



Appendix W

Signalised Intersection Layout and Street Tree Removals

LANDSCAPE ASSESSMENT REPORT
TREE REMOVAL ASSESSMENT | PAPANUI PAK'n SAVE
171 MAIN NORTH ROAD | CHRISTCHURCH

RESOURCE CONSENT

MAY 2019

rough & milne landscape architects

Report Name: Landscape Assessment Report:
Tree Removal Assessment | Papanui PAK'n SAVE
171 Main North Road, Christchurch

Client Name: Foodstuffs South Island Ltd.

Project No: 17136

Issue Date: 24 May 2019

Report Status: For Resource Consent

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Contents

1.0	Introduction	4
2.0	Descriptions of the Receiving Environment and Site.....	4
	2.1 Receiving Environment	4
	2.2 Site.....	5
	2.3 Description of Trees Growing Along Main North Road Landscape Median	5
	2.3.1 Table 1: Schedule of existing trees growing along the Landscape Median between 161 – 188 Main North Road	6
3.0	Proposal.....	6
	3.1 Table 2: Schedule of existing trees with conflicts	7
4.0	Compliance with Statutory Requirements	7
5.0	Assessment of Potential Landscape and Visual Effects	7
6.0	Conclusion and Recommendations	8
7.0	Appendices.....	9

Appendices

- Appendix A – Median Tree Inspection (*dated 23 April 2019*)
- Appendix B – Proposed Signalised Traffic Inspection Plan (*dated 10 April 2019*)
- Appendix C – Rough and Milne - Landscape Masterplan (*dated 20 May 2019*)
- Appendix D – Magnitude of Change to Landscape Character (*table*)

1.0 Introduction

Rough and Milne Landscape Architects Ltd (**r+m**) have been engaged by Foodstuffs South Island Ltd. to prepare an assessment of effects in regard to the removal of a tree that exceeds six metres in height within a road corridor¹.

The site is located at 171 Main North Road, Christchurch, and currently holds an unused building. It is proposed that a large-scale commercial activity will replace the current use, with the establishment of a PAK'n SAVE, and signalled intersection along Main North Road.

An 8m high Pin Oak (*Quercus palustris*) located within the Main North Road corridor (refer to Appendix A – Median Tree Inspection), requires removal to accommodate the traffic signals associated with the proposed signalled intersection. The proposed tree removal is a restricted discretionary activity within the Christchurch District Plan (CDP) and consequently requires resource consent. There will be an additional two trees removed to accommodate the intersection, both these trees comply with the height requirements required for the felling of any road corridor tree².

An assessment of the ten trees located along the centre landscaped median between 161 – 188 Main North Road has been undertaken to determine the trees' current health³, and to ascertain what is required to avoid any detrimental effect the proposal may have on the health of the remaining trees.

This report follows an initial assessment prepared by **r+m** and is in response to Christchurch City Council's Request for Further Information (RFI) dated 10 September 2018. This report shall be read in conjunction with the attached Appendices and Abley Transport - Integrated Transport Assessment dated 3 May 2019.

2.0 Descriptions of the Receiving Environment and Site

2.1 Receiving Environment

The receiving environment is defined as the area surrounding the application site that could be affected by the proposed activity.

The properties located within an 800m radius of the site comprise of industrial General (IG), Commercial Local (CL), Residential Suburban (RS), Specific Purpose (School) (SPS), Open Space Community (OCP) and Residential Medium Density (RMD) zones. There are several schools within proximity to the site; St Bede's College, Papanui Primary School, Papanui High School and St Joseph's School.

The site sits adjacent to the intersection of three main roads; Main North Road, Northcote Road and QEII Road (SH74). Each of these roads are multi-laned and service as a main east - west junction and main route into the central city for traffic coming in from North Canterbury. There is another main intersection approximately 200m south of the site; Cranford Street and Main North Road intersection. Both these signalled intersections are crossing points for pedestrians and cyclists.

The topography of the area is typical of the Christchurch City, being generally flat. Built form is typically low rise and low density. Many businesses in the area occupy sites zoned RS and utilise residential style buildings, for example Bainbridge Homes (showhome), Redwood Dental and Redwood Physio. Residential activities generally face towards the road and are mostly screened by a variety of fencing types and vegetation.

¹ Christchurch District Plan – Chapter 9 Natural and Cultural Heritage Rule 9.4.4 RD4

² Christchurch District Plan – Chapter 9 Natural and Cultural Heritage Rule 9.4.4 P6

³ Rough and Milne – Median Tree Inspection Site Visit - dated 23 April 2019



Figure 1: Example of boundary treatment along Main North Road

2.2 Site

The application site for the proposed PAK'n SAVE is approximately 1.5625 ha. Existing activities on the site include the former Murdoch Manufacturing building and former offices for Trents wholesale business.

Activities on properties directly adjacent to the site include residential, Foodstuff (SI) Head Office, storage and distribution warehouses, and Oil Changers Papanui Ltd. Vehicle access to the site and connectivity to surrounding sites is efficient for the current usage, with access via Lydia Street at the north western corner. Two entry/exit points are provided off Main North Road which is 3-4 lanes wide where it passes the site. This width includes a dedicated bus lane and a grassed median with a row of ten mature exotic trees.

The site is currently laid out for industrial use and is largely vehicle dependent, with poor pedestrian and cycle connections. The site has fences to all boundaries and access is mostly gated.

The Main North Road frontage has mixed native and exotic planting, and large areas of lawn which are well maintained. A large, healthy, well-formed Common Lime tree (*Tilia* spp.) is located in the north-eastern corner of the site. The remainder of the site to the south and west is utilised for asphalted car parking, roadways and further lawn and landscaped areas with few mature trees.



Figure 2: Existing site boundary treatment along Main North Road

2.3 Description of Trees Growing Along Main North Road Landscape Median

Ten mature exotic deciduous trees are located along the centre landscaped median between 161 – 188 Main North Road.

Species include *Quercus palustris* – Pin Oak and *Betula pendula* – Silver Birch. Of these trees, none are listed as significant within the CDP. All trees are of good health and by inspection, range between semi – mature and mature in age. The trees currently grow within an approximately 3m wide median with a maintained lawn beneath.

2.3.1 Table 1: Schedule of existing trees growing along the Landscape Median between 161 – 188 Main North Road

NUMBER	ID	BOTANICAL NAME	COMMON NAME	HEIGHT / SPREAD approx. (m)	NOTES
1	Qu p	<i>Quercus palustris</i>	Pin Oak	4.5 (H) x 4 (S)	Limbed to 1.5m (200mm DBH)
2	Be p	<i>Betula pendula</i>	Silver Birch	4.5 (H) x 3 (S)	Limbed to 1.5m (200mm DBH)
3	Qu p	<i>Quercus palustris</i>	Pin Oak	8 (H) x 7 (S)	Limbed to 4m (300mm DBH)
4	Be p	<i>Betula pendula</i>	Silver Birch	8 (H) x 7 (S)	Twin stem Limbed to 3.5m (300mm DBH)
5	Qu p	<i>Quercus palustris</i>	Pin Oak	6.5 (H) x 7 (S)	Limbed to 2.5m (250mm DBH)
6	Qu p	<i>Quercus palustris</i>	Pin Oak	6.5 (H) x 8 (S)	Limbed to 1.5m (300mm DBH)
7	Qu p	<i>Quercus palustris</i>	Pin Oak	5 (H) x 7 (S)	Limbed to 2m (250mm DBH)
8	Qu p	<i>Quercus palustris</i>	Pin Oak	5 (H) x 8 (S)	Limbed to 2m (250mm DBH)
9	Qu p	<i>Quercus palustris</i>	Pin Oak	7 (H) x 7 (S)	Limbed to 2.5m (300mm DBH)
10	Qu p	<i>Quercus palustris</i>	Pin Oak	7 (H) x 7 (S)	Limbed to 2m (300mm DBH)

Refer to Appendix A – Median Tree Inspection

All observations were made from ground level only. Tree heights were attained through the use of a surveying staff, diameter of trunk was measured at breast height (DBH) with a conventional tape and canopy spreads were an estimation based off the height measurement. No decay detecting equipment was used as part of the inspection process. All comments that have been discussed or provided within this report are based on the visual observations recorded during the site visit dated 23 April 2019.

3.0 Proposal

It is proposed that a large-scale commercial activity will replace the current use at 171 Main North Road, with the establishment of a PAK'n SAVE, and signalled intersection on Main North Road.

Due to operational requirements and the need for a reduction in transport conflicts⁴, a signalised intersection is proposed adjacent to the application site along Main North Road (refer to Appendix B – Proposed Signalised Traffic Intersection Plan).

The construction of this intersection will require the removal of three exotic deciduous trees along the road corridor median between 161 – 188 Main North Road. These trees include two *Quercus palustris* – Pin Oak and one *Betula pendula* – Silver Birch (refer to Appendix A – Median Tree Inspection). The trees to be removed are not listed as significant within the CDP.

⁴ Abley Transport – Integrated Transport Assessment Page 15

The median located south of the proposed intersection will start at the location of Tree 2. There will be no changes to the median or median vegetation, south of Tree 3.

3.1 Table 2: Schedule of existing trees with conflicts

TREE NO.	ID	BOTANICAL NAME	COMMON NAME	HEIGHT / SPREAD approx. (m)	CONFLICT
1	Qu p	<i>Quercus palustris</i>	Pin Oak	4.5 (H) x 4 (S)	with intersection hardscape
2	Be p	<i>Betula pendula</i>	Silver Birch	4.5 (H) x 3 (S)	with intersection hardscape
3	Qu p	<i>Quercus palustris</i>	Pin Oak	8 (H) x 7 (S)	with traffic signals



Figure 3, 4, & 5: Median Trees with Conflicts

4.0 Compliance with Statutory Requirements

No.	Statutory Provisions under the Christchurch District Plan	Comments
	Chapter 9 Natural and Cultural Heritage	
9.4	Significant and Other Trees	
9.4.4.1.3 RD4	<p>Restricted discretionary activities</p> <p>a) Felling of any tree listed in Rule 9.4.4.1.1 P6, which does not meet one or more of the activity specific standards.</p>	<p>Restricted discretionary activity (pursuant to rule 9.4.4.1.1 P6).</p> <p>c. The tree shall not be:</p> <p>greater than 6 metres high in a road corridor or 10 metres high in a park or public open space;</p>
9.4.6 a-o	Rules – Matters of discretion	See below in regard to an assessment against the matters of Council's discretion.

Restricted Discretionary Activity

Tree 3	Qu p	<i>Quercus palustris</i>	Pin Oak	8m high
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5.0 Assessment of Potential Landscape and Visual Effects

When considering applications for restricted discretionary activities, the Council's discretion to grant or decline consent, or impose conditions, is restricted to the matters over which discretion is restricted to Rule 9.4.6.

The following assessment has been undertaken in relation to those matters in Rule 9.4.4.1.3 RD4 relating to landscape and visual amenity. Only matters relevant to the application have been addressed.

9.4.6 Rules – Matters of Discretion

Extent of benefit or need for activity/works

- i. *The need for the work to deal with an emergency situation, or to avoid significant risk of effects on human health and safety, or significant impacts on infrastructure, including the strategic transport network;*
- j. *The extent of benefits associated with the use and development of the site for activities anticipated by the zoning for the site, including the use of the site for residential development, taking into account the cumulative effect of multiple protection provisions (eg. setbacks from water bodies, heritage items);*

The proposal site is zoned Industrial General; however, it is proposed that a large-scale commercial activity will replace the current use, with the establishment of a PAK'n SAVE.

Alongside the change in site activity, there is a need for an additional signalled intersection along Main North Road. Refer to the Integrated Transport Assessment undertaken by Abley Transport for the reasons and benefits of a signalised intersection at this location.

An 8m high Pin Oak *Quercus palustris* (Tree 3) requires removal to accommodate the traffic signals associated with the new signalised intersection on Main North Road. This tree is required to be removed as in its current location it will be a threat to vehicle and pedestrian safety, given it will obscure the new traffic signals. There are no reasonable alternatives to avoid the felling of the 8m high Pin Oak street tree with a traffic signal required to be near this tree in the central median.

In regard to the extent of landscape and visual amenity effects with the removal of the 8m high Pin Oak *Quercus palustris* (Tree 3), the row of median trees currently breaks up the visual dominance of the 4-lane (proposed 6-lane) main road.

However, they do not currently screen views of the industrial buildings on the western side of Main North Road from the residential buildings on the eastern side of Main North Road. Instead, most of the residential properties along this stretch of Main North Road use high fences or vegetation as a boundary treatment, providing internal screening. With the generous setback, planted street front, and appropriate building form and mass of the proposed PAK'n SAVE building, it is unlikely that the retention of Tree 3 will provide any benefit or additional screening of the site activity for the residential property's opposite.

Furthermore, with the site's improved landscape street frontage providing essentially an ecological offset and using mostly native plant species, it is unlikely that Tree 3 - an exotic deciduous species - will provide any additional benefits ecologically to the site or surrounds. Also, it is considered unlikely that the removal of this tree will affect the health of the other mature trees within the median.

In conclusion, it is considered that the landscape effects will be **very low** (refer to Appendix D), with the removal of Tree 3, and alternatively there will be several benefits with the establishment of a signalised intersection in this location and the significant increase in native vegetation along the street frontage of the proposed development.

6.0 Conclusion and Recommendations

In conclusion, it is considered that the landscape effects resulting from the removal of Tree 3 will be **very low** (refer to Appendix D). The proposal will provide several benefits to the site and surrounds including, an active frontage, an increase 'eyes on the street' and provide a clear and logical layout for pedestrians, cyclists and vehicles, whilst reducing conflict.

Furthermore, we propose of the following recommendations to ensure that the development will not risk the character and integrity of the remaining mature trees in the median, during and beyond construction of the proposed development.

1. Works shall be undertaken in accordance with *Christchurch City Council Construction Standard Specifications, Part One, Section 19.4 Protection of Existing Trees*.
2. An initial exploratory dig by hand be undertaken before any demolition takes place to locate any prominent roots. All roots larger than 25mm diameter connecting to remaining trees shall be retained in an undamaged state and protected, unless the Council's Arborist gives permission in advance for them to be cut.
3. When soil is cleared around any tree roots, they are not left exposed for an extended time, and they are kept covered with moist sacking material.
4. Root trimming shall only be considered when all other alternatives have been exhausted. Cutting of any roots which are greater than 50mm in diameter shall be done with the permission of and in the presence of an arborist.
5. Any broken roots following excavations shall be cleanly cut with sharp tools. No ripping is to occur, and roots shall immediately be covered in uncontaminated soil.
6. A hand compactor should be used for the base course and heavy machinery should avoid operating within 5 metres of the trunk base except on existing sealed surfaces.
7. Disposing of water used to wash down machinery (e.g. concrete mixers) on the root plate of the tree is prohibited.
8. No materials are to be stored under the crown of any tree within the median during the construction work, including excavated soil, chemicals or building materials.
9. Any permanent change to existing soil levels surrounding any tree within the median shall be no greater than 50 mm.
10. Whilst no plans for underground services have been established for the intersection, these should be designed and installed in a manner which has a minimal impact on the tree root zone.
11. Following detailed design, if any additional trees are shown to require removal or earthworks are shown within 5m of trees greater than 6m in height, consent shall be sought.

7.0 Appendices

Appendix A, B and C

Refer to separate attachment.

Appendix D

Magnitude of Change to Landscape Character

Effect Rating	Use and Definition
Very High	Total loss of key elements / features / characteristics, i.e. amounts to a complete change of landscape character and / landscape values
High	Major modification of or loss of most key elements / features / characteristics, i.e. little of the pre-development landscape character remains and amounts to a significant negative change in landscape character and / or landscape values. <u>Concise Oxford English Dictionary Defn Adj.</u> - <i>Great in amount, values, size or intensity</i>
Moderate - High	Modifications of several key elements / features / characteristics, i.e. the pre-development landscape character remains evident but materially changed.
Moderate	Partial loss of or modification to key elements / features / characteristics i.e. the predevelopment landscape character and / or landscape values remains evident but is changed <u>Concise Oxford English Dictionary Defn Adj.</u> - <i>Average in amount, intensity or degree</i>
Moderate - Low	Minor loss of or modification to one or more key elements / features / characteristics, i.e. new elements are not uncharacteristic within the receiving landscape and do not disturb the pre development landscape character and / or landscape values.
Low	Very little material loss of or modification to key elements / features / characteristics. i.e. new elements integrate seamlessly into the pre-development landscape character and / or landscape values. <u>Concise Oxford English Dictionary Defn Adj.</u> - <i>Below average in amount, extent or intensity</i>
Very Low	Negligible loss of or modification to key elements / features / characteristics of the baseline. i.e. influence of new elements on landscape character and / or landscape values is barely discernible.

The scale above draws from (although does not exactly replicate) a similar document that is currently being used by Auckland City Council (*Landscape and Visual Effects Assessment Requirements – Auckland City Council September 2017*) as well as a document formulated by Boffa Miskell Limited. Each of these documents have been the subject of careful scrutiny by a range of landscape experts.