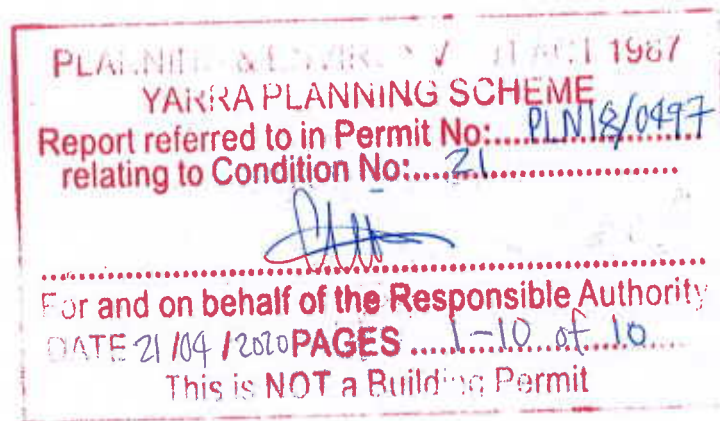


# TREE MANAGEMENT PLAN

44 OXFORD STREET, COLLINGWOOD.

02 July 2019



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## 1 INTRODUCTION

- 1.1 John Patrick consulting arborists have been engaged by Urban to prepare this Tree Management Plan (TMP).
- 1.2 They are developing the site that presently occupies 42-44 Oxford St, 61-63 Cambridge St and 16 Langridge St, Collingwood into an 8 level multi-apartment building with 2 levels of basement carparking.

## 2 OBJECTIVES

- 2.1 This TMP has been prepared in response to the City of Yarra Planning Permit No. P2592/2018, Condition 20, 21 and 22.

### **Street Trees**

**20.** Before the development starts, an Asset Protection Bond of \$8819.00 (ex GST) for the five (5) trees surrounding the subject site in Oxford, Cambridge and Langridge Streets must be provided to the Responsible Authority. The security bond:

- a. must be provided in a manner, and on terms, to the satisfaction of the Responsible Authority;
- b. may be held by the Responsible Authority until the works are completed to the satisfaction of the Responsible Authority; and
- c. in accordance with the requirements of this permit; or
- d. otherwise to the satisfaction of the Responsible Authority.

### **Tree Management Plan**

**21.** Before the development starts, a Tree Management Plan prepared to the satisfaction of the Responsible Authority and by a suitably qualified Arborist must be submitted to and approved by the Responsible Authority. When approved the Tree Management Plan will be endorsed and will form part of the permit. The Tree Management Plan must make recommendations for:

- a. the protection of street trees 12966, 12965, 12962 along Oxford and Langridge Streets and the two street trees adjacent to the subject site in Cambridge Street:
  - i. pre-construction;
  - ii. during construction; and
  - iii. post construction;
- b. the provision of any barriers;
- c. any pruning necessary; and
- d. watering and maintenance regimes,

**22.** The provisions, recommendations and requirements of the endorsed Tree Management Plan must be complied with

## 3 METHODOLOGY

- 3.1 This TMP is based on the following documentation;

- Proposed Basement & Ground Floor Plan, (Parallel Workshop, DWG No. TP100 Rev F, 12/02/2019).
- Site Inspection 27/06/2019.
- AS-4970 'Protection of Trees on development Sites'.
- City of Yarra Planning Permit No. P2592/2018, Condition 20, 21 and 22.

**Tree Data**

**Table 1: Tree Data**

Tree No.	Botanic Name	Common Name	Origin	Size (m)	DBH (cm)	TPZ (m)	Age	Health	Structure	ULE (Yrs.)	Arb. Value	Comments
1	<i>Tristaniopsis laurina</i>	Water Gum	Vic. Native	8 x 4	25	3.0	Semi mature	Good	Good	20+	High	Street tree front of 44
2	<i>Tristaniopsis laurina</i>	Water Gum	Vic. Native	7 x 5	25	3.0	Semi mature	Good	Fair	20+	High	Street tree front of 42
3	<i>Patanus insularis</i>	Cyprian Plane	Exotic	7 x 6	25	3.0	Semi mature	Good	Fair	20+	High	Growing in traffic treatment in roadway. Heavily pruned for L.V electrical wires
4	<i>Tristaniopsis laurina (x2)</i>	Water Gum	Vic. Native	2 x 1	4	2.0	Juvenile	Good	Fair	20+	High	Need formative pruning. Only small so easily removed & replaced with little impact.

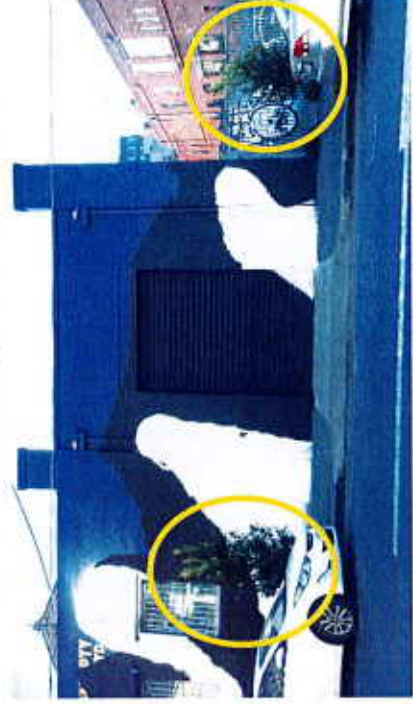
**Tree Photos**



**Image 1: Tree 3 in traffic treatment on Langridge St.**



**Image 2: Trees 1 & 2 in the footpath on Oxford St. St**



**Image 3: Tree 4 (x2) in footpath on Cambridge St.**

- 3.2 This TMP deals with the application of tree protection and management as they relate specifically to this project.

## 4 RECOMENDATIONS

### Induction

- 4.1 Prior to the commencement of works on site all workers are to be inducted into the necessity to protect council owned street trees and made aware of the existence of the TMP and sign off as having read it.
- 4.2 Prior to works commencing on the development an Asset Protection Bond of \$8819.00 is to be paid to the Responsible Authority in case of unexpected damages to public infrastructure or trees.

**NOTE:** Failure to abide by the TMP could result in a 'STOP WORK' notice being issued or fine by Responsible Authority.

### Project Arborist

- 4.3 Prior to any works commencing a Project Arborist must be appointed to oversee all works that may impact on the healthy retention of trees to be retained within and neighbouring the site. This shall include, but not be limited to the works prescribed in this TMP. Prior to demolition and commencement of any works on the site the Responsible Authority must be provided with evidence that the Project Arborist has been engaged.
- 4.4 The Project Arborist is to be an appropriately experienced with a minimum AQF Certificate 5 qualification (or equivalent) in arboriculture.
- 4.5 The Project Arborist may approve minor changes to the works specified in this TMP at their discretion. Approved changes are to be in accordance with accepted, professional arboricultural procedures and Council's endorsed plans.
- 4.6 Without the written consent of the Responsible Authority, no changes are to be made that are likely to damage or adversely impact on the healthy retention of trees.
- 4.7 The Project Arborist is to oversee any works including demolition adjacent to the council street trees.

### Supervision timetable

- 4.8 The Project Arborist will observe and have input into the supervision of the following tasks & decisions as outlined in the following table.

Task	Timing	Liaison
Site meeting to discuss TMP	Pre - demolition	Site Manager / Project Arborist
Installation of TPZ fencing	Demolition	Site Manager / Project Arborist
Monitor demolition adjacent to street trees.	Demolition	Site Manager / Project Arborist / Demolition Contractor
Any pruning to be undertaken by council contractors.	Demolition	Project arborist / Council Tree Contractors
Monitor any excavations within TPZs.	Construction	Site Manager / Project Arborist
Monitor installation of services within TPZs	Construction	Site Manager / Project Arborist
8-week interval inspections to evaluate tree condition and TPZ maintenance	Construction	Site Manager / Project arborist

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## Certification

- 4.9 The Project Arborist is to maintain written and photographic records of all site inspections based on the Supervision timetable and any variations, non-compliances that could detrimentally impact on the healthy retention of trees to be retained and protected. Below is an example of a Project Arborist Certification Checklist.

PROJECT ARBORIST - CERTIFICATION CHECKLIST		
<b>Project Permit No. &amp; Address:</b>		
<b>Commencement Date:</b>		
<b>Project Arborist / Company Name / Qualification:</b>		
Certification Item	Date / Signed	Comments
Initial Site meeting to discuss TMP.		
Installation of TPZ fencing, signage, mulching & ground protection.		
Monitoring tree protection during demolition.		
Pruning in accordance with AS-4373 by Responsible Authority.		
Monitor installation of services within TPZs.		
Monitor excavations within TPZs.		
Bi-monthly site inspections		
Site Inspection 2		
Site Inspection 3		
Site Inspection 4		
Site Inspection 5		
Final Inspection		
Certification Report submitted to Responsible Authority		
<b>Completion Date</b>		

## TPZ Fencing & Signage

- 4.10 TPZ exclusion fencing is to isolate trees to protect their canopy and more importantly roots from damage and compaction. TPZ fencing is identified on the Tree Protection Plan - Appendix 1.
- 4.11 However, in highly urbanised environments where trees are surrounded by hard surfaces e.g. footpaths roadways, it is only necessary to protect the above ground parts of trees. This allows public access to footpaths and roadways. The hard surface protects roots as long as no excavations occur within their TPZ. No excavations are to occur within the TPZ unless approved by and supervised by the Project Arborist and the Responsible Authority.

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- 4.12 Trees 1, 2 and 4 are to have hoarding or temporary fencing placed around them 1.5m long by the width of the tree plot. This allows access to the footpath and protects the lower part of the tree from injury. (image 4 & 5).



Image 4 & 5: Indicative tree protection

- 4.13 Tree 3 is to be protected by placing temporary cyclone fencing around the edge of the traffic treatment with shade cloth placed on the footpath side to ensure debris does not collect in the traffic treatment.
- 4.14 Refer to Appendix 1 - Tree Protection Plan for location of tree protection fencing
- 4.15 Fencing is to be constructed of temporary cyclone security fencing (or similar) minimum height of 1.8m. It needs to be securely fixed by concrete block bases or star pickets so as not to be easily moved when inconvenient. It is to deter entry.
- 4.16 This area is to be maintained as a “No-Go” zone through the demolition and development of the site.
- 4.17 The area is not to be used for the storing or disposal of waste, materials or equipment. No excavation or change in soil levels is to occur within the TPZ of council trees including those areas within the TPZ not fenced.
- 4.18 Tree protection fencing is to remain in place until final stages of development e.g. landscaping and only removed with the approval of the Project Arborist.
- 4.19 At least one A3 weatherproof sign is to be attached to each side of the TPZ fencing. It is to clearly state:



Image 6: TPZ Signage

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### **Access to Fenced Protection Zones**

- 4.20 Any access into a fenced protection zone is only to take place with the express approval of the Project Arborist and Responsible Authority. Requests for access to a fenced zone are to be made directly to the Project Arborist, with access to be in accordance with any conditions the Project Arborist imposes.
- 4.21 Even when access to the fenced zone is granted works restrictions may still apply. It is the responsibility of the relevant site workers to ensure that adequate notice is given to the Project Arborist so that if necessary they can be present on site to supervise access. Adequate notice is a minimum of two (2) working days.
- 4.22 If the Project Arborist deems that the requested access poses an unacceptable risk to a tree they have the following options:
- stipulate that access be delayed until they can be present to supervise works
  - stipulate additional protection requirements which must be adhered to during access
  - stipulated changes to construction/works/processes during the access.
- 4.23 Contractors may request that a refusal to grant access be discussed with the architect, project manager or other Responsible Authority.

### **Excavation in TPZ**

- 4.24 It is expected that due to the footings of buildings and masonry walls and the relatively small size of the trees that roots will not be growing into the subject site.
- 4.25 NGL are to be retained within TPZ, devoid of fill and excavation unless approved by the Responsible Authority & Project Arborist.
- 4.26 Any excavations within the TPZ are to be monitored by the Project Arborist to ensure roots are not indiscriminately damaged. It is preferable if excavations within TPZ are hand dug or hydro-excavated.
- 4.27 Any installation of services e.g. gas, water etc must where possible be avoided from being installed within the TPZ of retained trees. If installation of services are required to be installed within TPZ, services must be bored or hydro-excavation under the supervision of the Project Arborist to ensure roots are not indiscriminately damaged. Open trenching must be avoided within TPZs.
- 4.28 Should roots within the TPZ become exposed they need to be quickly covered with soil or other material and kept damp. Dehydration of exposed roots can lead to decline in tree health.

### **Pruning**

- 4.29 It is anticipated that pruning of the council street trees will be required along the property boundary to allow for scaffolding, gantries etc.
- 4.30 No pruning of street trees is to occur without written approval of the Responsible Authority.
- 4.31 All pruning is to be undertaken by council tree pruning contractors in accordance with AS-4373 'Pruning of Amenity Trees'. If unexpected pruning is required, the Project Arborist must contact the Council Arborist to undertake pruning of the tree.

### **Tree Maintenance & Watering**

- 4.32 All the trees assessed in the street are council managed trees and are managed on a programmed maintenance cycle by council contractors. As such it is not the responsibility of the developer to maintain council trees but make sure they are protected from damaged by installing tree protection fencing.



### Design Changes

- 4.33 Any changes to the building/landscaping design which alter surface or below ground works within the fenced protection zones are to be subject to the approval of the responsible authority and the Project Arborist prior to proceeding.
- 4.34 If the Project Arborist deems that the design changes pose an unacceptable risk to a tree they are to recommend modifications to the proposed design to alleviate this risk, subject to responsible authority approval. In certain situations, proposed changes may not be able to proceed.
- 4.35 All design changes within TPZs are to be recorded for inclusion in certification reporting by the Project Arborist in accordance with the endorsed plans.

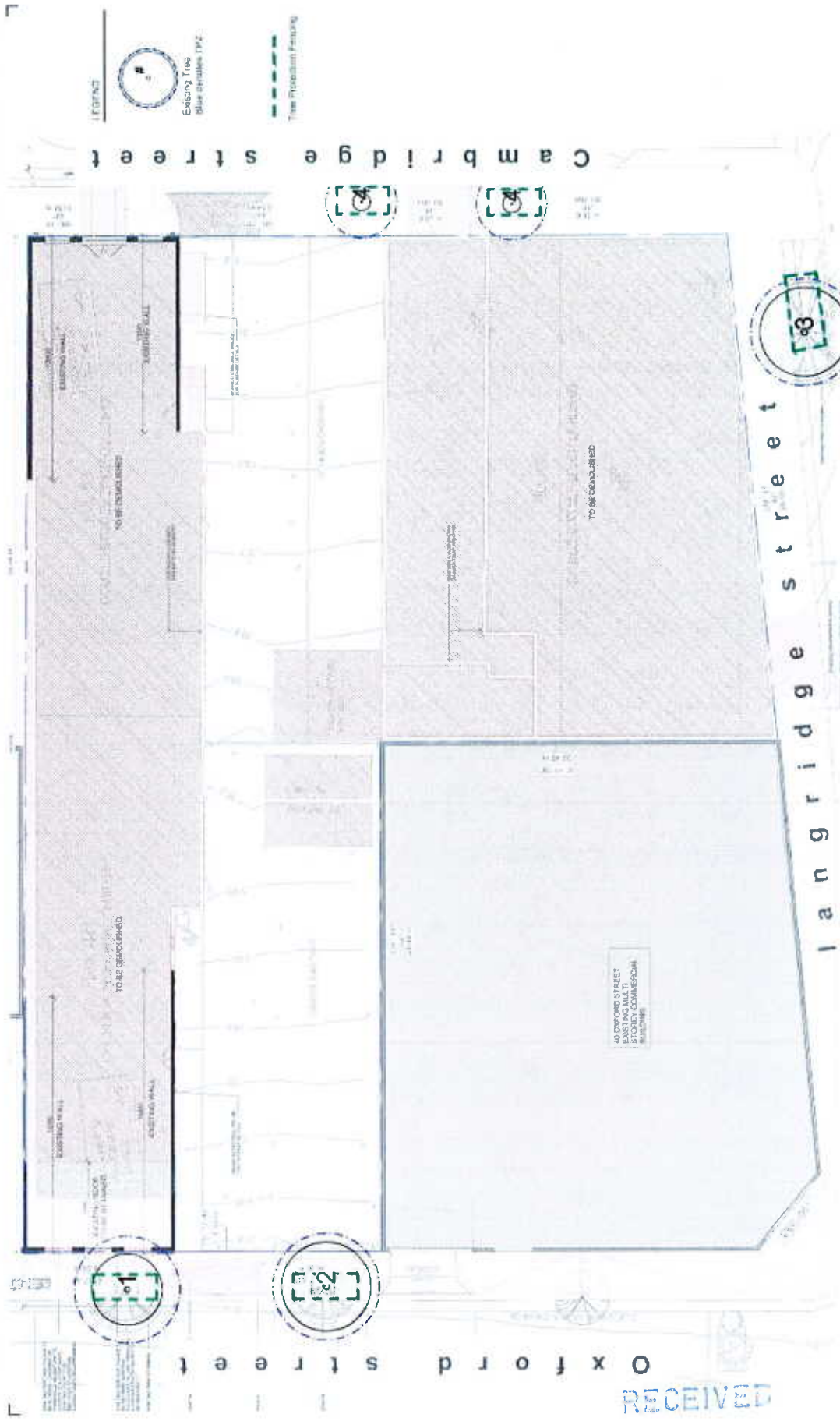
### Post Construction

- 4.36 Only once the development is complete can the TPZ fencing be removed.
- 4.37 All remedial works e.g. pruning, soil amelioration etc. is to be recorded for the purposes of certification by the Project Arborist. A final certification report can then be issued to the client and Responsible Authority.

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APPENDIX 1 - TREE PROTECTION PLAN



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 DWG NO 11411