

## Submission on Waimakariri District Council - Proposed District Plan

### Form 5 Submission on publically notified proposal for policy statement or plan, change or variation

*Clause 6 of Schedule 1, Resource Management Act 1991*

**To:** Waimakariri District Council - Development Planning Unit

**Date received:** 26/11/2021

**Submission Reference Number #:**126

This is a submission on the following proposed plan (the **proposal**): Waimakariri District Council - Proposed District Plan

**Address for service:**

J. Partridge

New Zealand

Email: jez.partridge@yahoo.co.nz

**I wish to be heard:** Yes

**I am willing to present a joint case:** Yes

Could you gain an advantage in trade competition in making this submission?

- No

Are you 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 effects of trade competition

- No

## Submission points

### Point 126.1

**Section:** TREE - Rakau hirahira - Notable trees

**Sub-section:** Activity Rules

**Provision:**

**TREE-R4**

Activities within any root protection area of any Notable Tree listed in TREE-SCHED1, other than provided for by TREE-R2 or TREE-R3

Activity status: PER

## Notable Trees Overlay

Where:

1. activities within any root protection area shall not involve:
  - a. any impervious surface, sealing, soil compaction, storage of materials, plant or equipment or parking of vehicles greater than 20% of the area defined by the root protection area;
  - b. alteration or disturbance of the existing ground level of more than 75mm;
  - c. the release, injection or placement of toxic chemicals or toxic substances;
  - d. the cutting or pruning of roots more than 25mm in diameter except for purposes under (1)(a) and (1)(e);
  - e. the construction, addition or replacement of any building or structure greater than 20% of the area defined by the root protection area, fixed or unfixed to the land; and
  - f. the lighting of an open air fire.

**Activity status when compliance not achieved:**  
**RDIS**

**Matters of discretion are restricted to:**

- TREE-MD1 - Pruning, root protection area, trunk and crown, removal
- TREE-MD2 - Extent of benefit or need for the activity or works

**Notification**

An application for a restricted discretionary activity under this rule is precluded from being publicly or limited notified.

**Sentiment:** Oppose

**Submission:**

Main areas of concern:

### 1) Definition of Root Protection Area (RPA)

Council's proposed method of definition is defined as a radius to the outer most extent of the spread of the tree's branches, and for a columnar tree the area beneath the canopy extending to a radius half the height of the tree.

My concern is that there is no reference to where this methodology is derived from or on what basis, scientific or other it has been made. It is important for Council to protect the roots of Notable Trees and especially those that anchor the tree. Tree roots often spread well beyond the edge of a tree's dripline or beyond a distance equal to half its height, whether or not the retention of such roots are critical to its stability and health is often requires an expert arboricultural assessment to determine.

In the previous District Plan the area of protected roots was described as from the canopy edge plus 3 metres. I have been unable to find out from Section 32 Report why this method for identifying the roots of a Notable Tree which should be protected was withdrawn. The new definition which is now termed a Root Protection Area (RPA) is therefore reduced as compared to the larger area of roots protected using the previous District Plan dripline plus 3 metre method. There appears to have been no cost benefit analysis undertaken of this change, or any analysis or comparison with other root area methods.

Council's position effectively allows the roots of a Notable Tree outside its RPA definition of its RPA to be cut or damaged without the need for Council consent, and this has the potential to be damaging or fatal for trees which do not conform to an idealised radial circle. The method takes no account of damage to tree root systems that are not found within the Council defined RPA. For example, for trees adjacent to structures such as roads, their root growth towards the road may well be prevented, and as a consequence important feeding or structural roots may be displaced to another area which is outside its dripline. In this type of situation, a Notable Tree could be significantly damaged to the extent that important structural or a large percentage of feeding roots could be harmed.

There is no discussion of the rationale for the method in the Section 32 Report or any cost benefit analysis of this method against other methods which could be used, or discussion of trees which do not possess symmetrical root systems. The term Root Protection Area (RPA) emanates from British Standard 5837 - Trees in Relation to Construction (2012). Under that British Standard the RPA is a radius with a measurement equal to 12 times the stem diameter for single stemmed tree and there is a conversion formula for multi stemmed trees. The same 12 times stem diameter approach is taken in Australian Standard 4970 – Protection of Trees on Development Sites (2009).

BS5837 and AS4970 are recognised as world leading standards in tree and roots protection and both use the 12 times stem diameter method to determine where important roots are that ideally should not be damaged or pruned unless there is expert justification. It is therefore curious that the dripline/half tree height method has been used by Council. Within the Section 32 Report there appears no evaluation or cost benefit analysis of why the method was chosen over the British and Australian

Standards.

The dripline/half height method dates back to an older BS5837 version from 1991. The method was withdrawn and improved in the revised BS5837 2005 and the improved method was then kept as part of the BS5837 2012 revision. It is therefore the case that Council is proposing to use a method for determining the RPA which is well out of date and is no longer recommended by the NZ, UK and Australian Arboricultural Associations as best practice. The method used to determine the RPA does not therefore reflect international best practice and has the potential to cause significant harm to Notable Trees.

Roots within the RPA should not be compacted or damaged unless an Arboricultural Impact Assessment and Method Statement has been approved by Council in accordance with AS4970. Such works can often be highly sensitive and require special engineering solutions, root exposure and pruning. These are complex operations requiring a high level of expertise and these would ideally not be permitted activities where Council effectively has no oversight or ability to peer review proposed activities. For example, it is permitted to remove or damage any roots of 25mm or less and in a situation where a root system is modified there may be very few roots supporting the tree and loss of any quantity of roots may not be advisable.

### **Relief sought**

Relief Sought:

- 1) Council undertakes Cost Benefit Analysis of International best practice methods used to determine the area of roots which cannot be disturbed without consent. Council selects a methodology which represents best practice in terms of tree root protection, which would ideally be the AS4970 or BS5837 12 times stem diameter method.
- 2) Council does not allow various permitted works within the RPA of a Notable Tree