

VEGETATION MANAGEMENT PLAN

for

*259-261 ASHMORE ROAD,
BENOWA*

(Lots 1 & 2 on RP77435)

prepared by



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Project Author/s: Craig Reid

Project Summary: The aim of this project was to assess the impacts to trees qualifying as assessable vegetation, arising from the proposed redevelopment of the site, and provide recommendations for the management of this vegetation.

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Purpose of Report

The Tree Advisory Centre has produced this report in its capacity as consultants for and on the request of the Australian Property Management Group (the Client) for the sole purpose of providing a Vegetation Management Plan, for vegetation located within the confines of 259-261 Ashmore Road, Benowa, Queensland (the **"Specified Purpose"**). This information and any recommendations in this report are restricted to the Specified Purpose and are based on information restricted to the subject matter of the report and the Specified Purpose at the time of production. This report is not to be used, nor is it suitable, for any purpose other than the Specified Purpose. While all care has been taken in the production of this report, The Tree Advisory Centre disclaims all liability for any loss and/or damage whatsoever arising either directly or indirectly as a result of any application, use or reliance upon the report for any purpose other than the Specified Purpose.

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Signed on behalf of
The Tree Advisory Centre

Date: 31/01/2018

Craig Reid

Principal Consultant
The Tree Advisory Centre

259-261 ASHMORE ROAD, BENOWA VEGETATION MANAGEMENT PLAN

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1.0 INTRODUCTION

1.1 INSTRUCTION

The Tree Advisory Centre was engaged at the request of the Australian Property Management Group, to provide a Vegetation Management Plan, addressing Section 9(i) of Gold Coast City Council (GCCC) Development Application Number MCU201701147.

1.2 DOCUMENTS AND INFORMATION

The following documents were provided:

- Copy of Draft Conditions for GCCC Development Application Number MCU201701147;
- Copy of Landscape Intent package prepared by Cardno; and,
- Copy of the Site Plan prepared by Design Imagery (Drawing 3287BA002 Issue A)

1.3 RELEVANT BACKGROUND INFORMATION

This report provides information in relation to vegetation qualifying as 'Assessable Vegetation' under the Council for the City of Gold Coast City Plan Version 4.

Note: 'Assessable Vegetation' is defined throughout the city as being:

1. greater than 4 metres in height;
2. equal to, or in excess of 40 centimetres in girth (circumference) measured at 1.4 metres above ground level;
3. remnant vegetation and its native under-storey as identified on the Vegetation Management Overlay Map; or
4. disturbed/re-growth/wetland vegetation and its native under-storey as identified on the Vegetation Management Overlay Map.

1.4 SCOPE OF THIS REPORT

This report is only concerned with the trees listed on the Tree Schedule included in Appendix 1.

The appraisal of these trees and the recommendations contained within this report are based on observations made at the time of inspection. Any alteration in the condition of the trees occurring due to biotic or abiotic factors or other maintenance performed on the trees by unqualified persons may affect the validity of the report and result in the need for additional assessments prior to implementation of the recommendations.

Recommendations are provided based on an assessment of the species, age, size and condition of the trees, and the impacts arising due to the proposed construction of the new car park. Recommendations are based on the proposed design, best management practices and in accordance with Australian Standard AS4970 2009 Protection of Trees on Development Sites.

1.5 AUSTRALIAN STANDARD AS4970 PROTECTION OF TREES ON DEVELOPMENT SITES

Conclusions and recommendations are based on best management practices in accordance with *Australian Standard AS4970-2009 Protection of Trees on Development Sites*.

As the protected vegetation is located within or adjacent to the footprint of the proposed dwellings, almost all vegetation will need to be cleared to realise the proposed design.

1.6 TREE PROTECTION ZONE (TPZ)

Australian Standard *AS4970-2009 Protection of Trees on Development Sites*, defines the TPZ as a designated area, calculated at a distance from the stem, preserved for the protection of above and below ground tree parts in such a manner as to protect the vitality and structural integrity of the tree from construction activities (Standards Australia, 2009).

1.7 TREES SUBJECT TO STATUTORY CONTROL

As the trees listed on the Tree Schedule are deemed to be legally protected, it will be necessary to consult and obtain approval from the Council for the City of Gold Coast before any works other than those recommended in this report are carried out. The works specified above are necessary for reasonable management and should be acceptable. However, please appreciate that the consenting authority may take an alternative point of view and have the option to refuse consent.

2.0 SITE VISITS & OBSERVATIONS/ COLLECTION OF DATA

2.1 SITE VISIT

A site inspection was undertaken on the morning Tuesday, 30 January 2018. All observations were from ground level and included all relevant standard dimensions. The weather at the time was fine, warm and with good visibility.

2.2 BRIEF SITE DESCRIPTION

The site is located on the northside of Benowa Road, opposite and approximately 150 metres south of *Woodlands Residences*.

The two allotments measure 809 m² each, are zoned medium density residential and improved by single-storey dwellings, one of which, at 261 Benowa Road, is currently unoccupied.

The site slopes gradually from west-to-east and slightly to the southern corner.

The site is bordered by Benowa Road to the west, a medium density residential development to the north, Benowa Secondary School to the east and an allotment of similar size to the east.

Both sites are moderately vegetated along the Benowa Road frontage, however the remaining site vegetation is limited to a few trees located directly on the boundary-line between the two allotments and also the rear boundary line.

2.3 IDENTIFICATION AND LOCATION OF TREES

The trees are numerically identified and their locations indicated on the Site Plan included in Figure 2. Tree numbers in the Tree Schedule correspond to numbers indicated on the Site Plan.

2.4 COLLECTION OF BASIC DATA

Ground based visual tree assessments were undertaken and information on species, height, stem diameter, canopy spread, maturity, health and vitality was collected and this information is included in the Tree Schedule in Appendix 1.

It must be stressed that inspection was of a preliminary nature and did not involve any invasive techniques, climbing or detailed investigation beyond what was visible from accessible points at ground level.

3.0 OBSERVATIONS

3.1 APPRAISAL

Only vegetation qualifying as Assessable Vegetation, contained within the boundaries and potentially impacted by the proposed construction works were assessed.

Thirteen trees, qualifying as Assessable Vegetation, are located within the footprint of the proposed redevelopment or adjacent to the area of proposed works and will be impacted by construction activities.

Both sites are moderately vegetated along the Benowa Road frontage with a screen planting of Mock Orange (*Murraya paniculata*) shrubs, a single semi-mature Mango (*Mangifera indica*), clumps of Giant White Bird of Paradise (*Strelitzia nicolai*) and Shell Ginger (*Alpinia zerumbet*), however the remaining site vegetation is limited to a few mature aged trees located directly on the boundary-line between the two allotments and three trees situated along the rear boundary-line.

A single Silky Oak (*Grevillea robusta*), located directly on the shared boundary-line towards the front of the allotments is the most dominant tree on the site. This tree has a bifurcated and bark-included stem union close to ground level and could not be considered to be an especially good specimen structurally.

The rear of the property is densely vegetated with a species of running Bamboo, which intrudes into the neighbouring allotments.

The design is sympathetic to the retention of a single Loquat (*Eriobotrya japonica*) situated to the north-west corner of the site (as indicated on the Site Plan).

The Landscape Intent also proposes that a single White Frangipani (*Plumeria obtuse*), whose location is in direct conflict with the proposed location of Unit 1, be transplanted off-site or otherwise integrated into the garden design.

None of the assessed trees are listed as Koala food source trees and no habitat hollows, stick nests, termitariums or native bees were observed to exist in any of the assessed trees. A fauna spotter catcher should not be required.

Based on the proposed design and the foreseeable impact to existing vegetation, other than retaining the Loquat shrub and transplanting the Frangipani shrub, all other vegetation will require clearing to realise the proposed design.

The Loquat will require protection for the duration of the project to ensure above and below tree parts are not damaged during construction.

3.2 LIMIT OF LIABILITY

This report is a qualified opinion of the current condition of the trees and best management options based on observations and the information provided. The Tree Advisory Centre accepts no responsibility for any circumstances that arise from the issue of a report that has been modified in any way as outlined above. Furthermore, whilst all care has been taken in the completion of this report, no responsibility is accepted for the continued vitality of the trees listed herein or for any special, consequential or indirect loss or damage arising on any material, building or persons appearing on site, which may occur in the future.

No guarantee or warranty, either expressed or implied is made in relation to professional advice provided in this document.

4.0 RECOMMENDATIONS

The following conclusions and recommendations are based on observations made during the site inspection and the information provided.

The redevelopment of the site will require the removal all existing site vegetation, except for:

Tree 5- which should be retained and protected for the duration of the project with fencing; and,

Tree 6- which should be preserved and transplanted off-site.

SUMMARY OF RECOMMENDATIONS:

Planning Stage-

1. Submit this report with the appropriate application to the City of Gold Coast (GCCC), to obtain an Operational Works- Vegetation Clearing approval notice.

When approval has been obtained-

1. Install temporary tree protection fencing (1.8 m high mesh wire panels) on the TPZ radius of Tree 5, and;
2. Schedule a pre-start meeting with the GCCC Assessing Officer prior to commencement of clearing.

Following the pre-start meeting and only when the GCCC Assessing Officer is satisfied the conditions of the Operational Works approval have been complied with clearing works can commence.

General quality assurance recommendations-

1. No storage of site buildings, goods or waste materials, incineration of any material, storage of 'spoil', mixing or disposal of chemicals, paints or plaster products within or adjacent to the TPZ is permitted.
2. The removal of vegetation should only be undertaken by a qualified arborist (minimum AQF Level 3).
3. The method of tree removal, including stump grinding, should not result in damage to above or below ground tree parts of retained vegetation. Trees to be cleared and located within the TPZ of retained trees should be manually cleared (felled, not pulled-out with an excavator) and be stump-ground to a depth of at least 300 mm below natural ground level.
4. TPZ's of retained trees should be mulched with a composted mulch to a depth of 50-75 mm

5.0 REFERENCES

Cardno, *Landscape Intent*, 259-261 Ashmore Road, Benowa, Sept. 2017

Council for the City of Gold Coast, *City Plan Version 2, Vegetation Management Code*, viewed 4/09/2017, <<http://cityplan.goldcoast.qld.gov.au/pages/plan/viewer.aspx?vid=10129&hid=21207>

Design Imagery, *Site Plan*, Drawing 3287BA002 Issue A, Dec. 2017

Draper, D. B., Richards, P. A., 2009, *Dictionary for Managing Trees in Urban Environments*, CSIRO Publishing, Collingwood, Australia

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Harris, RW, 1992, *Arboriculture Integrated Management of Landscape Trees, Shrub and Vines*, 2nd Edition, Prentice Hall, New Jersey

Lonsdale, D., *Principles of Tree Hazard Assessment and Management*, TSO, UK, 2013

Matheny, N.P. & Clark, J.R., *A Photographic guide to the Evaluation of Hazard Trees in Urban Areas*, 2nd edition, ISA, USA, 1994

Mattheck, C., Bethge, K., Weber, K., 2015, *The Body Language of Trees, Encyclopaedia of Visual Tree Assessment*, 1st Edition, Karlsruhe Institute of Technology, Germany

Shigo, A. L., *A New Tree Biology and A New Tree Biology Dictionary*, USA, 2008

Standards Australia, *Australian Standard AS4373 2007 Pruning of amenity trees*

Standards Australia, *Australian Standard AS4970 2009 Protection of trees on development sites*

FIGURE 1

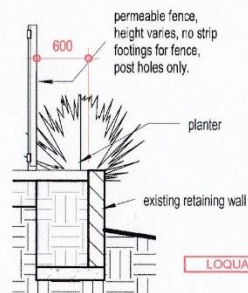
Location Plan



FIGURE 2

Site Plan

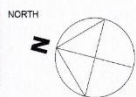
R.P.D.
Lots 1 & 2
R.P. 77435
PARISH Nerang
COUNTY
SHIRE GCCC
SITE AREA 1618m²



2 Front Fence Section
1:50

TPZ radius= 2 metres

1 Site Plan
1:200



A Consultants Issue
No AMENDMENT

11.01.18
DATE

DESIGN
IMAGERY
building concepts

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CLIENT
Australian Property Management
Group
PROJECT
Proposed Townhouses

LOCATION
259 - 261 Ashmore Road,
Benowa.

DRAWN
GJG
SCALE
As indicated

CHECKED
Checker
DATE
Dec 2017

TITLE
Site Plan

DRAWING No:
3287-BA-002

ISSUE
A

APPENDIX 1

Tree Schedule

Tree No.	Species	DBH (cm)	Height (m)	Canopy Spread (m)	Form	Vitality	Age	Observations/Comments	Recommendations
1	<i>Jacaranda mimosifolia</i>	25	8	7	Poor	Fair	Semi-mature	Design indicates direct conflict with proposed dwelling- removal required	Remove
2	<i>Mangifera indica</i>	70	8	8	Good	Good	Semi-mature	Design indicates direct conflict with proposed dwelling- removal required	Remove
3	<i>Jacaranda mimosifolia</i>	10	6	3	Poor	Fair	Semi-mature	Design indicates direct conflict with proposed dwelling- removal required	Remove
4	<i>Grevillea rubusta</i>	80	18	12	Fair	Fair	Mature	Design indicates direct conflict with proposed dwelling- removal required	Remove
5	<i>Eriobotrya japonica</i>	15	4	3	Good	Good	Semi-mature	Suitable for retention- will require protection	Retain- protect with TPZ fencing
6	<i>Plumeria obtusa</i>	5	2	2	Good	Good	Semi-mature	Excellent specimen	Preserve- transplant off-site
7	<i>Unknown sp.</i>	28	7	10	Good	Fair	Early mature	Design indicates direct conflict with proposed dwelling- removal required	Remove
8	<i>Cupaniopsis anacardioides</i>	21	8	9	Fair	Fair	Semi-mature	Design indicates direct conflict with proposed dwelling- removal required	Remove
9	<i>Ficus obliqua</i>	65	8	15	Good	Good	Semi-mature	Design indicates direct conflict with proposed dwelling- removal required	Remove
10	<i>Taxodium distichum</i>	22	8	8	Poor	Poor	Juvenile	Design indicates direct conflict with proposed dwelling- removal required	Remove
11	<i>Unknown fruit sp.</i>	30	8	6	Good	Good	Mature	Design indicates direct conflict with proposed dwelling- removal required	Remove
12	<i>Ficus elatica</i>	1	12	17	Fair	Good	Early mature	Design indicates direct conflict with proposed dwelling- removal required	Remove
13	<i>Taxodium distichum</i>	50	13	12	Good	Good	Early mature	Design indicates direct conflict with proposed dwelling- removal required	Remove

GUIDE TO TREE SCHEDULE

Tree #: All trees are numerically identified. The Site Plan shows reference to individual trees listed in the Tree Schedule.

Species: Scientific names are used to identify trees. The species identification is based on visual observations.

DBH: Diameter at Breast Height. The diameter of individual trees is measured at 1.4m above ground level. Stem diameter is measured with a diameter tape.

Height: Height is estimated to the nearest metre from ground level to the upper-most leaves.

Crown Spread: Crown spread is the estimated average spread to the nearest metre from the stem to the outer-most leaves (provided as an average diameter).

Age: Age is estimated from visual indicators and should only be taken as a provisional guide.

(J) Juvenile: A young specimen newly established, growing with considerable vigour but not exceeding 20% of what is considered mature for its species.

(SM) Semi-Mature: An established specimen, growing with considerable vigour but not exceeding 50% of what is considered mature for its species.

(EM) Early Mature: An established specimen with a DBH and Height considered to be 90% of that of a comparable mature specimen of the same species.

(M) Mature: A specimen considered 100% of what is considered mature for its species. Vigour is often reduced as energy reserves are utilized more for maintenance than growth.

(OM) Over-Mature: A specimen considered 100% of what is considered mature for its species and declining in health and structure. Acceleration of die-back & decay leads to natural reduction of canopy due to limb failure.

Form: Growth habit in consideration of form typical of the species. Indicators include trunk and branch taper, well-formed and sound branch attachments, symmetrical crown form free of defects or disorders. Classes are Good, Fair, Poor and Hazardous.

Vitality: Health indicators include, foliage colour and density, leaf size, annual shoot growth, twig dieback, woundwood development and obstructions to growth. Classes are Good, Fair, Poor and Dead.

APPENDIX 2

Brief Qualifications and Experience

1. QUALIFICATIONS

Graduate Certificate in Arboriculture (AQF Level 8) 2014/2015
Certificate III in Horticulture (Arboriculture) July 2005
Diploma Horticulture (General) June 2007
Certificate IV Training & Assessment (TAE) 2012
Quantified Tree Risk Assessment (QTRA) March 2012 (Licence No. 3054)
Licence to Perform High Risk Work (Licence No. 3195828)
General Safety Induction Blue Card No. 657740
ACDC Commercial Operator's Licence- Ground Distribution of Herbicides

2. PRACTICAL EXPERIENCE

Utility Clearance- City of Doncaster & Templestowe Electricity Supply Department (1984-1993)
Director- Surf City Tree Services (2002- 2016)
Director- The Tree Advisory Centre (2016-present)
Arboriculture Teacher- TAFE QLD Gold Coast (2012- present)

3. CONTINUING PROFESSIONAL DEVELOPMENT

Competitor: 2007 QLD Tree Climbing Competition- Wellington Point
Competitor: 2009 QLD Tree Climbing Competition- Gold Coast
Competitor: 2010 QLD Tree Climbing Competition- Sunshine Coast
Competitor: 2010 Australian Tree Climbing Championship- Adelaide

QLD Arbor Camp: 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013

Judge: 2008 QLD Tree Climbing Competition- Bribie Island
Judge: 2008 Far Nth QLD Tree Climbing Competition- Cairns
Judge: 2012 NSW Tree Climbing Competition- Tweed Heads
Judge: 2012 QLD Tree Climbing Competition- Currumbin
Judge: 2014 QLD/NSW Tree Climbing Competition- Bangalow NSW

Judge: 2008, 2009, 2013, 2014 Australian Tree Climbing Championships

2011 International Tree Climbing Competition- Sydney

Report Writing 101 Workshop- February 2012
Soil & Tree Health for Arborists Workshop- February 2012
Trees & Development Seminar- March 2012
SE QLD Local Authorities Tree Report Workshop- August 2012
Mark Bridge 2-day Climbing Workshop- October 2012
Hitch Climbers Guide to the Canopy Climbing Workshop- June 2013

Craig Reid

Grad. Cert. Arboriculture (AQF Level 8)

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