TREE WISE MEN®
AUSTRALIA PTY LTD

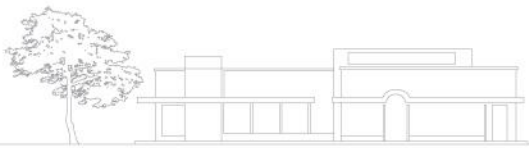
Arboricultural Assessment (Revised)
Supporting Removal of Tree 5 Camphor Laurel
MP10_0016
"The Terraces"
2 Cooper Street
Paddington

Prepared for:

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

Ref: 246MonTree5RevB *[AR-RE-P-1018]*

November 2016



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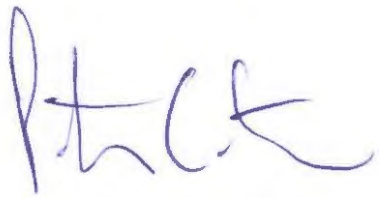

Peter Castor
Director

BSc (For.)
Member: IACA, PIA, UDIA, AA, LGTRA, MAE (UK)
8 November 2016

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1. EXECUTIVE SUMMARY

1.1 BACKGROUND

1.1.1 This Arboricultural Assessment (Revised) has been prepared at the request of Brookfield Multiplex Constructions Pty Ltd (BMC) following review of revised Construction Drawings and drawing mark-ups (Attachment C) and the emergence of a number of construction/tree retention conflicts.

1.1.2 This Assessment considers additional drawings prepared following a request for further information from the DPE (dated 15 September, 2016) in relation to the *Section 75W Modification* application for the removal of Tree 5.

1.1.3 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).

1.1.4 Tree 5 is a mature Camphor Laurel, *Cinnamomum camphora* located near to the Brown Street vehicular entrance to the existing Residential Aged Care (RAC) building at "The Terraces".

1.2 RECOMMENDED REMOVAL OF TREE 5

1.2.1 The retention of Tree 5 will create significant problems with truck manoeuvring given that Tree 5 would be located central to the construction hardstand area.

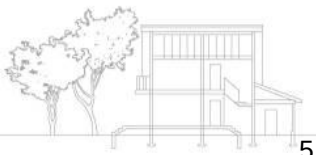
1.2.2 The removal of Tree 5 is supported for the reasons outlined below:

- It will provide a feasible Stage 2 construction hardstand layout benefiting Heritage Listed Tree 122, Moreton Bay Fig, *Ficus macrophylla* and ©Retention Value A tree, Tree 127, Port Jackson Fig, *Ficus rubiginosa*.
- There will be less Stage 2 hardstand construction area required within the TPZs of Trees 6, 125, 126 and 127.
- Tree 136 does not need to be removed as Gate 5 onto Brown Street is not required.
- Gate 6 adjacent to Tree 6 will not be required.
- Removal of Tree 5 will benefit the surrounding retained trees including the significant Heritage Listed Tree 6 Weeping Lilly Pilly, *Waterhousea floribunda* by reducing competition for soil nutrients and water and allowing space for the crown to grow in a north-westerly direction.
- The use of the residents' vehicular driveway will be safer as construction trucks will not be required to reverse out.
- It will avoid the root cutting associated with the construction of the raised boardwalk rain garden and the new Driveway as indicated on the Landscape Plan.

1.3 REPLACEMENT PLANTING

1.3.1 The visual impacts on the Brown Street streetscape will be negligible given the setback position of Tree 5 and location of other retained trees. Furthermore the removal of Tree 5 will allow for better views of the full crown of Heritage Listed Tree 6 from the main vehicular entrance to the site following site landscaping.

1.3.2 New plantings will be added to the Landscape Plan as required to compensate for the short-tem loss of foliage. We recommend that Tree 5 be replaced with a 1,000 litre, Port Jackson Fig, *Ficus rubiginosa*.



2. BACKGROUND

2.1 INTRODUCTION

2.1.1 This Arboricultural Assessment (Revised) has been prepared at the request of Brookfield Multiplex Constructions Pty Ltd (BMC) following review of revised Construction Drawings and drawing mark-ups (Attachment C) and the emergence of a number of construction/tree retention conflicts.

2.1.2 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).

2.1.3 Tree 5 is a mature Camphor Laurel, *Cinnamomum camphora* located near to the Brown Street vehicular entrance to the existing Residential Aged Care (RAC) building at "The Terraces".

2.1.4 *Tree Management Plan* September, 2015 prepared by Tree Wise Men® Australia Pty Ltd for Construction Certificate (Condition B16) recommended retention of Tree 5 but identified likely construction-related conflicts evident in Stage 1 and Stage 2 *Site Establishment Plans*.

2.2 PURPOSE OF THIS ASSESSMENT

2.2.1 This Assessment considers additional drawings prepared following a request for further information from the DPE (dated 15 September, 2016) in relation to the *Section 75W Modification* application for the removal of Tree 5.

2.3 DOCUMENTS REVIEWED

2.3.1 The following documents have been reviewed in the preparation of this report:

- *Foliage Analysis Trees 5 and 130* prepared by Brookfield Multiplex Constructions Pty Ltd
- *Tree 5 Removal - Construction Access Analysis* by Brookfield Multiplex Constructions Pty Ltd (Attachment C)
- *Google Image Mark-up* by Brookfield Multiplex Constructions Pty Ltd
- *Sitework Plan (C-P-2701-D)* prepared by Taylor Thompson Whitting
- *TRAFFIX s75W Letter* dated 3 November, 2016 prepared by TRAFFIX

3. CHARACTERISTICS OF TREE 5 AND SURROUNDING TREES

3.1 TREE 5 CHARACTERISTICS

3.1.1 The current characteristics of Tree 5 are summarised in the Tree Schedule excerpt below. See Attachment B for Definitions of Terms used.

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 VALUE	RETENTION STATUS @ 7/12/15
Camphor Laurel, *Cinnamomum camphora*	1.4	18	N10, S8, E8, W8	M	G	F	4.0	15.0	L	3	B	R+

Table1: Tree 5 Tree Schedule Excerpt

3.1.2 Tree 5 is a **©Retention Value *B*** tree by virtue of its ©Significance Rating of *3* and Useful Life Expectancy (ULE) of *Long* (>40 years). The ©Significance Rating of *3* is due to this tree species being Exempt under the Woollahra TPO when less than 10m tall and not located on a Heritage Item.

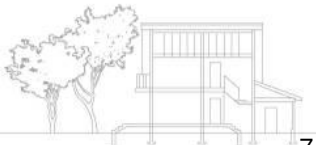
3.1.3 Camphor Laurels are generally regarded as nuisance or undesirable tree species in metropolitan Sydney due to their extremely strong, dominating growth habit and propensity to propagate by seed dispersal into adjoining land. Some municipal Councils (e.g. Ku-ring-gai) have declared Camphor Laurels as a Noxious Weed (Class 4) under the Threatened Species Conservation Act.

3.1.4 The *Fair* Condition of Tree 5 is a reflection of the skewed canopy, crossing branches and previous pruning (Photo A).

3.1.5 Crown pruning has recently been undertaken on the southern side over the temporary Driveway to provide a 4.5 metre clearance for construction vehicles and machines.

3.2 THE SITE AND SURROUNDING TREES

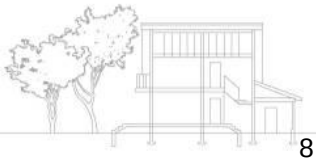
3.2.1 We have reviewed a series of marked-up photographs supplied by Brookfield Multiplex Constructions titled "*Foliage analysis Trees 5 and 130*" showing the crown spread of Tree 5. There is limited visibility of the Tree 5 when viewed from Brown Street due to the location of other surrounding trees to be retained. The proposed removal will have a negligible visual impact on the Brown Street streetscape. It should be noted the actual crown spread area for Tree 5 is significantly less than the notional Tree protection Zone (TPZ) area.



3.2.2 Tree 5 is starting to dominate the surrounding trees on the site including Heritage Listed Tree 6 and this will continue as Tree 5 still has *Long* life expectancy with further capacity for growth above and below ground. There are surface roots growing towards the existing kerb and gutter (Photo B) which will need to be removed with the proposed Driveway realignment (towards the tree) and the boardwalk construction.

3.2.3 The crown of Tree 5 merges with (competes with) the crown of other surrounding trees to be retained including Tree 6 the Heritage Listed Weeping Lilly Pilly, *Waterhousea floribunda* (Photo C) and Tree 127 Port Jackson Fig, *Ficus rubiginosa.* Both Tree 6 and Tree 127 are **©Retention Value *A*** by virtue of their ©Significance Ratings and ULE and should be given greater consideration for retention than ©Retention Value B trees, such as Tree 6. The proposed removal of Tree 5 will favour the long term life expectancy of Tree 6 and Tree 127 by alleviating competition for air space and soil water and nutrients.

3.2.4 A temporary construction Driveway has recently been built to the Project Arborist's (TWM) specifications for the purposes of Stage 1 construction (Photo D). This temporary Driveway passes between Tree 5 and Tree 6 and provides relief from soil compaction caused by machinery movements. The alignment of the Driveway is as indicated in Photo D. The temporary Driveway will be removed following the Stage 2 construction.



4. CONSTRUCTION IMPACTS

4.1 CONSTRUCTION STAGING

4.1.1 The proposed construction works are to be undertaken in two Stages.

4.1.2 The Stage 1 works have commenced and a temporary Driveway is in place for heavy vehicle and machinery movements between Trees 5 and Tree 6.

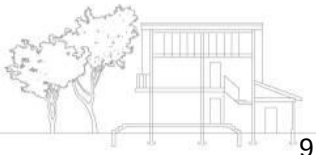
4.1.3 Stage 2 is scheduled to commence May 2017. Significant tree protection issues will arise during Stage 2 when a construction zone is to be established for the construction of the new Brown Street Building, whilst maintaining vehicular access to the new RACF building.

4.1.4 The Option A and Option B mark-ups contained at pages 1 & 2 of the *Tree 5 Removal - Construction Access Analysis* document (Attachment C) shows Tree Protection Zones for the site trees as per the *Tree Transplant & Removal Plan 18.9.15* prepared by Tree Wise Men® Australia Pty Ltd. This drawing is page 11 of the *Tree 5 Removal* document..

4.2 CONSTRUCTION HARDSTAND DESIGN

4.2.1 With either Option A or Option B the temporary construction hardstand area will need to be constructed with a "tree-sensitive" elevated, semi- permeable design as for the existing Stage 1 Driveway between Trees 5 and 6. Trunk protection fencing and or timber battening will be required for all retained trees within the hardstand area.

4.2.2 Soil cut within the TPZ of retained trees is to be restricted where ever possible including the embankment area adjacent Brown Street.



5. TREE 5 - TREE RETENTION AND REMOVAL CONSIDERATIONS

5.1 OPTION A - TREE 5 REMOVED

5.1.1 The document titled: *Tree 5 Removal – Construction Access Analysis (page 1 - Option A – Tree 5 Removed)* (Attachment C) shows the revised hardstand Driveway, gate layout and swept paths for trucks with Tree 5 removed.

5.1.2 The two-way travel paths for residents' vehicles is significantly less convoluted than that with Tree 5 maintained. This changes the alignment of the two way residents' vehicular access road and it shifts the construction hardstand zone away from Trees 6, 126, 127 and 133.

5.1.3 Gates 5 and 7 are not required, therefore Tree 136 Sydney Red Gum, *Angophora costata* does not require removal (for Gate 5).

5.1.4 Trucks can enter and leave the site in a forward direction creating a safer situation for users of the residents' access road.

5.1.5 The hardstand area within the TPZ of Trees 126 and 127 will be acceptable if constructed in a "tree-sensitive" manner.

5.1.6 The TPZ encroachment of Heritage listed Tree 122 is reduced to an acceptable extent.

5.1.7 There is a feasible truck manoeuvring space around the trunk of Tree 127.

5.2 OPTION B - TREE 5 RETAINED

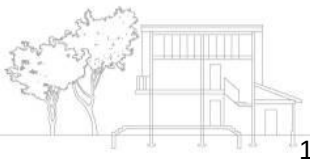
5.2.1 Tree 5 is located central to the construction activity, particularly during the Stage 2 works as indicated in *Tree 5 Removal – Construction Access Analysis (page 2 - Option B – Tree 5 Maintained)* (Attachment C) This is the primary reason why Consent is sought for its removal.

5.2.2 As indicated in the notations to the Option B mark-up truck movements are significantly restricted with Tree 5 retained and places additional pressure on other more significant trees such as Tree 127. The TRAFFIX report dated 3 November, 2016 details three significant truck movement constraints if Tree 5 is retained.

5.2.3 The location of Tree 127 immediately opposite Gate 6 will not allow for adequate tree protection fencing around Tree 127.

5.2.4 Tree 136 a Sydney Red Gum, *Angophora costata* would need to be removed to allow for the ramp construction to Gate 5 on Brown Street.

5.2.5 The kerb and gutter, timber boardwalk and rain garden proposed in the Landscape Plan will require excavation within the Structural Root Zone which will impact on tree stability and longevity.



6. CONCLUSIONS AND RECOMMENDATIONS

6.1 TREE 5 REMOVED

6.1.1 ***The removal of Tree 5 is supported for the reasons outlined below:***

- It will provide a feasible Stage 2 construction hardstand layout benefiting Heritage Listed Tree 122, Moreton Bay Fig, *Ficus macrophylla* and ©Retention Value "A" Tree 127, Port Jackson Fig, *Ficus rubiginosa*.
- There will be less Stage 2 hardstand construction area required within the TPZs of Trees 6, 125, 126 and 127.
- Tree 136 does not need to be removed as Gate 5 onto Brown Street is not required.
- Gate 6 adjacent to Tree 6 will not be required.
- Removal of Tree 5 will benefit the surrounding retained trees including the significant Heritage Listed Tree 6 Weeping Lilly Pilly, *Waterhousea floribunda* by reducing competition for soil nutrients and water and allowing space for the crown to grow in a north-westerly direction.
- The use of the residents' vehicular driveway will be safer as construction trucks will not be required to reverse out.
- It will avoid the root cutting associated with the construction of the raised boardwalk rain garden and new kerb and gutter as indicated on *C-P-2701, Rev D Sitework Plan.*

6.1.2 The visual impacts on the Brown Street streetscape will be negligible given the boundary setback position of Tree 5 and location of other retained trees as indicated in the *Foliage Analysis Trees 5 and 130* mark-up prepared by Brookfield Multiplex Constructions. The *Google Image* markup prepared by Brookfield Multiplex Constructions illustrates the limited extent of crown spread.

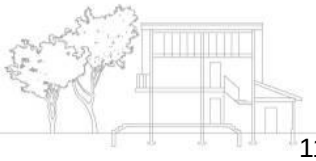
6.1.3 The removal of Tree 5 will allow for better views of the full crown of Tree 6 from the main vehicular entrance to the site following site landscaping.

6.1.4 The removal of Camphor Laurels, *Cinnamomum camphora* on construction sites in Sydney is not generally an issue given the dominating weed properties of the species.

6.2 REPLACEMENT PLANTING FOR TREE 5

6.2.1 New plantings can be added to the Landscape Plan as required to compensate for the short-tem loss of foliage.

6.2.2 We recommend that Tree 5 be replaced with a 1,000 litre, super-advanced Port Jackson Fig, *Ficus rubiginosa*.



Attachment A: Photos

Photo A: Tree 5 Camphor Laurel showing basal suckers and previous pruning wounds resulting in ©Significance Rating of *3*. Trees 4 and 8 to be retained are visible in the background.

Photo B: Tree 5 showing surface roots within SRZ which need to be cut as part of the new kerb and gutter, rain garden and timber boardwalk.

Photo C: Crown of Tree 5 (background) merging with surrounding trees to be retained.

Photo D: Recently installed "tree-sensitive" temporary construction Driveway between Tree 5 and Tree 6. Similar pavement is required adjacent Trees 5, 6, 125, 126, 127, 133, 136 and 137 for the Stage 2 construction.

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.

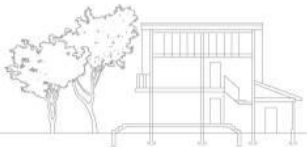
ULE – Useful Life Expectancy. The length of time from the date of inspection that the Arborist estimates the tree will live and provide a useful positive contribution to the landscape amenity of the site. ULE ratings are **Long** (retainable for 40 years or more), **Medium** (retainable for 16-39 years), **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.

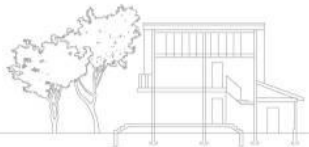
Table 1: ©Significance Rating Characteristics

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: *Tree 5 Removal – Construction Access Analysis (11 Sheets)*

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 biginosa

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 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 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 and protect existing trees

S. Colou g ensures pedestrian priority and traffic calming.

T. Entry a 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 l ssive recreation lawn from adjoining building.

W. Planted roof and balcony areas.

X. Indicat

Existing sprinkler / hydrant booster to remain

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

Tree 5: proposed to be removed under Option A.

Safe area allowance for truck turning: allows for typical 2.5m by 12.5m trucks to drive in / drive out

2 way travel paths of residents' vehicles shown in blue, accessing completed stage 1 buildings

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 A - TREE 5 REMOVED

Existing site fencing, shown in light green dashed lines. Indicative only.

Tree 127: to be retained as per Tree Management Plan.

Tree protection zone for Tree 127

Air roots of Heritage Tree 122

Previously proposed Gate 6 location: trucks entering may endanger Tree 127 due to close proximity.

Point B: RL 15.47

Point A: RL 16.67

Temporary fencing for stage 2, shown in yellow dashed lines. Indicative only.

Construction Zone: Stage 2

CRANE LOADING AREA

Typical Trucks: 2.5m x 12.5m

Construction hard stand for Stage 2, shown in orange

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

Photo 7

6.20 m

30.00 m

12.00 m

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 steps to extent shown. Heritage sandstone steps 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 … obiginosa
- **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 e… 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


PHOTO 1
POINT A
RL 16.67
REFER TO
DRAWING: DA
439
POINT B
RL 15.47
REFER TO
DRAWING: DA
439
1200MM LEVEL
DIFFERENCE
BETWEEN POINTS
A AND B
GATE
1
DANGER
12.10.2016 13:31

PHOTO 2

COMBINED
SPRINKLER/HYDRANT
BOOSTER VALVE

ENTRY/EXIT FOR STAGES 1 AND 2

6200mm

EXISTING FIRE
HYDRANTS

12.10.2016 13:29

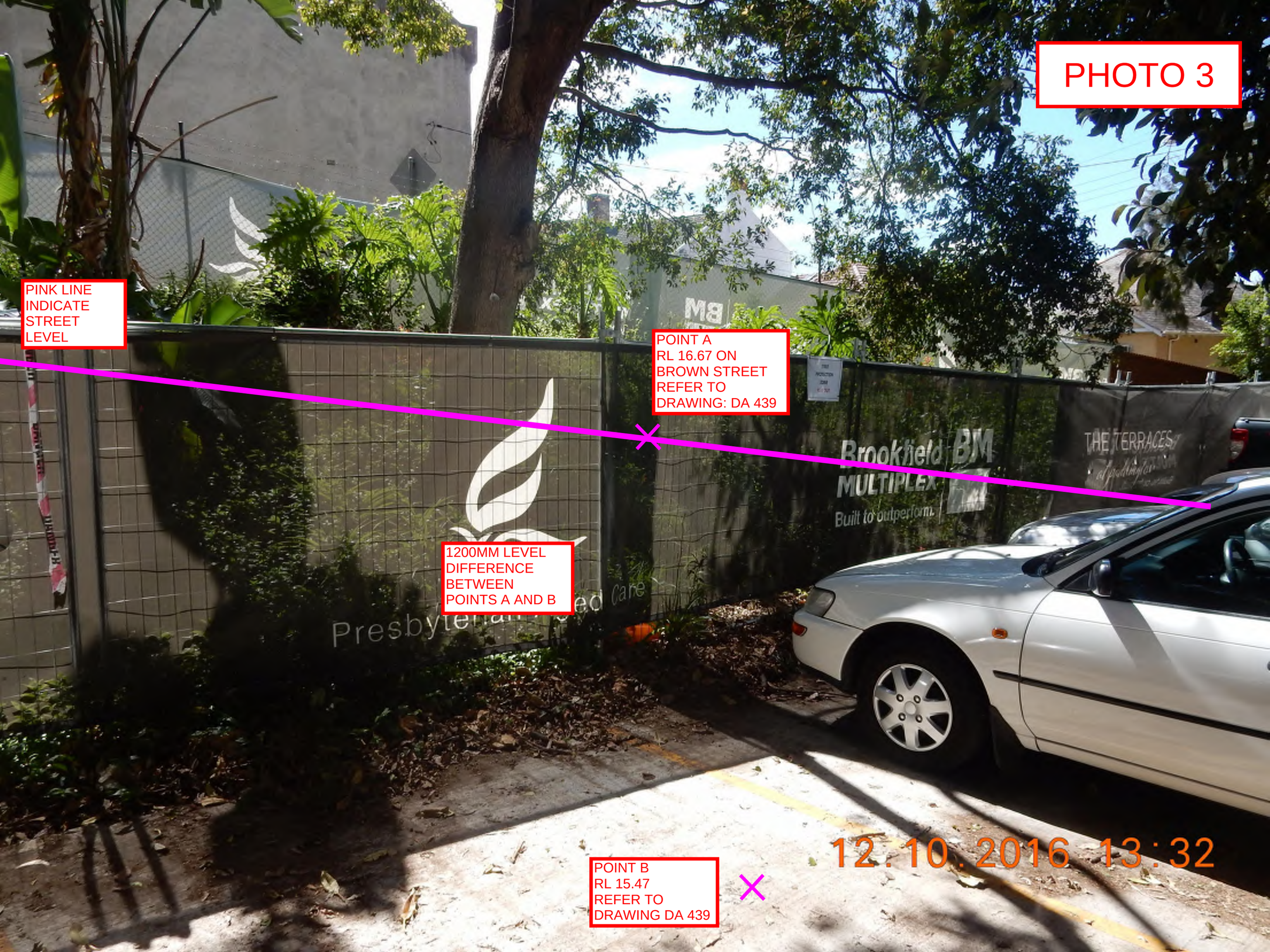


PHOTO 3
PINK LINE INDICATE STREET LEVEL
POINT A
RL 16.67 ON BROWN STREET
REFER TO DRAWING: DA 439
1200MM LEVEL DIFFERENCE BETWEEN POINTS A AND B
POINT B
RL 15.47
REFER TO DRAWING DA 439
Brookfield BM
MULTIPLEX
Built to outperform
THE TERRACES
12.10.2016 13:32

PHOTO 4

SIGNIFICANT TREE 127, TO BE RETAINED

SIGNIFICANT TREE 127: PORT JACKSON FIG, REFER TO TREE WISE MEN REPORT AR-RE-P-1001

18.10.2016 07:45

PHOTO 5

SIGNIFICANT TREE 127, FACING WEST.

18.10.2016 07:46

PHOTO 6

GATE 1

TREE 5, NUISANCE / UNDESIRABLE SPECIES (AS PER AR-RE-1007), PROPOSED TO BE REMOVED DURING STAGE 2 CONSTRUCTION PERIOD

18.10.2016 07:47

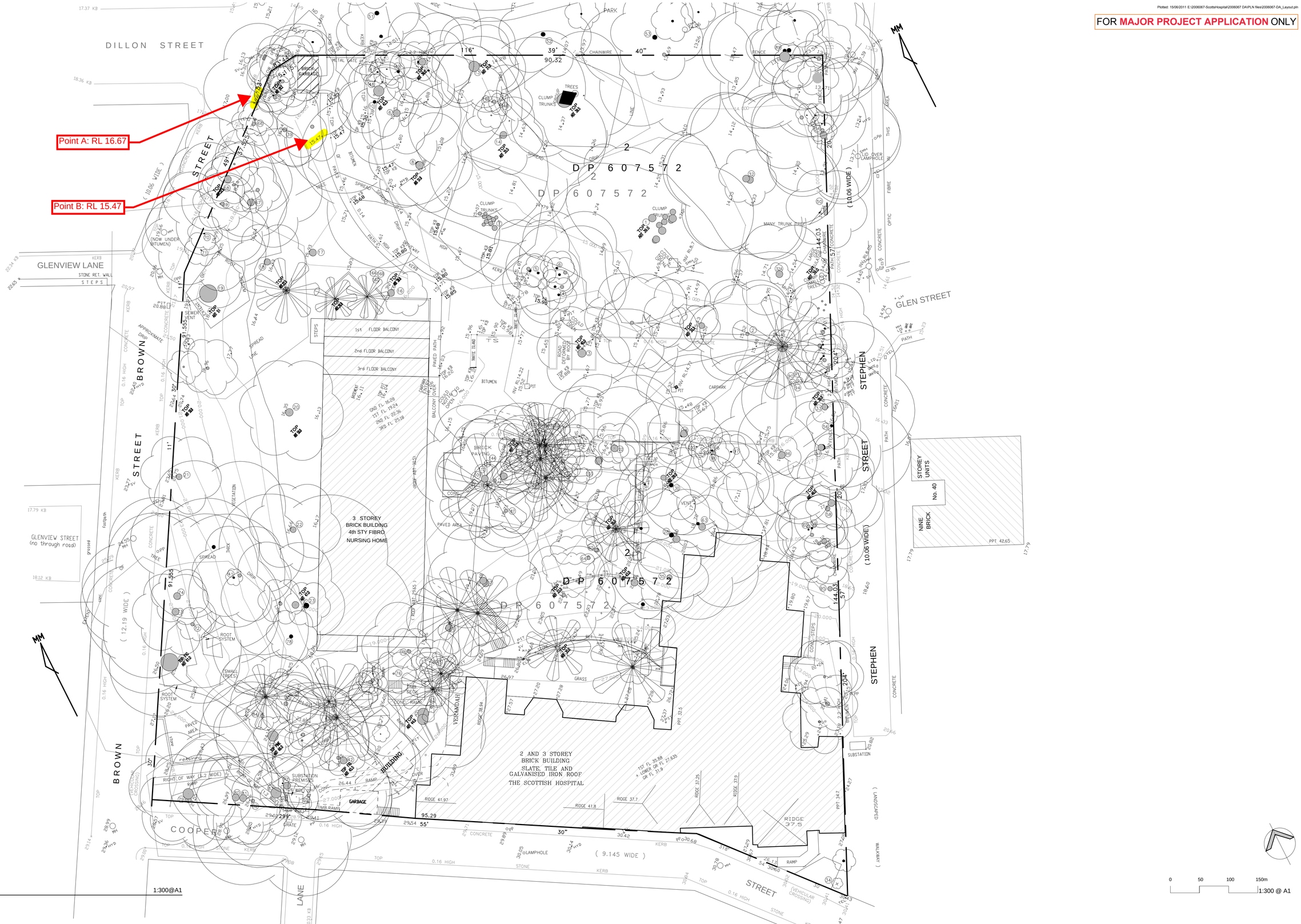
PHOTO 7

HERITAGE SIGNIFICANT TREE 122, VIEWING WEST

SIGNIFICANT AIR ROOTS WILL BE PROTECTED UNDER OPTION A

02.11.2016 07:13

FOR **MAJOR PROJECT APPLICATION** ONLY



01 SITE PLAN 1:300@A1

0 50 100 150m
1:300 @ A1

"THE TERRACES"

SCOTTISH HOSPITAL - 2 COOPER ST. PADDINGTON

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GMU GM Urban Design + Architecture Pty Ltd

CONSULTING ARCHITECT: AGED CARE
Flower and Samios architects

CONSULTING ARCHITECT: HERITAGE
CM+ Conybeare Morrison International Pty Ltd
Architecture Interiors Heritage Urban Design Masterplanning
T. 61 2 8244 8888 F. 61 2 8244 8877 E. mail@cmplus.com.au

SCALE AT A1	DATE	PROJECT No	PROJECT ADDRESS
1:100	07/10/2010	2006067	2 COOPER ST. PADDINGTON
REVISION	**DRAWN**	**ITEM No**	**CLIENT**
A	RM / YS/ RK	38120	Presbyterian Aged Care PADDINGTON

DRAWING TITLE
Existing- Site Survey

DRAWING No
DA 439

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treewise@treewisemen.com.au
www.treewisemen.com.au

COOPER STREET

STAGE 2

STAGE 1

STEPHEN STREET

Indicative location of Temporary Holding Yard for transplanted trees: T47, T86, T110, T120, T128, T129, T145 & T146.

Final location to be determined by site foreman.

NOTE: Must be read in conjunction with Tree Wise Men® Australia Pty Ltd *Tree Management Plan, 246MonTMP*, September, 2015.

LEGEND

Site boundary:	
Stage boundary:	
Existing features footprint:	
Heritage listed tree: T6, T81, T100, T105, T119 & T122.	
Trees to be retained:	
Trees to be removed:	
Trees to be transplanted:	T
Additional care to be taken during tree removal: T82, T83, T111, T112, T113 & T114 (refer to report):	!
Staged Removal (3-6 years): T29, T30, T36 & T39.	SR

TITLE:	**©TREE TRANSPLANT & REMOVAL PLAN**
CLIENT:	BROOKFIELD MULTIPLEX FOR PRESBYTERIAN AGED CARE
PROJECT:	"THE TERRACES" SCOTTISH HOSPITAL, PADDINGTON
DRAWING NO:	246MONTPP SHT 3 OF 5
DRAWN BY:	JB MH
BASED ON:	Shoring and Bulk Excavation Plan By Taylor Thomson Whitting - Consulting Engineers, Job No 141070, DWG No. S-P-0101, Rev P2, Dated 16/03/15
DATE:	17/03/2015
REV:	C REV DATE: 18/09/2015
SCALE:	1:500@A3

0 5 10 25 meters