

2 SECTION 2. SPECIFICATION FOR TREE PRUNING AND MAINTENANCE AT YARRANABBE PARK

2.1 GENERAL

2.1.1 Trees to be Pruned

The works relate to the no. x 14 *Ficus macrocarpa* var. *hillii* (Hills Fig) specimens as shown in red on the Tree Plan (**attachment 2 – Sheet 1**). There shall be no pruning of any other trees at Yarranabbe Park and neither shall there be any adverse impacts on other trees as a result of the specified works.

It is acknowledged that the pruning will involve the removal of much more of the canopy than is considered acceptable in the time-frame proposed and that the works would better be scheduled during winter when the stresses associated with hot, dry weather are less likely. It is recognised by Council that there is a risk that some or all of the trees may not survive the heavy pruning that is to be undertaken in one stage. Provided that the contractor complies with this specification, they will not be held liable for any tree losses.

2.1.2 Australian Standard for Amenity Pruning (AS4373-2007).

The works shall be carried out with the Australian Standard for Amenity Pruning (AS4373-2007) with the following exceptions:

Section 5. (Pruning Procedures)

Item 5.4 Final Cut

The principles of the standard shall apply but because the works are "lopping and topping" final cuts shall be made on the basis of optimising the specified outcomes (see below).

Section 6. (Foliage Distribution)

The principles of this standard shall apply but because the works are "lopping and topping" and previous scaffold pruning has been carried out on most of the trees, the pruning shall address the crown reduction requirements as specified in the Pruning Specification (**attachment 2 - Sheet 2**) regardless of the constraints of this standard.

Section 8. (Unacceptable Practices)

Item 8.1 Lopping and Topping

This standard shall not apply to the work.

2.2 OUTCOMES OF WORK

The works shall be carried out in a manner that is best likely to achieve the following key outcomes:

Tree Heights

The trees will be able to be maintained in the long-term at the heights shown (refer to **attachment 2 – Sheet 2: Pruning Specification**). It is expected that there will be future pruning of the trees to maintain them at or close to this height.

Separation of Tree Canopies

The trees' canopies are separated as shown in **attachment 2** (Sheet 2) and this can be maintained in future to preserve view corridors.

Health and Condition of Trees

Once they have recovered from the pruning the trees will be in good health and vigour and have enough foliage to support them and enable them to continue to thrive. It is recognized that there will be potential future problems with structural weakness due to epicormic growth but they should be able to be managed without the loss of the trees.

Amenity Values of Trees

It is expected that the pruning of the trees will result in a large-sized bonsai-like effect. However, the crowns of the trees should be pruned so that the end result is as balanced as possible with a rounded form. Consideration should be given to the future effects of regrowth on the tree's form.

2.3 ROOT PROTECTION ZONES (RPZs)

In order to provide optimal conditions for the trees during and after the works, root protection zones shall be established on the following basis:

1. Unless otherwise agreed, the root protection zone (RPZ) of each tree shall extend out for a radius of eight (8) metres from the base of the tree within areas of soft landscape.
2. Weed/grass should be killed or removed as necessary from areas to be established as RPZs prior to mulching (refer to section 2.4 Site Preparation). (Note: Weed control is not required in the case of Tree 1.)
3. Areas for RPZs should be mulched to a depth of 75mm.
4. Only clean, aged, weed-free, recycled leaf litter and chip mulch is to be applied (refer to section 2.8 Mulch).
5. RPZs should be maintained free of weeds during the post-pruning maintenance period.

2.4 SITE PREPARATION (DEEP WATERING AND WEED CONTROL)

The root zones of Trees 3, 4, 8, 9, 10, 11, 12, 14, 16, 19, 23, 24, 25 and 29 shall be treated to control weeds and grass prior to mulching. Control of weeds should be carried out at least five (5) days prior to mulching and at a time when weather conditions are suitable to ensure that the herbicide is not neutralised by rainwater and/or wind does not cause spray drift.

The following control methods are to be used on this site:

- Glyphosate at a concentration of 1:100 is to be used.
- Herbicide is to be applied only to vegetation (weeds and grass) that is growing within the areas beneath trees that are to be established as root protection zones.
- Herbicide shall be applied as a spray by hand.
- Herbicide is not to be applied in a way that is likely to directly come into contact with tree roots or other parts of the trees.
- It is not necessary to remove the poisoned weeds prior to mulching, however this decision can be made by the contractor on the basis of optimising the outcomes for the trees.

- Spray may be used where there is no risk of drift affecting significant remnants or plantings.
- Weed control should be timed to avoid rainfall rendering herbicide applications ineffectual.

2.5 WORK PRACTICES

All workers on the site (including sub-contractors) are to engage in work practices that ensure that they:

- Comply with the requirements of the NSW Occupational Health & Safety Act (2000).
- Comply with the Guidelines of the WorkCover Code of Practice for the Amenity Tree Industry.
- Address issues of public safety and potential damage to private property.
- No machinery is to be used within the areas designated for RPZs.
- Minimise harm to plants and soils by taking care during access and movement about the site.
- Do not dispose of any waste into the landscape.
- Behave in a responsible and courteous manner to members of the public.

2.6 PROCEDURES TO DEAL WITH INCIDENTS OR ACCIDENTS

The contractor is to have undertaken a risk management assessment of the site and work requirements and to have in place procedures for dealing with identified risks or problems. Notification of any risks particular to this project should be made in writing to Council's Project Manager before commencement of works. Notification of any incidents or accidents during the project are to be reported immediately to the Project Manager.

2.7 MAINTENANCE

The contractor is to undertake regular maintenance of the trees to support their recovery after the pruning. The works are to include the following:

- Irrigation
- Maintaining mulch
- Weed control
- Reporting of problems

Maintenance shall be carried out on the basis of maintaining a sufficient water supply to the trees to support their speedy recovery and ensuring that any problems are dealt with promptly during the recovery period. The contractor shall ensure that the individual soil moisture needs of each tree are met and that their root zones do not dry out or become water-logged due to over-watering during the recovery period.

Irrigation

The contractor will be responsible for supplying water to the site. Details of any sub-contractors to be used for delivering water to the site are to be provided to the Project Manager. Access to the site for water trucks will be possible but arrangements will need to be confirmed with Council's project manager.

Mulch

Mulch to the RPZs is to be maintained at all times at a depth of 75mm. Refer to 2.8 Mulch for mulch specification.

Weed Control

RPZs are to be maintained free of weeds and grass at all times. Refer to 2.4 Site Preparation for specification of weed control measures.

Reporting Problems

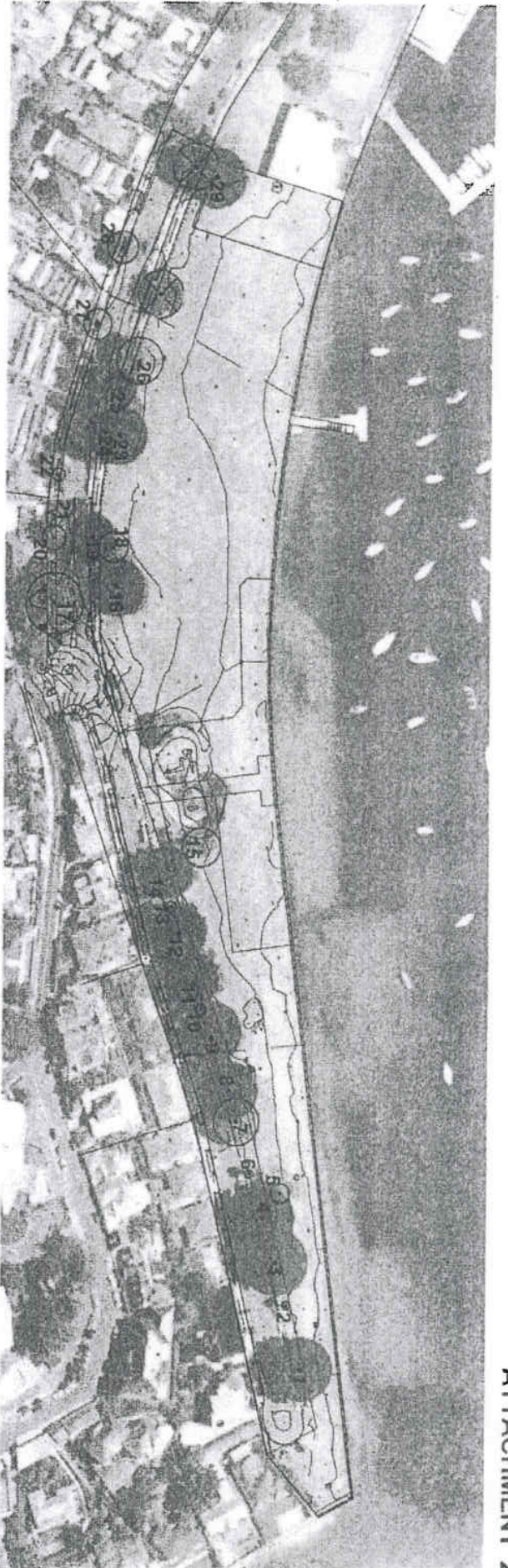
The contractor is to immediately notify Council's Project Manager of any problems or concerns relating to the condition, health, safety or good management of the trees during the maintenance period.

2.8 MULCH

It will be the responsibility of the contractor to ensure that problems associated with the use of mulch (such as nitrogen drawdown or the introduction of weeds) do not arise on this site.

Mulch for the RPZs is to comply with the following standards:

- Only organic material is to be used.
- All organic material is to be obtained from sources that are guaranteed to be free of potential weed species. Material not to be used includes:
 - i. *Cinnamomum camphora* (Camphor Laurel)
 - ii. *Cupressus* species (Cypress and relatives)
 - iii. *Pinus* species (Pines and relatives)
 - iv. Any material that contains seeds.
- All organic material is to have been allowed to age for a minimum of six (6) weeks prior to use on the site.



Trees NOT TO BE PRUNED



Trees to be pruned



Trees no longer present

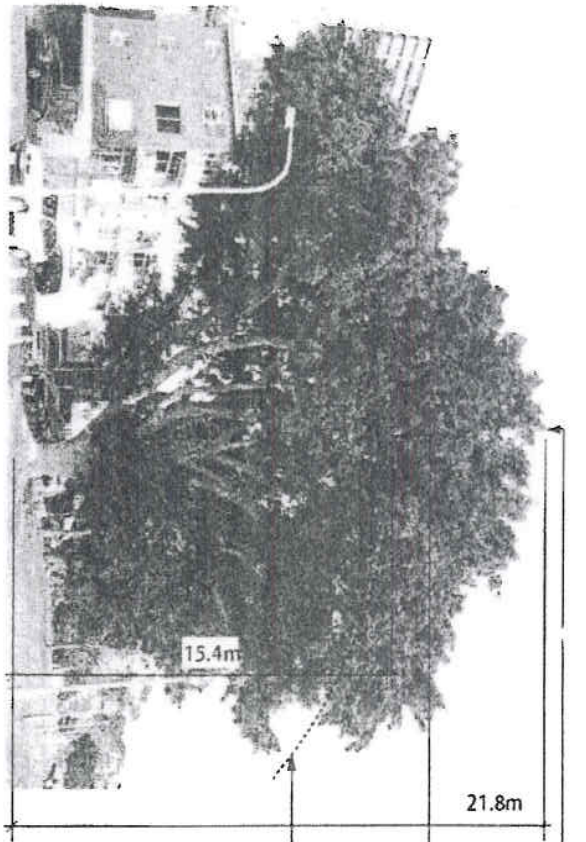
1 Tree numbers as per Tree Schedule (below)

TREE SCHEDULE

TREE	BOTANICAL NAME	COMMON NAME	ACTION
1	<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Fig	Prune
2	Palm sp.	Palm	Prune
3	<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Fig	Prune
4	<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Fig	Prune
5	<i>Eucalyptus robusta</i>	Swamp Mahogany	Prune
6	Palm sp.	Palm	Prune
7	<i>Ficus rubiginosa</i>	Port Jackson Fig	Prune
8	<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Fig	Prune
9*	<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Fig	Prune
10	Palm sp.	Palm	Prune
11	<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Fig	Prune
12	<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Fig	Prune
13	Palm sp.	Palm	Prune
14	<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Fig	Prune
15	<i>Eucalyptus robusta</i>	Swamp Mahogany	Prune

TREE	BOTANICAL NAME	COMMON NAME	ACTION
16	<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Fig	Prune
17	<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Fig	Prune
18	<i>Ficus rubiginosa</i>	Port Jackson Fig	Prune
19	<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Fig	Prune
20	<i>Angophora costata</i>	Smooth-barked Apple	Prune
21	<i>Jacaranda mimosifolia</i>	Jacaranda	Prune
22	<i>Tristanopsis laurina</i>	Water Gum	Prune
23	<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Fig	Prune
24	<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Fig	Prune
25	<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Fig	Prune
26	<i>Ficus rubiginosa</i>	Port Jackson Fig	Prune
27	<i>Lophostemon confertus</i>	Bush Box	Prune
28	<i>Lophostemon confertus</i>	Bush Box	Prune
29	<i>Ficus microcarpa</i> var. <i>hillii</i>	Hill's Fig	Prune

* N.B. Tree No. 9 is to be pruned last of all due to its stressed condition

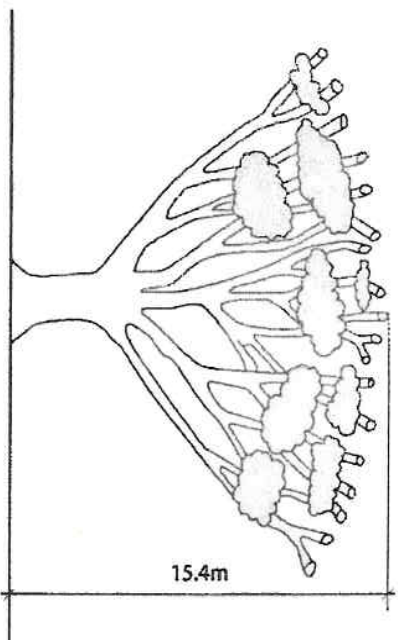


Existing height of tree

Proposed height after pruning

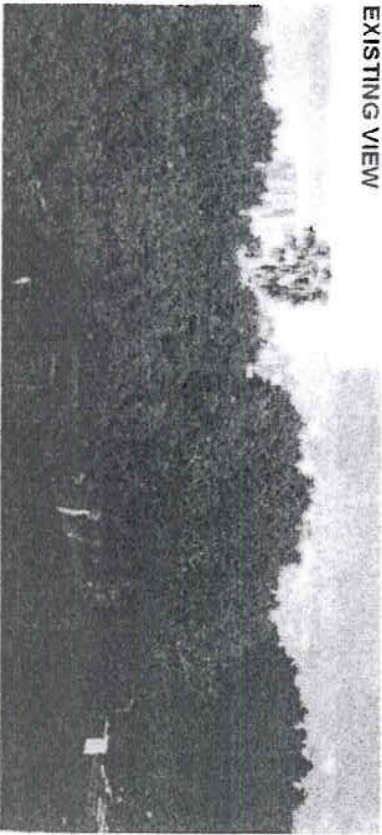
Proposed arc of crown to be as close to natural shape as possible, but as required to achieve separation as shown in image below

Tree 1 - Existing tree showing proposed height after pruning
1:200



Required height and indicative form of *Ficus hillii* trees after pruning
1:200

EXISTING VIEW



Proposed pruning to reduce crowns and to create view corridors

SAME VIEW AFTER PRUNING

