Before the Hearings Commissioners at Christchurch City Council

under: the Resource Management Act 1991

in the matter of: an application by Ryman Healthcare Limited for resource consent to establish and operate a comprehensive care retirement village at 100-104 Park Terrace and 20 Dorset Street, and 78 Park Terrace, Christchurch.

between: **Ryman Healthcare Limited**
Applicant

and: **Christchurch City Council**
Consent Authority

Statement of evidence of **Alan Wayne Parker** on behalf of Ryman Healthcare Limited

Dated: 6 January 2021

Reference: Luke Hinchey (luke.hinchey@chapmantripp.com)
Nicola de Wit (nicola.dewit@chapmantripp.com)

chapmantripp.com
T +64 9 357 9000
F +64 9 357 9099

PO Box 2206
Auckland 1140
New Zealand

Auckland
Wellington
Christchurch

chapman tripp

STATEMENT OF EVIDENCE OF ALAN WAYNE PARKER ON BEHALF OF RYMAN HEALTHCARE LIMITED

INTRODUCTION

1 My full name is Alan Wayne Parker.

2 I am an arborist and director at APConsulting.

3 I hold an Advanced Level 4 Certificate in Arboriculture with additional credits to Level 5 and 6 from the Waikato Institute of Technology.

4 I have 44 years' of experience as an arborist, including more than 10 years in the consultancy field. My experience includes five and a half years as Liaison Arborist for the SCIRT rebuild and one and a half years as consultant and monitoring arborist for the Avon River Precinct. I am currently advising the Cathedral reinstatement team on tree protection and construction methodology in relation to the three significant trees on that site.

5 I am a member of the NZ Arboricultural Association. I was one of the founding members of the NZ Arboricultural Association, and as a sole trader I am now an individual member.

6 I am familiar with Ryman Healthcare Limited's (*Ryman)* resource consent application to construct and operate a comprehensive care retirement village (*Proposed Village*) at 100-104 Park Terrace and 20 Dorset Street and 78 Park Terrace, Christchurch (*Site*). In this statement of evidence, I describe the parcel of land at 78 Park Terrace as the "Peterborough Site" and the parcel of land at 100-104 Park Terrace and 20 Dorset Street as the "Bishopspark Site". I refer to the Peterborough Site and Bishopspark Site together as the "Sites".

7 I prepared the Arboricultural Impact Assessment dated March 2020 (*Arboriculture Report*). I also prepared the arboricultural inputs for the Section 92 Responses dated 18 May, 13 July, 31 August and 17 November 2020 (*Further Information Responses*).

8 I have visited the Site and its surroundings on a number of occasions, including on 9 March, 15 June and 2 November 2020.

CODE OF CONDUCT

9 Although these proceedings are not before the Environment Court, I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note (2014), and I agree to comply with it as if these proceedings were before the Court. My qualifications as an expert are set out above. This evidence is

within my area of expertise, except where I state that I am relying upon the specified evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

SCOPE OF EVIDENCE

10 My evidence addressed the potential effects of the Proposed Village on the Common Lime tree located on the Peterborough Site. My evidence sets out the following:

10.1 A summary of the Arboriculture Report and Further Information Responses;

10.2 My response to the arboriculture issues raised in submissions;

10.3 My response to the arboriculture issues raised in the Council Officer's Report, and particularly the arborist report prepared by Mr John Thornton;

10.4 My comments on the draft conditions; and

10.5 My conclusions.

SUMMARY OF THE ARBORICULTURE REPORT AND FURTHER INFORMATION RESPONSES

Tree details

11 The Peterborough Site contains one Common Lime tree, which is listed in the Schedule of Significant Trees (as T 271) in the Christchurch District Plan (*District Plan*). The tree is located on the western aspect of the Peterborough Street frontage.

12 I surveyed the tree on 9 March 2020. I assessed the health of the tree as fair and representative of the species based on the foliage colour and density. There was minor naturally occurring deadwood present.

13 I assessed the form of the tree as fair and representative of the species. I identified buttress root flare, indicating minimal soil level changes close to the base. The crown of the tree has descended to ground level at the northern and eastern aspects.

Works in vicinity of the tree

14 The Proposed Village requires the following works in the vicinity of the tree:

14.1 Excavation for and construction of basement carparking, located just inside the dripline to the north of the tree and just outside the dripline to the east of the tree;

14.2 Construction of Building B08, located approximately 1m north and 2m east of the dripline;

14.3 Construction of a flight of 5 steps, located outside of the dripline to the south-east of the tree; and

14.4 Construction of a boundary fence/wall, located within the dripline of the tree at the southern aspect of the Peterborough Site.

Planning context

15 The pruning of the tree and works within the dripline of the tree requires restricted discretionary resource consent under the District Plan. I considered the relevant matters of discretion in undertaking my assessment of effects.

Assessment of arboricultural effects

16 The design of the Proposed Village has minimised works within the crown area and dripline of the Common Lime tree. The construction of Building B08, the flight of stairs, and the boundary fence/wall will have no or minimal impact on the tree.

17 The basement will encroach into the dripline of the tree. On 2 November 2020, a ground penetrating radar contractor was engaged, and manual excavations were undertaken, to confirm the distribution of the tree's root mass within the basement construction area. **Appendix A** contains my Root Mass Investigation report. As set out in the report, the root mass identified within the basement construction area was insignificant. Accordingly, I consider the basement works will have a negligible effect on the tree's root system.

18 It is likely that the construction plant will be in contact with the tree because the crown of the tree overhangs the basement line by approximately 0.4m.

19 I consider any potential effects on the tree can be appropriately mitigated through the application of standard arboricultural methods, including:

19.1 Protective fencing will be installed to isolate the dripline area during construction works;

19.2 Contractors will be briefed regarding the no-entry policy for the dripline area;

19.3 Piles will be lined as necessary to avoid contact of raw concrete with the root mass; and

19.4 Because I consider any damage will be minimal, I do not recommend pruning prior to installation. Maintenance

pruning will be carried out on completion of clutch piling installation.

RESPONSE TO COUNCIL OFFICER'S REPORT

20 I have reviewed the Council Officer's Report and the associated technical report prepared by Mr John Thornton. I note that Mr Thornton's report appears to rely on comments provided by another person, "Mr Gordon", but there is no accompanying report from this person.

Common Lime Tree works

21 Mr Thornton suggests the recommendation to prune the Common Lime Tree after the piling work is "*unusual*".[1] As discussed at paragraph 19.4 above, I do not recommend pruning prior to this work because damage to the tree during clutch piling installation is expected to be minimal. In my opinion, pruning after the piling work will allow the pruning to be minimised to the extent necessary.

22 Mr Thornton is concerned about the potential intrusion on the root system of the Common Lime Tree, and considers that root damage may result in the tree entering "*a spiral of decline*".[2] As discussed at paragraph 17 above, a root mass investigation has confirmed that the root mass within the basement construction area is insignificant. Accordingly, I consider the basement works will have a negligible effect on the root system, and are highly unlikely to result in the decline of the Common Lime Tree. I acknowledge that Mr Thornton did not have access to these results when preparing his report.

Containment pruning of landscape trees

23 Mr Thornton is concerned about the proposal to carry out containment pruning of the trees to be planted on the Site as set out in the Landscaping Management Plan (*LMP*). He says that containment pruning will impact their growth, form, health and vitality, and result in an unnatural appearance.[3]

24 In my experience, containment pruning is commonly carried out on trees planted in urban environments in order to maintain clearances from the built environment.

25 I estimate the trees that will be planted at the Site will grow at their branch tips by 200-400m annually during the early life of the trees, reducing to 100-300mm annually as the trees mature. The

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[1] Council Officer's Report, Appendix F – Arborist Report, paragraph 30.

[2] Council Officer's Report, Appendix F – Arborist Report, paragraph 35.

[3] Council Officer's Report, Appendix F – Arborist Report, paragraphs 37-50.

requirement in the proposed Landscape Management Plan for the trees to be maintained at 8-10m height would therefore require containment pruning at 4 - 6 yearly intervals, depending on their rate of growth. An alternative pruning regime would be to carry out the pruning at 2 – 3 yearly intervals, as this would reduce the (foliage) photosynthetic loss and reduce the size of the pruning wounds. Provided the pruning is carried out by a qualified arborist, I consider the pruning will not compromise the form or health of the trees. I also consider the pruning regime will result in an appearance that is common and appropriate for trees planted in urban environments such as this location. Although I consider containment pruning is appropriate, I note that Mr Dixon's evidence proposes some amendments to the landscaping plan to respond to the Council's concerns regarding containment pruning.

26 Mr Thornton notes that the hormone Auxin is located in the top of the tree, and therefore removal of the top can result in an "*unkempt look*".[4] In my opinion, an experienced arborist will have the knowledge to identify the required apical stems to be left intact. I therefore do not agree that pruning carried out by an experienced arborist will result in an untidy appearance or out of control regrowth.

DRAFT CONDITIONS

27 The Council Officer's Report has recommended a number of additional conditions relating to the Common Lime Tree (conditions 29-37 and 43-44), I generally agree with the matters addressed in proposed conditions 29-37 and 43, provided construction practicalities are introduced. For the reasons set out in paragraph 17 above, I do not consider proposed condition 44 is necessary.

CONCLUSIONS

28 I conclude that there is no arboricultural issue that would preclude the granting of consent for the Proposed Village on the basis of the conditions discussed in this evidence.

Alan Parker
6 January 2021

[4] Council Officer's Report, Appendix F – Arborist Report, paragraph 40.

APPENDIX A – ROOT MASS INVESTIGATION

Ryman Healthcare Limited

78 and 100 Park Terrace

Significant Lime, T 271

Root Mass Investigation

APConsulting, 1/37A Main Road, Christchurch 8081
M: 022 139 1617 E: alan@apconsulting.co.nz

1.0 INTRODUCTION, RMA/2020/673

In response to the proposed development of the site, particularly the proximity of the basement excavation to the Significant Lime at the Peterborough Street frontage, concerns have been raised by Mr John Thornton;

'My main concern regarding the Common Lime however, is the close proximity of the construction work, and in particular the installation of the underground basement within approximately 5 meters of the base of the tree, which is very close for a tree of this size and age.'

Considering that in my original report I used the spreading canopy tree model as the basis for my comments, Ryman Healthcare instructed me to carry out further investigation to provide some confirmation regarding root mass distribution at the site.

This was carried out on Monday 2nd November.

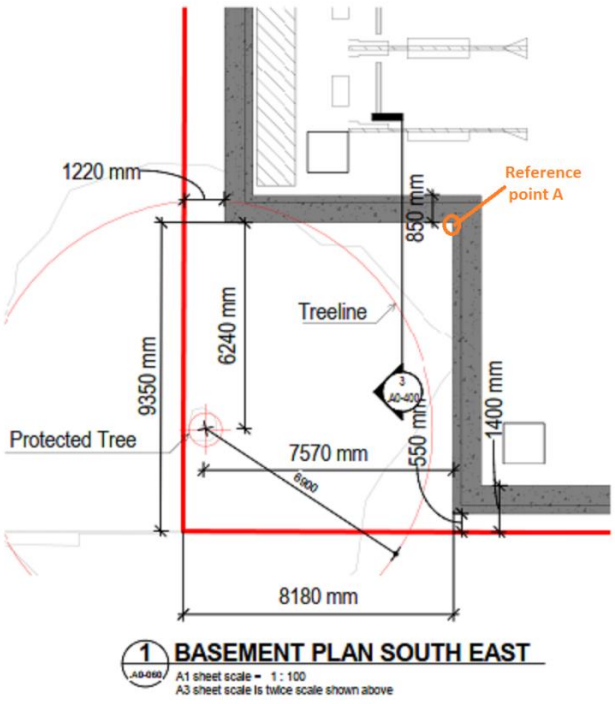
A GPR, (Ground Penetrating Radar) contractor was engaged to scan the proposed extent of the basement construction. The scanning was completed outside the marked boundaries of the proposed basement, not inside, as this would have potentially affected root mass in the area.

GPR is used to identify variation in soil density, but does not identify the source of variation.

Exposure and identification of the marked areas was completed by manual excavation.

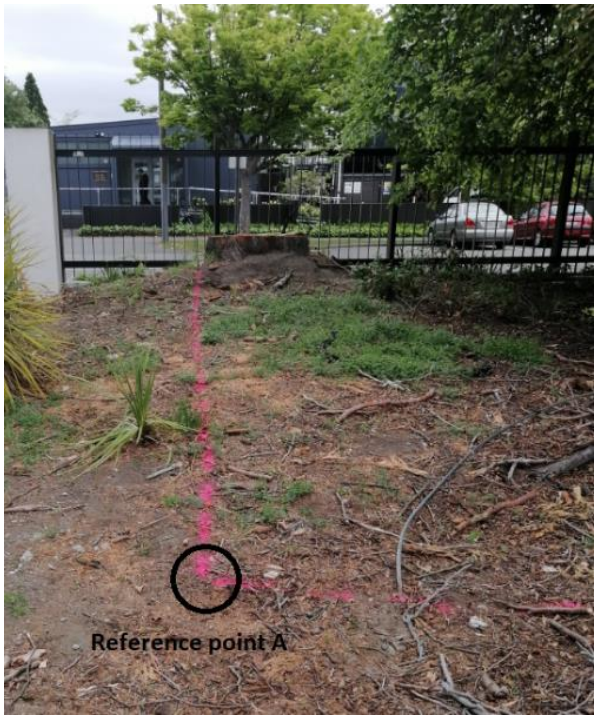
2.0 GPR SCAN

The following plan was used to measure the site accordingly, to define the extent of the proposed basement, on the ground, as preparation for the GPR.



Mark-up on site as follows, Point A looking west;

Mark-up on site as follows, Point A looking south;



3.0 EXCAVATION;

4 areas of interest were noted in the axis A looking west;

1 – Concrete and stone at 250 mm depth

2 - Concrete and stone at 250 mm depth

2 – Excavation to 550 mm, further probe to 650 mm depth overall, root mass found less than 10 mm diameter

4 – Root mass of 15 mm diameter found within the top 100 mm

3 areas of interest were noted in the axis A looking south;

5 – Root mass of 20 – 25 mm diameter found at 400 mm depth

6 – Root mass of 80 mm diameter found at 50 mm depth, tracked back to the Lime

7 – Root mass less than 20 mm diameter found at 350 mm depth

Additional observations;

- Point A looking west, sand was evident in all 4 excavations between 100 & 150-mm depth, below a layer of soil
- The GPR identified a general change in soil density over the areas scanned, at between 1.0 m and 1.2 m depth
- A large mass (approximately 1.0 m by 1.0 m) was encountered close to and surrounding Point A, assumed to be a concrete block as the mass was consistent around the steel cable.

4.0 DISCUSSION

The small amount of root mass identified was unexpected, considering the tree dimensions.

That the GPR was able to identify areas that contain root mass in the vicinity of 10 – 15 mm diameter provides support for its accuracy.

It is possible that post earthquake demolition activities have removed peripheral root mass, considering that some of the rubble encountered (areas 1 & 2) was concrete, not naturally occurring river run.

5.0 CONCLUSION

The GPR and subsequent manual excavation has revealed insignificant root mass at the location of the proposed basement excavation and construction, therefore I conclude that the proposed basement excavation and construction will have a negligible effect on the Significant Lime tree.

Alan Parker

Consulting Arborist

3rd November, 2020