traffix
traffic & transport planners

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Reference: 14.289r03v03

3 November 2016

Brookfield Multiplex Constructions Pty Ltd
GPO Box 172
Sydney NSW 2001

Attention: Kristina Stoffers

Re: The Terraces - Seniors Living and Residential Aged Care Facility
74 Brown Street, Paddington
Removal of Significant Trees 5 and 130

Dear Kristina,

We note that TRAFFIX have been commissioned to undertake an assessment of the impacts associated with the retention of two (2) significant trees located at the abovementioned site, being:

- Tree 5
- Tree 130

In undertaking this assessment, we note that we have reviewed the following information:

- Arboricultural Assessment of Supporting Removal of Tree 130 dated 28 February 2016, prepared by Tree Wise Men, provided in **Attachment 1**.
- Construction Access Analysis drawings prepared by Brookfield Multiplex, provided in **Attachment 2**, including:
  - Option A – Tree 5 Removed
  - Option B – Tree 5 Retained
- Development drawings prepared by JPR Architects.

Our findings in respect to Trees 5 and 130 are discussed separately below.

Tree 130

As shown on the subject development drawings and discussed within the abovementioned Tree Wise Men report, Tree 130 is situated to the immediate east of the proposed Brown Street vehicular ramp, which provides access to the basement car park. As discussed in the Tree Wise Men report, the extent of basement excavation (and provision of the Brown Street ramp) at this location encroaches into the Structural Root Zone (SRZ) and Tree Protection Zone (TPZ) of Tree 130,

therefore either requiring Tree 130 to be removed or a relocation of the proposed Brown Street ramp which in turn would require a redesign of the basement car park.
Whilst this issue could potentially be overcome through the relocation of the Brown Street ramp to the west, so that it no longer encroached into the SRZ or TPZ, this relocation is unable to occur for the following reasons:

- Relocation of the ramp to the west would conflict with the Retention Value A Tree 127, which is situated on the western side of the proposed Brown Street ramp. Due to its significance, the retention of Tree 127 takes precedent over Tree 130.
- Relocation of the proposed Brown Street ramp would require a significant redesign of the ramp and basement car park, which could detrimentally affect the development in achieving compliance with the relevant requirements of Australian Standard AS 2890.1 (2004).
- The redesign could lead to a loss in the number of on-site car parking spaces. Under the current development approval (MP10_0016), the development is required to provide exactly 132 parking spaces.

Taking the above constraints into consideration, it is our view that Tree 130 should be removed to ensure that a compliant development can be achieved with respect to both the relevant Australian Standard AS 2890.1 (2004) and the development approval (MP10_0016).

Tree 5

The Construction Access Analysis drawings prepared by Brookfield Multiplex, provided in **Attachment 2**, illustrate the required site access and internal traffic circulation arrangements for both construction vehicles and private cars associated with the residential aged care facility. These drawings show two (2) options being:

- Option A – Tree 5 Removed
- Option B – Tree 5 Retained

Whilst Option B would ensure that Tree 5 is able to be retained, this arrangement is considered unsatisfactory for the following reasons:

- The internal arrangements would not permit trucks to satisfactorily turn around within the site, ensuring that they could exit the site in a forward direction. Forward entry and exit manoeuvres to the site are essential for both safety and efficiency reasons, as well as being a requirement under Condition B7 of the development approval (MP10_0016). Specifically, reverse manoeuvres would most likely be required from previously proposed Gates 5, 6 and 7.
- The change in levels between the street and hardstand at the previously proposed Gate 5 is approximately 1.2m. This is considered a significant grade that trucks would need to reverse up in order to exit the site, which is considered unsafe. This would also result in efficiency concerns along Brown Street as through traffic would need to be held by traffic controllers each time a truck exits the site.
- The construction access driveway at the previously proposed Gate 5 would be situated in a prohibited location having regard for Figure 3.1 of AS 2890.1 (2004), rendering it unsafe.

Taking the above into consideration, it is our view that Tree 5 should also be removed to ensure construction vehicles are able to safely and efficiently enter and exit the site in a forward direction, as would be allowable through the implementation of the Option A site access and internal traffic circulation arrangements.

We trust the above is of assistance. Please contact the undersigned should you have any queries regarding the above.

Yours faithfully,

traffix

Asad Rajbhoy
Traffic Engineer

Email: asad.rajbhoy@traffix.com.au

Attachments:
1) Arboricultural Assessment, prepared by Tree Wise Men
2) Construction Access Analysis drawings, prepared by Brookfield Multiplex

Attachment 1

TREE WISE MEN®
AUSTRALIA PTY LTD

28 February 2016

Kamal Asadkamal
Brookfield Multiplex Constructions Pty Ltd
Level 22, 135 King Street
SYDNEY NSW 2000

Dear Kamal,

RE: Arboricultural Assessment of Supporting Removal of Tree 130 Sydney Red Gum: MP10_0016 - "The Terraces" 2 Cooper Street, Paddington

Ref: 246MonTree130*[AR-RE-P-1008]*

1. Background

This Arboricultural Assessment has been prepared at the request of Brookfield Multiplex Constructions Pty Ltd (BMC) following review of Construction Drawings and the emergence of a number of construction/tree retention conflicts.

Tree 130 is a mature Sydney Red Gum, *Angophora costata* located adjacent to the currently occupied Residential Aged Care (RAC) building at "The Terraces". Currently the tree is to be retained as detailed in the *Project Approval (MP10_0016)* (Condition C4 by reference to the Arboricultural Impact Assessment report dated September, 2010 by Tree Wise Men® Australia Pty Ltd).

Tree Management Plan September, 2015 prepared for Construction Certificate (Condition B16) prepared by Tree Wise Men® Australia Pty Ltd recommends retention of Tree 130 but identifies likely construction-related conflicts evident in the Stage 2 *Footing and Bulk Excavation Plans* and Stage 2 *Site Establishment Plans*. Refer to Section 3 below for detail of these conflicts.

Google Maps image 26.11.15 showing Tree 130 following Stage 1 tree removals.

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Phone +61 2 9981 5219 Fax +61 2 9971 0881

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2. Current Status of Tree 130 and the Surrounding Trees

The current characteristics of Tree 130 are summarised in the Tree Schedule excerpt below. See Attachment B for Definition of Terms used.

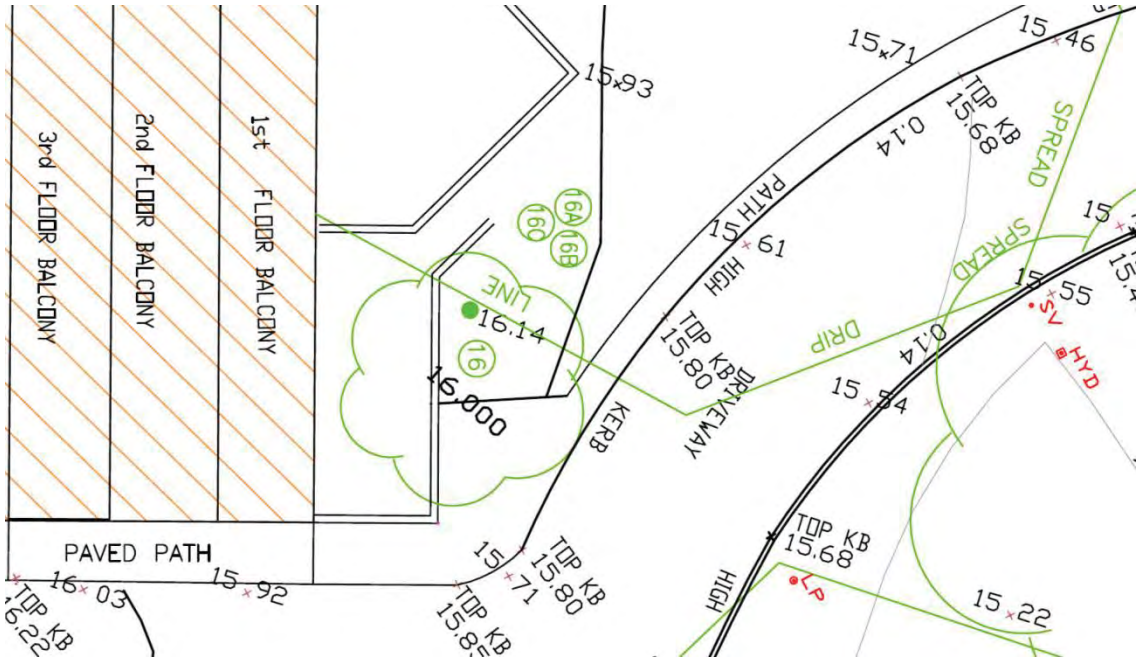
TREE No.	COMMON NAME/ GENUS SPECIES	DBH (m)	HEIGHT (m)	CANOPY RADIUS (m)	AGE CLASS	VIGOUR	CONDITION	SRZ RADIUS (m)	TPZ RADIUS (m)	ULE	©SIG RATING	©RETENTION INDEX	APPROVAL AS PER MP10_0016	TREE RETENTION STATUS @ DEC 2015	COMMENTS as at 7th December 2015 Inspection
130	Sydney Red Gum, *Angophora costata*	0.6	16	N7, S8, E8, W5	M	G	F	2.8	7.2	L	2	A	R+	R#	*Crown skewed to S over proposed Building. Proposed Carpark entrance to Brown Street Building within SRZ to be reviewed given excavation. Crown pruning required south side. Located within Stage 2 construction hardstand crane loading areas.*

Table1: Tree 130 Tree Schedule Excerpt

Tree 130 is a ©Retention Value *A* tree by virtue of its ©Significance Rating of *2* and Useful Life Expectancy (ULE) of *Long*. The ©Significance Rating of *2* is due to its size, this tree species being protected under the Woollahra TPO and being an Australian native species. The *Fair* Condition is a reflection of the trunk lean, crown skew and possible root confinement by existing walling (Photos A and B). The tree is growing within 1m of brick walling with likely root restriction or confinement resulting from the wall footings.

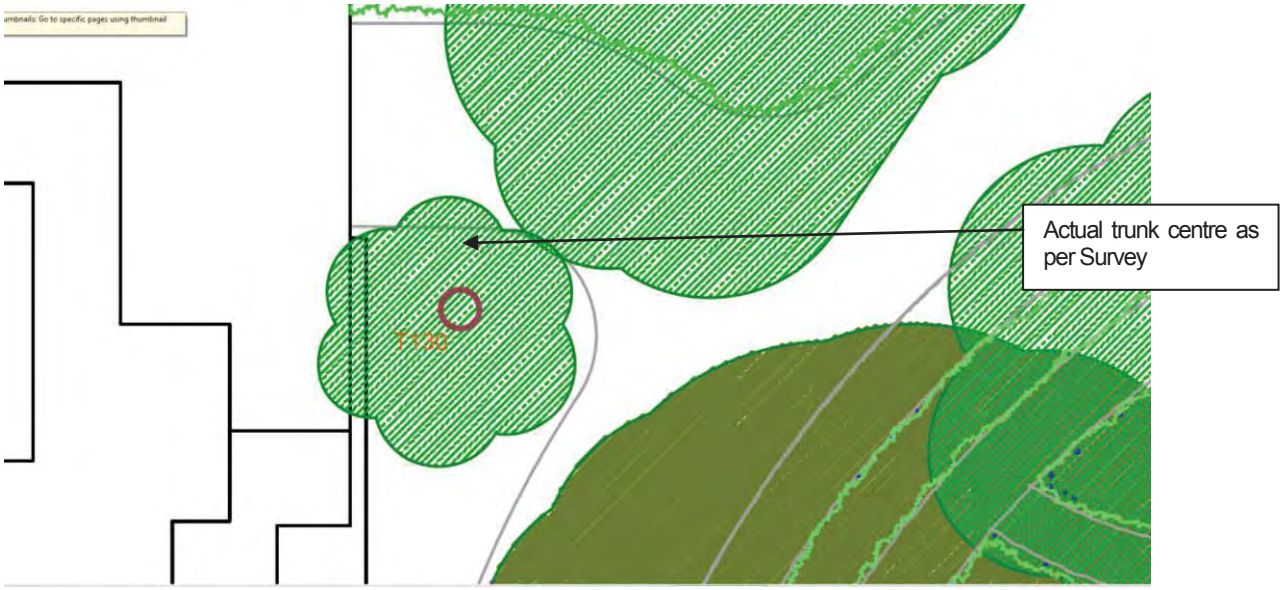
The crown symmetry of Tree 130 has been influenced by the older and larger adjacent trees predominantly Tree 127 (Port Jackson Fig, *Ficus rubiginosa* Photo C).

The assessment of the impact of the proposed building works on the tree in the Arboricultural Impact Assessment report for the DA (Ref: 246DAIA, September 2010) was in error. The close proximity of the trunk of the tree to the proposed Driveway ramp to the basement was not accurately assessed. The earlier tree number (#16) on the Survey was misinterpreted by some as the trunk of the tree. The actual trunk centre is at ERL 16.14 as indicated.



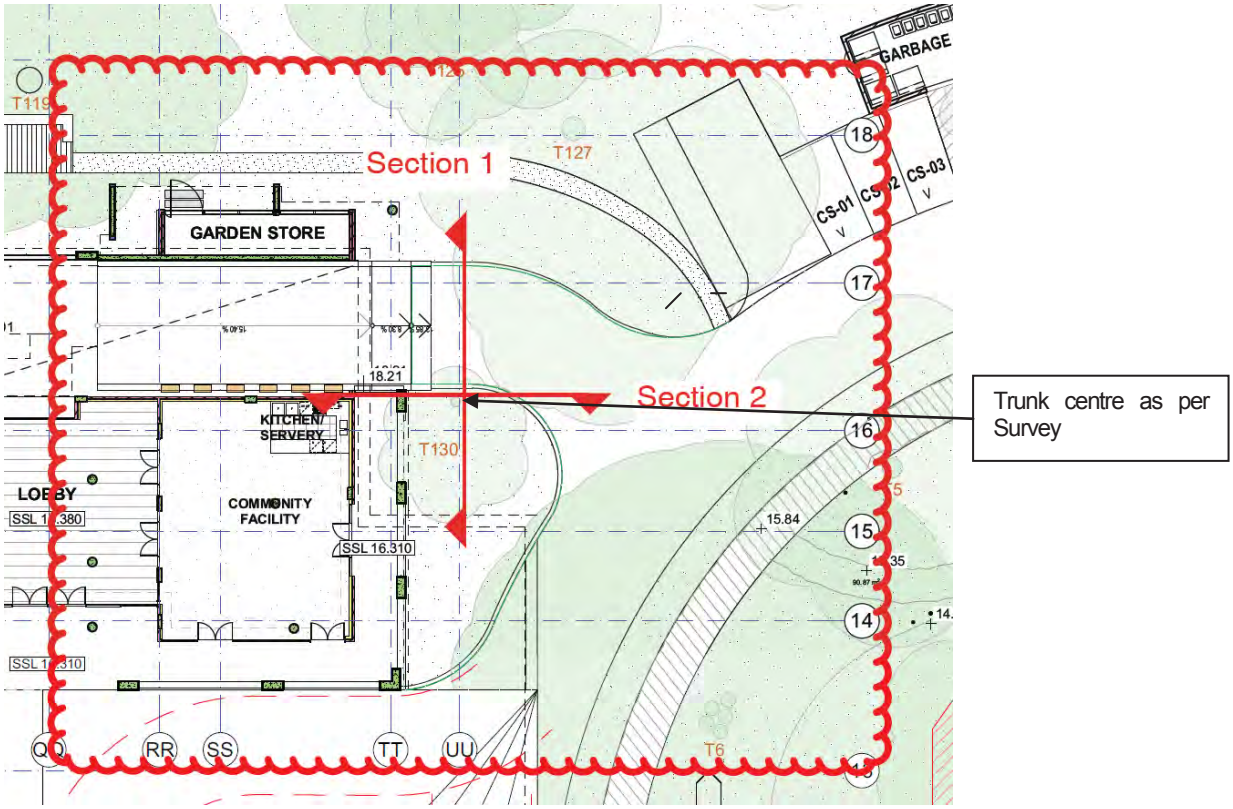
Excerpt from Survey Ref: 10358, July 2006 by Clement & Reid.

The JPRA Architectural set, *Rev. P11, 7.09.10* reviewed for the AIA, September, 2010 had the trunk shown as the tree number rather than the trunk centre, marginally further from the proposed ramp than shown on the current Drawings.



Excerpt from *Site Plan, DA101 Rev. P11* by JPRA.

The current construction drawings show the actual trunk location well within the Structural Root Zone (SRZ) (2.8m) of the tree. In fact the excavation needed for the Driveway ramp down to the Basement is within 1m of the base of the tree and will result in root cutting on the tension side of the tree.



Excerpt from *Level 01 Plan A-P-1103, Rev 10* by JPRA. Refer to Attachment C of detail of Sections 1 and 2.

The External Works Sections Drawing *A-P-1116, Rev 2* by JPRA has been marked up by Brookfield Multiplex Site Manager 3.12.06 (Attachment C) to accurately show the proposed excavation and the actual lean of the tree.

Section 1 shows the existing ground lines and proposed cut required for the Driveway ramp. Substantial cut for the proposed Driveway ramp is required at the base of the trunk to the west well inside the SRZ. Section 2 shows the cut required for the Basement (Grid line 15) within the Tree Protection Zone (TPZ) (7.2m) and excavation for the Basement (Grid line TT) within the SRZ. The tree will be destabilised by these combined excavation works within the SRZ, particularly given the lean of the tree away from Driveway ramp line of cut.

The crown of the tree is skewed to the south as indicated in Photo C, in the Survey excerpt above and as indicated in the External Works Sections markup (Attachment C). Substantial crown pruning would be required to allow for the proposed building facade and the scaffold required for the construction. As indicated in Section 2 (looking west) scaffolding is required in line with the base of the trunk. Even if the building were to be constructed without external scaffolding, the southern-most leader would need to be pruned to the main junction at approximately 3m above ground level and all the southern branches would need to be pruned to provide reasonable building clearance. This extent of crown pruning would render the tree significantly disfigured such that its ULE would be reduced and the landscape amenity provided by the tree would be lost.

4. Summary

Removal of Tree 130, Sydney Red Gum, *Angophora costata* is supported for the following reasons:

- The rootzone impact assessment for the AIA, September, 2010 was in error given the misinterpretation of the actual trunk centre.
- Significant excavation is required within the Structural Root Zone (SRZ) to the west (Driveway ramp) and south (Basement walling) which will destabilise the tree.
- The crown pruning required for the new building and scaffolding is substantial and will impact significantly on the tree form, ULE and amenity value.
- A replacement native tree species should be added to the Landscape Plan for a suitable location on the site.
- Appropriate approval for tree removal should be obtained to amend the Project Approval.

Peter Castor
DIRECTOR
Attachment A: Photos
Attachment B: Definition of Terms
Attachment C: External Works Sections A-P-1116, Rev 2 Markup 3.12.16

Attachment A: Photos

Photo A: Tree 130 looking southwest showing significant trunk lean to the south and close proximity to existing walling.

Photo B: Tree 130 looking west showing proximity to existing walling and overhang of existing building.

Photo C: Tree 130 looking east showing crown skew to south over existing and proposed building.

Attachment B: Definition of Terms

COMMON NAME/GENUS SPECIES CULTIVAR – Common names can vary with selected texts. Where species is unknown, "*sp*." indicated after genus. Where cultivar is unknown "*cv*" indicated after species.

DBH – Diameter at Breast Height. Tree trunk diameter measured at breast height (1.4 metres above ground level). Fabric diameter tape is used which assumes a circular cross section. Multiple measurements indicate multiple trunks. Where DBH measurement cannot be taken at 1.4m the height at which it has been taken is indicated.

CANOPY SPREAD RADIUS – Average canopy radius (widest + narrowest ÷ 2). Circular canopy depictions on Tree Plan/Survey are indicative only. Where canopy spread was significantly skewed, all four cardinal point measurements were recorded.

AGE CLASS – Immature (IM), Semi-mature (SM), Mature (M), Over-mature (OM). Assessment of the tree's current Age. A **Mature (M)** tree has reached a near stable size (biomass) above and below ground. Trees can have a *Mature* age class for >90% of life span. **Over-mature (OM)** trees show symptoms of irreversible decline and decreasing biomass.

VIGOUR – Good (G), Fair (F) or Poor (P). The general appearance of the canopy/foliage of the tree at the time of inspection. Vigour can vary with the season and rainfall frequency. A tree can have *Good* vigour but be hazardous due to *Poor* condition. A tree in *Good* vigour has the ability to sustain its life processes. Vigour is synonymous with health.

CONDITION – Good (G), Fair (F) or Poor (P). The general form and structure of the trunk/s and branching. Trunk lean, trunk/branch structural defects, canopy skewness or other hazard features are considered.

SRZ RADIUS – Structural Root Zone. The area around a tree required for tree stability. Earthworks should be prohibited within the SRZ. The area is calculated from the formula and graph at Figure 1 of *AS4970-2009.* The SRZ graph has been adapted from the work of Claus Mattheck (1994). DBH + 10% has been used for the calculation of SRZ. Where DBH is measured at grade or at a height other than 1.4m above grade, 10% has not been added.

TPZ RADIUS – Tree Protection Zone. Radial offset (m) of twelve times (12x) trunk DBH measured from centre of trunk (for trees less than 0.3 metre DBH minimum TPZ is 2.0 metres). To satisfactorily retain the tree, construction activity (both soil cut and fill) must be restricted within this offset. TPZ offsets are rounded to the nearest 0.1 metre. Existing constraints to root spread can vary. Generally an area equivalent to the TPZ should be available to the tree post development. Encroachment occupying up to 10% of the TPZ area is acceptable without detailed rootzone assessment. Encroachments greater than 10% require specific arboricultural assessment.

ULE – Useful Life Expectancy. The length of time from the date of inspection that the Arborist estimates the tree will live and provide a useful positive contribution to the landscape amenity of the site. ULE ratings are **Long** (retainable for 40 years or more), **Medium** (retainable for 16-39 years), **Short** (retainable for 5-15 years) and **Removal** (tree requiring immediate removal due to imminent risk or absolute unsuitability).

©SIG. RATING – ©Significance Rating Scale (see notes over)

©RETENTION INDEX (see notes over)

TREE RETENTION STATUS AT 7 DECEMBER, 2015 INSPECTION taking into account the nominated Variations. Trees are identified as *Retain (R), Retain + (R+)*.

COMMENTS – Comments relating to the location, surroundings and hazard potential of the trees at the time of inspection and where applicable the reason for removal.

©SIG. RATING – ©Significance Rating Scale. A site specific qualitative evaluation of a tree relative to the existing land use developed by Tree Wise Men® Australia Pty Ltd. Takes into consideration the impact of the tree on the surrounding landscape, streetscape and bushland. Rarity, habitat value, historical/cultural value and structural form of the tree are considered in this rating system. It is possible for a tree to have a *Short* ULE and a ©Significance Rating of 1. Likewise it is possible for a tree to be given a *Long* ULE and a ©Significance Rating of 4 (e.g. weed species). The ©Significance Ratings used in this Report are as outlined in Table 1.

Table 1: ©Significance Rating Characteristics

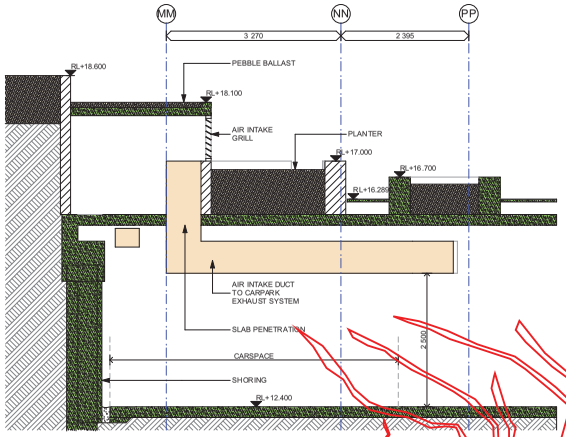
Rating	Significance	Characteristics (some or all)
©Sig. Rating 1	**Exceptional**	▪ Major contribution to site amenity ▪ Remnant specimen ▪ Heritage Listed ▪ Listed on Significant Tree Register ▪ Threatened Species ▪ *Good* vigour and condition ▪ Cultural significance ▪ Possible habitat tree for threatened fauna ▪ Excellent, well formed specimen ▪ Rare or unusual species ▪ Large above ground biomass ▪ Unique within the site and surrounds
©Sig. Rating 2	**High**	▪ Considerable contribution to site amenity ▪ Remnant specimen ▪ *Good* vigour and condition ▪ Threatened Species ▪ Cultural significance ▪ Possible habitat tree for threatened fauna ▪ Well formed specimen ▪ Rare or unusual species ▪ Large or moderate above ground biomass ▪ Other specimens with similar characteristics within the site and surrounds
©Sig. Rating 3	**Moderate**	▪ Minor contribution to site amenity ▪ Remnant or planted ▪ *Fair* or *Poor* vigour and condition ▪ Potential for growth ▪ Well formed or asymmetrical form ▪ Other specimens with similar characteristics within the site and surrounds
©Sig. Rating 4	**Low**	▪ Small/poor specimen ▪ *Poor* vigour and condition ▪ Inappropriate for the location ▪ Minor contribution to landscape amenity ▪ Easily replaced ▪ Weed species or TPO Exempt ▪ Hazardous ▪ Previously ©Sig. Rating 5 tree

©RETENTION INDEX. A site specific assessment of an individual tree's retention value developed by Tree Wise Men® Australia Pty Ltd. Incorporating ULE and ©Significance Rating each tree is allocated a ©Retention Value of A, B, C or D. The ©Retention Index values can be described as follows:

©Retention Value A	**Should be retained**	▪ Major redesign may be required (e.g. movement of building footprint, re-alignment of roadway).
©Retention Value B	**Could be retained**	▪ Minor redesign may be required (e.g. level changes, pavement detail).
©Retention Value C	**Could be removed**	▪ Should not constrain proposed development.
©Retention Value D	**Should be removed (irrespective of development layout**.)	▪ Should not constrain proposed development. ▪ **Remove ULE** should be removed irrespective of development layout.
	Should be removed or permanently fenced off	▪ Should not constrain proposed development ▪ **Short ULE** could be retained pending landscape proposal.

©Retention Index		**©Significance Rating**			
		1	**2**	**3**	**4**
ULE Rating	**Long (40+ years)**	**A**		**B**	**C**
	Medium (15-40 years)				
	Short (5-15 years)	**B**		**C**	**D**
	Remove (< 5 years)	**D**			

Attachment C: Markup 3.12.16 of External Works Sections A-P-1116, Rev 2



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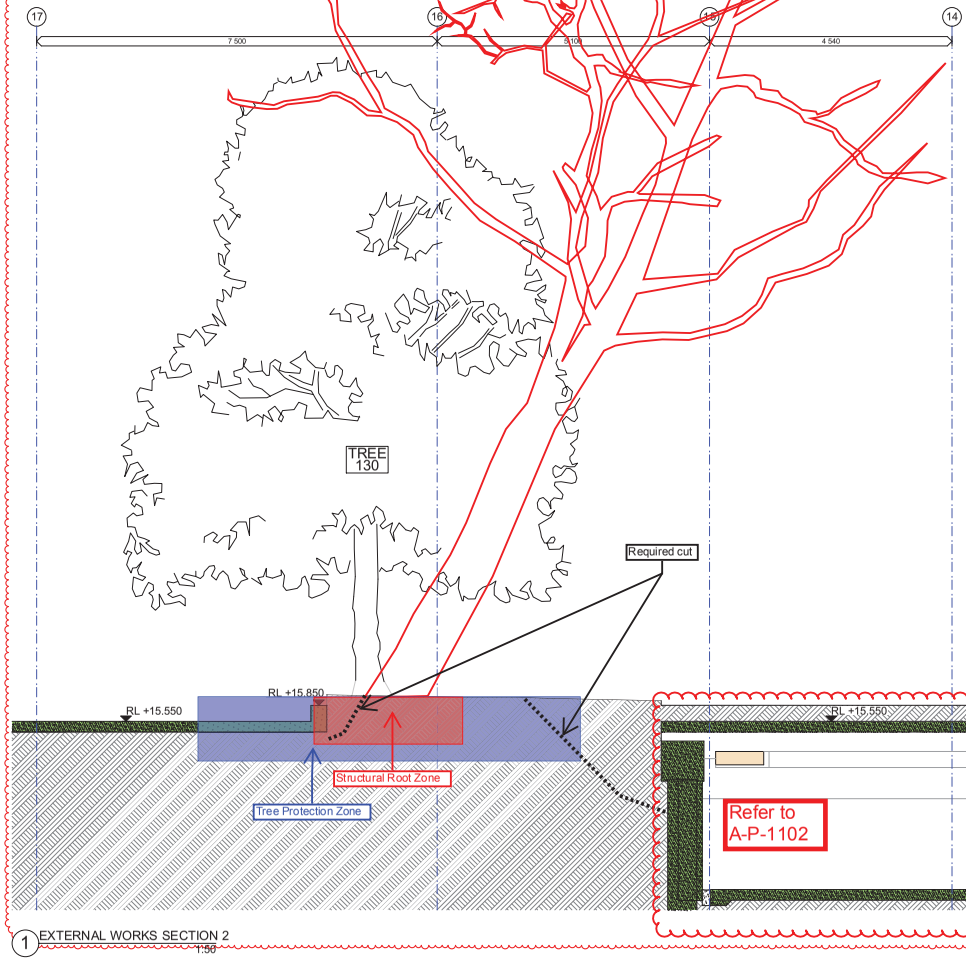

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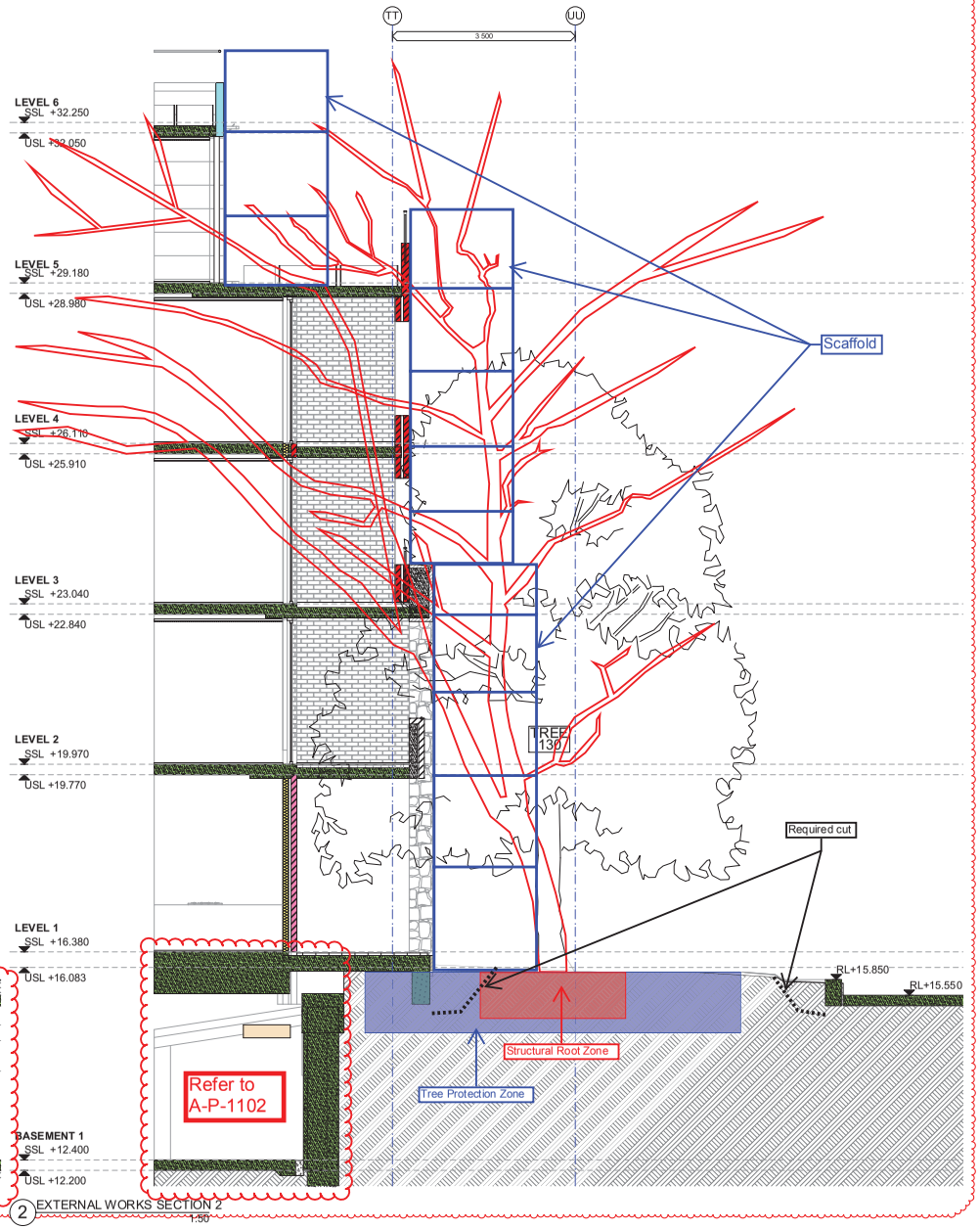

2 EXTERNAL WORKS SECTION 2
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Brookfield Multiplex Constructions Pty Ltd

This document has been reviewed for design intent.

In accordance with the Consultants and/or Brookfield Multiplex comments, the drawing is:

A ☐ Satisfactory

B ☐ Satisfactory Subject to Comments

C ☐ Not Satisfactory - Check comments and resubmit

This submission has been reviewed for general conformance against the project requirements and industry best practice it does not relieve the contractor of their responsibility for ensuring their work is complete, accurate and correct as per their contractual agreements.

Site Engineer: Kamal Asadkamal Date: 3/02/2016

REVISIONS

1	21/12/15	PRELIMINARY ISSUE
2	28/01/16	PRELIMINARY ISSUE

Presbyterian Aged Care

Brookfield MULTIPLEX

BM

CLIENT:
Brookfield Multiplex Pty Ltd
Level 22, 135 King St
Sydney, NSW 2000

DOCUMENT REVIEW - BROOKFIELD MULTIPLEX
- ☐ A - Acceptable for Construction
- ☐ B - Acceptable for Construction subject to comments. Correct & Resubmit
- ☐ C - Unacceptable for Construction. Correct & Re-submit for Review
- ☐ D - Drawing on Hold

Reviewed ..... Date .....
These documents have been reviewed for conformity with design intent. Acceptance does not mean approval of dimensions, sizes or weights nor does it relieve the subcontractor and/or the Consultant from responsibility for errors, omission or compliance with the obligations and/or requirements of the Contract and/or Subcontract.

CONSULTANTS

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Gilmore interior design
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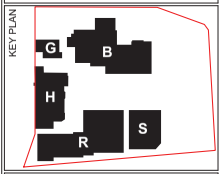
emf griffiths

KEY PLAN



PROJECT:
The Terraces
Seniors Living and Residential Aged Care Facility
74 Brown Street Paddington NSW 2021

DRAWING TITLE:
EXTERNAL WORKS SECTIONS

DOCUMENT CONTROL STATUS
PRELIMINARY

PROJECT NO:
2014063
DRAWN BY:
JPRA

PROJECT NORTH
0 1 2 3 4 5 6 7 8 9 10m
SCALE: 1:50@A1

DRAWING NO: **A-P-1116**
REV: **2**
PLOTTED: 28/01/2016

Attachment 2

Legend

A. Light screen planting of traditional specimens to define private courtyards.

B. Traditional garden terracing reinstated to display heritage garden species and define primary use areas. Retain existing sandstone wall and concrete stairs to extent shown. Heritage sandstone stairs to be reinstated to proposed setout.

C. Pick up/ drop off and passive recreation area with extensive garden planting and seating area opportunities adjacent to covered walkway.

D. Middle link garden to lower park areas. Low gradient ramp access, sensory planting and 'sanctuary' seating areas amongst low raised planters, small flowering trees and reflection pool.

E. Entry to park area set out to bookend the middle garden area and establishing long north south views through the site.

F. Main

G. Site community interactive hobby garden plots.

H. Exercise and wandering areas set amongst ornamental planting, exercise equipment and seating areas.

I. Timber and gravel circuit path addressing grand existing trees providing a link from the middle garden area to the boundary gate and adjoining park area.

J. T116 r ubiginosa

K. Replace existing weed tree species with fast growing, advanced native screen tree stock. Retain existing mature screen trees where appropriate. Complement with native planted under storey.

L. Low native planting to courtyard area and vigorous flowering native climbing plants to cable or steel mesh system on adjacent

M. Retain *Quercus ilex* (Holm Oak), including reinstatement of existing stone retaining structure adjacent to this tree (shown indicatively).

N. Public pocket park allows greater surveillance across this corner and a safe waiting area for public. Timber deck as primary ground plane protects existing trees from compaction and a level link to a ramp access system from within the hospital site. Multiple seating opportunities are set back from the street among large planted beds and recycled sandstone elements.

O. Existing banks are proposed to be intensively re vegetated with low growing locally native species after removal of invasive h *scantia*.

P. Plante reas looking towards adjoining tree canopies.

Q. Spa deck and garden area provides summer respite area setout around large existing tree (deck protects tree against compaction) Seating and picnic table are built into deck and ornamental garden beds define the area against the greater planted embankment. Refer to project architect for overhead walkway link to Brown Street. Tree 116 to be replaced with advanced *Ficus rubiginosa*.

R. Retain

S. Colou g ensures pedestrian priority and traffic calming.

T. Entry cies and access defined to adjoining park areas and pedestrian safety access.

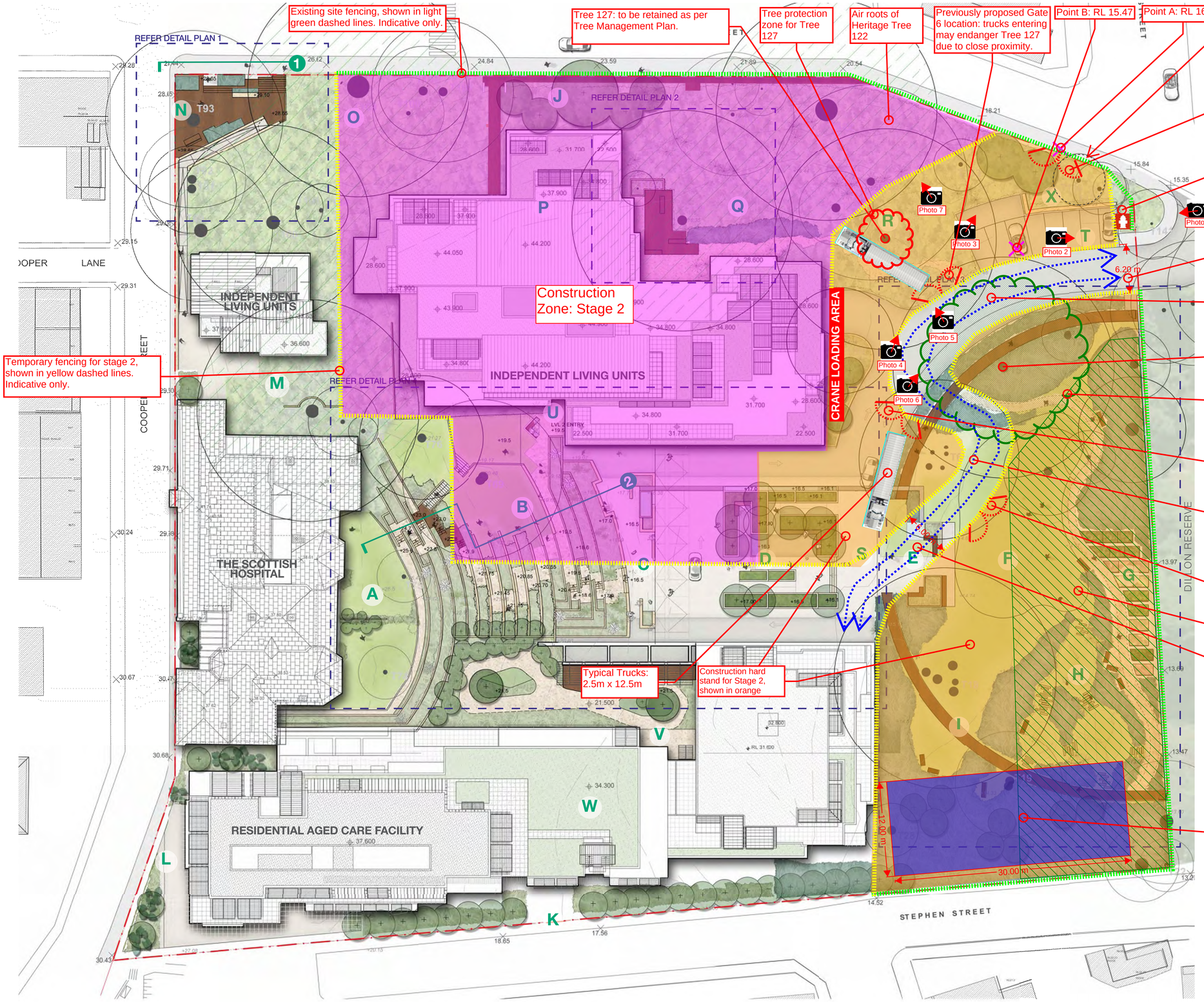
U. Entry link to passive recreation terrace areas from ILU building.

V. Entry ssive recreation lawn from adjoining building.

W. Planted roof and balcony areas.

X. Indicat

OPTION A - TREE 5 REMOVED



Legend

- **A.** Light screen planting of traditional specimens to define private courtyards.
- **B.** Traditional garden terracing reinstated to display heritage garden species and define primary use areas. Retain existing sandstone wall and concrete stairs to extent shown. Heritage sandstone stairs to be reinstated to proposed setout.
- **C.** Pick u… and seating area opportunities adjacent to covere…
- **D.** Middl… planting and 'sanctuary' seating areas amongst l…
- **E.** Entry to park area set out to bookend the middle garden area and establishing long north south views through the site.
- **F.** Main …
- **G.** Site community interactive hobby garden plots.
- **H.** Exercise and wandering areas set amongst ornamental planting, exercise equipment and seating areas.
- **I.** Timber and gravel circuit path addressing grand existing trees providing a link from the middle garden area to the boundary gate and adjoining park area.
- **J.** T116 … biginosa
- **K.** Replace existing weed tree species with fast growing, advanced native screen tree stock. Retain existing mature screen trees whe…
- **L.** Low p… to cable or steel mesh system on adjacent w…
- **M.** Retain existing ground levels to protect existing *Quercus ilex* (Holm Oak), including reinstatement of existing stone retaining structure adjacent to this tree (shown indicatively).
- **N.** Public … this corner and a safe waiting area for public. Timber deck as primary ground plane protects existing trees from compaction and a level link to a ramp access system from within the hospital si… from the street among large planted beds and recycled sandstone elements.
- **O.** Existin… etated with low growing locally native species after removal of invasive h… *cantia*.
- **P.** Plante… reas looking towards adjoining tree canopies.
- **Q.** Spa … area setout around large existing tree (deck protects tree against compactio… and ornamental garden beds define the area against the greater planted en… head walkway link to Brown Street. Tree 116 to be replaced with advanced …
- **R.** Retain …
- **S.** Colou… ensures pedestrian priority and traffic calming.
- **T.** Entry areas intensively planted with ornamental species and access defined to adjoining park areas and pedestrian safety access.
- **U.** Entry link to passive recreation terrace areas from ILU building.
- **V.** Entry … ssive recreation lawn from adjoining building.
- **W.** Planted roof and balcony areas.
- **X.** Indicat…

Removal of tree 136 required

Previously proposed Gate 5 location: 1200mm level difference between street level (RL 16.67) and hard stand level (15.47) would be too steep for trucks to enter and exit safely.
Trucks will not be able to physically make the turn in and out.

Existing sprinkler / hydrant booster to remain

Existing entrance (Gate 1): to be used for stages 1 and 2

Approved driveway RL below existing and the new kerb, gutter and raingarden thus within the SRZ of Tree 5 which is not supported by Tree Wise Men as major structural roots will need to be cut.

Tree 5: retained under option B

Tree 5 canopy size: 10 metres to the north, 10m south, 8m east, 10m west, shown in green cloud

Previously proposed Gate 7 location: area too small for trucks to leave in forward direction thus maintain site and pedestrian safety.

2 way travel paths of residents' vehicles shown in blue

Proposed Gate 2 location for stage 2

VPA area shown in green hatch

Minimum 6 metres clearance for two way traffic

Existing site office: shown in blue

OPTION B - TREE 5 MAINTAINED