



Waimakariri District Council
215 High Street
Private Bag 1005
Rangiora 7440, New Zealand
Phone 0800 965 468

DISTRICT PLAN REVIEW

Proposed Waimakariri District Plan - Submission

Clause 6 of Schedule 1, Resource Management Act 1991

Submitter details

(Our preferred methods of corresponding with you are by email and phone).

Full name:

J [redacted] and A [redacted] Holcroft

Email address:

juliaholcroft1@gmail.com

Please select one of the two options below:

- ☒ I **could not** gain an advantage in trade competition through this submission (go to Submission details, you do not need to complete the rest of this section)
- ☐ I **could** gain an advantage in trade competition through this submission (please complete the rest of this section before continuing to Submission details)

Please select one of the two options below:

- ☐ I **am** directly affected by an effect of the subject matter of the submission that:
- A) Adversely affects the environment; and
 - B) Does not relate to trade competition or the effect of trade competition.
- ☒ I **am not** directly affected by an effect of the subject matter of the submission that:
- A) Adversely affects the environment; and
 - B) Does not relate to trade competition or the effect of trade competition.

Submission details

The specific provisions of the proposal that ^{our} ~~my~~ submission relates to are as follows: (please give details)

Protection of two extensive Lombardy Poplar Shelter Belts on the North and South boundaries of our 1/2 acre property at 431 Tuahiwi Road.

Our

~~My~~ submission is that: (state in summary the Proposed Plan chapter subject and provision of your submission. Clearly indicate whether you support or oppose the specific provisions or wish to have amendments made, giving reasons) (please include additional pages as necessary)

Seven years ago, these boundary trees were described by two Council Arborists as worthy of protection for their overall health, landscape and Amenity values. Due to a policy change in the Assessment Criteria these trees are among the small number of trees formerly considered for Protection, but now denied it.

☒ We have included: 7 additional pages

☒ We seek the following decision from the Waimakariri District Council: (give precise details, use additional pages if required)

- 1 We are therefore enclosing the 2014 Council Assessment by the Council Arborist; McKinnon
- 2 We are enclosing the 2020 assessment/report by James Gibb qualified in both UK and NZ
We would like the Council to review its present decision in favour of Protection of our trees. While reasonable consideration has been given to Amenity and Condition, we believe information we have regarding Notable Criteria might be of some significance in achieving this

Submission at the Hearing

☒ I/we wish to speak in support of my/our submission

☐ I/we do not wish to speak in support of my/our submission

☐ If others make a similar further submission, I/we will consider presenting a joint case with them at the hearing

Important Information

1. The Council must receive this submission before the closing date and time for submissions.
2. Please note that submissions are public. Your name and submission will be included in papers that are available to the media and public. Your submission will only be used for the purpose of the District Plan review process.
3. Only those submitters who indicate they wish to speak at the hearing will be emailed a copy of the planning officers report (please ensure you include an email address on this submission form).

If you are a person who could gain an advantage in trade competition through the submission, your right to make a submission may be limited by clause 6(4) of Part 1 of Schedule 1 of the Resource Management Act 1991.

Please note that your submission (or part of your submission) may be struck out if the authority is satisfied that at least 1 of the following applies to the submission (or part of the submission):

- It is frivolous or vexatious
- It discloses no reasonable or relevant case
- It would be an abuse of the hearing process to allow the submission (or the part) to be taken further
- It contains offensive language
- It is supported only by material that purports to be independent expert evidence, but has been prepared by a person who is not independent or who does not have sufficient specialised knowledge or skill to give expert advice on the matter.

Send your submission to:
Proposed District Plan Submission
Waimakariri District Council
Private Bag 1005, Rangiora 7440

Email to: developmentplanning@wmk.govt.nz

Phone: 0800 965 468 (0800WMKGOV)

You can also deliver this submission form to one our service centres:

Rangiora Service Centre: 215 High Street, Rangiora

Kaiapoi Service Centre: Ruataniwha Kaiapoi Civic Centre, 176 Williams Street, Kaiapoi

Oxford Service Centre: 34 Main Street, Oxford

Submissions close 5pm, Friday 26 November 2021

Please refer to the Council website waimakariri.govt.nz for further updates

STEM Assessment -431 Tuahiwi Road, Tuahiwi.

Date: 31 05 2014	Condition	Points	Comments
	Form	15	Good
Tree Ref Number: A008	Occurrence	3	Predominant
	Vigour vitality	15	Good
Tree Common Name:	Function	3	Minor
Lombardy Poplar/various natives	Age	9	35+ estimate
	Condition total	45	

Species:

Populus nigra Italica

Location:

E1570323 N5203933

Additional Comments:

This Poplar win break runs down each side of the property and forms a natural frame to the landscape. The Poplars are typical of the species with some trees showing signs of decay the overall vigour of the trees is good. There is a large area of native plantings backing on to Camside Road which connects the two Poplar windbreaks. This area of natives is well maintained and developing well and forms a green corridor to connect the property with the surrounding area via the Camside Road vegetation belt.

Height m: 20

CS m: 4

Dbh m: 0.45

Amenity	Points	Comments
Stature	15	20m
Visibility	3	0.5 kms
Proximity	9	Parkland
Role	15	Important
Climate	9	Moderate
Amenity total	51	

Notable

Stature feature
Stature form
Historic
Age
Association
Commemoration
Remnant
Relict
Scientific source
Scientific rarity
Scientific endangered

Points **Comments**

Notable Points

0

Condition /

Amenity total

96

Total points

96

Original tree age	45	Estimated
New tree age	5	
	<u>40</u>	
Tree cost	\$130.00	
Points	96	
Unit tree cost	<u>\$12,480.00</u>	
Site preparation	50	
Transport	50	
Planting	50	
Planting unit cost	<u>150</u>	
Maintenance per year	37.5	
Age difference	40	
Maintenance cost	<u>\$1,500.00</u>	
Sub total	<u>\$14,130.00</u>	
GST @ 15%	<u>\$2,119.50</u>	
Total	<u><u>\$16,249.50</u></u>	

Arborist Report 22/06/20

James Scott Gibbs - Arborist (2006-Present)

Qualifications - City & Guilds NPTC Arb Qualifications & NZQA Qualifications

Client - Anthony & Julia Holcroft

Location - 431 Tuahiwi Rd

Date of Survey - 22/06/20

Client Brief

We have been asked to carry out a survey on behalf of Anthony Holcroft in regards to a shelterbelt (standing) of Lombardy Poplars (*Populus nigra 'Italica'*) at 431 Tuahiwi Rd. The trees in question are located along the boundary between 431 & 423 Tuahiwi Rd. We have been approached by the client to offer our opinion on the trees current health and an a suggestion for their future management

Tree Species (of tree in question) - Lombardy Poplars (*Populus nigra 'Italica'*)

Information Regarding species

- Exotic to New Zealand (non native)
- Deciduous
- Potential to grow upwards of 40m + in height
- Common within area
- Wood structure/density considered low
- Fast growing

Report on tree(s) in question

Having arrived on site I assessed the trees first from afar for their overall condition of health. The trees for the most part appeared healthy within the crown break, with dead wood/broken limbs apparent but on the acceptable side for a tree of this age/size. I would estimate these trees to be within the 40-60 year age range and a typical example of the species.

Evidence of the recent branch failure is evident as well as older remedial work. The client informed me that recently a few large limbs had been 'pruned' removed from the trees in question by the neighbour (see *pic 1 & 3*). This could be the cause of broken branches within the canopy. It was clear from looking at the tree that it was in fact recent (within the last 1-3

years) and that one tree in particular had lost a significant proportion of the upper crown, leaving only approx 50% of the remaining canopy leaning away from the neighbouring property. The tree has compartmentalised (started to heal) the existing wounds and new epicormic growth is growing from the newly healed area.

The issue with removing a significant portion of any tree, especially Lombardy Poplars is that the regrowth is very weak and prone to failure, something I will come back to later in this report. If one of these limbs/branches were to break from the crown and fall into the neighbouring property, serious damage to property or person could occur. Given the trees' recorded height I have created a "fall zone" image to illustrate (*see pic 2*).

Looking at the main stem/structure of the trees they appear rather healthy, which is somewhat unusual for Poplars of this age and size. There doesn't appear to be much, if any signs of decay or dieback evident at the base (*see pic 3*). Most of the trees in question have a main stem (trunk) structure up until approx 7m in height, then the crown breaks into multiple leaders reaching an average of 35 - 40m (the height was determined by in flight data from drone flight, the tallest tree reaching 41m *see pic 4*). The trees in question have been assessed by the local council and deemed 'significant to the landscape' by their Arborist. I am unsure of the trees current status within the council assets.

From standing at ground level on the 431 Tuahiwi Rd side of the trees you can see a row of Poplars spanning 318m in length that stand between the two neighbouring properties (*see pic 5*). Having walked the entire row I only found evidence of a couple trees that had fallen in the past. Determined by gaps in the hedge line and old stumps. My professional opinion would be that they seem for the most part somewhat structurally sound whilst standing in unison.

Another area to assess would be the root system. Unfortunately due to the location of the tree, being between boundaries, it is extremely difficult to get a clear picture of what is going on without accessing both properties. The only way to make an assessment on this would be to access 423 Tuahiwi Rd, an option which was not possible at the time of report. The tree's overall health did not suggest that any issues were apparent with the root system. Poplar roots on trees this size can span anywhere up to 25m from the main stem. It should be known that Poplar roots "*follow the path of least resistance*" according to North Dakota State University and turn when they encounter obstacles such as concrete foundations, but they could pose a problem to drainage systems in urban areas if the roots find cracks in the system. Without carrying out extensive works with use of equipment like an air spade it is hard to make a judgment on their condition or whereabouts.

Options of Work

When speaking to the client on site I was informed these were the two options being discussed between parties. Here is some information on both options. (*see pic 7*)

Significant crown reduction/Pollarding;

The issue of falling trees raised by the concerned parties is and always should be a concern of any persons or dwellings around large trees. Unfortunately no one can say with certainty when and if a tree will fall or fail, but assessing and managing the risk is the best option.

It's within my opinion though that the risk of failure would only be increased by drastically reducing some trees. This due to opening the remainder to wind. The issue with losing such a large proportion of any tree's canopy or neighbouring trees are the sudden exposure of the remainder to wind.

Think of a forest, if the outside trees fall this allows the wind to then penetrate the remaining forest and affect the trees which until now have not had the full force of the wind. These trees would have not put the necessary anchor roots down to deal with this and in turn can fall victim to the wind.

This principle can be applied to single trees and this entire row. This would be made even worse by the fact of their species. Poplar is an extremely brittle wood, it has weak wood density and is prone to breaking when in high wind areas.

A concern of mine if the trees in question were to be removed or topped would be that the sudden exposure of wind to the large Black Poplars (*Populus Nigra*) situated within 431 Tuahiwi Rd, which are in fact protected under the local councils scheme. Any major damage to these trees would be irreversible. This tree (see pic 6) has had the protection of the nearby Lombardy Poplars which have helped shelter it from strong winds.

- **Pollarding** - is a pruning method involving the removal of the upper branches of a tree, which promotes the growth of a dense head of foliage and branches

Pollarding or significant crown reduction is an efficient method of maintaining trees, albeit classed as an 'outdated' method it is still commonly used today, especially on soft woods such as Willow, Poplar & Hazel. The issue with pollarded trees is that the regrowth, called epicormic regrowth is very weak and adding this to the fact the tree species is Poplar isn't a great mix. When trees are topped to such an extent you open up a large wound, this wound is then exposed to the elements and rot and decay is able to set in 'if' the tree doesn't compartmentalise the wound. This is almost a certain outcome on trees of this size and species if they were to be reduced so drastically. This in turn leads to a managed pruning program needing to be put in place to control the regrowth and cut back periodically to minimise failure.

Removal of first trees (approx 9 in total)

The removal of the first group of trees (up until the previously cut 'topped' one) would drastically decrease the fall risk of trees which have the potential to damage the dwellings at 423 Tuahiwi Rd. This would be about the only positive from doing so. The negatives would be again,

exposure of remaining Lombardy and Black Poplar to wind events. This could lead to failure of other trees including the adjacent row of Lombardy Poplars on the North boundary of 431 Tuahiwi Rd. It would also take away from the significance of the landscape and the stature of the shelterbelt should it become protected.

Conclusion

My professional opinion of what work could be carried out on the trees are either of these options

1. Major reduction of canopy/veteranisation/pollarding

A large scale reduction of the overall canopy would reduce the risk of major failure/damage to any nearby infrastructure. The reduction of the canopy would alleviate a lot of the stress upon the area of the crown break and reduce the risk of broken limbs falling from the higher canopy or complete tree failure.

Veteranisation is a relatively new management technique designed to preserve large trees where safety may be an issue. This would mean a crown reduction of approx 30%. Pruning is performed over a number of stages to mimic the natural dieback and branch shedding of aging trees, resulting in the low-risk compact canopy associated with veteran trees. Carried out correctly, veteranisation can preserve large aging trees, manage risk where safety is a consideration and create important habitat features for insects and wildlife, sustaining the natural ecosystem present within the veteran tree.

Pollarding the tree down to the main stem/crown break is another option. This would mean a crown reduction of 100%, leaving only the main stem which would then regrow. The issue with this method is that the tree will remain an ongoing concern for the client. This tree will always regrow from where it has been cut. The issue with this is that new growth from these large cuts will be weak epicormic growth that should not be left to grow to any substantial size due to the weak wood structure. Therefore a pruning plan would need to be implemented to make sure the tree remains safe for its remaining life.

2. Complete removal of first trees (approx 9 in total)

The complete removal of the tree would mean that the client no longer has the issue of ongoing pruning/emergency work for the tree. Although it may solve the fall risk issue it would disrupt the significance of the tree line as you'd be removing multiple trees. It would also open up remaining trees to wind, which could lead to further failures down the line.

Careful monitoring of the remaining trees would need to be carried out periodically to assess the overall condition.

3. Leaving as is

As mentioned the row of trees are stronger now as they are in unison, more so than if they were when some were removed or reduced. The trees may eventually become protected and with that, regular monitoring would be put in place to keep record of health which would be advantageous to both parties

James Gibbs - Owner/operator
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