

REFERRAL RESPONSE – TREES & LANDSCAPING

FILE NO: DA 310/2010/1

ADDRESS: 40 Wentworth Road VAUCLUSE 2030

PROPOSAL: The consolidation of the 3 sites, the demolition of the existing pool and alterations and additions to the existing dwelling-house at 40 Wentworth Rd; the total demolition of the existing dwelling-houses at 49 & 47 Vacluse Rd and the erection of a 2 storey module linked to the dwelling-house on 40 Wentworth Rd containing 13 off-street car parking spaces, gymnasium and pool structure; landscaping and siteworks.

FROM: Andrew Simpson Tree Management Officer

TO: Mr D Booth

I refer to the following documents received for this report:

- Statement of Environmental Effects, prepared by Design Collaborative, dated June 2010
- Survey Plan No. (090706) 40 Wentworth & 49 Vacluse, drafted by Denny Linker & Co, dated 23.02.10
- Architectural Plan Nos , Project 09020 DA 02-0100 Rev A, 1101, 1102, 1103, 1104, 1105, 2000, 2001, 3000 and 3001 drawn by Tzannes Associates, dated 25.06.10.
- Arboricultural Assessment Reports prepared by Tree Transplanters Australia:
 - October 2009
 - Addendum 1, dated November 2009
 - Ref: TTA/VPB170510, dated May 2010
 - Ref: TTA/VPB220610 Addendum 2 (V3), dated June 2010
 - Ref: TTA/VPB230610 Addendum 3, dated June 2010
- Landscape Plan Sheets 1 & 2 designed by Paul Bangay Garden Design, dated 22nd June 2010

A site inspection was carried out on the following day: 19th July 2010

COMMENTS

Forty nine (49) trees have been addressed within this proposal. Of these, thirty four (34) are positioned within the properties known as 40 Wentworth Road & 49 Vacluse Road; twelve (12) trees are positioned within the property known as 47 Vacluse Road. Three (3) trees are positioned on the road reserve of Wentworth Road and are Council-managed trees.

Five (5) Arboricultural Reports have been provided as part of this submission (references are outlined above). The content of these reports with regards to the proposed works is addressed below.

Trees within 40 Wentworth Road & 49 Vacluse Road

Thirty four (34) trees within the properties of 40 Wentworth Road and 49 Vacluse Road will be impacted by the proposed works. Of these:

- Eleven (11) are proposed for removal
- Twenty three (23) trees are proposed to be retained, four (4) of which are proposed to remain in their current location with nineteen (19) proposed to be transplanted.

Trees Proposed for removal

Eleven (11) trees are proposed for removal. These are Trees 2, 15-20, 24, 26, 27 and 28. These trees are generally not considered worthy of retention in the medium term due to health or structural issues. These trees generally provide a minimal contribution to the amenity of the surrounding landscape.

Trees proposed for retention

Twenty three (23) trees have been assessed as being considered worthy of retention. Of these, four (4) are proposed to be retained in their current location, these are Trees 23, 29, 30 and 31.

Tree 23 is a *Ficus rubiginosa* (Port Jackson Fig) which is positioned on the high side of the sandstone escarpment overhanging the rear garden of 51 Vacluse Road. The existing retaining wall to the south of this tree is to be demolished and a new tiered garden is proposed to be constructed. Root spread of this tree will be found along the sand stone wall and under the paving.

The Tree Transplanters Australia Report Ref: TTA/VPB220610 Addendum 2 (V3), dated June 2 Parts 7.1.1 to 7.1.8 details appropriate construction techniques and tree protection measures which if implemented should adequately protect the tree. These tree protection measures should form part of any Conditions of Consent.

Trees 29, 30 and 31 are *Lophostemon confertus* (Brush Box) which are positioned within the property of 40 Wentworth Road adjacent to the Vacluse Road frontage. These Brush Box provide a high contribution to the landscape of the surrounding area as they can be clearly seen from the public domain. The retention of these trees, and in combination with the proposed planting, will act as a screening element to the proposed car parking and guest room structures.

The Tree Assessment Schedule provided in the Arboricultural Assessment Reports prepared by Tree Transplanters Australia, date October 2009 does not indicate Tree Protection Zones (TPZ) for these trees. A TPZ is defined by the Australian Standard The Protection of Trees on Development Sites (AS 4970 -2009) as '*a specified area above and below ground and at a given distance from the trunk set aside for the protection of a tree's roots and crown to provide for the viability and stability of a tree to be retained where it is potentially subject to damage by development*'.

The TPZs for Trees 29, 30 and 31 in accordance with AS 4970 -2009 are 6.4m, 6.5m and 6.6m respectively. The Paul Bangay Garden Design Tree Removal/Retention Plan indicates a 6m TPZ for each of these trees. The indicated TPZ on the supplied plans is reduced directly comparative to the AS 4970 -2009.

Section 02 B of DA 02-3000 Rev A shows the existing grade 6m from the base of these trees as being unaltered. This plan also shows an excavation for the car park also at 6m from the base of these trees. These works are a Minor Encroachment and considered acceptable in accordance with the AS 4970-2009. A Minor Encroachment as defined within the AS 4970 - 2009 is *where works are undertaken within the TPZ which are less than 10% of the area and is outside the SRZ. The area lost to this encroachment should be compensated for elsewhere and contiguous within the TPZ.*

Furthermore, the Tree Transplanters Tree Assessment Schedule indicates that the canopies of Trees 29, 30 and 31 extend east approximately 5m towards the proposed building. There should be no conflict with the proposed building and the canopies of these trees.

The landscape Plan Sheet 2 of 2 indicates a pedestrian path is proposed to be positioned between Trees 29 and 30 and approximately 1m from the centre of their trunks. These trees have a calculated Structural Root Zones (SRZ) of approximately 2.8m. AS 4970 – 2009 defines the SRZ as the *'area around the base of the tree required for the tree's stability in the ground. The woody root growth and soil cohesion in this area are necessary to hold the tree up right'*. The path is proposed to be constructed within the SRZ of these trees.

The path should be constructed using a no-dig design and with the following considerations:

- Adjust the finished grades so that the sub base level is built on top of roots within the TPZ
- To reduce sub-base compaction, place a geo-textile fabric over roots to be retained to protect soil displacement
- Increase the strength of the paving material to minimise the reliance on the sub-base for strength

A new metal fence is also proposed to be installed along the boundary of the Vacluse Road frontage. The potential impact on these trees includes root damage and severance during the positioning of footings. The fence should be supported on isolated piers. The positioning of these piers should be flexible to avoid the severance of roots with a diameter greater than 20mm. Furthermore, piers should not be positioned within the SRZs of these trees.

These trees should be retained and protected throughout any works.

Trees proposed to be transplanted

Trees 1, 3-14, 21, 22, 25 and 32-34 are proposed to be transplanted as part of the works. The species proposed to be transplanted are generally sympathetic to being relocated due to their fibrous root systems. The most limiting factor which influences successful transplantation of a tree is the size of the rootball. The Tree Transplanting Methodology Statement Attachment F of the Transplanters Australia Report, dated October 2009 provides a best practice detailed methodology for this procedure. This Methodology should form part of any Conditions of Consent.

Council-managed street trees

Three (3) Council-managed street trees will be impacted by the proposed works. These have been identified as Trees TA, TB and TC and are located on the road reserve of Wentworth Road.

Trees TA and TB have health and structural defects resultant from repeated poor pruning practices to provide powerline clearance. These trees are not worthy of retention in the context of the development. Replacement trees are proposed to be installed as part of the works. Three (3) suggested replacement species have been provided in Part 5.1 of the Design Collaborative Statement of Environmental Effects, these are *Angophora hispida* (Dwarf Apple), *Buckinghamia celsissima* (Ivory Curl Flower) and *Cupaniopsis anacardioides* (Tuckeroo).

The limiting factor to the species selection is the powerlines positioned approximately 9m above grade. With consideration to this constraint, the most appropriate species for this position is the *Angophora hispida* (Dwarf Apple).

Tree TC has good health and structure with high landscape significance. This tree has been pruned sympathetically for powerline clearance comparative to Trees TA and TB. This tree provides a positive contribution to the amenity of the surrounding area and should be retained as part of the works.

The proposed works are outside the TPZ of Tree TC which is acceptable in accordance with AS 4970-2009. This tree should be retained and protected throughout any works.

Trees within 47 Vacluse Road

Twelve (12) trees within the property of 47 Vacluse Road will be impacted by the proposed works. These trees are all proposed to be removed. It should be noted that there is ambiguity within the documentation regarding Trees 4, 5, 6 and 7. Comments made within the Design Collaborative Statement of Environmental Effects differ from what is indicated on the Landscape Plan sheet 1 of 2.

The Design Collaborative Report (4.1.2) states that “*Depending upon the constraints of the project intent, the removal of some or all of these trees may be a more favourable option with consideration given to replacement planting within the site*”. Where as the Landscape plan indicates these trees are proposed to be removed.

George Korban of *Tzannes Associates Architects Urban Design* has indicated (via e-mail correspondence, dated 22nd July 2010) that these trees are all proposed to be removed.

Replacement Trees

Twenty three (23) canopy trees are proposed to be installed throughout the site as part of the landscape treatment. These replacement trees are a reasonable compensation for the trees to be removed. The replacement species, for the large part, will be able to be seen from the public domain and should provide a positive contribution to the amenity and canopy cover in the medium term.

RECOMMENDATIONS

Council’s Tree and Landscape Officer has determined that the development proposal is satisfactory in terms of tree preservation and landscaping, subject to compliance with the following Conditions of Consent.

CONDITIONS OF CONSENT

Please note that the standard conditions of consent are generally modified by the Technical Services Department to suit a particular development application. Please ensure all Technical Services conditions of consent are cut and pasted from this document only, and not inserted as standard conditions using the automatically generated (F3) function

TABLE OF CONTENTS

- A. General Conditions6**
- A.1 Approved Plans and supporting documents.....6
- B. Conditions which must be satisfied prior to the demolition of any building or construction6**
- B.1 Establishment of Tree Protection Zones6
- B.2 Demolition and Construction Management Plan.7
- B.3 Arborists Periodic Site Inspection and Log8
- C. Conditions which must be satisfied prior to the issue of any construction certificate8**
- C.1 Payment of Security, Levies and Fees (S80A(6) & S94 of the Act, Section 608 of the Local Government Act 1993)8
- C.2 Tree Management Details9
- D. Conditions which must be satisfied prior to the commencement of any development work.....9**
- E. Conditions which must be satisfied during any development work9**
- E.1 Tree Preservation9
- E.2 Tree Preservation & Approved Landscaping Works10
- E.3 Replacement trees which must be planted12
- E.4 Paving in the vicinity of trees13
- E.5 Level changes in the vicinity of trees13
- E.6 Footings in the vicinity of trees13
- F. Conditions which must be satisfied prior to any occupation or use of the building (Part 4A of the Act and Part 8 Division 3 of the Regulation)14**
- F.1 Amenity Landscaping14
- G. Conditions which must be satisfied prior to the issue of any Subdivision Certificate14**
- H. Conditions which must be satisfied prior to the issue of a Final Occupation Certificate (s109C(1)(c))14**
- H.1 Landscaping14
- I. Conditions which must be satisfied during the ongoing use of the development14**
- I.1 Maintenance of Landscaping14
- J. Miscellaneous Conditions.....15**
- K. Advisings.....15**
- K.1 Pruning or Removing a Tree Growing on Private Property15

A. General Conditions

A.1 Approved Plans and supporting documents

Reference	Description	Author/Drawn	Date(s)
Sheets 1 & 2 of 2	Landscape Plan	Paul Bangay Garden Design	22nd June 2010.
	Arboricultural Assessment Report	Tree Transplanters Australia	October 2009
Addendum 1	Arboricultural Assessment Report	Tree Transplanters Australia	November 2009
Ref: TA/VPB170510	Arboricultural Assessment Report	Tree Transplanters Australia	May 2010
Ref: TTA/VPB220610 Addendum 2 (V3)	Arboricultural Assessment Report	Tree Transplanters Australia	June 2010
Ref: TTA/VPB230610 Addendum 3	Arboricultural Assessment Report	Tree Transplanters Australia	June 2010
Ref: TTA/VPB220610 Addendum 2 (V3), 2 Parts 7.1.1 to 7.1.8	Tree Management Plan	Tree Transplanters Australia Report	June 2010
Attachment F	Tree Transplanting Methodology Statement	Transplanters Australia Report	October 2009

Standard Condition: A5

B. Conditions which must be satisfied prior to the demolition of any building or construction

B.1 Establishment of Tree Protection Zones

Before the demolition of any building or construction, a Tree Protection Zone (TPZ) shall be established around the tree/s to be retained not less than the distance shown in the schedule below.

a) Tree Protection Zone areas

Council Ref No	Species	Location	Radius from Trunk (Metres)*
23	<i>Ficus rubiginosa</i> (Port Jackson Fig)	Top of rock escarpment, north boundary of 40 Wentworth	4
29	<i>Lophostemon confertus</i> (Brush Box)	Adjacent to west boundary of 47 Vaucluse Road	6
30	<i>Lophostemon confertus</i> (Brush Box)	Adjacent to west boundary of 47 Vaucluse Road	6
31	<i>Lophostemon confertus</i> (Brush Box)	Adjacent to west boundary of 47 Vaucluse Road	6
TC	<i>Angophora costata</i> (Sydney Red Gum)	Road reserve of Wentworth Road	4

Note: Where this condition relates to street trees and the fence cannot be placed at the specified radius, the fencing is to be positioned so that the entire verge (nature strip) area in front of the subject property, excluding existing driveways and footpaths, is protected.

- a) Tree Protection Fencing shall be installed at the perimeter of the Tree Protection Zones outlined above. The Tree Protection Fence shall consist of 1.8m high temporary chain wire panels supported by steel stakes. They shall be fastened together and supported to prevent sideways movement. The fence shall have a lockable opening for access. The trees' woody roots shall not be damaged during the installation of the Tree Protection Fencing.
- b) The area within the Tree Protection Zone shall be kept free of weeds and grass, and mulched to a depth of 70mm for the duration of works.
- c) Tree Protection Signage shall be attached to each Tree Protection Zone and displayed in a prominent position. The signs shall be repeated at 10m intervals or closer where the fence changes direction. The signage shall be installed prior to the commencement of works on-site and shall be maintained in good condition for the duration of the works. Each sign shall advise the following details:-
 - i. This fence has been installed to prevent damage to the trees and their growing environment. **Access is restricted.**
 - ii. If access, encroachment or incursion into this Tree Protection Zone is deemed essential, prior authorisation is required by the Site Arborist.
 - iii. *Name, address, and telephone number* of the developer
- d) The Tree Protection Zone shall exclude the following activities, except as amended by the following conditions:
 - i. Excavations and trenching
 - ii. Modification of existing soil levels
 - iii. Cultivation of the soil
 - iv. Mechanical removal of vegetation
 - v. Soil disturbance
 - vi. Movement of natural rock
 - vii. Storage of materials, plant or equipment
 - viii. Erection of site sheds
 - ix. Affixing of signage or hoarding to the trees
 - x. Preparation of building materials
 - xi. Disposal of waste materials and chemicals
 - xii. Movement of pedestrian or vehicular traffic
 - xiii. Temporary or permanent location of services, or the works required for their installation
 - xiv. Any other activities that may cause damage to the trees

Standard Condition: B5

B.2 Demolition and Construction Management Plan.

A Demolition and Construction Management Plan in relation to existing trees on/adjacent the subject site must be submitted to Council for further assessment. The plan must consider and make allowance for all construction operations which will be undertaken within the vicinity of existing trees. In particular the plan is to include:

- a) Drawings and method statement showing details of hoarding and scaffold construction and pruning required to accommodate hoarding and scaffolding;
- b) Movement of heavy machinery, lifting cranes, Pier drilling gantry etc.;
- c) How trees will be protected from storage and movements of materials;
- d) Site construction access, temporary crossings and movement corridors on the site defined;
- e) Contractors carparking;
- f) Phasing of construction works;
- g) The space needed for all foundation excavations and construction works;
- h) All changes in ground level;
- i) Space for cranes, plant, scaffolding and access during works;
- j) Space for site sheds, temporary latrines (including any drainage) and other temporary structures;
- k) Space for sorting and storing materials (short or long term), spoil and fuel and the mixing of cement and concrete and
- l) The effects of slope on the movement of potentially harmful liquid spillages towards or into tree protection areas.

B.3 Arborists Periodic Site Inspection and Log

To ensure the condition and health of existing trees are maintained, an arboricultural log book for the subject property is to be prepared by a qualified arborist and retained by the site foreman. Details of the arborists site inspection are to be recorded in the log during each visit. At each site visit the arborist must check and monitor the condition of existing trees and compliance with approved protection measures. As a minimum the following intervals of site inspections by a qualified arborist must be made.

Stage of arboricultural inspection	Minimum considerations at each stage	Additional visits required determined by arborist notes/comments
Prior to the demolition of any building or construction.	Correct installation of Tree Protection Zone barriers.	Make additional site visits as deemed necessary for ongoing monitoring/supervisory work.
During development work.	Tree Preservation and approved works are complied with. Monitor condition of trees.	Visit site at two week intervals to monitor condition of protected trees.
Prior to the issue of a Final Occupation Certificate.	Supervise the dismantling of tree protection measures.	Make additional site visits as deemed necessary for ongoing monitoring of tree vigour.

C. Conditions which must be satisfied prior to the issue of any construction certificate

C.1 Payment of Security, Levies and Fees (S80A(6) & S94 of the Act, Section 608 of the Local Government Act 1993)

Description	Amount	Indexed	Council Fee Code
LONG SERVICE LEVY under Building and Construction Industry Long Service Payments Act 1986			
Tree Damage Security Deposit – Making good any damage caused to any public tree as a consequence of the doing of anything to which the consent relates.	\$2860	No	T600

INSPECTION FEES			
under section 608 of the Local Government Act 1993			
Public Tree Management Inspection Fee	\$166.00	No	T95

Standard Condition: C5

C.2 Tree Management Details

The *Construction Certificate* plans and specifications required by clause 139 of the *Regulation* must, show the following information;

- a) trees to be numbered in accordance with these conditions,
- b) shaded green where required to be protected and retained,
- c) shaded yellow where required to be transplanted,
- d) shaded blue where required to be pruned,
- e) shaded red where authorised to be removed and,
- f) references to applicable tree management plan, arborists report, transplant method statement or bush regeneration management plan.

Standard Condition: C30

D. Conditions which must be satisfied prior to the commencement of any development work

E. Conditions which must be satisfied during any development work

E.1 Tree Preservation

All persons must comply with Council's *Tree Preservation Order* ("the TPO"), other than where varied by this consent. The order applies to any tree, with a height greater than 5 metres or a diameter spread of branches greater than 3 metres, is subject to Council's *Tree Preservation Order* unless, exempted by specific provisions. Works to be carried out within a 5 metre radius of any tree, subject to the *Tree Preservation Order*, require the prior written consent of Council.

General Protection Requirements:

- a) Unless specified in this Consent, there must be no excavation or *work* within the required *Tree Protection Zone(s)*. The *Tree Protection Zone(s)* must be maintained during all *development work*.
- b) Roots with a diameter equal to or greater than 20mm which are located within the *Tree Protection Zones* of trees to be retained must not be damaged or severed. A qualified Arborist (minimum AQF Level 5) must inspect and note all exposed roots. Excavation must only recommence when the Arborist is satisfied works can be achieved in accordance with the Conditions in this Development Consent.
- c) Any damage to above or below parts of the tree must be inspected by the Site Arborist. The *principal contractor* must immediately implement treatment as directed by the arborist or where specific instructions are given by Council's *Tree Management Officer* in strict accordance with such Council instructions.

Note: Trees must be pruned in accordance with *Australian Standard AS 4373 "Pruning of Amenity Trees"* and *WorkCover NSW Code of Practice Amenity Tree Industry*.

Standard Condition: E8

E.2 Tree Preservation & Approved Landscaping Works

All landscape works must be undertaken in accordance with the approved landscape plan, arborist report, tree management plan and transplant method statement as applicable.

a) The following trees must be retained

- Trees on Private Land

Council Ref No	Species	Location
23	<i>Ficus rubiginosa</i> (Port Jackson Fig)	Top of rock escarpment, north boundary of 40 Wentworth
29	<i>Lophostemon confertus</i> (Brush Box)	Adjacent to west boundary of 47 Vacluse Road
30	<i>Lophostemon confertus</i> (Brush Box)	Adjacent to west boundary of 47 Vacluse Road
31	<i>Lophostemon confertus</i> (Brush Box)	Adjacent to west boundary of 47 Vacluse Road

- Trees on Council Land

Council Ref No	Species	Location	Tree Value
TC	<i>Angophora costata</i> (Sydney Red Gum)	Road reserve of Wentworth Road	\$2860.00

Note: The tree/s required to be retained should appear coloured green on the construction certificate plans.

b) The following trees must be transplanted and successfully established in the location(s) indicated on the approved landscape plan:

Council Ref No	Species	Location	Height (metres)
1	<i>Washingtonia robusta</i> (Washington Palm)	Refer Tree Removal/Retention Plan	9
3	<i>Strelitzia Nicolai</i> (Giant Bird of Paradise)	Refer Tree Removal/Retention Plan	6
4	<i>Strelitzia Nicolai</i> (Giant Bird of Paradise)	Refer Tree Removal/Retention Plan	7
5	<i>Washingtonia robusta</i> (Washington Palm)	Refer Tree Removal/Retention Plan	18
6	<i>Washingtonia robusta</i> (Washington Palm)	Refer Tree Removal/Retention Plan	9
7	<i>Phoenix dactylifera</i> (Date Palm)	Refer Tree Removal/Retention Plan	4
8	<i>Phoenix dactylifera</i> (Date Palm)	Refer Tree Removal/Retention Plan	3
9	<i>Dracaena draco</i> (Dragon Tree)	Refer Tree Removal/Retention Plan	4
10	<i>Howea forsteriana</i> (Kentia Palm)	Refer Tree Removal/Retention Plan	4
11	<i>Howea forsteriana</i> (Kentia Palm)	Refer Tree Removal/Retention Plan	4
12	<i>Howea forsteriana</i> (Kentia Palm)	Refer Tree Removal/Retention Plan	6

Council Ref No	Species	Location	Height (metres)
13	<i>Howea forsteriana</i> (Kentia Palm)	Refer Tree Removal/Retention Plan	4
14	<i>Howea forsteriana</i> (Kentia Palm)	Refer Tree Removal/Retention Plan	4
21	<i>Dracaena draco</i> (Dragon Tree)	Refer Tree Removal/Retention Plan	2.5
22	<i>Dracaena draco</i> (Dragon Tree)	Refer Tree Removal/Retention Plan	3
25	<i>Lepidozamia peroffskyana</i> (Pineapple Zamia)	Refer Tree Removal/Retention Plan	2
32	<i>Washingtonia robusta</i> (Washington Palm)	Refer Tree Removal/Retention Plan	7
33	<i>Washingtonia robusta</i> (Washington Palm)	Refer Tree Removal/Retention Plan	9
34	<i>Washingtonia robusta</i> (Washington Palm)	Refer Tree Removal/Retention Plan	9

The above trees shall be transplanted in accordance with the Tree Transplanting Methodology Statement Attachment F of the Transplanters Australia report, date October 2009.

Note: The tree/s required to be retained should appear coloured yellow on the construction certificate plans.

c) The following trees may be removed:

Council Ref No	Species	Location	Height (metres)
2	<i>Magnolia x soulangeana</i> (Saucer Magnolia)	Refer Tree Removal/Retention Plan	5
15	<i>Cupressus sempervirens</i> "Stricta" (Pencil Pine)	Refer Tree Removal/Retention Plan	5
16	<i>Cupressus sempervirens</i> "Stricta" (Pencil Pine)	Refer Tree Removal/Retention Plan	5
17	<i>Cupressus sempervirens</i> "Stricta" (Pencil Pine)	Refer Tree Removal/Retention Plan	5
18	<i>Cupressus sempervirens</i> "Stricta" (Pencil Pine)	Refer Tree Removal/Retention Plan	5
19	<i>Cupressus sempervirens</i> "Stricta" (Pencil Pine)	Refer Tree Removal/Retention Plan	5
20	<i>Cupressus sempervirens</i> "Stricta" (Pencil Pine)	Refer Tree Removal/Retention Plan	5
24	<i>Livistonia australis</i> Cabbage (Tree Palm)	Refer Tree Removal/Retention Plan	25
26	<i>Castanospermum australe</i> (Black Bean)	Refer Tree Removal/Retention Plan	7
27	<i>Lophostemon confertus</i> (Brush Box)	Refer Tree Removal/Retention Plan	10
28	<i>Syzygium australe</i> (Scrub Cherry)	Refer Tree Removal/Retention Plan	10
1	<i>Magnolia grandiflora</i> "Little gem" (Magnolia Variety)	Within 47 Vaucluse Road (Refer Tree Removal/Retention Plan)	4

2	<i>Magnolia grandiflora</i> "Little gem" (Magnolia Variety)	Within 47 Vaucluse Road (Refer Tree Removal/Retention Plan)	5
3	<i>Magnolia grandiflora</i> "Little gem" (Magnolia Variety)	Within 47 Vaucluse Road (Refer Tree Removal/Retention Plan)	4
4	<i>Syzygium australe</i> (Scrub Cherry)	Within 47 Vaucluse Road (Refer Tree Removal/Retention Plan)	6
5	<i>Syzygium australe</i> (Scrub Cherry)	Within 47 Vaucluse Road (Refer Tree Removal/Retention Plan)	6
6	<i>Syzygium australe</i> (Scrub Cherry)	Within 47 Vaucluse Road (Refer Tree Removal/Retention Plan)	6
7	<i>Camellia japonica</i> (Camellia)	Within 47 Vaucluse Road (Refer Tree Removal/Retention Plan)	5
8	<i>Syzygium australe</i> (Scrub Cherry)	Within 47 Vaucluse Road (Refer Tree Removal/Retention Plan)	5
9	<i>Acacia fimbriata</i> (Fringed Wattle)	Within 47 Vaucluse Road (Refer Tree Removal/Retention Plan)	6
10	<i>Acacia fimbriata</i> (Fringed Wattle)	Within 47 Vaucluse Road (Refer Tree Removal/Retention Plan)	6
11	<i>Acacia fimbriata</i> (Fringed Wattle)	Within 47 Vaucluse Road (Refer Tree Removal/Retention Plan)	6
12	<i>Ficus rubiginosa</i> (Port Jackson Fig)	Within 47 Vaucluse Road (Refer Tree Removal/Retention Plan)	5

Note: The tree/s that may be removed should appear coloured red on the construction certificate plans.

E.3 Replacement trees which must be planted

Replacement planting shall be installed in accordance with the Landscape Plan Sheets 1 & 2 designed by Paul Bangay Garden Design, dated 22nd June 2010. Replacement plants shall be maintained in a healthy and vigorous condition until they are protected by Council's Tree Preservation Order.

If the replacement plant is found to be faulty, damaged, dying or dead before it attains a size whereby it is protected by Council's Tree Preservation Order, it must be replaced with another of the same species which complies with the criteria outlined below. All replacement trees are to be grown in accordance with NATSPEC.

Species/Type	Planting Location	Container Size or Size of Tree (@ time of planting)	Minimum Dimensions at Maturity
<i>Angophora hispida</i> (Dwarf Apple)	Road reserve of Wentworth Road	100 Litre	8m height x 5m spread
All replacement trees are to be NATSPEC grown.			

E.4 Paving in the vicinity of trees

The path extending between Trees 29 and 30 must be constructed utilising materials/techniques designed to ensure that alterations (cut/fill) to the existing grade do not occur and roots are retained and protected. The path shall be designed to:

- Adjust the finished levels so that the sub base level is built on top of roots within the TPZ
- Achieve a reduction of the need for sub-base compaction by placing a geo-textile fabric over roots to protect soil displacement
- Increasing the strength of the paving material and minimising the reliance on the sub-base for strength
- The paved surface shall be made of a permeable material

E.5 Level changes in the vicinity of trees

Level changes shall not occur within the specified radius from the trunks of the following trees.

Council Ref No:	Species	Location	Radius from Trunk (metres)
23	<i>Ficus rubiginosa</i> (Port Jackson Fig)	Top of rock escarpment, north boundary of 40 Wentworth	4
29	<i>Lophostemon confertus</i> (Brush Box)	Adjacent to west boundary of 47 Vaucluse Road	6
30	<i>Lophostemon confertus</i> (Brush Box)	Adjacent to west boundary of 47 Vaucluse Road	6
31	<i>Lophostemon confertus</i> (Brush Box)	Adjacent to west boundary of 47 Vaucluse Road	6
TC	<i>Angophora costata</i> (Sydney Red Gum)	Road reserve of Wentworth Road	4

E.6 Footings in the vicinity of trees

Footings positioned within the specified radius of the following trees shall be constructed using an isolated pier and beam construction method. Excavations for the piers shall be located so that no root with a diameter equal to or greater than 20mm is severed or damaged. The smallest possible area is to be excavated which allows construction of the pier. All beams are to be placed clear of the existing grade and designed to bridge all roots to be retained.

All piers shall be positioned outside the Structural Root Zone of trees to be retained.

Council Ref No:	Species	Location	Radius from centre of trunk (metres)
23	<i>Ficus rubiginosa</i> (Port Jackson Fig)	Top of rock escarpment, north boundary of 40 Wentworth	4
29	<i>Lophostemon confertus</i> (Brush Box)	Adjacent to west boundary of 47 Vaucluse Road	6
30	<i>Lophostemon confertus</i> (Brush Box)	Adjacent to west boundary of 47 Vaucluse Road	6
31	<i>Lophostemon confertus</i>	Adjacent to west boundary of 47 Vaucluse Road	6

	(Brush Box)		
--	-------------	--	--

F. Conditions which must be satisfied prior to any occupation or use of the building (Part 4A of the Act and Part 8 Division 3 of the Regulation)

F.1 Amenity Landscaping

The *owner* or *principal contractor* must install all approved amenity landscaping (screen planting, soil stabilisation planting, etc.) prior to any occupation or use of the site.

Note: This condition has been imposed to ensure that the environmental impacts of the development are mitigated by approved landscaping prior to any occupation of the development.

Standard Condition: F6

G. Conditions which must be satisfied prior to the issue of any Subdivision Certificate

Nil

H. Conditions which must be satisfied prior to the issue of a Final Occupation Certificate (s109C(1)(c))

H.1 Landscaping

All landscape work including all planting must be completed by the *principal contractor* or *owner* in compliance with the approved landscape plan, arborist report, transplant method statement and tree management plan. The *principal contractor* or *owner* must provide to *PCA* a works-as-executed landscape plan and certification from a qualified landscape architect/designer, horticulturist and/or arborist as applicable to the effect that the works as completed comply with this consent.

Note: This condition has been imposed to ensure that all Landscaping work is completed prior to the issue of the *Final Occupation Certificate*.

Standard Condition: H9

I. Conditions which must be satisfied during the ongoing use of the development

I.1 Maintenance of Landscaping

All landscaping must be maintained in general accordance with this consent.

This condition does not prohibit the planting of additional trees or shrubs subject that they are native species endemic to the immediate locality.

Reason: This condition has been imposed to ensure that the landscaping design intent is not eroded over time by the removal of landscaping or inappropriate exotic planting.

Note: This condition also acknowledges that development consent is not required to plant vegetation and that over time additional vegetation may be planted to replace vegetation or enhance the amenity of the locality. Owners should have regard to the amenity impact of trees upon the site and neighbouring land. Further, drought proof vegetation being native species endemic to the immediate locality is encouraged. Suggested native species endemic to the immediate locality are listed in the Brochure Titled "Local Native Plants for Sydney's Eastern Suburbs" published by Woollahra, Waverley, Randwick and Botany Bay Councils.

Standard Condition: I8

J. Miscellaneous Conditions

Nil

K. Advisings

K.1 Pruning or Removing a Tree Growing on Private Property

Woollahra Municipal Council's *Tree Preservation Order* 2006 (TPO) may require that an application be made to Council prior to pruning or removing any tree. The aim is to secure the amenity of trees and preserve the existing landscape within our urban environment.

Before you prune or remove a tree, make sure you read all relevant conditions. You can obtain a copy of the TPO from Council's website www.woollahra.nsw.gov.au or you may contact Council on 9391-7000 for further advice.

Standard Condition: K19

Andrew Simpson
Tree Officer