



JACKSONS NATURE WORKS

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ARBORICULTURAL IMPACT ASSESSMENT REPORT

At

**44 Lovett Street
Manly Vale**

Prepared for

Watermark Construction Group

3rd February 2020

Prepared by: Ross Jackson

Graduate Certificate in Arboriculture (AQF L 8)

Dip. Horticulture (Arboriculture – AQF L 5)

Certificate III in Horticulture (Arboriculture)

Certificate in Horticulture (Landscape)

Member of the Arboriculture Australia (MAA)

Member of the Australian Institute of Horticulture

Consulting Arborist Nos.1695

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DISCLAIMER

The Client acknowledges that this Report, and any opinions, advice or recommendations expressed or given in it, are the information supplied by the Client and on the data inspections, measurements and analysis carried out or obtained by Jacksons Nature Works (JNW) and referred to in the Report. The Client should rely on The Report, and on its contents, only to that extent.

Care has been taken to obtain all information from reliable sources. All data has been verified as far as possible. However, Ross Jackson – Consulting Arborist can neither guarantee nor be responsible for the accuracy of information provided by others.

Unless stated otherwise:

- Information contained in this report covers only the trees examined and reflects the health and structure of the trees at the time of inspection. The documented, observations, results, recommendations and conclusions given may vary after the site visit due to environmental conditions.
- The inspection was limited to visual examination from the base of the subject tree without dissection, probing or coring; and
- There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the subject trees may not arise in the future.
- Unauthorised use of this report in any form is prohibited and remains the intellectual property of Jacksons Nature Works until all costs are settled.

Ross Jackson.

Consulting Arborist

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1. BACKGROUND and METHODOLOGY

- 1.1 The purpose of this Tree Report is to inform and accompany the development application works at 44 Lovett Street, Manly Vale – The Site.
- 1.2 The report was commissioned by Watermark Construction Group to respond to Council's requirements to consider the development impacts on trees located on and around the Site.
- 1.3 This report outlines the health and condition of the subject trees, the remaining life expectancy of the trees, identifies any visible defects or other problems, describes which trees require pruning, removal, retention or represent a potential hazard and comments on the impact on these trees in relation to the works proposed. The report also provides recommended tree protection measures (Tree Management Plan) to ensure the long-term preservation of the trees to be retained where appropriate.
- 1.4 The Site is a residential site with gardens at Manly Vale.
- 1.5 The trees were identified by ground level Visual Tree Assessment (VTA) ¹ only in the data collection, taken on 28.11.2019. No aerial (climbing) was undertaken.
- 1.6 All site photographs were taken by the author at the site. All photographs were taken using a digital camera (Canon 7D) with no image enhancement either within the camera or on computer.
- 1.7 The subject trees were located on plans supplied. The trees have been plotted and can be found on Annexure B – Tree Location Plan.
- 1.8 The trees were identified and their genus species and common name used. The trees were identified by the use of data collected and compared to G Burnie, S Forrester et al (1997) **Botanica** Random House, Milsons Point, NSW, Australia.
- 1.9 DBH. The Trunk Diameter at Breast Height (1.4 metres above ground level) in centimetres was measured over bark using a metal tape which automatically converts to diameter and assumes a circular trunk cross section.
- 1.10 DRB. The trunk Diameter above Root Buttress in centimetres was measured over bark using a metal tape which automatically converts to diameter and assumes a circular trunk cross section.
- 1.11 Height. Estimated overall height in metres.
- 1.12 Spread. Measured with a metal tape measure and shown in metres.
- 1.13 Useful Life Expectancy (ULE)².
A systematic pre-development tree assessment procedure developed by Jeremy Barrell, Hampshire, England. It gives a length of time that the Arborist feels a

¹ Mattheck, Dr. Clause & Breloer, Helge (1994) – Sixth Edition (2001) **The Body Language of Trees – A Handbook for Failure Analysis** The Stationery Office, London, England

² Barrell, Jeremy (1996, 2001) **Pre-development Tree Assessment** Proceedings of the International Conference on Trees and Building Sites (Chicago) International Society of Arboriculture, Illinois, USA

particular tree can be retained with an acceptable level of risk based on the information available at the time of the inspection. SULE ratings are Long (retainable for 40 years or more with an acceptable level of risk), Medium, (retainable for 16 – 39 years), Short (retainable for 5 – 15 years) and Removal (tree requiring immediate removal due to imminent hazard or absolute unsuitability).

1.14 The Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) have been calculated in terms of AS 4970 – 2009 Protection of trees on development site Section 3.

1.15 To prepare this report we have reviewed the following documents:

- Detail survey by Waterview Surveying Services, dated 3.12.2019;
- Architectural plans by Watermark Construction Group, dated 15.12.2019;
- Northern Beaches Council, B4.22 Preservation of Trees or Bushland Vegetation (TPO); &
- Australian Standard AS 4970 – 2009 Protection of trees on development sites.

2. OBSERVATIONS as seen on the days of inspection (28.11.2019)

2.1 Our tree observations can be found in Annexure A.

3. DISCUSSIONS

3.1 We have been commissioned by Watermark Construction Group, to examine the health and condition of the trees on and around this development site.

It is proposed to demolish the existing deck and construct a new deck to existing residence on Site (development works).

3.2 We have examined the trees on site and can suggest the following considerations for the development works:

1. Tree 1 *Ficus rubiginosa* shows good vitality with an elevated form – refer plate 1. The proposed deck will be constructed on posts anchored to the existing rock which will not impact the root system of this tree, then constructed the deck with care. It is noted, no branch pruning is required to build the deck. All work is within the TPZ & SRZ of this tree, but by locating the posts on existing rock, the encroachment is considered acceptable as defined by AS 4970 – 2009. The new posts installation shall be supervised by the Project Arborist to ensure no damage occurs to this tree. Otherwise the work can proceed with care.

There are a number of trees in the front yard that are being retained and as all materials are being carried in by hand, they were not assessed.

By employing the above methodology, the deck can be built without affecting the stability and viability of this high retention value tree.

Note this tree for retention and protection (temporary fence around the base of the tree) in the Tree Management Plan.



Plate 1 – existing deck with clearance to tree 1

4. RECOMMENDATIONS

The following recommendations are advised:

- a) Retain the following tree on site: Tree 1;
- b) Install the following Tree Protection Measures around the retained tree: Tree 1, tree protection measures shall be a temporary fence of chain wire panels 1.8 metres in height (or equivalent), supported by steel stakes or concrete blocks as required and fastened together and supported to prevent sideways movement. Existing boundary fences or walls are to be retained shall constitute part of the tree protection fence where appropriate. A sign is to be erected on the tree protection fences of the trees to be retained that the trees are covered by Council's tree preservation orders and that "No Access" is permitted into the tree protection zone – refer Annexure D;
- c) That a Tree Management Plan be prepared as part of the Construction Certificate by a consulting arborist who holds the Diploma in Horticulture (Arboriculture), Level 5 or above under the Australian Qualification Framework;
- d) An AQF Level 5 Project Arborist shall be engaged to supervise the building works and certify compliance with all Tree Protection Measures.
- e) The tree location plan can be found on Annexure B; &

f) The tree impact plan can be found on Annexure C.

A handwritten signature in black ink, appearing to read 'Ross Jackson', with a stylized flourish at the end.

Ross Jackson M.A.A. & M.A.I.H.
Consulting Arborist 1695
Graduate Certificate in Arboriculture AQF Level 8
Horticulture (Arboriculture) – AQF Level 5
Certificate III in Horticulture

Annexure A: Observations as seen on the day of inspection of trees

Tree No	Botanical Name	Age Class	Height – m	Spread - m	D.B.H (cm)	D.R.B (cm)	TPZ & SRZ Rad.m	Condition comments on trees as seen on site	ULE
1	<i>Ficus rubiginosa</i>	M	16	20	110	112	12.0, 3.6	G vitality with roots going in and around surrounding rook	2

Terms used in Tree Survey & Report:

Age Class

(Y) – Young refers to a well-established but juvenile tree. Less than 1/3 life expectancy

(SM) – Semi-mature refers to a tree at growth stages between immaturity and full size. A tree has reached First Adult Form i.e. displays adult characteristics. 1/3 to 2/3 life expectancy

(M)- Mature refers to a full size tree with some capacity for future growth. Older than 2/3 life expectancy

(OM) – Over-mature refers to a tree approaching decline or already declining. Older than 2/3 life expectancy and showing signs of irreversible decline.

Health refers to a tree's vigour, growth rate, disease and/or insects.

Vitality summarises observations about the health and structure of the tree on a scale of: **(G) Good, (F) Fair, (P) Poor, (P) Poor & (D) Dead.**

Good: Tree is generally healthy and free from obvious signs of structural weaknesses or significant effects of pests and diseases or infection;

Fair: Tree is generally vigorous although has some indication of being adversely affected by the early effects of disease or infection or environmental or mechanical damage. Appropriate tree maintenance can usually improve overall health and halt decline;

Poor: Tree in decline and is not likely to improve with reasonable maintenance practices or has a structural fault such as bark inclusion;

Dead: Tree no longer capable of sustained growth.

Deadwood (DW) – deadwood found in canopy as a percentage.

Over Head Power Lines (OHPL) – upper canopy pruned to accommodate power lines at a given height.

Height expressed in metres refers to estimated overall height of tree.

Next Door tree (ND) – tree located in the neighbour's property.

Street Tree (ST) – tree located in Councils footpath reserve.

Spread expressed in metres refers to estimated spread of crown at the drip line.

(DBH) Diameter at Breast Height expressed in millimetres refers to the trunk diameter at 1.4 metres above ground level. Where there are multiple trunks the combined diameter has been calculated in terms of Appendix A – AS 4970 – 2009, shown in brackets.

(DRB) Diameter above Root Buttress expressed in millimetres refers to the trunk diameter above root buttress.

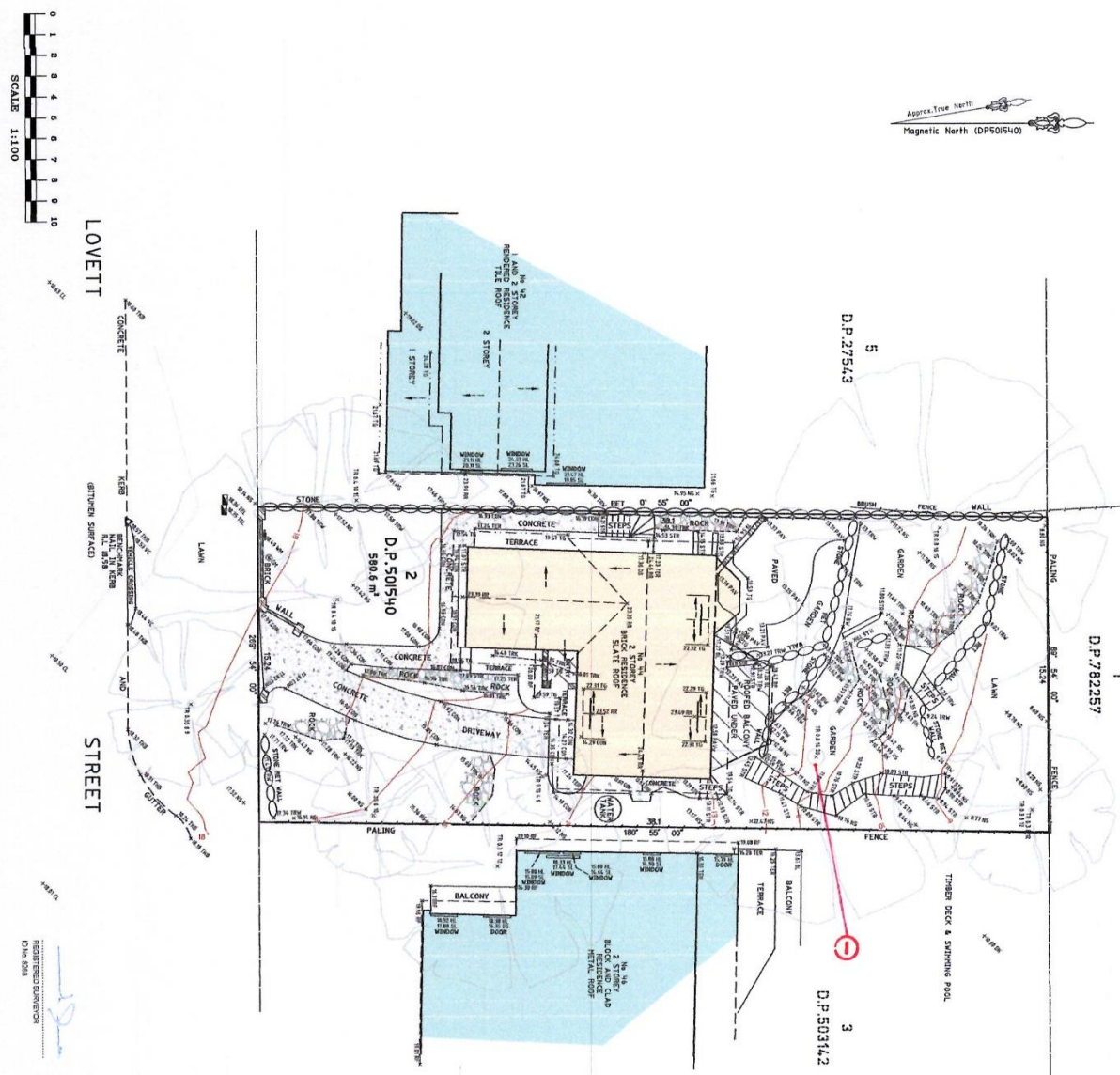
(TPZ) Tree Protection Zone & Structural Root Zone (SRZ) as defined by AS 4970 – 2009 Section 3

(ULE) The various ULE categories indicate the useful life anticipated for an individual tree or trees assessed as a group. Factors such as the location, age, condition and vitality of the tree are significant to the determination of this rating. Other influences such as the tree's effect on better specimens and the economics of managing the tree successfully in its location are also relevant to ULE (Barrell 1993, 1995, 2001).

ULE RATING (UPDATED 1/4/01) BARRELL

1.Long ULE: Trees that appear to be retainable at the time of assessment for more than 40 years with an acceptable level of risk.	2.Medium ULE: Trees that appear to be retainable at the time of assessment for more than 15-40 years with an acceptable level of risk.	3.Short ULE: Trees that appear to be retainable at the time of assessment for more than 5-15 years with an acceptable level of risk.	4.Remove: Trees that should be removed within the next 5 years.	5.Small, young or regularly pruned: Trees that can be reliably moved or replaced.
(A) Structurally sound trees located in positions that can accommodate future growth	(A) Trees that may only live between 15 and 40 more years.	(A) Trees that may only live between 5 and 15 more years.	(A) Dead, dying, suppressed or declining trees because of disease or inhospitable conditions.	(A) Small trees less than 5 Metres in height.
(B) Trees that could be made suitable for retention in the long term by remedial tree care.	(B) Trees that could live for more than 40 years but may be removed for safety or nuisance reasons.	(B) Trees that could live for more than 15 years but may be removed for safety or nuisance reasons.	(B) Dangerous trees because of instability or recent loss of adjacent trees.	(B) Young trees less than 15 years old but over 5 metres in height.
(C) Trees of special significance for historical, commemorative or rarity reasons that would warrant extraordinary efforts to secure their long term retention.	(C) Trees that could live for more than 40 years but may be removed to prevent interference with more suitable individuals or to provide space for new planting.	(C) Trees that could live for more than 15 years but may be removed to prevent interference with more suitable individuals or to provide space for new planting.	(C) Dangerous trees because of structural defects including cavities, decay, included bark, wounds or poor form.	(C) Formal hedges and trees intended for regular pruning to artificially control growth.
	(D) Trees that could be made suitable for retention in the medium term by remedial tree care.	(D) Trees that require substantial remedial tree care and are only suitable for retention in the short term.	(D) Damaged trees that are clearly not safe to retain.	
			(E) Trees that could live for more than 5 years but may be removed to prevent interference with more suitable individuals or to provide space for new planting.	
			(F) Trees that are damaging or may cause damage to existing structures within 5 years.	
			(G) Trees that will become dangerous after removal of other trees for the reasons given in (A) to (F).	
			(H) Trees in categories (A) to (G) that have a high wildlife habitat value and, with appropriate treatment, could be retained subject to regular review.	

Annexure B: Tree location plan



TITLE INDICATES THAT LOT 2 IN D.P.501540 IS SUBJECT TO
- RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S).
- J373638 COVENANT (NOT INVESTIGATED)

Scale 1:100 @ A1	Rev. A
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FINNOCIL 1010	1010detail 1
Date of survey 03/12/2019	

BEING LOT 2 IN DP.501540

PROJECT: 1010 PAGE 1 OF 1

44 LOVETT STREET
MANLY VALE NSW 2093

Detail and Levels over

44 LOVETT STREET
MANLY VALE NSW 2093

DATE: 01/15/2010

NAME: SADA WIRIYUT

DATUM: AUSTRALIAN HEIGHT DATUM (AHD)
B.M. PM 745
R.L. 14.90
SOURCE: S.G.I.V.S. 3/12/2019

Westcott Catalog

ACN 610 583 572
michael@wvsurveying.com.au
0674 943 180

SURVEYING SERVICES
14 Mona Street Mona Vale NSW 2103


WaterView

* THIS NOTICE MUST NOT BE DISASTED.

* NO PART OF THIS SURVEY MAY BE REPRODUCED, STORED IN A RETRIEVAL SYSTEM OR TRANSMITTED IN ANY FORM, WITHOUT THE WRITTEN PERMISSION OF THE COPYRIGHT OWNER EXCEPT AS PERMITTED BY THE COPYRIGHT ACT 1958.

• IF ACCURATE TIME WORTH IS REQUIRED A FURTHER SURVEY WOULD BE NECESSARY.

- POSITION OF INDEX LINES ARE DIMENSIONAL ONLY (NOT TO SCALE).
- THE INFORMATION IS ONLY TO BE USED AT A SCALE ACCURACY OF 10%.

- CONTIGS SHOWN REFLECT THE TOPOGRAPHY, EXCEPT AT SPOT LEVELS SHOWN, THEY DO NOT REPRESENT THE EXACT LEVEL AT ANY PARTICULAR POINT. ONLY SPOT LEVELS SHOULD BE USED FOR CALCULATIONS OF QUANTITIES WITH CAUTION.

- CRITICAL SPOT LEVELS SHALL BE COMPARIED WITH SURVEY.
- THIS PLAN IS ONLY TO BE USED FOR THE PURPOSE OF DESIGNING NEW CONSTRUCTION.

ONLY VARIABLE SERVICES HAVE BEEN LOCATED. UNDERGROUND SERVICES HAVE NOT BEEN LOCATED. SOIL BORING YOU OBS SERVICES (A TNA) SHOULD BE USED AND A TOLL UTILITY INVESTIGATION INCLUDING A UTILITY LOCATION SURVEY, SHOULD BE INITIATED BEFORE CASTING OUT ANY CONSTRUCTION ACTIVITY IN OR NEAR THE EXISTING FOUNDATION.

- THIS PLAN HAS BEEN PREPARED FOR THE EXCLUSIVE USE OF SABA WRIGHT
- RELYING ON IMPROVEMENTS TO DOCUMENTS IS DANGEROUSLY SLIPY. WHERE IMPROVEMENTS ARE CRITICAL, THEY SHOULD BE COMPLETED BY PLANNED SURVEY.
- DO NOT MIXE SOWNS BY POSITION LOCATION OR DATA WITH RESPECT TO

- IF CONSTRUCTION ON THE LAND IS PROCEEDED IT IS RECOMMENDED THAT THE BOUNDARIES OF THE LAND BE PLANNED.
- THREE SIZES ARE ESTIMATED ONLY.

DATE	12/19
TIME	1300
<p>REMARKS HAVE BEEN ENTERED,</p>	

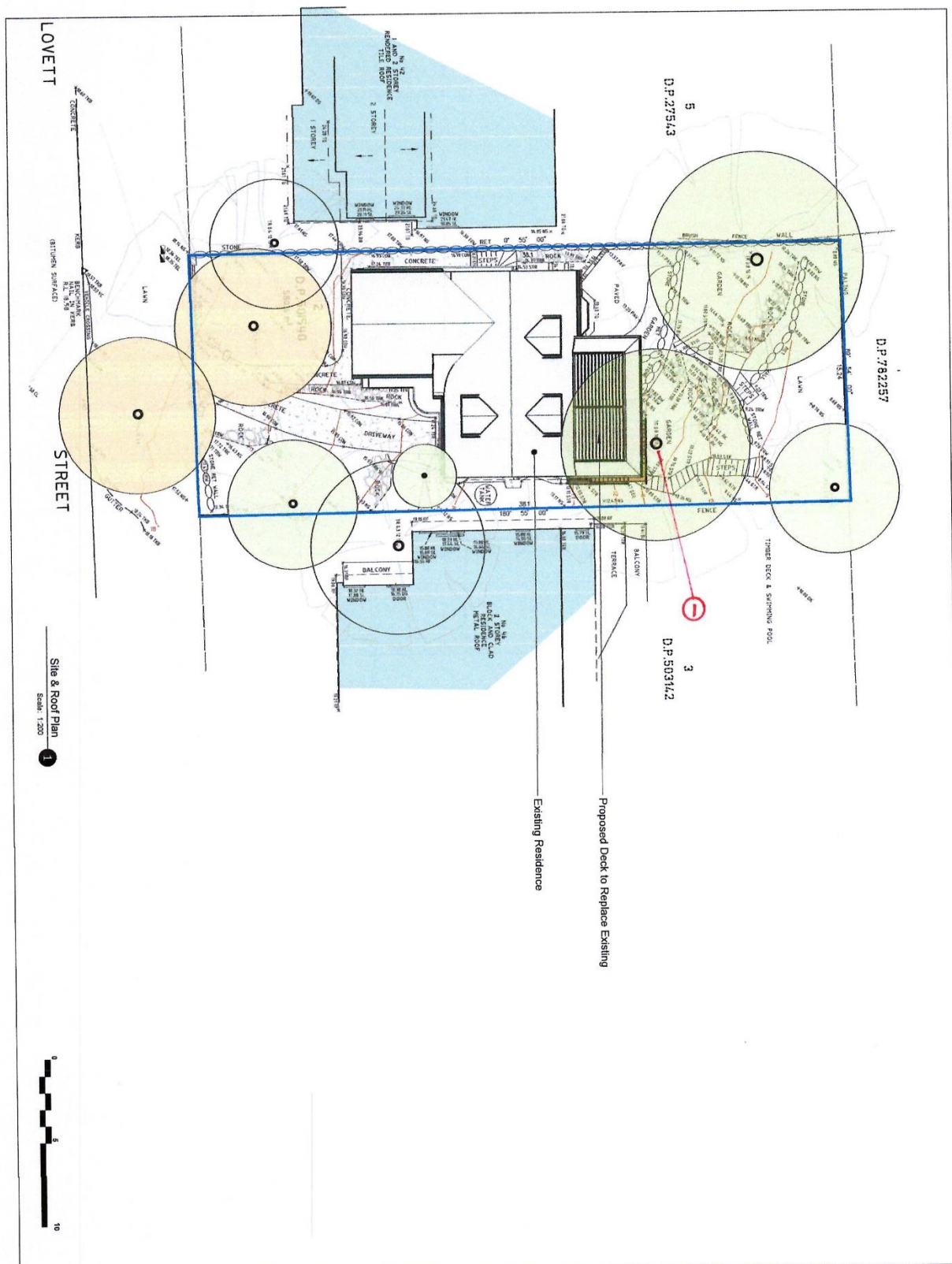
Direct Issue	0.03/0.0
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Annexure C: Tree impact plan



A.01

Site & Roof Plan

ISSUE
15.12.19

SCALE
1:200

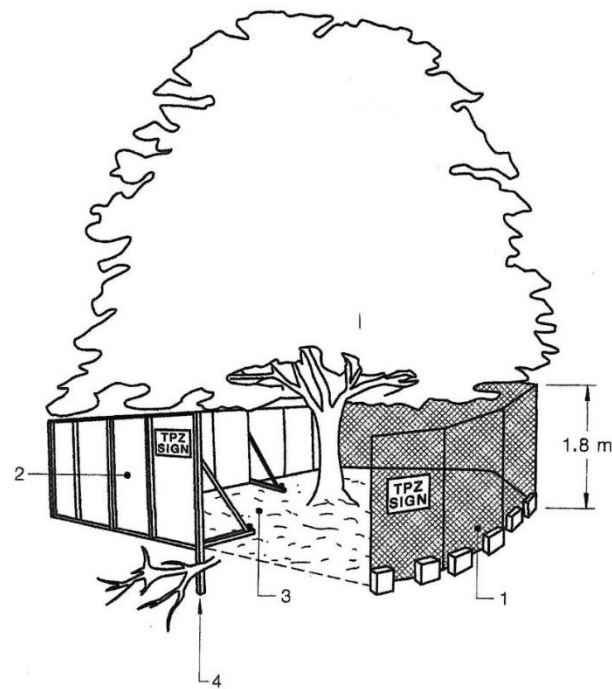
PROJECT
Replace Existing Deck
& Alterations to
Existing Openings

PROJECT NO.
ELM::1

CLIENT
Sara Wright & Iain Baxter
Lot 2 DP. 501540
44 Lovett Street
Manly Vale NSW 2095

WATERMARK CONSTRUCTION GROUP
9b 3-9 Kenneth Road
Manly Vale NSW 2095

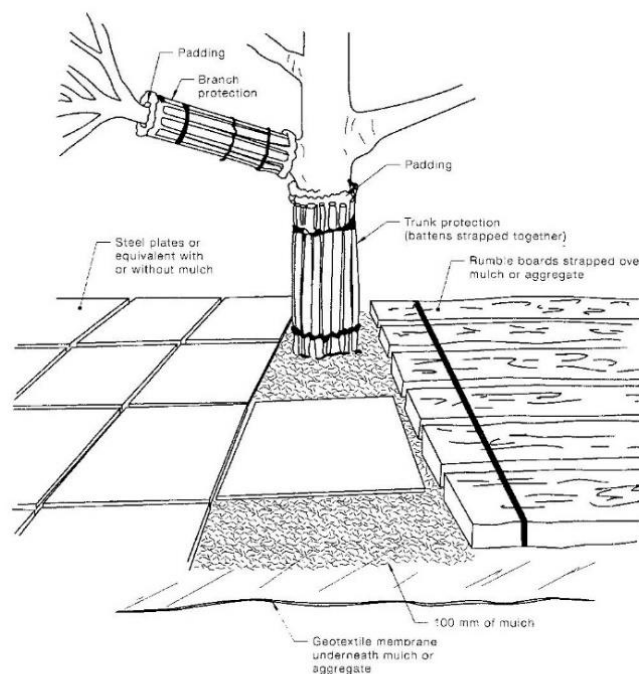
Annexure D: Tree protection



LEGEND:

- 1 Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
- 2 Alternative plywood or wooden paling fence panels. This fencing material also prevents building materials or soil entering the TPZ.
- 3 Mulch installation across surface of TPZ (at the discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ.
- 4 Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

FIGURE 3 PROTECTIVE FENCING



NOTES:

- 1 For trunk and branch protection use boards and padding that will prevent damage to bark. Boards are to be strapped to trees, not nailed or screwed.
- 2 Rumble boards should be of a suitable thickness to prevent soil compaction and root damage.

FIGURE 4 EXAMPLES OF TRUNK, BRANCH AND GROUND PROTECTION