The arboricultural value of Tree 1 is slightly reduced (to medium-low) due to tree form.

5.4 Trees 2 and 3 were assessed as having medium arboricultural value, as they exhibit good structure. The reduced value is due to the current size of these trees.

5.5 Trees 1, 2 & 3 are to be retained under the proposal.

5.6 6% of the TPZ of Tree 1 extends within the subject site. As the maximum TPZ encroachment of works within the subject site is less than 10%, a degree of encroachment defined as minor under AS4970-2009 *Protection of trees on development sites,* site works are not expected to prevent the healthy retention of Tree 1, provided works are restricted to within the site boundary. Any excavation undertaken within the site must be restricted to within the site boundary. If excavation is required, it is recommended that prior to bulk excavation, a trench is dug using non-destructive means (e.g. hydro-excavation) along the alignment of the edge of excavation, and any roots encountered cleanly cut in compliance with AS2373-2007 *Pruning of amenity trees* under the supervision of the Responsible Authority.

5.7 8% of the TPZ of Tree 1 extends within the footprint of the existing vehicular crossover. No works to the crossover are proposed.

5.8 A hydrant booster is proposed immediately north of the extent of the TPZ of Tree 1 within the subject site. Service lines must be located outside the TPZ.

5.9 The TPZs of Trees 2 and 3 do not extend within the subject site and, provided they are protected during works, the proposal is not expected to prevent their healthy retention.

LITTLE BANK STREET

SUBSTATION

RAISED PLATFORM

BIN STORE

BIN WASH FACILITIES TO BE PROVIDED

1100L 660L 240L

COM BIN

240L 240L

COMMS

FCR

F5

12 Cars

DROP OFF

+2.04

+3.07

+2.39

+3.07

+3.07

+2.7

TO BASEMENT 01

TO LEVEL 01

1:4 1:8 1:7 1:8 1:4 1:8 1:4

Communal
175.73 m²

OVERHEAD TRAFFIC LIGHT SYSTEM WILL BE INSTALLED BASED OFF EACH RAMP LEVEL ON ALL LEVELS

BOOSTER

ENTRY RAMP 1:12.5

STEEL FRAME ROLLERDOOR

RAMP 1:5

ROLLER DOOR

RAMP 1:4

LINE OF CAPPING BEAM RL 2.15

RAMP 1:4

FULL HEIGHT WALL

RAMP 1:4

RAMP 1:9

BM OFFICE

CORRIDOR

LIFT 1

LIFT 2

ELEC

HYD

MIRROR WALL

MAILBOXES

LOBBY

CEILING LOBBY A/C

AIRLOCK

ENTRY/EN TRANCE MAT

KITCHEN

BOOSTER CUP'D

FIP / EWS

EXISTING CROSSOVER

EXISTING SITE BOUNDARY 50.90m 338°36'

PROPOSED SITE BOUNDARY 40.22m 248°45'

7,000

PARK STREET

3

2

1

LEGEND

Existing Tree
Blue denotes TPZ
Orange denotes SRZ

JOHN PATRICK

CLIENT
Park Street Development Partnership Pty. Ltd.

PROJECT
Commercial Development
60-70 Park Street, South Melbourne.

DRAWING
Tree Location Plan

SCALE	1:200 @ A3
DATE	DEC 2024
DRAWN	FW
CHECKED	
JOB NO	24-369
DWG NO	TS-01

6 CONCLUSION

6.1 A total of 3 trees or tree groups were assessed, all street trees. As these trees are outside ownership of the subject site, any works within their TPZs must be approved by the Responsible Authority.

6.2 All 3 street trees assessed are to be retained under the proposal.

6.3 The proposed works are not expected to prevent the healthy retention of the street trees assessed, provided measures set out above are adhered to, and provided the trunks and canopies are protected during all site works.

7 RECOMMENDATIONS

7.1 A Tree Management Plan be prepared to direct works around trees to be retained.

8 DESCRIPTORS

Tree Number:

Refers to the identification number for reference purposes, denoted on the Tree Data and Tree Survey Plan.

Botanical Name:

Botanical name of species, based on nomenclature and spelling in Spencer, R 1995, *Horticultural flora of South Eastern Australia* (vols. 1-5), University of NSW Press, Sydney. Where Eucalyptus spp. are not found in this source, nomenclature is based on Euclid: Eucalypts of Australia, 2006, Centre for Australian National Biodiversity Research (CANBR). Eucalypt subspecies information is also based on this source.

While accurate tree identification is attempted, and uncertainties are indicated, some inaccuracies in tree identification may still be present – especially in the case of difficult to determine genera (e.g. *Cotoneaster* and *Ulmus*), and with cultivars which can have similar characteristics.

From time to time taxonomists revise plant classification, and name changes are assigned. If it is known names have been revised post the publication of the relevant above listed source, the new nomenclature has been used.

Common Name:

Common names are based primarily on names and spelling used by Spencer in Horticultural Flora of South Eastern Australia (vols. 1-5). The source for common names is taken in the following order:

- Single name supplied in Horticultural Flora of South Eastern Australia;
- First in list of names supplied in Horticultural Flora of South Eastern Australia, unless another name in the list is deemed more appropriate;
- Common name as per Costermans, LF 2000, *Trees of Victoria and adjoining areas*; Costermans Publishing, Victoria.
- Most widely used common name if not available in either source previously mentioned.

Common names are provided for thoroughness; the botanical name should be used when referring to the tree taxon.

Age:

Juvenile: Tree has recently been planted and is still in establishment phase. Tree currently makes little contribution to the amenity of the landscape. Trees of this age are possible candidates for relocation during development.

Semi-mature: Tree has established but has not yet developed mature habit. The tree provides some landscape contribution. Tree size would still be expected to increase considerably provided there are no significant changes to existing growing conditions.

Maturing: Tree has developed mature structural habit but has substantial potential to increase in size.

Mature: Tree has or is close to reaching full potential and expected size. Growth rate has slowed, however the tree does not exhibit any major signs of health or structural weakness due to age.

Over mature: Tree is no longer actively putting out extension growth, and is starting to show signs of decline in health due to age. Canopy may thinning and signs of die back in the canopy may be present

Height: The tree's height in metres

Width: The tree's average canopy width in meters. Variations in canopy width to that stated may be present due to canopy asymmetry.

DBH: The tree's trunk Diameter at Breast Height. Measured at 1.4m above ground level, in accordance with *AS4970 Protection of trees on development sites*, unless specified as having been measured lower.

DBH may be estimated or measured, as specified in the report. In the case of multi-stemmed trees, stem diameter is either listed individually, or a measurement taken at a point lower than the point of stem divergence. In some cases, especially where trees are not considered worthy of retention or stems are too numerous the DBH may simply be listed as 'multi-stemmed'.

Health:

Good: Tree is not stressed and shows no obvious signs of pest or disease. It is free of wounding. Annual growth rate is as would be expected of a healthy specimen in the same area. There are no signs of die back and canopy is dense. Tree maybe partially suppressed by neighbouring trees.

Fair: Tree is showing signs of reduced health. It maybe drought stressed or show partial signs of pest or disease. Foliage density is less than optimal and minor die back may be present. Tree is typical of its species. Remedial works may improve tree health.

Poor: Tree exhibits signs of stress, e.g. sparse canopy and possibly stunted growth. A large number of dead branches or dieback are present. Tree is likely to be significantly affected by pests or disease. Tree often in decline. Remedial works not expected to improve long-term health.

Dead: Tree shows no signs of life and is not growing.

Note on Deciduous Species: Assessment of deciduous species can be problematic and results may vary depending on the time of year. Descriptor comments in relation to foliage density do not apply to deciduous trees assessed when dormant or entering or exiting dormancy. Time of leaf drop or bud burst and extent of bud swell may be considered in the health rating of these trees.

The ratings indicate that certain characteristics listed have, or have not, been observed. Inspections do not assess the entire tree in detail for each characteristic. The comments category should be referred to for further information.

Structure:

As a rule, the structure ratings is based on identified faults in tree habit which reduce the structural integrity and may lead to partial or entire tree failure. It must be noted, however, that this is not a full hazard or failure assessment.

Good: Tree appears to have no obvious structural defects which would diminish the tree's structural integrity.

Fair: The tree has one or more obvious structural defects. e.g. dead branches or codominant stems, however the observed defects are unlikely to prevent retention of the tree. Judicious remedial intervention could remove structural defects and improve the structure rating.

Poor: Tree has at least one or more structural defects that remedial intervention cannot rectify without significantly reducing the retention value of the tree. These defects reduce the useful life expectancy of the tree.

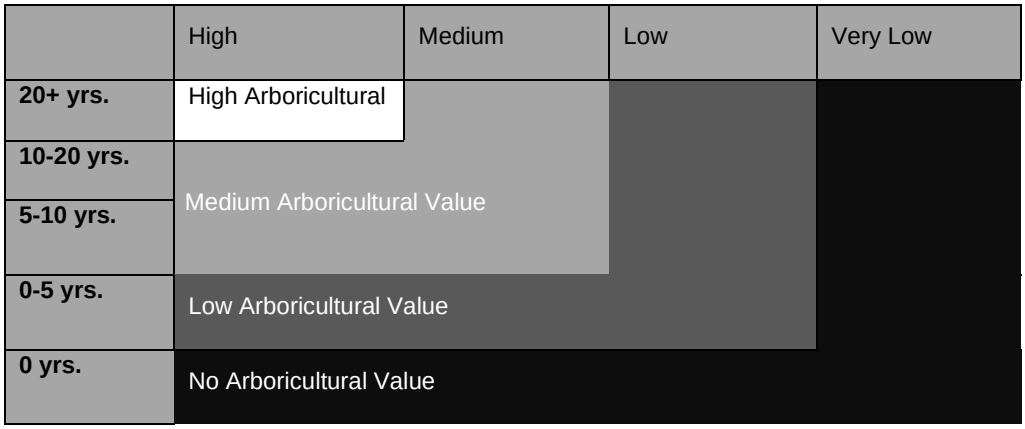
Hazardous: The tree shows one or more structural faults that are prone to failure and present an immediate safety concern. Judicious intervention to remove structural faults and reduce safety risk would leave a tree not worthy of retention. These trees should be removed as a high priority.

Arboricultural Value:

The Arboricultural Values shown in the table below are based on the ULE of the tree which considers structure and health ratings and landscape contribution.

The arboricultural value assists in determining the positioning of structures and infrastructure outside the tree's identified TPZ.

ULE	Landscape Significance



ULE: The Useful Life Expectancy of the tree from a health, structure, amenity and weediness viewpoint given no significant changes to the current situation occur. This category is difficult to determine, and should be taken as an estimate only. In addition, factors not observed at the time of inspection can lead to tree decline.

- 0 yrs.: Tree should be removed due advanced decline/ dead or hazardous.
- 0-5 yrs. Tree is in decline and has poor health or structural faults which cannot be resolved by intervention. Tree is often over- mature.
- 5-10yrs. Tree of fair health or structure
- 10-20. Semi-mature or mature tree of fair health and structure
- 20+ yrs. Juvenile or semi-mature, or a long lived species of good health and structure.

TPZ (Tree Protection Zone):

The Tree Protection Zone of the tree, measured as a radial distance in metres from the centre of the trunk. The TPZ is calculated using the method specified in Australian Standard *AS4970-2009 Protection of trees on development sites*. 12 x DBH=TPZ

Recommendation:

i.e. Further exploratory root investigation, alterations to proposed works to allow tree retention.

Comments:

Any additional comments specific to individual tree specimens.

AS4970-2009:

The recognised Australian Standard for the 'Protection of Trees on Development Sites'. It provides guidelines on tree protection and formulas for calculating Tree Protection Zones (TPZs), Structural Root Zones (SRZs) and the Diameter at Breast Height (DBH).

AS4373-2007:

The recognised Australian Standard for the 'Pruning of Amenity Trees'. This Standard provides guidelines on tree pruning to encourage good health and structure.

Ecological Vegetation Class (EVC):

A type of native vegetation classification that is described through a combination of its floristics, life form and ecological characteristics, and through an inferred fidelity to environment attributes. Each EVC includes a collection of floristic communities (i.e. lower level in the classification that is based solely on groups in the same species) that occur across a biogeographic range, and although differing in species, have similar habitat and ecological processes operating.