



Arboricultural Report

Damage to Protected Common Lime - 30 Queens Drive, Ashburton

1. Introduction

- 1.1 I have been asked by Rhonda Gallagher, Ashburton District Council (ADC), to provide advice on the management of a protected common lime tree which was been ring-barked on Sunday December 20, 2020 (image 1). The tree is located at 30 Queens Drive, Ashburton and is listed as tree 64 on the Schedule of Protected Trees in Appendix 12-4: of the Ashburton District Plan.
- 1.2 I was initially contacted by phone on Friday January 15, 2021 and provided a brief on the background relating to the damage that the tree had sustained. The immediate concern of Council staff related to any hazard that the tree may pose. Based on the information provided, I considered that the tree did not pose any immediate threat and further detailed observations and measurements were sought.
- 1.3 In an effort to mitigate the wounding that had occurred to the tree, the wounds had been packed with moist sphagnum moss under plastic as is the recommended practice in such events (image 2). This was done to ensure the cut cambium surfaces did not dry out to aid restoration of the tree's cambium.
- 1.4 A detailed examination of the tree was undertaken by ADC staff on Tuesday January 18, 2021 and forwarded to me. Measurements were taken of the tree and the depth and length of cuts were recorded (see attached inspection record 18.01.2021). Additional images have also been provided.
- 1.5 A further report of the tree's condition was received later in the month including how the tree performed in a high-wind event that occurred on Tuesday 19th January 2021.
- 1.6 For the purposes of this report, I personally viewed the tree on two occasions, March 13 and more recently April 29, 2021.



Image 1: Showing ring barked stems (supplied)



Image 2: Showing initial treatment of wounds to damaged lime tree (supplied).

2. Damage to the Tree

- 2.1 As can be seen on the attached inspection record and images, each of the three stems have sustained a chainsaw wound around a portion of their circumference. Stem A has had 64% of the circumference cut, Stem B 28% has been cut and Stem C has had 44% cut.

- 2.2 In my view, these percentages are not sufficiently high enough to cause the short-term death of the tree as satisfactory conductivity remains to ensure the roots receive starch and other assimilates from the canopy, and that the canopy is conversely provided the moisture it requires from the root system.
- 2.3 During my visit to the site in March I noted that the remaining canopy was unaffected by the ringbarking. By late April the canopy was still full and healthy, and some regrowth was observed arising from the truncated stems (see image. 3). If the cuts had been more severe then canopy death would have resulted.
- 2.4 The tree has a cable support system installed in the canopy (image 4). One or two of the cables appears to have been cut during the partial removal of the tree however the canopy still appears to well supported. Further closer inspection of the support system will be required.
- 2.5 The partial removal of two of the stems has unbalanced the canopy and therefore some corrective pruning will be necessary if the tree is to be retained.



Image 3: Showing canopy cover on April 29, 2021.



Image 4: Showing cable support system installed in the tree. Regrowth on the truncated stems can also be observed (April 29, 2021).

- 2.6 While the short-term damage to the tree has not affected tree health or stability, the long-term damage that will result from the ringbarking is much more serious.
- 2.7 Over the next 10-15 years, decay is likely to become well-established in the main stems and the ongoing retention of the tree will much depend on the ability of the tree to produce new wood each year to provide future stability.
- 2.8 The other aspect of damage caused to the tree is the loss of some of its visual appeal.
- 2.9 In my 35 years' experience in the tree industry I can say that this act of ringbarking a tree prior to its removal is unheard of. In my opinion it makes no sense at all and one can only conclude that it was carried out with cynical intent.

3. Recommendation for Remedial Works

- 3.1 I agree with the Jemmet assessment of the tree that there are two options to explore at this point in time: there being 1) removal and 2) crown reduction and retention.

- 3.2 I am of the view that the tree is not immediately dangerous and that efforts could be made to restore the canopy by corrective pruning. While this may affect the visual appeal of the tree in the short term, lime trees are resistant and are quite able to respond to heavy pruning. Indeed, they are a tree that will tolerate pollarding.
- 3.3 To that end a complete grown reduction will be required to balance the canopy. Additionally, the cable support system will require reassessment and corrective steps taken if necessary.
- 3.4 A six-monthly inspection of the tree should follow up this work.
- 3.5 Alternatively, and given the resources required to undertake the above work, complete removal may also be considered.
- 3.6 It will be difficult to anticipate the long-term impact of the damage to the tree. With the corrective steps taken, the tree could live for many years if it is continued to be managed appropriately. It is also possible that future inspections deem the tree to have become unsafe, necessitating removal. I am of the view that this would be unlikely to occur within the next 5-10 years.

4. Summary

- 4.1 The protected lime tree at 30 Queens Drive Ashburton has sustained serious damage that will severely shorten the service life of the tree.
- 4.2 In the short term the tree can be pruned and otherwise attended to ensure that it does not pose a hazard to adjoining properties. Canopy health has not been affected and the tree is likely able to respond well to crown reduction.
- 4.3 Despite the damage caused to the tree, it survived a high-wind event shortly after it was cut. Crown reduction will further wind-firm the tree.
- 4.5 With appropriate care, I am of the opinion that the short-term health and stability of the tree can be expected to be good however there is a question mark over its long-term existence.

Brad Cadwallader Dip.A.Hort. Cert.Den. NCH L4 (Arb). FRIH
Tree Consultant

11 May 2021



Arborist's Disclosure Statement

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the appearance and health of trees and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatment, pruning and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines and other issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees, is to eliminate all trees. Trees that are regularly inspected by competent, knowledgeable arborists and maintained in accordance with modern arboricultural practices are far less likely to experience unexpected failures than unmanaged trees.

In the preparation of any report that may be used as expert testimony, the consultant acknowledges and will abide by the Code of Conduct for Expert Witnesses.

Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character, nor is any opinion rendered as to the quality of any title. Any and all existing liens and encumbrances have been disregarded, and any and all property is appraised/evaluated as though free and clear, under responsible ownership, and competent management.
2. It is assumed that any property is not in violation of any applicable codes, acts of Parliament, ordinances, statutes, or other governmental regulations.
3. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
4. The consultant shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made.
5. Loss or alteration of any part of this report invalidates the entire report.
6. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person or party to whom it is addressed, without the prior expressed written consent of the consultant.
7. Neither all nor any part of the contents of this report, nor copy thereof, shall be used for any purpose by anyone but the person or party to whom it is addressed, without the prior written consent of the consultant; nor shall it be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales or other media, without the prior written or verbal consent of the consultant: particularly as to value conclusions, identity of the consultant, or any reference to any professional society or institute, or to any initialed designation conferred upon the consultant stated in his qualifications.
8. This report and any values expressed herein represent the opinion of the consultant and the consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
9. Sketches, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.
10. Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflect the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible components without dissection, excavation, or probing unless otherwise noted. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

ATTACHMENTS

- Ashburton District Council tree inspection 18/01/2021
- Four Seasons Tree Care Ltd Report 23/12/20

Date of inspection 18/01/2021

Inspection of protected "Lime Tree" at 28 Queens Drive Ashburton

Time of entry 08:36

People present; Rhonda Gallagher (Open Spaces), Mike Farrell and William McCormick (Warranted under RMA for protection of the "Lime Tree")

On arrival to site of the "Lime Tree" it was still wrapped and signage place before Christmas still in place.

Tree was unwrapped and measurements taken of the cuts.



Figure 1 Tree as unwrapped looking from east to west saw cuts seen as where sphagnum moss has been inserted.

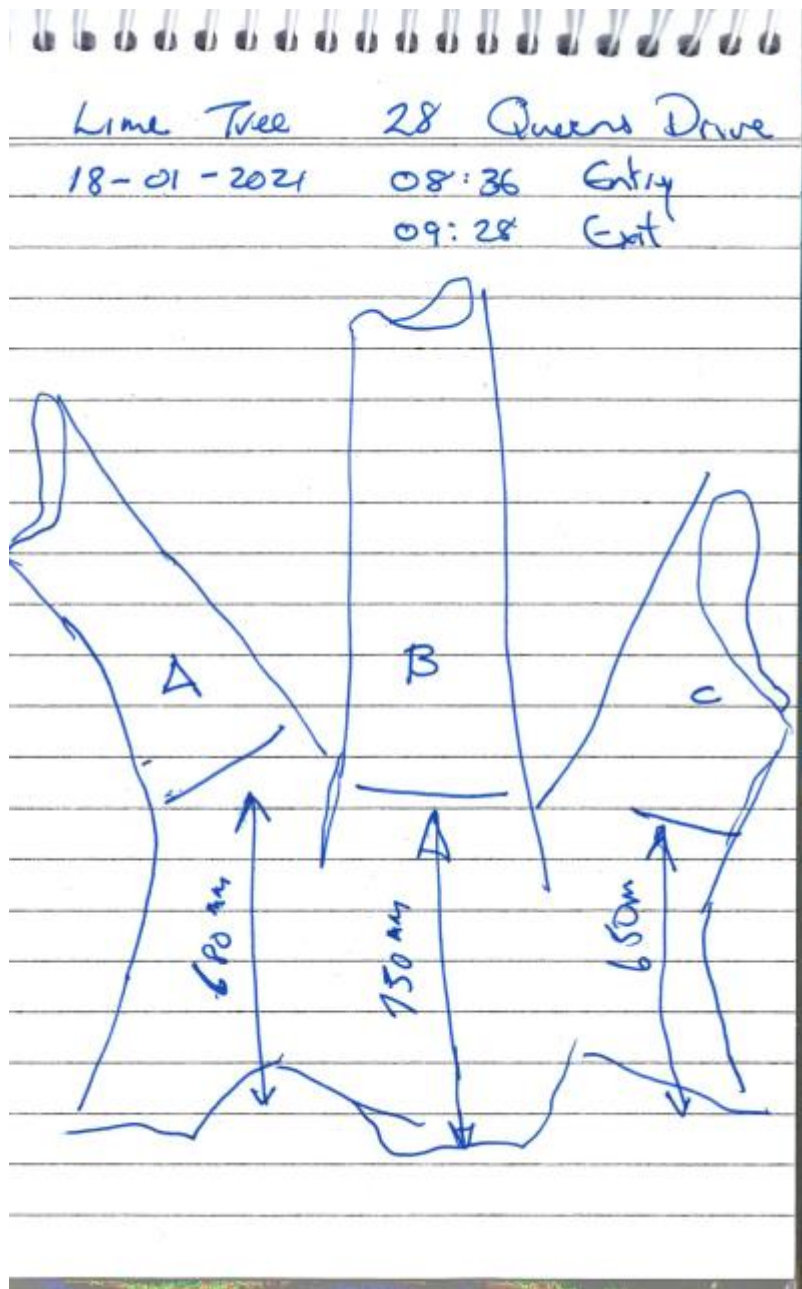


Figure 2 site note showing height of saw cuts and position on trunks looking from east to west.

ASHBURTON DISTRICT COUNCIL

5 Baring Square West
Ashburton

PO Box 94
Ashburton 7740

P (03) 307 7700
E info@adc.govt.nz

www.ashburtondc.govt.nz



Figure 3 Trunk A 1400 mm cut 43 mm to 37 mm deep. Cut on front 650 mm 33 mm deep. Circumference 3200 mm.



Figure 4 B saw cut 620 mm long and 62 mm deep. Circumference 2200 mm.

ASHBURTON DISTRICT COUNCIL

5 Baring Square West
Ashburton

PO Box 94
Ashburton 7740

P (03) 307 7700
E info@adc.govt.nz

www.ashburtondc.govt.nz



Figure 5 C saw cut 1300 mm and 34 mm deep. Circumference 2930 mm



All cuts were checked no health issues showing and moss was wet and rewrapped.

ASHBURTON DISTRICT COUNCIL

5 Baring Square West
Ashburton

PO Box 94
Ashburton 7740

P (03) 307 7700
E info@adc.govt.nz

www.ashburtondc.govt.nz

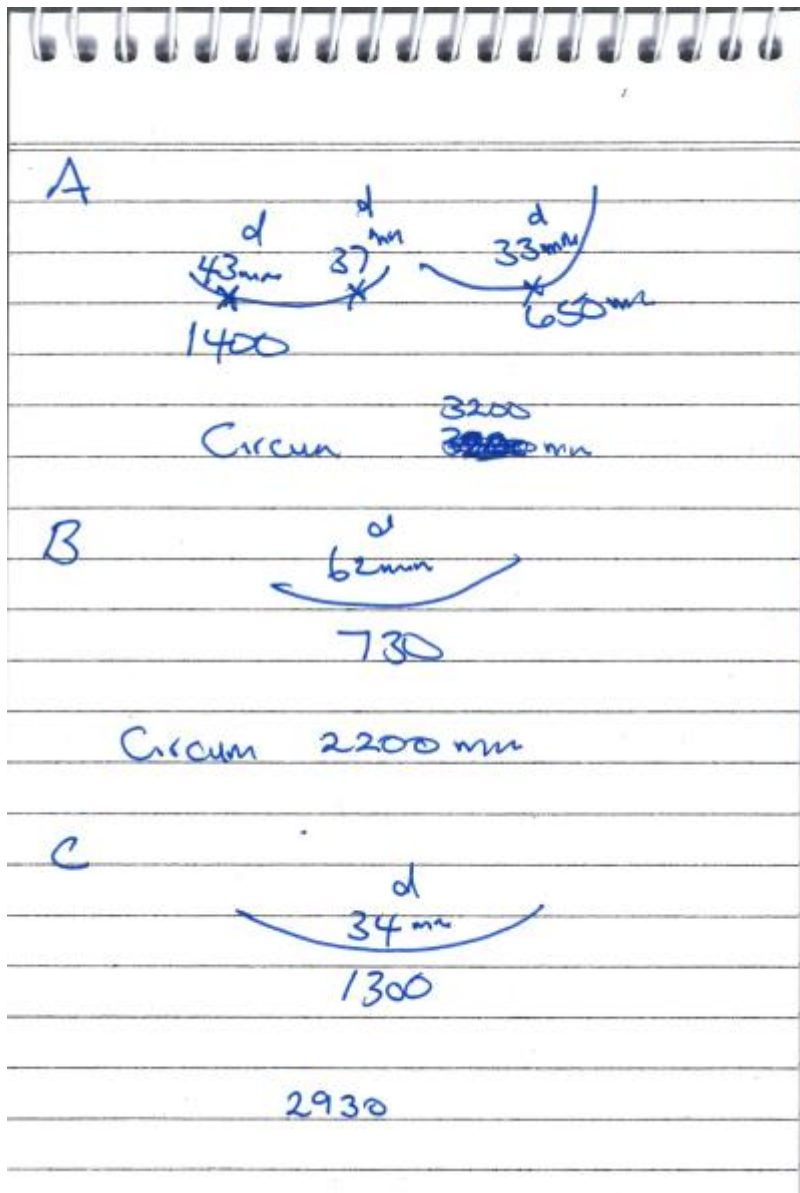


Figure 6 Site note of cut size and depths.

Site exited 09:028

Mike Farrell

FOUR SEASONS TREECARE LTD

Tree Condition Assessment and Tree Protection Recommendations

Client: Ashburton District Council

Site Address: 30 Queens Dr, Ashburton

Date, time of visit: Monday 21 December, 10.30am

Report Author: Lyall Jemmett

Version: FINAL

1.0 SCOPE OF REPORT

To inspect one tree on the site –

- Identify tree species
- Assess its condition
- Describe its features
- Make recommendations

1.1 Background

William McCormick requested a tree report to be completed on a Lime tree on Queens Dr. The scope of this report is to assess the trees condition and health and make recommendations.

1.2 Report Methodology and Limitations

This report is restricted to the one tree.

All statements and recommendations made by Four Seasons Treecare are limited to information provided at the time of the inspection and exclude any outside factors including, but not limited to, climatic incidences, vandalism, and changes in natural/ built environment.

Four Seasons Treecare Ltd has made every effort to ensure the statements in this report are accurate at time of inspection however as a living organism the tree's health can change without warning therefor regular inspections are advised. This report is a guide only to the management of the tree. All inspections are taken at ground level and no samples have been taken.

2.0 PROTECTED TREE STATUS

The subject tree is listed in the Ashburton District Plan; Section 12 in the Schedule of Protected Trees:

12. Tilia x Europa

30 Queens Dr, Ashburton

Legal Description – Lot 42 DP 408393

District Plan Map no: U47

Evaluation Score: 34

See Appendix 12.5 Criteria for Evaluation of Protected Trees, of The Ashburton District Plan, for more information on the Evaluation Score.

3.0 GENERAL SITE DETAILS

3.1 Weather Conditions of time of inspection

Summer conditions –dry and clear

3.2 Slopes and Boundaries

Site is level. The site is an urban environment.

3.3 Underlying Soils

Waimakaririf (Sib 1) - deep, well drained, silty loam

Area: 70% - Confidence: **Low**

Waimakaririf (Sib 2) - moderately deep, well drained, silty loam

Area: 20% - Confidence: **Low**

Rakaiaf (Sib 4) - shallow, well drained, silty loam

Area: 10% - Confidence: Low

(ref: S-Map Soil report – Landcare Research - <https://smap.landcareresearch.co.nz>)

4.0 TREE DETAILS

Site Address : 30 Queens Dr, Ashburton

Species: Common Lime, *Tilia x Europa*

ADC District Plan id no : 64

ADC Evaluation Score : 34 (based on ADC Criteria – See Appendix 1.0)

Height: Approx. 15m (May 2020 calculations)

Crown Spread: 8-10m (May 2020 calculations)

DBH: 2.5 (May 2020 calculations)

Health/Form/Overall Condition/Recommendations:



Here is a photo of the tree taken May 20 and again on 21 December 20.



I was advised on Sunday 20 December that the resident in the Queens Dr property had employed contractors to remove this tree. The nearby residents witnessed the work being undertaken and knowing of the tree's heritage tree listing informed the Ashburton District Council who responded very quickly on shutting the work site down.

Unfortunately work had already been undertaken leaving the tree significantly damaged and unbalanced. This work has affected the aesthetics of the tree and also possibly causing a health and safety issue due to the unbalanced weighting of the tree.

Not only has there been damage to the upper canopy, the tree has also been ring barked with a chainsaw – see pictures above. This is across most of the base of the stems but not

the whole base - therefore it is possible sap flow could continue to occur within the tree (this could be a slow process requiring regular monitoring).

With all the factors considered, in my opinion there are two options:

1) Attempt to retain the tree

I would recommend a full crown reduction to take all the wind loading out of the tree and to then monitor the trees health regularly for any dieback which may occur during the ring barking process.

2) Full removal

Report Classification: Tree Condition Assessment and Tree Protection
Recommendations

Report Status: FINAL

Report Author: Lyall Jemmett
Advanced Certificate in Arboriculture, Level 4
Director - Four Seasons Treecare Ltd
027 545 9255 / fourseasonstreecare@xtra.co.nz

Date: 23 December 2020

APPENDIX 1 – Ashburton District Council District Plan – pg 12-45, 12-46 (see - <https://www.ashburtondc.govt.nz/our-district/sport-and-recreation/parks-and-sports-fields/Pages/notable-trees.aspx>)

Factors	Points: 0	2	4	8	16	32
Size (Crown diameter x total height) or exceptional trunk diameter.	Very small – less than 10m ³ .	Small – 10m ³ to 50m ³ .	Medium - 50m ³ to 150m ³ .	Large – 150m ³ to 250m ³ or largest tree in locality.	Very large 250m ³ or more. Very large specimen or trunk diameter exceptionally large for particular species or grove of trees.	Largest or one of largest of particular species in New Zealand.
Age	Recent planting.	5 – 50 years.	50 – 100 years.	100 – 150 years.	150 years plus.	Oldest on record in New Zealand.
Form and condition	Dying, dead, diseased, unbalanced, bad structural defects or dangerous and cannot be rectified.	Poor condition or form, stable condition, no bad defects. Any hazardous and other conditions can be rectified.	Fair – reasonable form, stable condition, no bad defects.	Good form, healthy condition, making good growth or interesting character.	Exceptionally good, outstanding specimen for district and region.	One of best examples of species in New Zealand.
Suitability in relation to setting or site conditions	Totally obscures or is causing significant damage to heritage objects, buildings or any essential structure or utility.	Partially obscures a heritage object or is causing slight damage to important structures, dwellings or commercial premises that can be rectified.	Tree not obscuring or injuriously affecting any buildings, objects, structures, services or utilities. No significant negative values.	Good juxtaposition and harmony with important buildings, objects, structures and essential services or utilities.	Tree species and position specifically chosen and designed to enhance whole site or neighbourhood.	Classic and nationally recognised example of excellent landscape design with trees.
Functional value e.g. soil stabilization, noise amelioration, shelter, screening, pollution control shade tree etc.	No functional value.	25% effective (state function).	50 % effective (state function).	75% effective (state function).	100% effective (state function).	Of vital public interest that function be maintained (state function).

Appendix 12-5: Criteria for Evaluation of Protected Trees

Factors	Points: 0	2	4	8	16	32
Heritage/historic				Local area/community significance or planted by well known local identities or organisations.	Early settler plantings or trees intrinsically associated with historic/heritage buildings or places or important historical events.	Trees commemorating important regional or national historic events or planted by historic identities.
Scientific/ botanical	No special scientific or botanical value. Classified as noxious or surveillance plant or unwanted wilding exotic tree species.	Few good specimens of particular species in particular township or local community	Rare throughout District.	Rare in Canterbury region or significant tree group or ecological association or important seed or propagating material source.	Rare throughout New Zealand or arboretum or tree collection.	Only known specimen in New Zealand or last remnant of native trees or bush.
Importance of position in landscape	Totally obscured by trees, structures or not seen from a public place.	Small tree or tree more than 50% obscured by other trees, objects or landscape.	Roadside or park tree or tree/s in well frequented public place or private property.	Fine avenue or street plantings or tree/s growing in areas where other large trees are scarce.	Principal feature of important public place or landscape design. Well known district landmark or provides "gateway" effect to township or local community.	Landmark of national importance or tree/s are a vital component of a definitive landscape design.
Cultural, ethnical, social, or spiritual values or to commemorate a personal sacrifice.	No special cultural, social, ethnical or spiritual values.	Planted by unknown person/s to commemorate minor event.	Planted by well known person/organisation or event of local importance.	Tree well known throughout district to be of significance. Tree represented as emblem or symbol.	Tree well known throughout Canterbury region to be of significance.	Tree well known nationally to be of significance.