

Prepared for : Fresh Hope Care



T-01 T-02 T-03 T-04

DATE :



# **PROJECT & CLIENT** Residential Aged Care Facility

7 Martin Close and 42 Stronach Ave East Maitland NSW 2323

# **Arboricultural Plans**

# DRAWING INDEX

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12 June 2020

ISSUE :

For Development Application

ARTERRA DESIGN PTY LTD ABN 40 069 552 610 SUITE 602 / 51 RAWSON STREET, EPPING, NSW 2121 **P** 02 9957 2466 **F** 02 9957 3977 **W** ARTERRA.COM.AU

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## TREE PROTECTION SPECIFICATIONS

1. Tree Protection Measures and Protocols. All work around existing trees to be retained shall be in accordance with AS

the required Tree Protection Areas (TPA's). If the scope of work allowed within or Machines with a long reach may be used if they can work from outside TPA's or the Contract Manager or Project Consulting Arborist for clarification.

Before any site works commence tree protection zones and other measures must Debris to be removed from TPA's must be moved across existing hard surfacing or be established and conveyed to those all working on the site. The Contractor shall temporary ground protection in a way that prevents compaction and disturbance of ensure all subcontractors are inducted prior to working on the site. All inductions shall include description and identification of the Tree Protection Zones and the restriction on work and activities with regard to trees.

Damage to roots or degradation of the soil through compaction and/or excavation within TPA's is likely to cause serious damage to the tree. Any work operations required within TPA's must be carried out with extreme care. All trees, palms and other shrubs within TPA's are to be retained unless shown otherwise on the Tree Protection Plan(s). Trees marked for retention shall not be used to display signage, base should be left and new surface finishes placed over the top without or as fence or cable supports for any reason. No materials stockpiling, chemicals disturbance. or washout areas are permitted immediately upslope of or within the Tree Protection Area. The washing down of wheel barrows, paint cans/brushes, acids and the like shall not to be done near existing trees as the runoff is very harmful to Excavation within TPA's shall not be allowed using mechanical equipment such as tree roots.

No fuel powered pumps or generators or air compressors are to be placed within TPA's. No fuel or chemicals shall be stored and no equipment or vehicles shall be serviced or re-fuelled within a TPA.

#### 2. Controlled Construction Access

on site and fenced off where appropriate. Uncontrolled access and parking of vehicles inside TPA's shall be avoided. If access is required through a tree protection area, the access way shall be treated with ground protection.

#### 3. Tree Protection Fencing & Signage

The Tree Protection Plan(s) shows the extent of areas to be fenced and protected Protection measures shall be certified as adequate by the Project Consulting Arborist. This fencing may form part of the general construction site fencing, where Final trimming and planting shall be judiciously undertaken around trees. All soft practical. It shall remain in place as long as possible and typically not be removed until the final landscape installation in those areas begins.

All tree protection fencing shall be 1800mm high galvanised chain wire or welded steel mesh. Fencing must be bolted together and secured with the necessary back electrical services shall also be designed and installed to avoid any excavation or stays and bracing.

### Star pickets with bunting or danger tape shall not constitute acceptable tree No significant excavation or cultivation, especially by rotary hoes or excavators, protection fencing.

Suitable signage as defined by AS 4970-2009 Appendix C shall be affixed to the external side of the fencing at a spacing of not less than 1 sign per 20 lineal metres ground level. Where turf is to be installed tree trunks shall have mulched rings of fence.

If fence locations conflict with the proposed works, contact the Project Consulting Arborist and Contract Manager for resolution. No new services (unless underbored) shall be located within or through the Tree Protection Area.

#### 4. Trunk and Lower Branch Protection

A trunk barrier is to be erected around the circumference of the tree trunk and root **11. Canopy Pruning** buttress where shown. This barrier will consist of a double layer of used carpet or The Contractor shall prune branches of protected trees only as directed by the carpet underfelt placed around the trunk. A layer of battens is to be placed over the Project Consulting Arborist. Pruning is only to be undertaken by a gualified arborist underfelt. The battens are to have a maximum spacing of 50mm. The height of the (under the supervision of a person with AQF Level 4 or above). The Project battens is to be 2 metres or to the height of the first branches. Lower large branches may require the same protection if likely to be damaged by passing vehicles or equipment. Secure in place with galvanised steel bracing straps. Do not wounds nail into or otherwise injury the trunk or bark. Battens may be made from any suitable waste timber of similar sizes and depths. All sharp or protruding edges are 12. Root Pruning to be properly covered with tape or similar padding.

#### 5. Works within the TPA's

All work within the root zone of existing trees shall be undertaken with the utmost care. If by necessity a tree requires removal of branches for building or access pruning shall be done in strict accordance with accepted arboriculture techniques and AS 4373-2007. No rubbish, spoil or new materials shall be placed on the root zone of any existing tree or against their trunks.

#### 6. Ground Protection

If it is proposed to create any access route, or similar, within the TPA of a retained tree, the Contractor shall install rumble boards over the TPA ground surface. No excavation shall be allowed. Contractor shall first place a suitable permeable geotextile to the extent required and then a 100mm thick layer of wood chip mulch or coarse no-fines gravel over the extent to be covered. Then place hardwood boards (minimum 3600 x 200 x 75mm) on their flat edge, side by side, with a 30 -50mm gap to form a rumble strip. These boards are to be held together with three galvanised metal bracing straps nailed to each board. The two outer straps are to be approximately 200mm in from the ends of the boards. The third strap is to be along the centre line of the boards.

#### 7. Provision of Temporary Irrigation

A temporary and automated (battery powered timer is sufficient) watering system to be placed within the TPAs of all trees to maintain adequate water to the retained shall be made and the damage cleaned up by as much as possible without further trees and help maintain their healthy condition. This shall be a surface mounted 'residential-style' soaker hose and/or similar surface sprinkler systems. It is to be surface visible and spray delivered so that is operation can be easily visible and verified. It should be on a designated supply line, separate from other construction sections shall be exposed and pruned leaving clean cuts to minimise risk of related water supplies to minimise its likelihood of being disconnected.

Typically, during spring and summer months it should be set to run for a minimum of 30 minutes every day, in the early morning. During, autumn and winter months it should be set to run for 1 hour once every week. The operation can be suspended temporarily in periods of extensive and prolonged rain.

The system is to remain in place for the duration of construction, or until the project consulting arborist approves it's removal. It may be removed to allow final landscape treatments to proceed. If accidentally disturbed or damaged by construction activities, it is to be reinstated as soon as practicable.

### 8. Structural Demolition Within TPA's

Project Consulting Arborist shall be on site during all demolition work within the TPA's to monitor and advise on tree protection. Secateurs and a handsaw shall be 4970-2009 Protection of trees on development sites with the clear establishment of available to deal with and cleanly cut any exposed roots that have to be cut. the extent of the Tree Protection Areas of existing trees is not clear, please refer to from protected areas within TPA's. They shall not encroach onto unprotected soil in TPA's.

> soil. Alternatively, it can be lifted out by machines provided this does not disturb TPA's or damage the canopy. If appropriate, leave below ground structures such as footings and disused pipes in place if their removal will cause excessive root disturbance.

When pulling up existing paving the Contractor shall work backwards, lifting demolished paving back onto the existing paving. Roots may be found growing under the pavement and should not be trafficked. Roots growing into existing sub-

#### 9. Excavations or Trenching within TPA's

excavators or backhoes. Excavation within TPA's shall only be carried out carefully by hand taking care not to damage the bark and wood of any roots. Specialist tools for removing soil around roots using compressed air (air spade), or water vacuum extraction shall be an appropriate alternative to hand digging and is the preferred method.

Exposed roots to be removed shall be cut cleanly with a sharp saw or secateurs at Construction access points, stockpiling and storage areas shall be clearly identified the face of the excavation. Roots temporarily exposed must be protected by appropriate covering with damp hessian or sand. Roots greater than 50mm in diameter are to be retained and shall only be cut in exceptional circumstances and only after consultation with the Project Consulting Arborist. Roots greater than 100mm in diameter shall typically not be allowed to be cut and must be worked around.

#### 10. Soft Landscaping Installation

landscaping within the tree protection zones will be installed with care to avoid root disturbance from irrigation trenching, lighting installation and the planting of larger plants. Permanent irrigation (if used) shall be installed as spray heads located outside of TPA's and spraying inwards. All other services such as small-scale trenching around the trees.

shall occur within TPA's. Where new designs require the levels to be increased, good quality and permeable top soil shall be used. It should be firmed into place but not over compacted. All areas close to tree trunks shall be kept at the original applied rather than grass laid up to the trunk.

The size of the installed plants shall typically be less than 5L pots so that the maximum depth of the new root balls is less than 200mm. Any planting proposed that is larger than this shall be only installed outside of the SRZ and with care to not injure roots while digging planting holes.

Consulting Arborist is to be present at all times during the pruning work. Work is to be in strict accordance with AS4373 Pruning of Amenity Trees. Do not treat

Pruning of roots of protected trees shall only be as directed the Project Consulting Arborist. The Tree Contractor shall use only a qualified arborist (AQF Level 4 or above). The Project Consulting Arborist is to be present at all times during the root pruning.

Roots are not to be cut using normal excavation machinery of any sort. This usually results in splitting and massive disturbance well past the intended line of cut. When required to cut roots, use hand methods and sharp hand tools (e.g. secateurs, hand saw) such that the remaining root systems are preserved intact and undamaged. Roots are to be cut back by hand square to the direction of the root travel (or edge of the excavation). Do not cut any tree roots exceeding 40mm diameter unless permitted. Excavations within root zones should be kept open for as short a period as possible. Any excavated face containing roots is to be temporarily supported, where necessary, to prevent soil loss from around the other retained roots.

### 13. Accidental Tree Damage

Should a tree be accidentally damaged, the Contractor shall immediately notify the Project Consulting Arborist. Timing can be of the essence, particularly with bark injuries, trunk damage or chemical contaminations.

If a branch has been broken, it shall be removed and the damaged end pruned to a suitable branch collar. If the branch has been torn out of the trunk, assessment damage to the tree.

If roots are accidentally disturbed or excavated, any broken, crushed and torn infection by fungal pathogens and promote good conditions for new root growth.



Example image of acceptable ground protection rumble boards



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Example image of acceptable tree tree protection battens

Example image of acceptable tree protection fencing measures to be applied. (1.8m high rigid metal fencing with appropriate lateral bracing)



# NOTE

Refer to the accompanying Arboricultural Impact Assessment Report for full description of trees, measurements and methods used to assess the trees, and proposed tree protection measures.

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Fresh Hope Care

Fresh Hope Care Maitland - Tree Assessment Schedule								
0	Tree	Common	Truck	Truck	Nominal	Nominel	۵)	Decement
ee II	Tree Species	Common	Diameter	Diamet	TPZ	SRZ	Value	Recommendation
	0,000,00		Breast Height	er at base	radius (m)	radius (m)	tion	
			(dbh) (m)	(dgl)	12xdbh	(AS	eten	
				(m)	(AS 4970)	4970)	Ř	
1	Corymbia maculata	Spotted Gum	0.72	0.80	<u>8</u> .64	<u>3.</u> 01	High	Retain and Protect
2	Corymbia maculata	Spotted Gum	0.26	0.30	3.12	2.00	Low	Retain and Protect
3	Corymbia maculata	Spotted Gum	0.30	0.40	3.60	2.25	High	Retain and Protect
4 5	Corymbia maculata	Spotted Gum	0.40	0.30	2.52	2.47	High	Retain and Protect
6	Corymbia maculata	Spotted Gum	0.19	0.30	2.28	2.00	High	Retain and Protect
7	Eucalyptus paniculata	Grey Ironbark	0.87	0.80	10.44	3.01	High	Retain and Protect
<u>8</u> 9	Corymbia maculata	Spotted Gum	0.41	0.36	4.92	2.57	High	Retain and Protect
10	Corymbia maculata	Spotted Gum	0.12	0.20	2.00	1.68	High	Retain and Protect
11	Eucalyptus globoidea	White Stringybark	0.28	0.50	3.36	2.47	Moderate	Retain and Protect
12	Eucalvptus paniculata	Spotted Gum Grev Ironbark	0.39	0.40	4.68	2.25	High	Retain and Protect
14	Corymbia maculata	Spotted Gum	0.44	0.50	5.28	2.47	High	Retain and Protect
22	Eucalyptus globoidea	White Stringybark	0.34	0.50	4.08	2.47	Moderate	Retain and Protect
23	Eucalyptus paniculata Eucalyptus globoidea	Grey Ironbark White Stringybark	0.21	0.30	2.52	2.00	High	Retain and Protect
143	Eucalyptus punctata	Grey Gum	1.12	1.20	13.44	3.57	High	Retain and Protect
144	Corymbia maculata	Spotted Gum	0.30	0.40	3.60	2.25	Moderate	Retain and Protect
145	Corymbia maculata Melaleuca styphelioides	Spotted Gum Prickly Paperbark	0.22	0.25	2.64	1.85	Low	Retain and Protect
152	Eucalyptus paniculata	Grey Ironbark	0.30	0.40	3.60	2.25	High	Retain and Protect
156	Eucalyptus punctata	Grey Gum	0.53	0.65	6.36	2.76	Moderate	Retain and Protect
157	Eucalyptus tereticomis	Forest Red Gum	0.28	0.40	3.36	2.25	High	Retain and Protect
158 159	Glochidion ferdinandi	Cheese Tree	0.28	0.40	3.36	2.25	High	Retain and Protect
167	Salix sp.	Willow	0.24	0.40	2.88	2.25	V Low / Remove	Retain and Protect
168	Eucalyptus fibrosa	Broad-leaf Red Ironbark	0.32	0.40	3.84	2.25	High	Retain and Protect
169 170	Corymbia maculata Corymbia maculata	Spotted Gum	0.51	0.60	6.12 3.06	2.67	Moderate	Retain and Protect
171	Corymbia maculata	Spotted Gum	0.13	0.21	2.00	1.72	Moderate	Retain and Protect
172	Corymbia maculata	Spotted Gum	0.21	0.25	2.52	1.85	High	Retain and Protect
173 174	Corymbia maculata Fucalvotus fibrosa	Spotted Gum Broad-leaf Red Ironberk	0.15	0.20	2.00	1.68	Moderate	Retain and Protect
178 178	Corymbia maculata	Spotted Gum	0.65	0.90	10.20	3.17	Moderate	Retain and Protect
179	Eucalyptus fibrosa	Broad-leaf Red Ironbark	0.45	0.60	5.40	2.67	Low	Retain and Protect
180	Corymbia maculata	Spotted Gum	0.44	0.60	5.28	2.67	Moderate	Retain and Protect
181 182	Ficus obliqua Morus nigra	Small-leaved Fig	0.49	0.80	5.88	3.01	Moderate	Remove
183	Sapium sebiferum	Chinese Tallow Tree	0.50	0.60	6.00	2.67	Moderate	Remove
184	Corymbia maculata	Spotted Gum	0.30	0.40	3.60	2.25	Moderate	Retain and Protect
185	Eucalyptus fibrosa	Broad-leaf Red Ironbark	0.39	0.45	4.68	2.37	High	Retain and Protect
186	Eucalyptus fibrosa	Broad-leaf Red Ironbark	0.31	0.40	2.64	2.25	Low	Retain and Protect
188	Corymbia maculata	Spotted Gum	0.27	0.30	3.24	2.00	Moderate	Remove
189	Callistemon viminalis cv.	Weeping Bottlebrush	0.13	0.20	2.00	1.68	Low	Remove
190 191	Callistemon viminalis cv. Corvmbia maculata	Spotted Gum	0.24	0.25	2.88	1.85	Low	Remove Retain and Protect
192	Corymbia maculata	Spotted Gum	0.23	0.30	2.76	2.00	Low	Retain and Protect
193	Corymbia maculata	Spotted Gum	0.44	0.50	5.28	2.47	High	Retain and Protect
194	Corymbia maculata	Spotted Gum	0.31	0.40	3.72	2.25	High	Retain and Protect
195	Corymbia maculata	Spotted Gum	0.20	0.50	5.30	2.25	High	Retain and Protect
197	Corymbia maculata	Spotted Gum	0.36	0.40	4.32	2.25	Low	Remove
198	Casuarina cunninghamiana	River She-Oak	0.30	0.40	3.60	2.25	Low	Remove
200	Casuarina cunninghamiana	River She-Oak	0.30	0.40	4.32	2.25	Low	Remove
201	Corymbia maculata	Spotted Gum	0.27	0.35	3.24	2.13	Low	Remove
202	Eucalyptus fibrosa	Broad-leaf Red Ironbark	0.78	0.84	9.36	3.08	Moderate	Retain and Protect
203 204	Corymbia maculata Corymbia maculata	Spotted Gum	0.47	0.60	5.64	2.67	Moderate	Retain and Protect
205	Melaleuca bracteata	Black Tea-Tree	0.24	0.27	2.88	1.91	Low	Remove
206	Casuarina cunninghamiana	River She-Oak	0.63	0.40	7.56	2.25	Moderate	Remove
207 208	Casuanna cunningnamiana Corymbia maculata	Spotted Gum	0.30	0.40	3.60	2.25	Low	Retain and Protect
209	Corymbia maculata	Spotted Gum	0.40	0.50	4.80	2.47	Moderate	Retain and Protect
210	Corymbia maculata	Spotted Gum	0.63	0.70	7.56	2.85	High	Retain and Protect
213 214	Cupressus sempervirens 'Swanes Golden' Cupressus sempervirens 'Swanes Golden'	Swanes Golden Pencil Pine	0.25	0.30	3.00	2.00	Low	Remove
215	Casuarina cunninghamiana	River She-Oak	0.48	0.60	<u>5.76</u>	2.25	Moderate	Remove
216	Casuarina cunninghamiana	River She-Oak	0.37	0.50	4.44	2.47	Moderate	Remove
217 219	Casuarina cunninghamiana	River She-Oak	0.69	0.75	8.28	2.93	Moderate	Remove
219	Citharexylum spinosum	Fiddlewood	0.43	0.27	5.40 2.64	3.01 1.91	Low	Remove
220	Jacaranda mimosifolia	Jacaranda	0.14	0.20	2.00	1.68	Low	Remove
221	Sapium sebiferum	Chinese Tallow Tree	0.16	0.25	2.00	1.85	Low	Remove Retain and Protect
223	Corymbia maculata	Spotted Gum	0.78	0.60	9.30	3.31 2.67	Moderate	Retain and Protect
224	Eucalyptus punctata	Grey Gum	0.55	0.70	6.60	2.85	High	Retain and Protect
225	Corymbia maculata	Spotted Gum	0.40	0.50	4.80	2.47	High	Retain and Protect
226 227	Corymbia maculata	Spotted Gum	0.46	0.00	5.52 6.00	2.67	Moderate	Retain and Protect
228	Corymbia maculata	Spotted Gum	0.43	0.50	<u>5.16</u>	2.00	High	Retain and Protect
229	Eucalyptus fibrosa	Broad-leaf Red Ironbark	0.70	0.80	8.40	3.01	High	Retain and Protect
230 231	Lophostemon confertus	Brush Box	0.50	0.60	6.00 2.52	2.67	High	Retain and Protect
232	Ulmus parvifolia	Chinese Elm	0.30	0.32	3.60	2.00	Moderate	Remove
233	Corymbia torelliana	Cadaghi	0.36	0.42	4.32	2.30	Low	Remove
234 22₽	Ceratonia siliqua Sanium sehifarum	Carob Bean	0.14	0.20	2.00	1.68	Low	Remove
235 236	Callistemon citrinus cv.	Crimson Bottlebrush	0.13	0.20	2.00	1.08	V Low / Remove	Remove
237	Callistemon viminalis cv.	Weeping Bottlebrush	0.33	0.37	3.96	2.18	Low	Remove
238	Hibiscus tiliaceus	Coast Cottonwood	0.32	0.29	3.84	1.97	Low	Remove
239 240	syzygium australe Cupressus sempervirens 'Swanes Golden'	Swanes Golden Pencil Pine	0.00	0.34	2.00	2.10	Low	Remove
241	Corymbia citriodora	Lemon Scented Gum	0.79	0.90	9.48	3.17	High	Retain and Protect
242	Cupressus sempervirens 'Stricta'	Pencil Pine	0.10	0.15	2.00	1.49	Low	Retain and Protect
243 244	corympia maculata Eucalyptus punctata	Spotted Gum	0.55	0.75	6.60	2.93	High	Retain and Protect
245	Eucalyptus nicholii	Narrow-leaved Black Peppermint	0.40	0.50	4.80	∠.47 2.47	Low	Retain and Protect
246	Corymbia maculata	Spotted Gum	0.50	0.60	6.00	2.67	High	Retain and Protect
247	Syagrus romanzoffiana	Queen Palm	0.30	0.40	3.60	2.25	Low	Retain and Protect

Residential Aged Care	Facility



oject No : 20.01 esigned : RWS : RWS/BT : 1:300@A1/1:600@A

lotted at :

**Tree Protection Specifications** 



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## TREE RETENTION VALUE NOTES

The proposed retention value of the trees w suitability of the tree. Each tree was then ran **1.** "High" Retention Value — these a prominent, historically or environmentally im their removal avoided where possible and fe **2. "Moderate" Retention Value** — the defects and could be retained where possibl 3. "Low" Retention Value — these are common place, are not historically, environing development. They could be retained only development outcomes.
4. "Very Low" Retention Value — thes

defects, are considered weeds or combinati development.

Consideration has also been given to the related areas on the site. For example, trees that a unstable with the removal of surrounding tre



# NOTE

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Refer to the accompanying Arboricultural Impact Assessment Report for full description of trees, measurements and methods used to assess the trees, and proposed tree protection measures.

## 30m

	STRONACHAVENUE
vas determined based on a considered combination of the nked according to one of 4 retention categories; are trees that are typically in good or very good condition portant. They should represent a serious physical consteasible.	e size, age, condition and dition, large and visually traint to development and
esse are trees that are in good to reasonable condition, le and feasible to do so. trees that are of poor condition or have structural defects inmentally or socially significant and should not be consi- inly if they are not likely to be impacted by or constr se are trees that are in very poor health, or poor form, of cion of all these, and therefore should be considered for re- elationship of the trees to one another and their proximity are part of a closely spaced group, or are likely to be s sees and structures are considered with these factors in mir ectacuent esidential Aged Care Facility	with no major structural s, are particularly small or idered as a constraint to rain potentially desirable or have serious structural emoval regardless of any to the likely development significantly misshapen or nd.
sh Hope Care	Drawn : RWS/BT North Scale : 1:300@A1/1:600@A3

ree	Retention	Value	Plan
してて		value	i iaii



Plotted at : 5:52 pm

