



Open Space Services

Arboriculture, Horticulture & Playground Safety Specialists

WELLINGTON EAST CEMETARY TREES

Tree Inspection – March 2021

Location

Wellington East

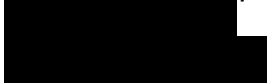
Facility Manager

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Arborist

Barry Rolton *Dip Hort, Dip Arb, Dip CLM*



Order number

13258



TREE AUDIT

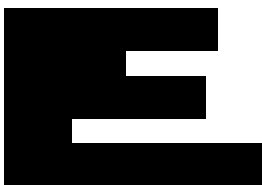
The audit has been written in a format, which can be easily understood by most people, in some situations the trees are identified as having a defect that will need to be checked periodically to ensure that the defect has not become a safety problem, this will enable the problem to be recognised and dealt with before failure occurs. To keep the cost down Trees SA do not offer hard copies (printed copies) of the reports, the reports are in PDF format that can be printed by the client. It is also suggested that once all pruning has been completed that a copy of this report be emailed or transferred to the insurance company to show that a duty of care has been taken.

Open Space Services reports do not include all the fluff that bulks out the report, in most cases the defects can easily be seen once identified, comprehensive reports can be written, however these are at much greater price and take considerable time to put in a lot of information that is not needed. This is another way of keeping our price affordable

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Sudden limb drop is common with large trees and can happen without warning; there is no way of detecting this problem and there is no way of predicting where the next limb will fail, however this problem while common is regarded as very low risk, in areas like schools, the ovals and gardens will usually receive some form of irrigation over summer periods which reduces stress compared to other trees which do not, this reduces the risk considerably.

While all effort is made to assess the trees for faults and structural weaknesses, there is always the problems that cannot be seen, these include but are not limited to: cell collapse within the tree, decay in areas where no external signs are showing and problems out of visual reach, Open Space Services cannot guarantee the structural integrity of any tree, the project Arborist makes the judgment on known outcomes which is achieved by experience and education.

Barry Rolton

Diploma of Horticulture

Diploma of Arboriculture

Diploma of Conservation and Land Management

**Open Space Services
Director**

CONDITIONS OF VEGETATION WORKS

All pruning is to be carried out in a manner that leaves the tree in a state that is more visually aesthetic state rather than regimental pruning. No stubs are to be left as they will produce shoots if left too long. Pruning to Australian Standards AS4373-2007 is a requirement.

If trees and large shrubs are removed, the stumps have to be removed, most plants will produce growth when they are removed if the stump is left. The new growth will grow into a tree of upright proportion if left to regrow, which will require it to be removed again if not completely removed the first time. If a stump muncher cannot be use, the stump will need to be poisoned immediately after removal with an appropriate herbicide.

All waste material is to be mulched or removed from the property; all mulch that is to be kept by the school should look for direction of placement from the groundskeeper or the principal, no mulch is to be left within two metres of a building.

If root pruning is specified, the cut root will need to be applied with a specified bituminous compound to reduce uptake of soil borne bacterial pores. Once coated with the compound, apply paper to reduce the compound from sticking to anything. No compound should be used for pruning cuts above ground.

If work is to be carried out during a school day, correspondence must be undertaken with the principal for an agreed time. All WHS procedures have to be followed in regards to all persons within the area of control of undertaken works. Exclusion areas of work are to be used in the way of bunting to indicate exclusion areas.

RELATIVE LOCATION USE

When assessing trees and their risk, location always plays a big part in how the tree is evaluated. This allows for a narrower deviation from the proper risk analysis and also allows for only needed works to be undertaken.

Low: areas that have very little pedestrian traffic, or are not usually accessible or do not have evidence of traffic movement, located within garden beds with no directed traffic movement.

Medium: Garden beds that may be close to walking areas of directed traffic, close to buildings but are not a fire risk.

High: next to walkways, roads and main entrances which have a heavy pedestrian and vehicular traffic, branches that overhang car parks or rest points such as seats and tables. Close to buildings which are a fire risk.

RISK MATRIX

Regulated and significant trees come under Group A of the matrix; the title of the land has to also be checked to see if there is a Land Management Agreement in place.

All trees that are to be removed that are of significant size should also be checked with the heritage register to make sure that there are no conditions placed on the tree if removal is to go ahead.

URGENT RISK	Urgent removal required as the tree is destined to fail and cause damage or serious injury within a short period of time.
HIGH RISK	High risk will require removal or specific remedial works at the scheduled time of works (usually within 1 month).
MEDIUM RISK	Medium can either be for removal or remedial pruning that is not of immediate risk but is required for defects or eventual failure.
LOW RISK	Low risk does not require any works by the contractor

CONTRACTORS REFERENCE

A coloured graphic below the risk status in the upper right corner of the page shows a quick reference guide for contractors, this is due to the risk matrix having different classes of risk compared to removal or pruning.

In some cases, a high risk can be mitigated by the use of remedial pruning or by removal. The graphics work in the same way as a traffic light i.e.: red means you need to stop and remove it, Orange means that pruning is required and green means that you can go past it as there is no work.

REMOVAL	Removal of whole tree and stump where possible.
REMEDIAL PRUNE	Pruning only, leaving the tree to grow.
NO WORK REQUIRED	No work required.
GROUNDSKEEPER	Groundskeeper only to carry out works

SITE PLAN



SITE 1

WELLINGTON EAST – FERRY ROAD



1. Eucalyptus species

MEDIUM RISK

PRUNING REQUIRED

SPECIES INFORMATION

Common Name: Eucalypt

Species Status: Native

Condition of tree: Regenerating

Relative Location Use: Low

Pest Plant Status: No

PHOTO



INSPECTION

This large eucalypt has suffered in the past from both water stress and from the encroachment of the large Aleppo pine. The tree has grown out on an angle due to phototropism and the confined area of planting that has occurred throughout its growing life. The tree is regenerating which indicates that the passed problems are due to water stress. As the tree is regenerating it should continue to grow back especially over the winter months when the rejuvenation of soil moisture becomes adequate to sustain the tree. The amount of deadwood will need to be removed back to the point where regeneration has occurred. This is due to it being in the entrance way and in a high traffic area for this situation which is not as high as it would be in some other places but still significant. There are some larger Deadwood approximately halfway up which will need to be removed as it is quite large and does not look to have habitat hollows within them.

RECOMMENDATION

Prune out the large deadwood.

2. Eucalyptus species

MEDIUM RISK

PRUNING REQUIRED

SPECIES INFORMATION

Common Name: Eucalypt

Species Status: Native

Condition of tree: Fair

Relative Location Use: Medium

Pest Plant Status: No

PHOTO



INSPECTION

This tree has multiple failures in the past with at least 10 that can easily be seen and are large and some may have been a result of falling limbs further up. The tree has had significant dieback also due to water stress and this tree is going to need deadwood removal including the stubs from previous breaks. If the tree has more failed limbs in the future then the tree may need to be removed, however as the tree is in a low use area I am recommending that the tree stay for now. There is one limb which is growing out over the fence which is on a lean and I am recommending removing this branch back to the attachment point this will also remove the hyperextended branch that looks to be the next area of break on this tree.

RECOMMENDATION

Prune out the large deadwood and remove the limb growing out over the fence.

3. *Eucalyptus cladocalyx*

MEDIUM RISK

PRUNING REQUIRED

SPECIES INFORMATION

Common Name: Sugar Gum

Species Status: Native

Condition of tree: Good

Relative Location Use: Low

Pest Plant Status: No

PHOTO



INSPECTION

This tree has suffered from water stress in the past but not as bad as the other two trees have. This tree does have a void in the attachment point approximately 5 metres from ground level this looks to be from Borer damage. The void is only on one side with the remainder being structurally sound. There is one large dead stub over the access way between the fence and the tree which will require removal as this piece of deadwood may fail. The trees in the past have had bird damage throughout the area but most of the damage is being encroached by wound wood. I recommend removing the deadwood and the void should be inspected at least every three years.

RECOMMENDATION

Prune off the large deadwood.

4. *Eucalyptus cladocalyx*

MEDIUM RISK

PRUNING REQUIRED

SPECIES INFORMATION

Common Name: Sugar Gum

Species Status: Native

Condition of tree: Good

Relative Location Use: Low

Pest Plant Status: No

PHOTO



INSPECTION

This is the fourth in the line of trees that will require dead wooding although not as much as the other trees, this tree is more isolated than the other trees and has grown much better because of this. The tree does have an injury on one side of the trunk, there is a hollow habitat within the centre which extends from the central attachment point, however the live wound wood around these areas is quite large which indicates that the tree is still held together in a quite sound manner.

RECOMMENDATION

Remove large dead wood throughout the canopy.

5. *Eucalyptus cladocalyx*

MEDIUM RISK

PRUNING REQUIRED

SPECIES INFORMATION

Common Name: Sugar Gum

Species Status: Native

Condition of tree: Good

Relative Location Use: Low

Pest Plant Status: No

PHOTO



INSPECTION

This tree also has suffered from water stress but is regenerating quite well. This tree will need deadwood removal as well as removal of second tier and low hyper extended live branches. The hyperextended limbs are the limbs that are extended outside the canopy and can easily be broken off when storm events occur. The larger dead wood to be removed is abundant throughout the tree which is due to water stress, foliage below the yellow line will require removal as this will develop faster than the upper foliage which will continue the upper canopy dieback when the area becomes low in moisture.

RECOMMENDATION

Prune out the larger deadwood, prune out the hyperextended green wood and remove foliage from below the yellow dotted line.

1 - PROBABILITY	
NO DETECTABLE THREAT	No Detectable Threat The tree appears healthy, no apparent sign of disease or damage, or is not of a size, species or condition likely to pose a threat
FAILURE UNLIKELY	The tree appear healthy, but is of a type or condition to potentially develop minor branch drop of live or dead wood .
FAILURE POSSIBLE	Mature to aged tree in declining condition, and/or structure, and/or disease apparent, showing potential for branch drop, history of limb failure.
FAILURE LIKELY	The tree has over weighted limbs, disease, root damage, removal of adjacent supporting tree, supported split trunk, bark inclusion, supported fractured branch, declining health with multiple dead branches.
FAILURE CERTAIN	The tree has significant structural root damage, removal of significant adjacent supporting tree, signs of recent Root plate movement, split trunk, fractured branch, hanging branch, bark inclusion with prominent shoulders.
2 - CONSEQUENCE	
MINOR	The tree is out of the way and unlikely to be near people, vehicular traffic, or significant assets where it may pose a threat
MODERATE	The tree is in a garden area with minimal people, or vehicular traffic, or near significant assets where it may pose a threat
SERIOUS	The tree is in an area high in people, or vehicular traffic, or near significant assets where it does pose a threat.
EXTREME	The tree is in an area high in people, or vehicular traffic, or near major assets and is of a size, species, or condition, or showing signs of significant, movement, root or structural damage, or disease and where its failure is likely to cause significant injury or damage.

CONSEQUENCE	PROBABILITY			
	FAILURE UNLIKELY	FAILURE POSSIBLE	FAILURE LIKELY	FAILURE CERTAIN
MINOR	LOW	LOW	MEDIUM	MEDIUM
MODERATE	LOW	MEDIUM	MEDIUM	HIGH
SERIOUS	MEDIUM	MEDIUM	HIGH	HIGH
EXTREME	MEDIUM	HIGH	HIGH	CRITICAL

3 - RISK LEVEL INDICATORS	
CRITICAL	Removal of trees (section 54A emergency Tree Removal) Arborist or SES/CFS/POLICE (will fail within one day or is a high risk hazard)
HIGH	REMOVAL
	Remedial tree works required as soon as possible or removal if pruning does not remove the risk or allow the risk to be an acceptable one
	No work required

GLOSSARY

Apical Dominance:

Suppression of lateral growth in preference to elongation of the terminal bud.

Branch Collar:

A thick ring of tissue that forms around the base of a branch between the stem and branch.

Callus:

Repair tissue produced in response to wounding.

Canopy:

Comprises more than one crown, joined with other crowns, e.g. forest canopy.

Critical Root Zone:

This area contains the supporting root structure and (CRZ): should remain unaltered by any form of construction work, including digging, filling or chemical flow unless instructed from a consulting arborist.

Crotch:

The point formed by the junction of 2 parts of a tree, such as by a branch and stem.

Crown:

That part of the tree containing the branches and foliage. (Crown union is where the branches meet the trunk)

Decurrent:

Trees that lack a central leader, the crown being made up of a number of branches.

DBH:

This is a common measure in the tree industry; it stands for Diameter at Breast Height and is 1.3 metres from ground level.

Epicormic growth:

A survival response, shoots occurring on stems, branches and on suckers from the tree base, generally a symptom of over pruning, flush cuts, topping or a stressed tree.

Kino:

Name given to the sap that weeps from scars in many of the Eucalypts, Kino is also known as gum as in Blue Gum or Bloodwoods as Borers that would exit the Eucalypt trees would cause this sap to weep and looked as though the tree was bleeding.

Phototropism:

The behaviour of a plant to grow towards the greatest source of light, often causing the tree to lean.

Flushcut:

Pruning technique where the branch is removed with the branch collar (i.e. stem tissue) contrary to the AS4373.

Girdling root:

A root that encircle the base of the trunk – impeding growth and support.

Root crown:

The point at which the trunk and roots meet.

Scaffold branch:

The major structural support branches that attach to the stem or leader.

Secondary branching:

Branch network connecting the scaffold limbs to the finer branches containing the foliage.

Tree Protection Zone (TPZ):

This area is to be maintained in accordance with the protection Specification. Limited work may take place in this area and only in conjunction with that detailed within the design requirements of a consulting Arborist.

Vascular system:

Made up of the cambium, phloem and xylem these cells provide the transport of water, minerals and production of new cells as well as support.

REFERENCE AND STANDARDS

Reference



Australian Heritage Places Inventory
<http://www.heritage.gov.au>



South Australian Development Act 1993
<http://www.legislation.sa.gov.au>



South Australian Development Plans
<http://www.planning.sa.gov.au>



South Australian Native Vegetation Act 1991
<http://www.legislation.sa.gov.au>



[Arboriculture 4th Edition](#)
Integrated management of Landscape Trees, Shrubs, and Vines
Harris, Clark and Matheny 2004



[Ornamental Flowering Trees](#)
Raymond J Rowell
1991



[What Garden Pest or Disease is That](#)
New Holland Publishers Pty
1985



[Native eucalypts of South Australia](#)
Dean Nicolle



[Melaleucas](#)
Ivan Holliday



[Encyclopedia Of Australian Plants: Volume 1 to 9](#)
W. Rodger Elliot / David L Jones

Standards



Pruning of Amenity Trees
Australian Standards
AS4373-2007



Protection of trees on development sites
Australian Standards
AS4970-2009