



# **Tree Health and Condition Report**

**Port Explorers, Langley Rd**

**Port Douglas**

**31 August 2016**

**Arborist: Jim Watts**

**T: 0407 860 009**

**E: [Jimw@mpdt.com.au](mailto:Jimw@mpdt.com.au)**



## **Contents**

**1.0** Aim

**2.0** Site overview

**3.0** Materials and Methods

**4.0** Survey schedule

**5.0** Recommendations and Conclusions

**Appendix 1:** Index of Arboricultural terms used



## **1.0        Aim**

The aim of this survey was to establish the current health and condition of three tree located in courtyard that had been highlighted in a recent OHS report as a risk.

Trees were assessed from ground level only, 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. It must be remembered that trees are dynamic organisms, being subject to continuous change, and reassessment should therefore be carried out on a regular basis (recommended 6 monthly).

## **2.0        Overview**

The surveyed trees are located at the back of the complex, all located near fence lines and overhang both neighbour and Port Explorer properties. They are also located overhanging access point to the Day Care Facility.

As a group of trees they do provide some aesthetic value, though are not suited for a Day Care Centre and the environment in which they are growing. There has been noted history of this tree causing incidents, both trip hazards and falling branches.

### **3.1 Materials and Methods**

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

- 1) Number: where appropriate, each surveyed tree was allocated an individual number as a means of future identification. Where appropriate, a metal tag was attached to each tree at a height of approximately 2m.
- 2) Species: the tree's botanical or common name as is most appropriate.
- 3) 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
- 4) 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
- 5) 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.
- 6) Height: the height of the tree in metres, estimated using surveyor's own judgment (no measuring instruments were used in this survey).
- 7) Spread: generally, the crown spread in one direction only. Heavily asymmetrical crowns may require additional directional measurements for future reference (North, East, South and West)
- 8) Comments: comments relating to the general health and condition of the tree.
- 9) Recommendations: recommendations for remedial work or other relevant advice.
- 10) Priority: recommended works rated High (H – action required within 3 months), Medium (M – action required within 6 months) or Low (L – not critical but of benefit in the longer term).

## **4.0 Survey Schedule**



Date: 31<sup>st</sup> August 2016

Weather Conditions: Fine

Tree No.	Species	Age	Condition	DBH (cm)	Height (m)	Spread (m)
1	Swamp Mahogany ( <i>Lophostemon Suaveolens</i> )	M	Reasonable	50	13	6m

Comments	Recommendations	Priority
This tree is of mature age is located in a risen garden bed adjacent to the kindergarten. The crown hangs over both the kids playing area and the shed/smoko area. As per photos you can see the amount of deadwood falling on to building and hung up in crown. Also, the large root system from both this Swamp Mahogany and the adjacent Mango Bark tree have caused the pavement to lift and cause major trip hazards.	Due to the type of tree that the Swamp Mahogany is, it is prone to losing branches and deadwood. This, coupled with the fact that the roots are causing a liability and to repave and remove the roots would cause the integrity of the tree to be compromised and cause a further risk. As attached there is a report from an OHS compliance officer for the kindergarten that has stated the trip risk.	H



Tree No.	Species	Age	Condition	DBH (cm)	Height (m)	Spread (m)
2	Mango Bark or Scrub Turpentine (Canarium Australianum)	M	Good	55	13	7

Comments	Recommendations	Priority
Mango Bark or Scrub Turpentines are typically a species that is spread by birds and end up growing near fence lines, being the stopping place for the bird's droppings. They are quite quick growing trees and have an aggressive root system because of this. Much of the damage caused to pavers is due to this tree. As stated previously and as attached, there is a OHS report done specifying the trip hazard of these.	It is recommended that this tree please be removed for the obvious OHS issues. Any work done to remove these roots will compromise the integrity of the tree and make it more of an issue. It has also had limbs fall at various times, which these trees are known to do, which is a concern as this area is also designated for smoko, and access to the tool shed.	M



Tree No.	Species	Age	Condition	DBH (cm)	Height (m)	Spread (m)
3	Swamp Mahogany ( <i>Lophostemon Suaveolens</i> )	M	Poor	15	9	4

Comments	Recommendations	Priority
This tree is on fence line adjoining the kid's playground. This tree is in poor condition and in decline as shown by limbs. This tree has been overshadowed by adjacent trees which has limited its growth and effected the structure of its crown.	To remove this tree as it is a clear risk to those playing in playground and will only continue to cause root problems in the future	H





### **3.0 Recommendations and Conclusions**

Overall the priority of work is the removal of the trees as they pose an immediate risk to students and staff.

This has been reiterated with a report (attached) from a OHS officer that had been done for Port Explorers, specifying the trip hazard caused by roots.

Trees 1, 2 and 3 have structure issues also, which are typical for their species, at this point in their life cycle. Also, to remedy the trip hazard the trees and roots will have to be removed, or as the alternative, cutting and removing the roots and placing on root barrier, will effect the integrity of the tree – this is not safe option.

Because of the location of this tree and the confined area that they are in, it would be advised that a tree/s that are more suitable for an urban environment be planted, particularly keeping in mind that they could grow near child playing areas.

All pruning works should conform to AS4373 (2009).

If contractors are to be engaged for removal / 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.



## Appendix 1: Index of Arboricultural terms used

The following terms are widely used in tree assessment (*as adapted from "Principles of tree hazard assessment and management" - Lonsdale, D. 1999*):

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.

Bifurcated – having two co-dominant stems (forked).

Branch collar – a swelling at the base of a branch.

Crown – the main foliage-bearing portion of a tree.

Crown reduction - the overall reduction of both the height and spread of a crown. The extent of reduction is dependent on tree species, tree health and site requirements.

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.

Decline – a deterioration of a tree’s general condition and vigor.

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.

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

Included union – branch union where there is bark to bark contact which results in a structural weakness.

Leader – the dominant stem

Lopping – removal of branches, now generally applied to heavy or excessive trimming.

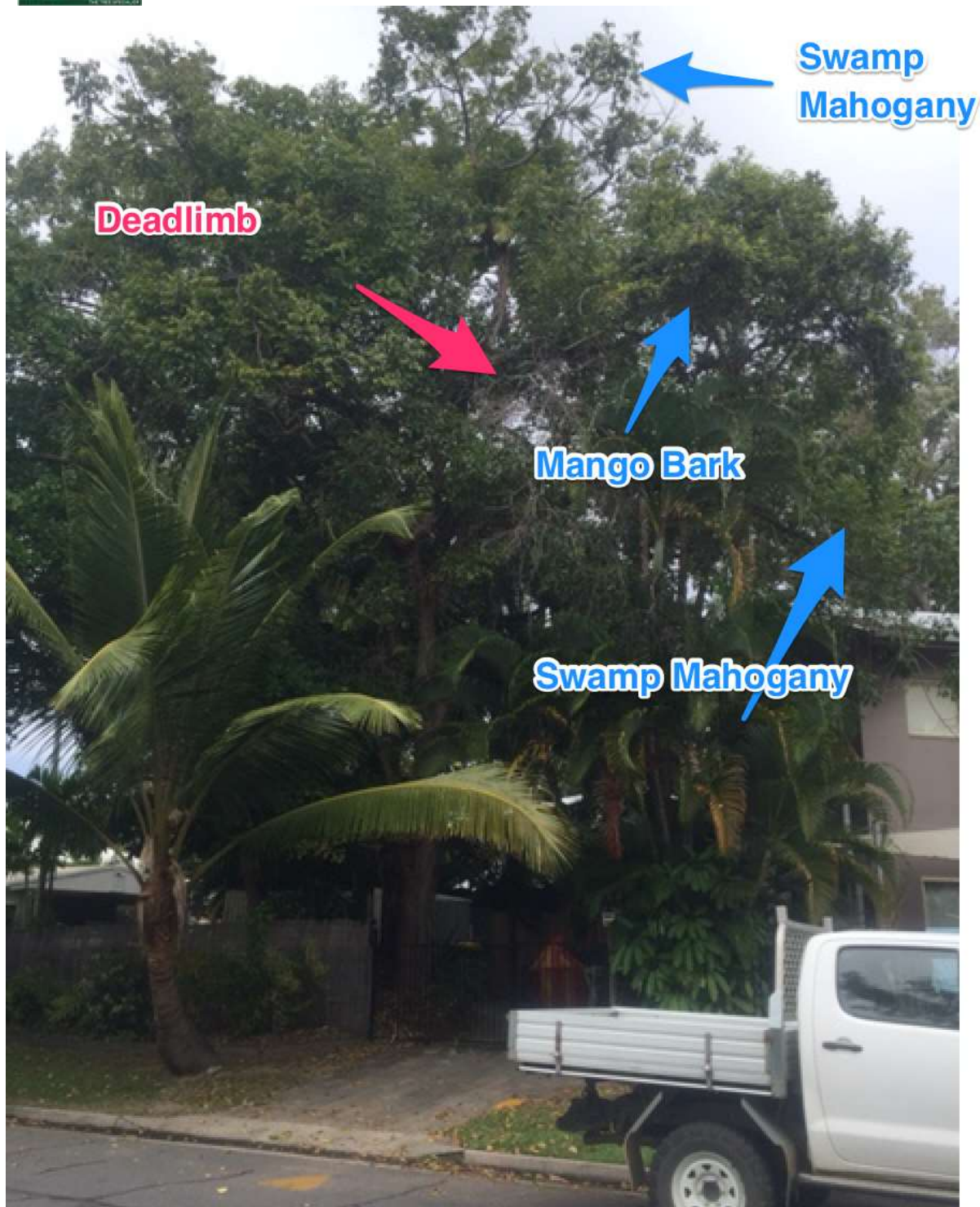
Phototropic lean – lean due to a tree’s growth towards available light.



SULE – Safe Useful Life Expectancy. A term used to summarize the combined attributes of form, health / condition and future amenity value. This then allows site managers to make a decision with regard to retention of the tree or otherwise

Topping – the removal of all or a large portion of a tree's canopy.

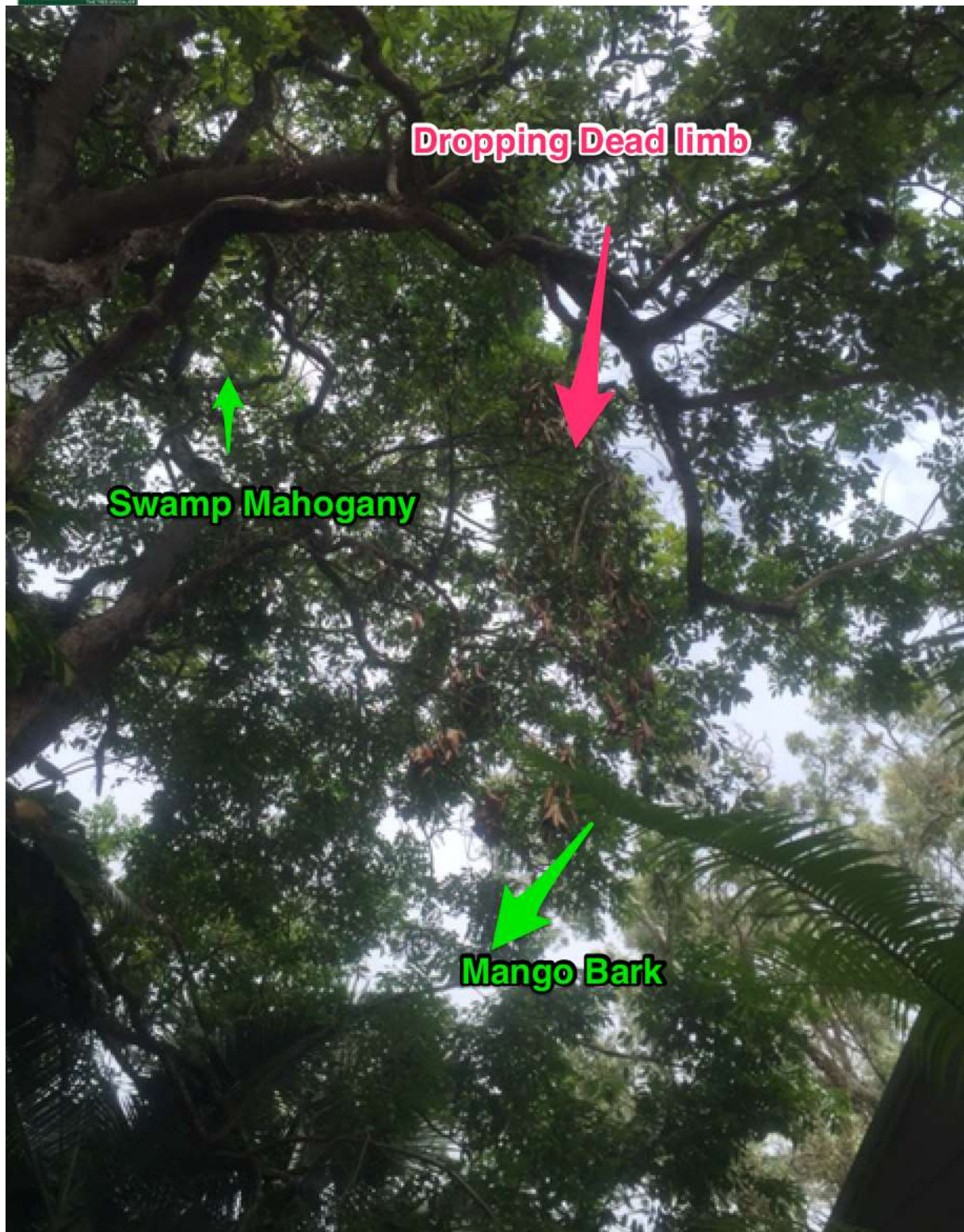
Trifurcated – having three co-dominant stems





















## Section from Report

<p>workstation.</p> <ul style="list-style-type: none"> <li>Employees are not encouraged to take short, regular postural breaks from repetitive activities.</li> </ul>		
<p>Adhoc Hazards Identified</p> <ul style="list-style-type: none"> <li>Rope around posts in outdoor play area are coming loose exposing the bolts.</li> <li>Posts under stairs in play area have exposed bolts.</li> <li>Area between paths in play area with pavers and Mondo grass present an undulating surface causing potential trip hazard for children and adults.</li> <li>Side entry pavers are undulating as the tree roots are lifting the pavers. I understand that staff and parents with children utilise this access from the side street.</li> <li>Hose is coiled around the fence in a manner which may be used as a climbing support in the outdoor play area.</li> <li>The space between the bottom of the hand rail and stairs leading from the outdoor play area to the veranda to upstairs rooms appears quite large and small children may slip through.</li> </ul>	<p>M</p>	<ul style="list-style-type: none"> <li>Investigate and record hazards and address risks to implement solutions.</li> </ul>



\*The original format of this report remains the property of MPDT Pty Ltd (ABN 42 120 581 544)