

4 May 2023

Enquiries: Jenny Elphinstone
Our Ref: EXEM 2023_5368/1 (Doc)
Your Ref:

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Jess Coleman
Secretary
Paperbark Gardens

Email: jesscoleman.tnq@gmail.com

Dear Madam

EXEMPTION CERTIFICATE

Council refers to your request for an exemption certificate for the following premises received on 24 April 2023.

Summary of Exempt Development

Proposed damage to existing trees of trimming only as per the Arborist's Report, "*Tree Health and Condition Report, 48 Mudlo Street, Port Douglas, Paperbark Gardens 4th April 2022,*" prepared by James Watts for Tree Acq Pty Ltd – MPDT.

Location details

Street Address: 0/48-50 and 8/48-50 Mudlo Street Port Douglas
Real Property Description: Lots 0 and 8 on BUP 102644
Local Government Area: Douglas Shire Council

Decision

Council advises that an exemption certificate has been granted on 4 May 2023 for development as detailed in Attachment 1.

Referral agencies

Not Applicable.

Reasons for giving exemption certificate

The development is exempt under this certificate under s46(3)(b) of the *Planning Act 2016* for the following reason(s):

- The effects of the development would be minor or inconsequential, considering the circumstances under which the development was categorised as assessable development.

When exemption certificate ceases to have effect

This exemption certificate lapses in two years.

Other

Please quote Council's application number: EXEM 2023_ 5368/1 in all subsequent correspondence relating to this request.

Should you require any clarification regarding this matter, please contact Jenny Elphinstone on telephone 07 4099 9444.

Yours faithfully



For
Paul Hoyer
Manager Environment & Planning

cc Emailed to Paperbark Gardens Body Corporate CTS-17030 – admin@zacks-strata.com

Attachment 1



Tree Health and Condition Report



48 Mudlo street, Port Douglas

Paperbark Gardens

4th April 2022

Diploma of Arboriculture: *James Watts Passionate about trees*

E: sales@mpdt.com.au

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1. Introduction

MPDT has been commissioned by ZACKs Strata to provide a tree and health assessment report. The aim of this survey was to establish the impact of 2 significant trees in the grounds of Lot 8 48 Mudlo Street, Port Douglas (Paperbark Gardens).

These trees were assessed from ground level using accepted modern arboricultural techniques - no aerial or underground inspections were made.

The information and recommendations contained within this report are relevant to the survey date only. This report is relevant to our site visit Monday 4th April 2022. It must be remembered that trees/palms are dynamic organisms, being subject to continuous change, and reassessment should therefore be carried out on a regular basis (recommended 6 monthly).

2. Objectives

The objectives of this report are:

- To provide an impact assessment on 2 trees at 48 Mudlo street, Port Douglas. (Paperbark Gardens)

3. Information and Documentation Provided

At the time of the actual site inspection for assessment and health condition report James Watts was provided with photos from administration so he could identify and document the location of the trees reported on.

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4. Site Survey

On Monday 4th April 2022 James Watts conducted an onsite inspection at 48 Mudlo street Port Douglas. It was a bright sunny day. I met with Tina showed me the 2 tree locations.

4.1 Site Description

All Trees inspected are located on the grounds of the Lot 8, 48 Mudlo street Port Douglas.

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5. Materials & Methodology

The following is a description of elements included in the tree assessment.

- Species: the tree's botanical or common name as is most appropriate.
- Age: an estimation of the tree's age
 - Young (Y): from establishment, up to one third expected life span
 - Semi-mature (SM): between one and two thirds expected life span
 - Mature (M): between two thirds expected life span up to full maturity
 - Over mature (OM): trees older than expected life span or veteran trees
- Condition: the tree's overall health and condition
 - Good: good form, typical of species with no major defects present. Long safe useful life expectancy
 - Reasonable: Good or reasonable form. Any defects are easily rectifiable or can be managed
 - Poor: Poor form. Major defects present.
 - Dead
- DBH: the diameter of the tree in centimetres, measure at a height of approximately 1.5m. Used as a means of identification and gauge of future growth.
- Height: the height of the tree in metres, estimated using surveyor's own judgement (no measuring instruments were used in this survey).
- Spread: the crown spread in one direction only
- Comments: comments relating to the general health and condition of the tree.
- Recommendations: recommendations for remedial work or other relevant advice.
- Priority: Priority of recommended works
 - High (H): action required within one month
 - Medium (M): action advised within 3 months
 - Low (L): action not critical but advisable for longer term health of the tree/amenity value

The process of risk identification and controls have been carried out in accordance with AS/NZS 4360:2004 – Risk Management

Tree heights were determined with the use of a range finder

Biomechanical stability of the examined trees and tree components were determined utilising VTA (Mattheck and Breloer 1994).

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6. Collection of Data

The data collected for this tree health and condition report was done so of a preliminary nature. All data was collected from visible access points at ground level. No climbing or use of elevated work platforms was utilised. Due to the visual nature of this assessment there may be other issues that remain undetected.

7. Tree Protection Zone

All plants consist of three main sections, a crown (leaves), a stem or trunk and a root system. Each one of these sections carries out specific functions necessary for the survival of the tree as all parts interact. Above ground and below ground these sections if damaged the entire tree will suffer and symptoms may appear in any part of the tree. Therefore, any demolition and construction operations that occur around trees must be carried out in such a way as to minimize the impact on the health of the tree.

The principles of a tree protection zone are the combination of root area and crown area requiring protection. It is an area isolated from construction disturbance, so the tree remains viable. This needs to be incorporated before and during works carried out to minimise the impact of encroachment to surrounding trees. We work to the recommendations of the Australian Standards (AS 4970-2009).

If required, we will utilise temporary protection measures to avoid any damage to surrounding vegetation. This will include the use of barrier tape, signage and star pickets to keep people out of the encroachment area. These will remain in place until all works are completed and your project manager is satisfied and requests us to remove it.

Other considerations within the TPZ include temporary watering to maintain soil moisture levels which need to be regularly monitored, the application of mulch around base of trees at a uniform cover of 150mm in depth (using coarse organic materials which comply with AS 4454-2003 - Soil conditioner, Compost and Mulches) and the supervision of any other activities within the TPZ such as landscaping etc.

As head arborist, I will be inspecting the site to ensure exclusion zones are in place and not encroached by other contractors.

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8. Tree Protection Plan

A tree protection plan must be available on site prior to commencement of and during works. This must be accessible to the site manager, project arborist and contractors at all times so they are aware of its requirements.

Development Stage - Planning	Considerations	Actions to be taken
Detail surveys	<ul style="list-style-type: none"> Council plans & policies Heritage Threatened species 	<ul style="list-style-type: none"> Existing trees to be accurately plotted on survey plan
Preliminary tree assessment	<ul style="list-style-type: none"> Hazard/Risks Tree retention value 	<ul style="list-style-type: none"> Evaluate trees suitable for retention and mark on plan Provide preliminary arboricultural report & indicative TPZs to guide development layout
Preliminary development design	<ul style="list-style-type: none"> Condition of trees Proximity to buildings Location of services Roads Level changes Building operations space Long term management 	<ul style="list-style-type: none"> Planning section of trees for retention Design modifications to minimize impact to trees
Development submission	<ul style="list-style-type: none"> Identify trees for retention through comprehensive arboricultural impact assessment of proposed construction Determine tree protection measures Landscape design 	<ul style="list-style-type: none"> Provide arboricultural impact assessment including tree protection plan and specification
Development approval	<ul style="list-style-type: none"> Development controls Conditions of consent 	<ul style="list-style-type: none"> Review consent conditions relating to trees

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Development Stage - Pre-construction	Considerations	Actions to be taken
Initial site preparation	<ul style="list-style-type: none"> • State based OHS requirement for tree work • Approved retention/removal, pruning of amenity trees as per AS 4373 • Specifications for tree protection measures 	<ul style="list-style-type: none"> • Compliance with conditions of consent • Tree removal/tree retention/transplanting • Tree pruning • Certification of tree removal and pruning • Establish TPZs • Install protective measures • Certification of tree protection measures

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Development Stage - Construction	Considerations	Actions to be taken
Site Establishment	<ul style="list-style-type: none"> • Temporary infrastructure • Demolition • Bulk earthworks • Hydrology 	<ul style="list-style-type: none"> • Locate temporary infrastructure to minimize impact on retained trees • Maintain protective measures • Certification of tree protection measures
Construction work	<ul style="list-style-type: none"> • Liaison with site manager • Compliance • Deviation from approved plan 	<ul style="list-style-type: none"> • Protection measures in place as per arborist report and in the correct locations • TPZ's inspected & certified by onsite arborist • Does tree protection plan need modification
Implement hard and soft landscape works	<ul style="list-style-type: none"> • Installation of irrigation services, control of compaction work • Installation of pavement and retaining walls 	<ul style="list-style-type: none"> • Remove selected protective measures as necessary • Remedial tree works • Supervision and monitoring
Practical completion	<ul style="list-style-type: none"> • Tree vigour and structure 	<ul style="list-style-type: none"> • Remove all remaining tree protection measures • Certification of tree protection

Development Stage - Post construction	Considerations	Actions to be taken
Defects liability/maintenance period	<ul style="list-style-type: none"> • Tree vigour and structure 	<ul style="list-style-type: none"> • Maintenance and monitoring • Final remedial works • Final certification of tree condition

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9.

Survey Schedule

Species: 2-melaleuca leucadendra. In the grounds of number 8 at eastern end of property.

Age: Mature, X 2

Condition: Reasonable, X 2

Comments: Tree with fig requires fig removal and poisoning once cuts are made on fig to prevent wood sealing making poison inactive, remaining canopy requires rebalancing by the form of reduction as necessary. Removal of major dead wood to prevent harm. Larger tree with vine nearest pool has indications of included bark at crown break (approximately 3 meters from ground level) this could be investigated further once vine is removed from canopy, included bark is a concern due to being weak in architecture (structurally weak unions that can fail). To reduce the risk of failure would be a crown reduction, by this recommendation the sail space of the tree is reduced which prevents wind shearing on the upper canopy and less weighted limbs on weak unions (crown break where the included bark is located).

Recommendations: Rebalance, Dead Wood, Crown lift, Crown Shape, Monitor, Removal of fig. Tree nearest pool heavy crown reduction and shape, deadwood, removal of vine. Please reduce to substantial growth points. All works in accordance with AS4373-2007 pruning of amenity trees.

Recommendation Comments: Tree with fig will benefit from fig removal, less strain on canopy once crown balancing is done. Tree nearest pool will be safer once crown is reduced (weighted limbs made lighter on outer extremities) have less wind drag and weight on unions. Reductions are good way of containing the canopy but will require ongoing maintenance regime at least once a year to monitor regrowth as tree owners are responsible legally for their vegetation. Depending on investigation once vine is removed, the percentage of the crown reduction can be determined by the condition of the main crown unions, to determine the extent of included bark if any. Also recommended council consent before works, due to trees being semi protected and of significant in size and being well established. An alternative is to also obtain a second opinion from another Qualified Arborist.

Priority: High

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11 Recommendations and Observations

Assessed as an extended group, surveyed trees are currently in fair condition,

For 2 trees assessed are deemed in high traffic areas but still deems them unsafe until works are carried out in time frames outlaid in section 5, Materials and methodology.

Both trees are located in confined areas overhanging infrastructure, which is a concern if there is structural failure in both trees. Trees will have risk of failure greatly reduced once recommended works are carried out. Inspections of unions at crown break once vine is removed is also recommended.

If contractors are to be engaged for remedial work, they should be fully qualified and experienced, being able to demonstrate a comprehensive OHS policy specific to tree work, with relevant insurances in place.

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Appendix 1: Index of Arboricultural terms used

Amenity	The quality of being pleasant or agreeable
Arboriculture	The culture and management of trees as groups and individuals, primarily for amenity and other non-forestry purposes
Assessment	In relation to tree hazards, the process of estimating the risk that a tree or group of trees poses to persons or property
Basal Area	Area of tree around stem base, including visible buttress roots
Bifurcated	A tree with two main stems
Biomechanics	Mechanical loading of the tree's structure
Branch collar	A swelling at the base of a branch
Buttress roots	Angled roots at stem base
Cable braces	Branch or stem supporting system
Clean out	Removal process of dead, dying and diseased branches
Crown	The part of the tree comprising of limbs, branches and foliage
Crown lifting	Remove lower branches to a specified height
Crown reduction	Reduce the overall size of the crown proportionally
Crown spread	Distance from stem to crown edge
Crown thinning	The reduction of the volume of a crown without changing the overall height and spread. Often referred to as reducing the "sail area". The extent of thinning is dependent on tree species, tree health and site requirements
D.B.H	Tree diameter measured at breast height (approximately 1.5m)
Dead wood	Dead branches and stubs
Decline	A deterioration of a tree's general condition and vigour
Defect	In relation to tree hazards, any feature of a tree which detracts from the uniform distribution of stress
Dieback	The death of part of a tree, often progressive
D.R.F	Diameter of root flare, diameter measured immediately above root buttress
Epicormic growth	Growth arising on mature stems, often following previous pruning or injury.
Failure	In relation to tree hazards, a partial or total fracture of wood or loss of cohesion between tree and soil
Formative Pruning	Selective pruning to promote good future shape and integrity
Included Bark	Branch union where there is bark to bark contact which results in a structural weakness.
Leader	Dominant Stem
Lopping	Removal of branches, now generally applied to heavy or excessive trimming
Multi stemmed	A tree with many main stems
Phototropic lean	Lean due to a tree's growth towards available light.
Root Plate	The base of the tree stem with major support roots
Slime Flux	Liquid exudation from the tree, bacterial based
S.R.Z	Structural root zone (the woody root growth and soil cohesion in this area for structural stability)
Sucker Growth	Growth from stem base and/or exposed roots
Topping	The removal of all or a large portion of a tree's canopy
T.P.O	Tree Preservation Order
T.P.Z	Tree Protection Zone (specified area for the protection of roots and crown for viability and stability)
Trifurcated	A tree with three main stems

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Appendix 1: Index of Arboricultural terms used

V.T.A	Visual Tree Assessment
Vigour	Ability of a tree to sustain its life processes
Widow maker	Dead unattached branches in tree
Witch's Broom	Foliage disorder resulting in clustered and dense area of twigs
Q.T.R.A	Quantified tree risk assessment
P.O.F	Probability of failure
R.O.H	Risk of acceptable harm

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Appendix 2: Tree Protection Zone Summary

The tree protection zone (TPZ) is the principal means of protecting trees on development sites. The TPZ is a combination of the root area and crown area requiring protection. It is an area isolated from construction disturbance, so that the tree remains viable.

When determining potential impacts of encroachment into the TPZ, we should consider the following:

- a) Location and distribution of the roots to be determined through non-destructive investigation methods (pneumatic, hydraulic, hand digging or ground penetrating radar). Photographs should be taken and a root zone map prepared.
- b) Potential loss of root mass resulting from the encroachment: number and size of roots.
- c) Tree species and tolerance to root disturbance
- d) Age, vigour and size of tree
- e) Lean and stability of the tree
- f) Soil characteristics and volume, topography and drainage
- g) The presence of existing or past structures or obstacles affecting root growth
- h) Design factors

Tree sensitive construction measures such as pier and beam, suspended slabs, cantilevered building sections, screw piles and contiguous piling can minimize the impact of encroachment.

When siting a structure near to a tree, the future growth of the tree, both above and below ground should be considered. Precautions should be taken at the planning and design stage to minimize potential conflict between trees and new structures.

When the reach structure is reactive clay, techniques such as localised pier and beam (bridged), screw pile footings or root and soil moisture control barriers may be appropriate to minimize effects on structures.

The structural root zone (SRZ) is the area required for tree stability. A larger area is required to maintain a viable tree.

Some factors of the SRZ are tree height, crown area, soil type and soil moisture. These may influence built structures such as rocks and footings. The most common cause of damaged trees on development sites is root damage, as roots are far more extensive and closer to the surface than commonly thought. When using heavy machinery it is important to take due care not only to not damage the tree directly, but to avoid soil compaction as this will suffocate the tree.

Crown Protection

Tree crowns may be injured by machinery and the removal of surrounding trees. Where crown protection is required it will be usually located at least one metre outside the drip line of the crown. Crown protection may include pruning, tying back of branches or other measures. If pruning is required, this should be undertaken before the establishment of the tree protection zone.

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The TPZ is a restricted area usually delineated by protective fencing. This is installed prior to site establishment and retained intact until completion of work.

Some works and activities within a TPZ may be authorised by the determining authority. These may be supervised by the project arborist. Any additional encroachment that becomes necessary as the site works progress must be reviewed by the project arborist and be acceptable to the determining authority before being carried out.

Approved tree removal and pruning should be carried out before the installation of tree protection measures.

Activities restricted within the TPZ include but are not limited to –

- a) Machine excavation including trenching
- b) Excavation for silt fencing
- c) Cultivation
- d) Storage
- e) Preparation of chemicals, including preparation of cement products
- f) Parking of vehicles and plant
- g) Refuelling
- h) Dumping of waste
- i) Wash down and cleaning of equipment
- j) Placement of fill
- k) Lighting of fires
- l) Soil level changes
- m) Temporary installation of utilities and signs
- n) Physical damage to the tree

Protective fencing should be erected before any machinery or materials are brought onto the site and before the commencement of works including demolition. Once erected, protective fencing must not be removed or altered without approval from the project arborist. The TPZ should be secured to restricted access.

The negative impacts of inadequate development design, planning and supervision are cumulative and very difficult to remediate after development is completed. The best way to ensure the long-term retention of established trees is to follow the guidelines of the Australian Standards AS 4970-2009. (Reference material in Tree Protection Zone taken from AS 4970-2009).

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References:

- Pirones Tree maintenance 7th addition
- Dr Alex Shigo – Pruning amenity trees
- AS 4373-2007 Pruning of amenity trees
- AS 4970-2009 – Tree protection on construction sites
- Diagnosis of Ill health in trees By R.G Strouts and T.G Winter (Forestry commission)
- The body language of trees (A handbook for failure analysis) by Claus Mattheck and Helge Breloer, edited by David Lonsdale from a translation by Robert Strouts

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