Ryman Village on old Training College Site

1 STATEMENT OF EVIDENCE OF MICHAEL DONN

1.1 Introduction

My name is Michael Donn. I am currently Associate Professor in Building Environmental Science at te Herenga Waka Victoria University of Wellington.

1.2 Qualifications and experience

1.2.1 I have a PhD in Building Environmental Performance Simulation from te Herenga Waka.

1.2.2 I was employed to teach and research in the field of Building Environmental Aerodynamics and Indoor Environmental Quality in buildings in 1979.

1.2.3 I am appearing here, not as an employee of te Herenga Waka, but as a private consultant who has been employed since 1980 to advise the Wellington City Council on the effect of buildings on the wind.

Since that initial contract, I have had extensive experience in auditing the wind assessments, wind tunnel model studies, and desktop wind assessments in Wellington and have assessed developments in Auckland, Lower Hutt, Porirua, Wellington, Christchurch and Dunedin.

1.3 Overview of my advice to WCC

1.3.1 There is no independent measurement of the effect of the proposed buildings

In the Central City a building of the scale planned for this site would be wind tunnel tested. It is my preference that, armed with this neutral evidence, a developer's consultant and I can provide advice on the basis of fact, and a genuine assessment of risk. This is not because the Central City is somehow intrinsically more windy than the suburbs. It is because the rules were not written for buildings of this scale. My determination to minimise risk from a building of the scale of the tallest proposed structure is to recall that the Hope Gibbons building when constructed at the West end of Courtenay Place was similarly a roughly 8 storey structure in amongst a neighbourhood of 2-3 storey buildings. The wind effects of that building and the ropes that were deployed on the street edge for pedestrian safety from the 1920s to the 1980s established Wellington's reputation as a place that could be hazardous to health in windy conditions. The eventual rise of the height of the surrounding buildings provided shelter that reduced the effect of this building on the street.

1.3.2 Initial frustration at the inconsistency of the Landscape Plan and the Wind Assessment that were presented for my, and the WCC, approval.

This has largely been addressed in the details I have seen made aware of subsequent to my initial audit. I note that Mr Jamieson in his evidence (page 6) states:
"*I also consider wind mitigation treatments should remain in the condition addressing the final landscaping plans rather than having a separate additional wind assessment (as proposed by the Council Officer). This approach will ensure the two disciplines are integrated, ….*" In a conversation yesterday, I applauded this measure to ensure integration of the two disciplines. I understand that the landscape report will include an assessment by a suitably qualified wind expert of the likely effectiveness of the proposed landscape measures.

1.3.3 I would note that in much of what I have contributed to the WCC on this topic my tone has been driven by a concern to approve only what I can see;

I have been burned a number of times by assurances along the lines of "should it be necessary, further landscaping will be undertaken after the development is completed". This runs the risk that the proposed wind mitigation measures are viewed by future users of a building as disposable / temporary in a manner that permanent features of building are not.

Examples of this type appear in the following paragraphs of Mr Jamieson's report:
Para 52
Para 53
Para 54
Para 61
Para 72
Para 78

I have every hope that the integrated landscape and aerodynamics report will likely resolve most of these issues.

1.3.4 I would also note that even prior to the sorting out of the boundary fences designed to confine the wind accelerations to the site, most of the off-site effect of the proposed building development was likely to be on the adjacent public footpaths.

With the exception of the potential for swirling Southerlies in Scapa Terrace rear yards, I do not believe that the proposed development will have a deleterious effect on other properties in the neighbourhood. It should be repeated that without the proposed fence the development will likely shelter the Scapa Terrace houses from the Northerlies while also causing some backwash in Southerlies.

1.3.5 I have long taken the attitude that any apparent Public Park design presented in a set of plans is assessed from the point of view of its exposure to the wind. My rationale is that because a planner often has to weigh up different effects in recommending Resource Consent it is helpful if they are aware of how useful these Parks might be.

I am reassured that the integrated landscape and wind report will address these and the planned outdoor balconies.

1.3.6 I note that in his oral evidence Mr Jamieson made several references to his view that much of what we are discussing is amenity, not safety. I would note, in the absence of a wind tunnel or CFD assessment, that I cannot be so certain.

I am reassured that the intention of the Ryman organisation to address through design the potential windiness of the courtyard at the south corner of the "U-shaped" space between Buildings B01A and B01B. The sketch contained in Mr Jamieson's written report of what I understand is a 2m fence with associated planting is reassuring of a desire to address the issue. The safety limit for the central city is far higher than what might be considered a suitable limit for the assumed greater frailty of the general population of the proposed village. Therefore, I would have to disagree with Mr Jamieson. I believe that the issues associated with the courtyard in general and the gap between buildings in the southern corner are safety issues.

I would note on this that it is the intention of the Wellington Wind Rules to seek as far as possible to improve, and at least to not make worse the general wind conditions. The Cumulative Effect rule seeks to stop the steady deterioration of the general wind. Its intent is more about not approaching the Safety Rule stealthily, one building at a time, than amenity per se.

1.3.7 In light of my concerns about safety, it is my practice, not just to look at the effects of a building on the wind but also the placement and design of the building entrances. These locations of sudden transition from clam inside to strong winds outside are locations where safety is a concern.

In the proposal that I was asked to assess, there was no evidence of an awareness of the importance of features like wind lobbies with associated wind screens to ensure the safe transition of the residents of the village past this potential wind hazard. Indeed on the plans I had, there seemed no room inside for these. I am advised that it is standard practice in all Ryman developments to have wind lobbies on all outer doors, so am trusting that this will indeed be the case.

MD
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