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

Supplementary statement of **Rebecca Anne Skidmore** and **Andrew Davies Burns** on behalf of Ryman Healthcare Limited

Dated: 30 March 2021

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SUPPLEMENTARY STATEMENT OF REBECCA ANNE SKIDMORE AND ANDREW DAVIES BURNS ON BEHALF OF RYMAN HEALTHCARE LIMITED

1 Our full names are Rebecca Anne Skidmore and Andrew Davies Burns. Our qualifications and experience are set out in our respective statements of evidence dated 6 January 2021. We repeat the code of conduct statement contained in our statements of evidence.

2 The purpose of this supplementary statement is to:

2.1 Record our responses to the evidence of Ms Mary Clay, which were presented verbally on 26 January 2021; and

2.2 Address the urban design-related matters raised in the Commissioners' Minute 6.

3 As our evidence on these matters is aligned, this supplementary statement is a joint statement.

RESPONSE TO THE EVIDENCE OF MS CLAY

Visual simulations

4 Ms Clay's evidence presents photomontage visualisations prepared by Glasson Huxtable Landscape Architects Limited (*Glasson Huxtable*).

Rebecca Skidmore

5 Paragraph 312-313 of my statement of evidence responded to the submission of Centro Roydvale Limited criticising the visual simulations contained in the application. I reiterate that visual simulations are a useful assessment tool, but they do not replicate reality and should be viewed in combination with field observations. At the hearing I confirmed that the visual simulations prepared for the application are technically accurate and I explained how they should be viewed.

6 I referred to photomontage visualisations prepared by Glasson Huxtable, and identified a number of issues with them:

6.1 It is unclear from the methodology statement whether the viewpoint locations have been accurately surveyed to ensure the modelling is correct.

6.2 The model of the Proposed Village inserted into the photographs were prepared using 'Sketchup'. That software does not have the accuracy of 'Revit' – the software used by Ryman to create the visual simulation. The images do not provide the level of detail that will be apparent in the buildings. This is evident when comparing the images with

the visual simulations prepared by Ryman. It is also unclear how shading is represented on the photomontages and thus the high level of modulation of building forms provided by the Ryman Proposal.

6.3 The photomontages present a narrow field of view, showing a small and truncated view of the Proposed Village. However, viewers will have a wider perspective and a better understanding of the relationship between the Proposed Village and its context.

6.4 The images do not include any of the proposed landscaping or boundary treatments, but do include the currently existing planting. Therefore, they do not present a true representation of the overall Proposal.

6.5 There are a range of other issues with the photomontages that are small on their own, but cumulatively misrepresent the Proposed Village. For example, the Dorset Street photomontage at page 14 of Ms Clay's evidence vertically truncates the building at 18 Dorset Street, with the model of Building B01 seen behind. As a result, the relationship between the Buildings B01, B03 and their context cannot be understood from this image.

Andrew Burns

7 I generally agree with Ms Skidmore's response to the photomontage visualisations prepared by Glasson Huxtable. I am not familiar with the exact technical differences between SketchUp and Revit such that one is more accurate than the other. However, I agree that the level of detail provided by the SketchUp images is less than that provided in the Ryman visual simulations.

Relevant factors for assessment

Rebecca Skidmore

8 Ms Clay says, at paragraph 30, that "*…it is the scale of the buildings as opposed to the façade treatment given to the buildings or building material used that has the most significant effect on adjoining properties and the receiving environment".*

9 I do not agree with this statement.

10 I consider Ms Clay's statement represents an overly simplistic view, and under appreciation of the full range of matters that determine the way an environment is perceived and factors relevant to an assessment of amenity effects.

11 Mr McGowan carefully explained how the Proposed Village spatial layout and building designs were carefully considered. Amenity effects do not simply result from the scale and bulk of buildings. Instead, all relevant factors need to be considered in combination

when undertaking an assessment. While bulk and scale is important, so is the placement of buildings, relationship between buildings, orientation, modulation, façade treatment and landscape treatment.

Andrew Burns

12 I agree with Ms Skidmore's response to Ms Clay on this point. In particular, I agree that Ms Clay places undue weight on one factor (scale) relevant to how a building can create 'relational qualities' with its context. Simply relying on scale is incomplete. Scale is the relative size of an element (e.g. a building) compared to other buildings. For example, a Bunnings retail store is big (out of scale) compared to a finer grain of urban form in, say, a central city environment such as the Site. However, a mixed-use development of the same size as the hypothetical Bunnings store, but comprised of, say, commercial and residential activities all individually expressed as sub-ordinated forms, can successfully establish relational qualities with its finer grain setting, such that compatible outcomes occur.

13 This is why a robust urban design assessment cannot be undertaken without considering other relevant factors, such as the variety of activities within buildings, the composition and hierarchy of forms and sub-forms, and the modulation of buildings and articulation of façades at range of viewing distances. Therefore, in this regard, I do not consider Ms Clay's evidence provides an appropriate assessment of amenity effects.

Comparison table

Rebecca Skidmore

14 Commissioner Mountfort asked a question regarding the usefulness of the table at paragraph 33 of Ms Clay's evidence. This table sets out the footprint and number of levels of the buildings in the immediate and wider receiving environment.

15 I do not consider this table assists with the assessment of urban design effects. The footprint and height of buildings, considered in isolation, do not determine how a building contributes to neighbourhood character and the surrounding environment. The table does not include information on the proportion each building takes up of its site or other relevant factors set out above.

16 Ms Clay's use of this table demonstrates that she has not acknowledged how these range of factors together determine amenity effects. For example, a simple box with a height of 16m would have quite a different visual effect compared to a building with a height of 16m with a stepped building form, clearly articulated roof form, high level of modulation and articulation using a range of materials and colour finishes.

Andrew Burns

17 I agree that Ms Clay's table is not helpful. It provides building footprint dimensions and numbers of storeys. On its own, this type of data does not describe urban form, relational qualities (to context) or any measure of intensity of development (density). It ignores the parent lot/site size on which building(s) are located. If Ms Clay had developed that data further into a Plot Ratio (or Floor Area Ratio (*FAR*)) analysis combined with site coverage, then some level of meaningful interpretation might have emerged. However, I would add that the District Plan does not set FAR standards but only describes a Dwellings per Hectare (*DPH*) measure, being a minimum of 50DPH (net). This measure of density relates to population not urban form and is therefore not a useful tool to describe physical environmental character.

Sensitivity of receiving environments

Rebecca Skidmore

18 At paragraph 52, Ms Clay disagrees with "*the conclusion that commercial uses of properties to the east are not as sensitive to change as residential activities*".

19 There are generally accepted principles for determining the sensitivity of a receiver to change.

20 A commercial receiver is less sensitive than a residential receiver, because the focus of that commercial use is the work being undertaken and not the enjoyment of residential amenity.

21 Even within a residential property, the sensitivity of different areas of the property will vary, depending on how the property is configured and different areas used. For example, primary residential living spaces are more sensitive than secondary residential spaces (bathrooms, bedrooms, etc.).

22 I consider a hotel to be less sensitive than a permanent residence, because the guests will only experience the environment for a short period. Expectations around amenity are not so fixed.

Andrew Burns

23 I agree that commercial buildings are less sensitive than residential buildings to amenity effects. In a city centre commercial area, a back to back relationship between commercial buildings is common and appropriate.

RESPONSE TO THE COMMISSIONERS' MINUTE 6

Daylight saving time

24 Warren and Mahoney (*WAM*) have advised that the shading diagrams do not show daylight saving time. As a result, the times shown on the summer shading diagrams should be shifted towards

the afternoon by one hour. The diagrams should therefore be read as follows:

24.1 The 10am 22 December diagram shows the shading that will be experienced at 11am on 22 December;

24.2 The 1pm 22 December diagram shows the shading that will be experienced at 2pm on 22 December; and

24.3 The 4pm 22 December diagram shows the shading that will be experienced at 5pm on 22 December.

25 We confirm that the corrected diagrams do not change the overall analysis and assessment of shading effects set out in our primary statements of evidence.

Cumulative shading effects on Salisbury Street and Peterborough Street properties

26 Minute 6 requested that Ryman "*address cumulative effects in terms of shading from the proposed buildings on the neighbouring Salisbury Street and Peterborough St properties that is in addition to shading already experienced there from existing buildings to the north-east*".

Additional shading diagrams

27 In response to that request, WAM have produced additional shading diagrams showing:

27.1 Shading from existing buildings; and

27.2 Shading from the Proposed Village.

28 These additional shading diagrams have been prepared for both Sites at 22 December, 23 September, and 22 June.

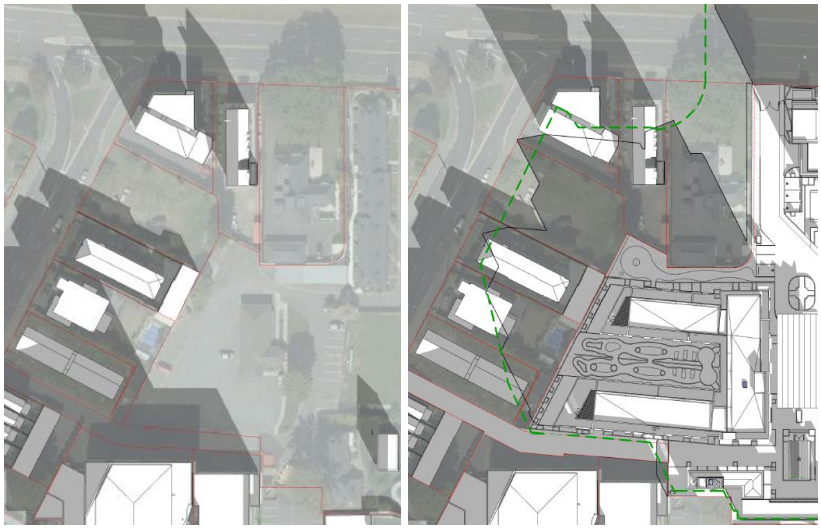
Assessment of cumulative shading

29 This urban design assessment of the cumulative shading effects of the Proposed Village on the adjoining Salisbury Street and Peterborough Street properties is based on the shading diagrams prepared by WAM. We refer to these documents as the 'cumulative shading work' throughout this assessment.

30 For ease of reference some vignette illustrations have been extracted from the WAM shading studies and used in this assessment.

31 The WAM shading diagrams describe the shade cast by existing buildings in the vicinity of the Site, and that shading profile is then layered on to a drawing showing the shade that will be cast by the Proposed Village.

32 The plan-based shading diagrams demonstrate the maximum extent of shade cast by existing and proposed buildings at ground level. The black outlines on the drawings describe the shadows cast by the Proposed Village buildings. The dark grey tone is the actual shadow cast by all proposed and existing buildings (including those off the Site). Shade cast by vegetation and by fencing is excluded. For consistency with previous effects assessments, the shade that would be cast by a building form compliant with the District Plan built form standards is indicated by a green dashed line.



Figures 1 and 2: Extracts from WAM plan view shading diagrams. The left image shows existing shading on the Salisbury Street properties adjoining the Bishopspark Site on 21 June at 10am; and, the right image shows cumulative shading on the Salisbury Street properties at the same time.

33 A fine-grained analysis looking at the cumulative shading effects on vertical walls has not been prepared. More detailed 3D studies would serve to verify the plan analysis and assist with a more nuanced assessment of effects. This approach has been undertaken for 15 Peterborough Street in response to Minute 6 paragraph 5 where apartments at different levels exist. However, for the Salisbury Street properties, we consider that the plan view shading diagrams are suitably comprehensive and allow an accurate picture of cumulative shading effects to be determined.

34 The rating of the significance of shading effects is the same as the approach adopted for assessment in the primary urban design evidence. This considered the scale of both positive and negative effects from 'less than minor' to 'significant'. Other matters influencing assessment of shading effects included: 1) the duration of shading effects (fleeting, short duration changes will reduce effects and tend towards 'less than minor'); and, 2) the nature of the area being shaded (e.g. private outdoor spaces / internal living spaces are generally more significant).

35 In many cases, the cumulative shading assessment reveals that the Proposed Village shading does not create a 'new' effect because it overlaps with existing shading. At some locations and times, the Proposed Village shading does add to existing shading and this is assessed on a property-by-property basis. As expected, sunlight access is more limited during winter and to provide a balanced picture, the overall sunlight access / shading for the year has been considered.

5 Salisbury Street

36 5 Salisbury Street is currently vacant and therefore it is not possible to determine the shading effects on building forms or associated outdoor spaces. General conclusions can be drawn around the parts of the subject lot that are shaded. For example, shade falling on the northern portions of the lot where usable outdoor spaces are likely to occur and onto which internal living spaces may be oriented will have greater effect than were shade to fall along southern edges.

37 The cumulative shading work indicates this lot receives good sun throughout the day at mid-summer with shading from existing buildings only occurring from 6-8pm. At the spring equinox, good sun is also present. This lot experiences a small amount of existing shade in the morning (9am-10am) along the eastern boundary and in the northern corner circa 5% of the lot is shaded at this time by the Proposed Village at the equinox. The lot is shaded in the afternoon between 3pm and 6pm solely by 82 and 84 Park Terrace. At mid-winter, the lot is heavily shaded from 9-10am by proposed and existing buildings (60:40 balance). At 11am, circa two thirds of the lot is shaded by proposed buildings, at noon circa 20% of the lot is shaded and this reduces to 5% at 1pm. From 2-3pm partial shading occurs, largely from existing buildings but at 4pm the lot is entirely shaded of which circa 60% is from existing buildings.

38 Overall, across the year, we confirm our assessment that the shading effects of the Proposed Village in light of the shading from existing buildings is 'less than minor'.

13 Salisbury Street

39 13 Salisbury Street contains 4 individual terraced housing Units numbered 1 (at the street edge) to 4 (at the common boundary with the Site). Each dwelling Unit includes a small patio garden along the eastern side of each Unit and a green open space sits to the street front of the lot (to the south of Unit 1). A car port is located at the rear (north) of the Site with an associated car manoeuvring area. The lot's western edge is dominated by a vehicle accessway. Dwelling entries are located off the driveway.

40 The cumulative shading work indicates that no additional shading from the proposed buildings falls on useable outdoor areas or

habitable buildings at mid-summer and the spring equinox. Any shade is generated solely by existing buildings. At 9am in mid-winter, Units 1-4 and their patios are heavily shaded by existing buildings and again from 2-4pm the patios are in shade. At noon, the gardens are generally free from shade. For the rest of the day (10-11am, 1pm) the patios are partially or fully shaded by proposed buildings. Overall, the proposed buildings create limited additional shading.

41 Overall, across the year, we confirm our assessment that the shading effects of the Proposed Village in light of the shading from existing buildings is 'less than minor'.

15 Salisbury Street

42 15 Salisbury Street contains a single, two-storey detached dwelling with a large rear garden and swimming pool (with combined dimensions of circa 17m x 17m). The pool is flanked to the east and west by what appear to be ancillary buildings. A pergola structure sits above the pool. This lot extends along the common boundary with the Bishopspark Site and connects east to Westwood Terrace. This access leg provides vehicle parking.

43 The cumulative shading work indicates that no additional shade from the proposed buildings falls on this property at mid-summer. Any shade at this time is generated by existing buildings.

44 At the spring equinox, shade occurs to varying degrees on this property from 9am-6pm from both existing and proposed buildings. The bulk of this property's rear outdoor garden area receives sun from 10am-4pm. Outside of those times shade is generated by existing buildings only. The proposed buildings create additional shade over part of the pool area from 9am-11am. I would also observe that some shade would already be present on the pool area from the northern common boundary wall and existing planting, although this is not shown on the shading diagrams. From noon-2pm, the pool receives sun. At 3pm, the proposed buildings create shade over the pool. At 5pm, the pool is already shaded by existing buildings (the car port of 13 Salisbury Street).

45 At mid-winter, the building and its rear outdoor garden area is in full shade at 9am from existing buildings. At 10am, the property is still in full shade generated by existing buildings (circa 60%) and proposed buildings (40%). At 11am, the rear area will be fully shaded by the proposed buildings. This reduces to partial shade from noon-1pm. At 2pm, the proposed buildings create additional shade over circa 40% of the outdoor space. From 3pm-4pm, the rear outdoor area is effectively fully shaded by existing and proposed buildings (40:60 split).

46 At mid-winter there are significant cumulative shade effects over the majority of the rear outdoor area of 15 Salisbury Street. However, at the equinox and mid-summer, sun is available to part or all of the rear area for the majority of the day. Overall therefore, across the year, we confirm our assessment that the shading effects of the Proposed Village in light of the shading from existing buildings is 'less than minor'.

17 Salisbury Street

47 17 Salisbury Street contains 6 individual terraced houses numbered 1 (at the street edge) to 6 (at the boundary with the Site). Garden spaces for each townhouse are located to the western side boundary adjoining 15 Salisbury Street. Vehicle access and dwelling entry occurs along the eastern edge off Westwood Terrace. The rear of the property adjoins a vehicle access leg for 15 Salisbury Street. This property does not share a common boundary with the Bishopspark Site.

48 The cumulative shading work indicates that no additional shade from the proposed buildings falls on the property (i.e. all 6 Units) at mid-summer. Any shade at this time is generated by existing buildings only (17 Salisbury Street shades itself).

49 Because of the access leg from 15 Salisbury (and therefore the setback of 17 Salisbury Street away from the Bishopspark Site), there is no shading on 17 Salisbury Street from the proposed buildings at the spring equinox (except for a very small sliver at 4pm over Unit 6).

50 At mid-winter all 6 Units are fully shaded by existing buildings from 9am-10am and Units 1-5 are also shaded by existing buildings at 11am. At noon the garden areas of dwellings 1-5 are partly shaded by existing buildings and the garden areas of dwellings 4-6 experience full shade from the proposed buildings. At 1pm, the gardens of dwellings 4-6 are fully shaded by proposed buildings but partial sun returns from 2-3pm. From 2-4pm, Units 1-3 experience partial or full shade from existing buildings. At 4pm, all Units 1-6 are fully shaded by both existing and proposed buildings (with existing buildings shading Units 1-3 and proposed buildings generating additional shading on Units 4-6).

51 Overall, across the year, we confirm our assessment that the shading effects of the Proposed Village in light of the shading from existing buildings is generally 'less than minor'. Ms Skidmore confirms her view that shading effects on Unit 6 are 'minor' but acceptable in this inner-city location.

18 Salisbury Street

52 18 Salisbury Street comprises 8 terraced townhouse dwellings in two clusters of four dwellings (1-4 and 5-8) arranged as shown in Figure 3 below.

Figure 3: Aerial image of 18 Salisbury Street describing the individual terraced house Unit numbers.

53 Dwellings 1-4 front Salisbury Street while 5-8 are located at the southern rear portion of the lot. A large, central vehicle turning and parking area, comprised of two carport structures occupies the middle of the lot and separates the two clusters of dwellings. Vehicle access occurs along the western boundary with the Proposed Village. Outdoor spaces for dwellings 1-4 are located at the street front while the rear cluster (5-8) are provided with split patio spaces front and back. All dwellings include a small upper-level balcony facing north. Tall front fencing contains and divides the street front yard spaces.

54 The cumulative shading work identifies that, at mid-summer, no additional shade from the proposed buildings falls on this property from 9am to 4pm. All Units 1-8 receive 7 hours of sun. There is one exception at 4pm when some shade falls on the driveway and also on half of the front patio of Unit 8, however the boundary fencing would likely already cast this area in shade. From 6pm the north-facing open spaces of Units 1-4 and 6-8 are fully shaded (Unit 5 is partially shaded) by proposed buildings, though the rear spaces of Units 5-8 receive sun. From 7-8pm the existing buildings partially or fully shade the north-facing outdoor spaces of all Units (1-8), but the rear courts of Units 5-8 are free from shade at 7pm.

Shade from proposed buildings adds to the shade created by the existing buildings on this property from 5pm-8pm resulting in full shade on the north-facing spaces of all Units in the early evening from 6pm-8pm.

55 At the spring equinox, from 9am-2pm no (or negligible) shade from proposed buildings falls on the property and only shade generated by existing buildings occurs. All 8 Units receive a minimum of 5 hours of sun, while Units 1-4 receive 6 hours throughout the day. From 9am-6pm, existing buildings partially or fully shade the rear open spaces of Units 5-8 (except for Unit 8 at 6pm where it is free from shade). At 4pm, the proposed buildings create a small area of additional shade over the rear space of Unit 8 only. From 5-6pm, the proposed buildings create additional shade over the rear spaces of Units 5-8 and partial shade over the front yard space of Units 1-4.

56 At mid-winter (9am-4pm) the rear Units 5 and 8 and their front and particularly their rear open spaces are almost completely shaded by existing buildings. The rear Units 6 and 7 receive a couple of hours of sun from 12-2pm. Most of this shade is existing. The proposed buildings generate a little additional shade over the front yard of Unit 5 at 3pm and Unit 8 experiences a little additional shade at 4pm. Units 1-4 front yards experience some shade from existing buildings from 1-3pm and full shade on buildings and spaces by 4pm. Overall Units 1-4 receive some 6 hours of sun throughout the day. Overall, we consider additional shade from the proposed buildings has little effect on this property.

57 Overall, across the year, we confirm our assessment that the shading effects of the Proposed Village in light of the shading from existing buildings is 'less than minor'.

20 Salisbury Street

58 20 Salisbury Street is a single detached two storey house with a front parking area and large rear garden. This property is located east of 18 Salisbury Street and does not directly adjoin the Site. As such the effects on this property are generally very low.

59 Shading only occurs in the late afternoon (from 4pm) at the equinox from existing buildings. Throughout mid-winter the property's main rear space is almost entirely shaded by existing buildings. At mid-summer late afternoon (5-8pm) shading from existing buildings occurs. The proposed buildings have little additional shading effect on this property.

60 Overall, across the year, the effects of additional shade from proposed buildings over and above shade from existing buildings is 'less than minor'.

15 Peterborough Street

61 15 Peterborough Street is a 7-storey apartment building comprising 25 apartment Units. Vehicle access is via Peterborough Street with an accessway along the eastern side of the property to a two-level rear car parking area that is located at the northern end of the property.

62 The apartments are a combination of single aspect facing either east or west and double aspect facing both east and west. The end apartments also include north or south fenestration.

63 Generally, each level includes four apartment Units facing west towards the Peterborough Site, and specifically towards Building B08. These apartments include living areas and outdoor spaces, either as ground-level terraces or upper-level balconies. The top two levels (levels 5 and 6) include three apartments, two of which are in a two-level duplex arrangement and face the Peterborough Site.

64 For the purposes of this cumulative shading assessment, only those apartments with living areas and outdoor spaces facing west towards the Peterborough Site are considered.

65 We have reviewed the additional cumulative sun studies, both plan view images and 3D elevation images. The 3D elevation images are important as the effects on the different floor levels vary as the shading moves up the building. The plan view images show the shading from the proposed buildings and indicate the extent of shade from a form that complies with the built form standards and it is important to read this information alongside the 3D views. The 3D elevation images were not available when we conducted our primary assessments and therefore we have looked at these Units in more detail to confirm our earlier assessments in light of the cumulative shading information.

Mid-Summer

66 In terms of existing shading, between 9am and 1pm, 15 Peterborough Street shades itself and specifically its west facing Units. The exceptions are Units 23, 24 and 25 that receive full sun onto their north-facing façades. The Common Lime tree casts shade over Units 1-4 from 6-7pm and across Units 5, 7, 9, 11, 13, and 15 at 8pm as recorded on the 'Combined' shading studies by WAM and further verified using 3D elevation studies requested from WAM.

67 The following paragraphs address cumulative shading of the 15 Peterborough Street Units.

68 No additional shade from proposed buildings falls on this property as a whole from 9am-1pm. At 2pm and 3pm all Units receive sun except ground floor Unit 1 (highlighted yellow at Figure 4 below)

which is partially shaded at 3pm over its outdoor terrace area and walls (see Figure 5 below). It should be noted that fencing and relatively dense planting occurs along the boundary (see Figure 6 below) and is highly likely to cast shade at ground level. Therefore, in my opinion, shade from proposed buildings causes no additional shade effect on Unit 1 at 3pm.

Figure 4: 15 Peterborough St, ground floor plan. Unit 1 highlighted in yellow.

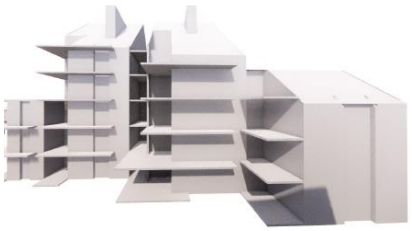


Figure 5: 15 Peterborough St, 3pm mid-summer. Partial shade indicated on Unit 1 ground level that already likely to be in shade from boundary fencing and planting.

Figure 6: 15 View from Peterborough Street showing planting along the boundary with the Peterborough Site.

69 At 4pm in mid-summer, the four ground floor Units (1, 5, 17, and 23) are shaded as well as part of Units 2 and 7 on the first floor (see Figure 7 below). Unit 23 enjoys full sun onto its north façade.

Units 5 and 17 are west facing only and will receive 2 hours of sun at 2pm and 3pm at mid-summer but lose the sun at 4pm. This outcome does create adverse effects on their amenity though I would note that existing vegetation along this boundary will likely contribute to the shade condition of these Units. At this time, shade from a form compliant with the built form standards shade Unit 1 but does not extend onto Unit 2. Therefore units 5, 17, 23 and part of unit 2 experience additional shade from the proposed buildings.

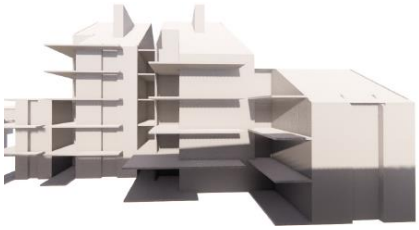


Figure 7: Mid-summer, 4pm.

70 At 5pm in mid-summer, eight ground and first floor Units are shaded (1, 5, 17, 23 and 2, 7, 18, 24) as well as part of Unit 9 on the second floor (see Figure 8 below). No shade occurs from existing buildings. Units 2, 7, 18 and 9 receive 3 hours of sun during 2pm, 3pm and 4pm at mid-summer, losing the sun by 5pm, and I consider that outcome to be acceptable. Unit 24 receives extensive sun (7 hours) onto its northern façade. At this time, shade from a form compliant with the built form standards shades these Units.

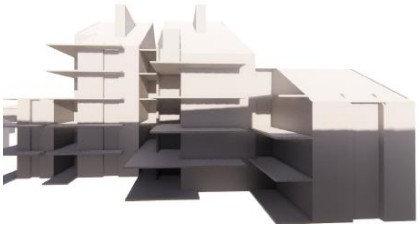


Figure 8: Mid-summer, 5pm.

71 At 6pm in mid-summer, twelve ground, first and second floor Units are shaded (1, 5, 17, 23 and 2, 7, 18, 24 and, 3, 9, 19, 25) as well as part of Unit 11 on the third floor (see Figure 9 below). No shade occurs from existing buildings but some shade from the Common Lime tree falls on Units 1-4. Units 3, 19 and 11 receive 4 hours of sun at 2pm, 3pm, 4pm and 5pm at mid-summer, losing the sun by 6pm, and I consider that outcome to be acceptable. Unit 25 receives extensive sun (7 hours) onto its northern façade. At this time shade from a form compliant with the built form standards is the same as shade from proposed buildings.

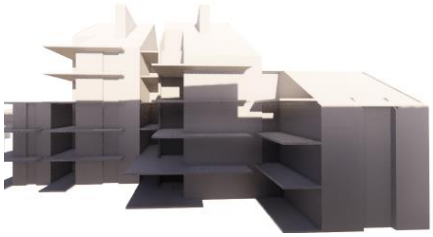


Figure 9: Mid-summer, 6pm.

72 At 7pm in mid-summer, fourteen ground, first, second and third floor Units are shaded (1, 5, 17, 23 and, 2, 7, 18, 24 and, 3, 9, 19, 25 and 11, 20, 4)(see Figure 10 below). No shade occurs from existing buildings but some shade from the Common Lime tree falls on Units 1-4. Units 4 and 20 receive 5 hours of sun from 2pm-6pm, losing the sun by 7pm, and I consider that outcome to be acceptable. At this time, shade from a form compliant with the built form standards is the same as (or greater than) shade from the proposed buildings.

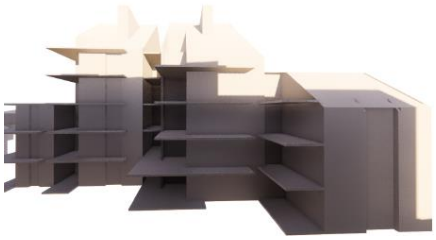


Figure 10: Mid-summer, 7pm.

73 The top three levels (levels 4, 5 and 6) are generally free from shade from the proposed buildings in summer. Therefore, Units 13, 21, 15 and 22 only experience a small amount of early evening shade at the equinox (at 6pm) and at mid-winter (at 4pm). I consider these Units to receive acceptable sun year-round.

Spring Equinox

74 15 Peterborough Street shades itself in the morning at this time of year. The morning and early afternoon period (9am through to 2pm) is free from shade generated by the proposed buildings.

75 At the spring equinox there is a similar pattern of shade on 15 Peterborough Street though starting 1 hour earlier (i.e. from 3pm rather than 4pm). In addition, the fourth level Units 13 and 21 are also in shade by 6pm. As at mid-summer, Units 2, 5 and 17 receive 2 hours of sun at 1pm and 2pm, losing sun by 3pm. This outcome does affect their amenity, although I note that over this time shade from a form compliant with the built form standards is the same as (or greater than) shade from proposed buildings. Unit

1 has a similar outcome but is already shaded by fencing/planting as discussed above. All other Units receive 3 or more hours of sun, which is an outcome that I consider acceptable.

Mid-winter

76 15 Peterborough Street shades itself in the morning at this time of year. The buildings at 18 Salisbury Street also create partial shade on 15 Peterborough Street at mid-winter from 10am-4pm to varying degrees, though this existing shading only affects the northern most Unit 23 and possibly 24 and 25 depending on how far up the building this shade extends. The morning and early afternoon period (9am through to 1pm) is free from shade generated by the proposed buildings.

77 At mid-winter, shade on the lower levels begins at 2pm, one hour earlier than at the equinox. At this time, shading affects Units 1 and 2 on the ground and first floors. At other times through to 4pm, the shade tracks up the building affecting the apartment Units in a pattern similar to the summer and equinox patterns described above. As discussed above, Unit 1 is considered to be already in shade from existing fencing/planting. Unit 2 receives limited sun for 1 hour around 1pm. Units 5, 17, 7, 18, 3 and 9 over ground, first and second floors receive 2 hours of sun at 1pm and 2pm, losing sun by 3pm. Units 23 and possibly Unit 24 receive some shade from 18 Salisbury Street from 2-3pm but overall have good sunlight exposure (some 4-5 hours). All other Units receive 3 hours or more sunlight. From 2pm-4pm shade from a form compliant with the built form standards is the same as (or greater than) shade from proposed buildings.

Conclusion

78 We conclude that the existing building 15 Peterborough Street has a significant effect on existing shading. This building shades itself, specifically all Units facing the Peterborough Site (to the west), throughout the morning up to and including 1pm in summer, noon at the spring equinox and noon in winter. 18 Salisbury Street has a small existing shading effect on the lower level northern Unit 23 and possibly first floor Unit 24 in winter, though its contribution to the cumulative shading effect is negligible. At mid-summer the Common Lime tree casts shade on Units 1-4 from 6-7pm and this shade moves across onto Units 5, 7, 9, 11, 13 and 15 at 8pm.

79 Generally, the proposed buildings will generate shade over various apartments across the ground, first, second, third and fourth levels from mid-late afternoon across the year. The fifth and sixth levels are generally free from shade throughout the year. The ground level apartments (1, 5, 17) and Unit 2 on the first floor experience the greatest cumulative shade effects as they receive some 2 hours of sun per day throughout the year (with Unit 2 receiving 1 hour at mid-winter). We note that existing fencing and planting along the boundary between 15 Peterborough Street and Building

B08 is likely to shade the ground level apartments and particularly Unit 1. The first and second floor apartment Units 7, 18, 3 and 9 receive 2 hours of sun at mid-winter, but receive 3 hours or more at mid-summer and the equinox.

80 For the reasons set out in our primary evidence, recognising the level of shade anticipated in this central city location, we have revised our original assessment and now conclude that, overall, shading effects are 'less than minor' through to 'moderate' for different apartments at this property. Specifically, for Units 2, 5 and 17, based on the cumulative effects information, we consider the shading effects on these particular ground and first floor Units to be 'moderate'.

Shading effects on 18 Salisbury Street and 15 Peterborough Street

81 Minute 6 requested that Ryman address "*what would be required to ameliorate late afternoon shading effects at 18 and 15 Peterborough St caused by buildings B07 and B08*", including "*how much the buildings would have to be reduced in scale below the limits of the built form standards to permit useful late afternoon sun at those properties*".

82 The Commissioners asked Ryman to comment on sunlight into the Units at 15 Peterborough Street, noting there are no outdoor living spaces or courtyards. We note that while the apartments do not have ground level courtyards, the ground floor Units 1, 5, 17 and 23 do have private terraces facing west. At the upper levels, all of the west-facing Units have balconies facing west.

Additional shading diagrams

83 In response to that request, WAM have produced additional shading diagrams:

83.1 Plan view shading diagrams for the Peterborough Site showing the shading effects on 18 Salisbury Street and 15 Peterborough Street for the hours from 4pm until sunset in the following scenarios:

(a) No buildings on the Peterborough Site (ie existing shading) (shown as 'A' or a black line);

(b) Buildings B07 and B08 as proposed (shown as 'B' or an orange line);

(c) Buildings B07 (east) and B08 – with a penthouse rather than a full top floor. No change to the scale of Building B07 (west) or Building B08 (shown as 'C' or a pink line);

(d) Buildings B07 (east) and B08 – minus one floor. No change to the scale of Building B07 (west) (shown as 'D' or a dark blue line);

(e) Buildings B07 (east) and B08 – minus two floors. No change to the scale of Building B07 (west). B08 – minus two floors (shown as 'E' or a light blue line); and

(f) Building B07 (east) – minus two floors and B07 (west) minus the penthouse. B08 – minus two floors (shown as 'F' or a brown line).

83.2 Three dimensional 'elevation' shading diagrams for the Peterborough Site showing the shading effects on the Units at 15 Peterborough Street in the following scenarios:

(a) Building B08 as proposed (shown as 'A');

(b) Building B08 – minus one floor (shown as 'D'); and

(c) Building B08 – minus two floors (shown as 'E').

These elevation views allow the shading experienced by each Unit at the various levels of this building to be identified.

84 The scale reduction scenarios are explained in the site sections on Sheet S02.A0-090.

85 We note that the shading diagrams are based on the modelling of buildings. Other site features such as boundary walls and vegetation have not been modelled. Depending on the location of these features, they will also affect the shade experienced at these properties. For example, as the sun angle lowers, the solid wall along the driveway and between Units 1 – 4 of 18 Salisbury Street will cast shadow over differing areas of the outdoor spaces for much of the year. The plan view combined shading diagrams do include the indicative shade cast by the protected Common Lime tree on the Peterborough Site. As shown, that tree casts shadow on the southern part of the building at 15 Peterborough Street in the evening in summer time.

Preliminary comments

86 At the outset, we wish to make clear that our original shading assessments for the neighbouring properties as set out in our respective primary statements of evidence remain valid.

87 As experts, we also respectfully disagree with the focus of the Minute on the shading in the late afternoon period and on what is described as "useful" sunlight. This approach is, in our experience,

unusual and potentially misleading. We say this because shading effects need to be measured objectively. There are a wide range of usage patterns and subjective responses to shading effects on neighbours. Some people may prefer more sun in the morning or middle of the day or at different times of the year. Some may prefer sun in the later afternoon, for example Ms Waddy and Mr Davies. Shading conditions will also vary between individual properties based on topography, existing buildings, layout, vegetation and the like. In our experience, it is more commonly accepted that the middle of the day is an important time to be free from shade (e.g. 10am-3pm).

88 Our assessments therefore considered shading across the different times of the day and seasons of the year. We note that no Units at either property will experience shading from the Proposed Village in the morning, around the middle of the day or in the early afternoon. The 18 Salisbury Street properties and the upper-level Units at 15 Peterborough Street will receive good access to sunshine through most of the day throughout the year. Some of the lower level Units at 15 Peterborough Street will receive less sunshine. However, we consider the change will be less at some of those lower level Units than shown on the shading diagrams given the existing boundary fencing and vegetation. As set out in our primary statements of evidence, we consider the shading effects of the Proposed Village on these properties across the day throughout the year are generally acceptable for this central city environment (acknowledging the moderate effects on Units 2, 5 and 17 at 15 Peterborough Street).

89 Further, shading effects analysis must also account for the expectations of the District Plan, which adds an objective lens to the effects assessments. In this central city location, the District Plan doesn't specify a particular period to assess shading effects. In that sense, it does not emphasise the importance of late afternoon sun. It also does not distinguish between different neighbouring orientations (e.g. southern boundaries are not treated differently to northern boundaries). It does however contain guidance on the expectations of change in achieving the high density objectives of the area. It also notes the relevance of the built form standards as a guide when seeking to protect amenity. In our view, the District Plan provisions reflect the fact that shade is a reasonably anticipated result of the more compact living environments created in a central city location.

90 We also respectfully remind the Commissioners that access to sunshine is one component of a person's overall amenity. In a central city location such as this, there will be a number of other elements that contribute to amenity, including close access to a range of community and recreation facilities, retail, entertainment and employment opportunities. Central city locations also support a non-car based lifestyle.

91 With those caveats outlined, we now go on to answer the questions raised by the Commissioners.

Interpretation of useful late afternoon sun

92 As urban designers, we would not typically use the term 'useful' afternoon sun. We have nevertheless sought to answer the Commissioners' question from an objective standpoint. In our experience, sunlight access to primary indoor and outdoor living areas is the key consideration. This was confirmed by Ms Waddy and Mr Davies. In winter, late afternoon is short and 'useful' late afternoon sun is unlikely in any event.

93 We interpret 'late afternoon' to mean the period from 4pm until sunset, while noting that the sun sets in the evening in summer (around 8pm). WAM have accordingly prepared shading diagrams for those times.

18 Salisbury Street

94 The property at 18 Salisbury Street contains 8 two-storey Units arranged in two rows. The Units and their associated outdoor living spaces are compact.

95 All Units receive good access to sunshine through most of the day in summer and either side through to the equinox. The Proposed Village will not result in shading in addition to that already experienced for any Unit before 3pm at any time of the year.

96 In winter, none of the scale reduction scenarios would alter the amount of shading experienced by the Units at 18 Salisbury Street.

97 At the equinox, none of the scale reduction scenarios would alter the amount of shading at 5pm or 6pm. At 4pm, even the 'minus three floors' scenario would not reduce shading to all of the Units.

98 In summer, the 'minus one floor' or 'minus two floors' scenarios would achieve an additional hour or two hours free from shading at different times for different Units. From 7pm, even the 'minus two floors' scenario would not reduce shading to any of the Units.

99 We consider the Proposed Village will maintain 'useful' late afternoon access to sun for all Units at 18 Salisbury Street, except Unit 8. The 'minus three floors' scenario would still create extensive late afternoon shading on Unit 8. The scenario evaluation exercise therefore shows that even a very conservative development form designed to be well below an envelope created by the built form standards would create a late afternoon shading impact. That impact is primarily a consequence of the Site and neighbour orientations. It is therefore not possible to achieve 'useful' late afternoon sun at this property. As noted earlier, this Unit will however receive good access to sunshine through most of

the day in summer and either side of this through to the equinox. We consider this is an appropriate outcome in this central city location.

15 Peterborough Street

100 As described above, the property at 15 Peterborough Street accommodates a 7-level (with the 7th floor containing a mezzanine floor) apartment building containing 25 Units. Of these, 19 Units have a western orientation towards the Site.

101 For the Units facing west towards the Site, the shading diagrams demonstrate:

101.1 The Proposed Village maintains 'useful' access to sun for the top two levels of Units (Units 13, 15, 21 and 22) at late afternoon in mid-summer and either side through to the equinox;

101.2 The 'minus one floor' scenario (resulting in a three-storey building) would additionally maintain 'useful' access to sun for Units 4, 11 and 20 at late afternoon in mid-summer and either side through to the equinox;

101.3 The 'minus two floors' scenario would additionally maintain 'useful' access to sun for Units 3, 9, 19 and 25 at late afternoon in mid-summer and either side of this through to the equinox;

101.4 The 'minus two floors' scenario would still create extensive late afternoon shading in mid-summer and either side through to the equinox for the units in the lower two levels of apartments;

101.5 The 'minus two floors' scenario would still create extensive late afternoon shading in mid-winter for the Units in the lower four levels of apartments.

102 As shown in the modelling, the 'minus two floors' scenario would improve the access to sunshine in the late afternoon and early evening for 7 Units during mid-summer and either side through to the equinox. However, even this scenario, would not maintain good access to sun for the Units in the lower two levels of Units at late afternoon. However, as noted earlier, the Units at the upper levels of 15 Peterborough Street will receive 'useful' access to sunshine through much of the day in summer through to the equinox. We consider this is an appropriate outcome in this central city location. It is not possible to maintain 'useful' access to late afternoon sunshine at the lower level Units if any building is located in the position of Building B08. However, in relation to shading, we do not consider the amenity of these Units will change

substantially given the existing boundary wall and vegetation already creates shade.

Implications

103 The removal of two or more floors (i.e. creating a two or three level eastern wing of Building B07 and a two level Building B08) would result in the loss of a considerable number of apartments. In this respect, it would diminish the ability of the Proposed Village to meet the high density expectations of the District Plan.

104 The removal of two or more floors would also require a fundamental re-consideration of the Proposed Village design.

105 As noted in our evidence in chief, the Proposed Village design has been carefully developed to ensure it relates to and makes a positive contribution to the character and amenity of the wider neighbourhood. This care has ensured a suitable relationship between the building elements on the Site and achieved a positive interface with the adjacent streets.

106 In relation to Building B07 the 'minus two floors' or 'minus three floors' scenarios would result in a considerable height difference between the eastern and western wings and therefore a lack of cohesion would result.

107 In relation to Building B08 the 'minus two floors' scenario would result in a two-storey building and would likely require a fundamental re-assessment of the building typology in this location. In our opinion, a two-storey Building B08 would be incongruous with its seven-storey immediate neighbour at 15 Peterborough Street and the pattern of development in the wider streetscape.

108 We consider that removing levels from the buildings would erode the overall cohesion of the Proposed Village design, in terms of the overall distribution of massing on the Site. In our view, that would diminish the contribution the proposed Village will makes to the revitalisation of central Christchurch.

Rebecca Anne Skidmore and Andrew Davies Burns
30 March 2021