

**BEFORE THE ENVIRONMENT COURT
AT WELLINGTON**

ENV-2015-WLG-024

IN THE MATTER of the Resource Management
Act 1991

AND

IN THE MATTER of applications for resource
consent by Site 10
Redevelopment Limited
Partnership and Wellington City
Council in respect of the area
known as Site 10

**STATEMENT OF EVIDENCE OF HUDSON LAURENCE MOODY
ON BEHALF OF SITE 10 REDEVELOPMENT LIMITED PARTNERSHIP AND WELLINGTON
CITY COUNCIL**

3 JULY 2015

 **Simpson Grierson**
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INTRODUCTION

1. My name is Hudson Laurence Moody. I am a director of Spencer Holmes Limited, a firm of engineers, surveyors and planners based in Wellington. I have been practising as a land surveyor for over 40 years since first starting work in 1974, and have been a director since 2001.
2. My qualifications are:
 - (a) NZ Certificate of Land Surveying – Technicians Certification Authority (1977);
 - (b) Bachelor of Surveying;
 - (c) Registered/Licensed Cadastral Surveyor since 1993; and
 - (d) I am a member of both the Consulting Surveyors of New Zealand, and the New Zealand Institute of Surveyors Incorporated where I hold the title of Registered Professional Surveyor.
3. Full details of my qualifications and relevant past experience are at **Attachment A** to this evidence.
4. I have been engaged by the applicants to provide evidence in relation to shading effects of the proposed development of Site 10, Kumutoto, Wellington Waterfront.
5. I have been providing the applicants with my expertise in relation to shading effects of the proposed development since July 2014 when I prepared a preliminary shading assessment for the proposed building.

CODE OF CONDUCT

6. I confirm that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014 and that I agree to comply with it. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express, and that, other than where I state that I am relying on the evidence of another person, my evidence is within my area of expertise.

SCOPE OF EVIDENCE

7. I prepared the technical report titled “Assessment of Effects on Sunlight” included as Appendix 14 of the Assessment of Environmental Effects (**AEE**) for the applications.
8. The shading assessment in my technical report was for the building shape depicted on Athfield Architect’s Plans P1.01-K, P1.02-K, P1.03K and accompanied by the 5 Storey Proposal Rooftop and Cross section plans labelled TAG Presentation 11.07.14. These TAG plans show a proposed parapet height of 22.4m above mean sea level, with the

plant room extending some 3.85m higher. I have since compared the drawings I used to prepare my technical report with the set of plans titled "Kumutoto Site 10 – Architectural Drawings for Resource Consent Submissions (Rev B)" dated 12 March 2015, submitted as part of the applicants' response to the second request for further information, and have found the key elements of building position and building height to be the same.

EVIDENCE

9. My evidence will cover the following matters:
- (a) an overview of the methodology used for the shading assessment;
 - (b) assumptions and limitations;
 - (c) a summary of the results from my technical report;
 - (d) comments in response to submissions;
 - (e) comments in response to the applicants' s92 response;
 - (f) comments in relation to the Wellington City Council's s87F report; and
 - (g) my conclusions.

Methodology

10. There are two principal methods of assessing shading. The more commonly used method relies on drawing a series of shadow diagrams for different times of the day for selected days of the year to depict the size and shape of shadows that will occur as a result of development work. The second, less commonly used but more informative, method uses sun transit diagrams to show the path of the sun through the sky relative to the various obstructions such as skylines, existing buildings and proposed structures which can cause shading to a selected viewpoint.
11. Each method has its advantages and disadvantages. The main advantage of a shadow diagram is that it graphically depicts the extent of shading over a larger area, but it only applies to a specific time. Shadow diagrams are easy for the lay person to understand. However, they do not quantify duration of shading and additional diagrams are required to show the shading effects for different times of the day and days of the year.
12. My reason for using the sun transit method is that it has the advantage of being able to provide a complete picture of when and for how long shading will occur over the course of a full year. A limitation is that this information is only relevant for the selected viewpoint. Therefore multiple viewpoints must be assessed around the development site to understand how different areas may be affected. Section 6 of my technical report explains the sun transit method in more detail.

13. For the applications, Athfield Architects have prepared a series of shadow diagrams to help understand the shading effects on the Whitmore Plaza area. These shadow diagrams were included with the applicants' response to the first further information request, in a series of plans titled "Kumutoto Site 10 – s92 Response WCC" dated 27 February 2015. These shadow diagrams also complement the sun transit diagrams contained in my technical report.

Assumptions & Limitations

14. The durations of shading stated in the tabulated summaries of my technical report assume 100% cloudless skies. It is not practical to allow for cloud as it is not readily quantifiable.
15. The tabulated durations of shading in my technical report are rounded off to the nearest 10 minutes, as I consider this level of accuracy to be adequate when considering the change in amenity value at a particular viewpoint.
16. Minor design variations to the size and shape of the proposed building will not materially affect my findings.

Summary of Findings from Technical Report

17. In summary, the findings expressed in my technical report are:
- (a) the proposed building will not generate any shading on Kumutoto Plaza;
 - (b) the northern end of the proposed Whitmore Plaza area is immediately to the south of the proposed building and shading to it is therefore inevitable;
 - (c) the public promenade area to the south of the proposed building will also be affected, but to a lesser degree. Whilst being a public area, it is not a place of civic importance which would be subject to periods of high public use. It is instead part of a public thoroughfare along the waterfront;
 - (d) the 22.4m building height results in shading consistent with a 22m high building. The additional 0.4m of parapet height does not materially alter the shading effects;
 - (e) the roof top plant room is set back sufficiently from the parapets so as to not contribute to the shading of the surrounding areas;
 - (f) the District Plan recognises that some shading of public spaces is inevitable when development occurs; and
 - (g) all things considered, the shading effects are less than minor.
18. I confirm that I still hold the same views and conclusions as expressed in my technical report.

SUBMISSIONS

19. Reviewing the submissions on the applications, submissions 6 (D&A Locke), 10 (Waterfront Watch), 12 (Boardman), 13 (Swann), 33 (Stevens), 34 (Lee), and 37 (Zwartz) make reference to matters within my area of expertise.
20. The submitters' comments do not provide much in the way of detail of when and where they consider shading will generate adverse effects.
21. Submission 6 suggests that any development needs to be small scale with minimum effect on movement, light and sun.
22. Submission 10 states that the proposed building will significantly shade the former Eastbourne Ferry Terminal Building.
23. Submission 12 states the shade and wind effects created by the proposed building would be a negative aspect of the development, and Submission 13 makes mention of diminished sunlight to public spaces and pedestrian routes.
24. Submission 33 states that the proposed building completely overshadows the historic former Eastbourne Ferry Terminal Building and the rest of the Kumutoto area.
25. Submission 34 simply states that the overall project will create wind and shade problems. Lastly, Submission 37 states that the former Eastbourne Ferry Terminal Building will be dwarfed and shaded by the new building.
26. I consider the submitters' comments to be of a general nature and, as such, it is difficult for me to specifically address their comments, suffice to say it is inevitable that a multi-storey building on Site 10 will cause shading to adjacent public spaces in much the same manner as existing buildings in the area do.
27. I acknowledge the proposed building will cause shading effects to the former Eastbourne Ferry Terminal Building. The former Eastbourne Ferry Terminal Building is some 8m from the proposed building. As a result, the proposed building will cause afternoon shading throughout the year, particularly to the western side of the former Eastbourne Ferry Terminal Building. By my calculations, any new building more than two storeys high on Site 10 would generate similar shading to the localised area around the former Eastbourne Ferry Terminal Building.
28. However, there are two key points to note. Firstly, the NZ Post building on the western side of Waterloo Quay already causes winter shading to the former Eastbourne Ferry Terminal Building.

29. More importantly, the District Plan does not specifically identify the former Eastbourne Ferry Terminal Building or the adjacent pedestrian routes as outdoor public spaces to be given any special sunlight amenity protection.

SECTION 92 RESPONSE

30. The applicants' s92 response to the first request for further information includes the shadow diagrams produced by Athfield Architects to address the Council's request for information on how the new structure will shade the proposed Whitmore Plaza area at the southern end of the proposed building.
31. I note that the Whitmore Plaza landscaping extends south westwards along the waterfront for around 50m. With regard to my technical report, Viewpoint 03 is situated at the northern end of Whitmore Plaza as it is intended to demonstrate shading effects close to the proposed building. Moving south-westwards away from the proposed building across Whitmore Plaza to the opposite end sees the shading effects diminish to around an hour at 10:00am in the winter months.
32. It is inevitable that the northern end of Whitmore Plaza adjacent to the proposed building will suffer shading from the proposed building. The public will have ample opportunity to find and enjoy other nearby open sunny places such as the south-western end of the Whitmore Plaza or even the Kumutoto Plaza if they feel so inclined.

SECTION 87F REPORTS

33. I have reviewed the section 87F reports prepared for this matter. The WCC's s87F report deals with shading related issues. I agree with the conclusions reached in this report as they are consistent with my own findings.

CONCLUSIONS

34. All buildings generate shading in one form or another and it is inevitable that there will be some public spaces around the proposed building which will be affected by shading.
35. The District Plan recognises that full sunlight protection will not be possible in all cases.
36. In my view, the shading effects generated by the proposed building are less than minor and consistent with the District Plan policies and objectives.



Hudson Laurence Moody

3 July 2015

ATTACHMENT A

Hudson Moody

SPECIALISATION: Cadastral Surveying & Shading Assessments

POSITION: Director - Surveying & Planning

QUALIFICATIONS: NZ Certificate in Land Surveying Wgtn Polytechnic (1977)
BSurv (Distinction) Otago University Graduated 9 May 1992

EXPERTISE:

I have over forty years experience in land surveying covering a wide range of traditional aspects of surveying including land development, topographical surveys, construction set out, monitoring surveys, district plan compliance assessments and cadastral surveying for commercial, urban and rural developments.

Since the introduction of the Resource Management Act 1991, I have gained a wealth of experience in the field of resource management, resource consent applications and presentation of evidence at consent hearings and the Environment Court. I have developed an area of expertise specialising in the analysis of sunlight and shading in conjunction with district plan requirements and resource consent applications.

With the introduction of LandonLine, I recognised an opportunity to improve business efficiencies and deliver benefits to clients including time savings for the issue of LINZ plan approvals. As a result, Spencer Holmes are fully conversant with LandonLine and electronic plan lodgments. I served as the NZ Institute of Surveyors representative on the LINZ Survey & Titles Advisory Committee from 2003 to 2008 which dealt with the development and delivery of LandonLine services to the legal and survey professions.

PROFESSIONAL STATUS:

Licensed Cadastral Surveyor
Registered Professional Surveyor
Member - New Zealand Institute of Surveyors
Member - Consulting Surveyors of NZ

KEY AREAS OF RESPONSIBILITY:

Experienced in the following aspects of surveying:

- Subdivision design
- Small and large scale topographical surveys
- Urban control surveys
- Building and construction set out
- Monitoring surveys and precise levelling
- Cadastral surveys including urban, rural, commercial and unit title developments
- Resource management and associated environment court and consent hearings
- Sunlight studies
- Expert witness, particularly in relation to sunlight studies

RELEVANT EXPERIENCE WITH RESPECT TO SHADING ANALYSIS:

I have completed no less than 50 separate shading assessment projects. A summary of the more relevant examples typically involving a resource consent hearing is tabulated below.

I have also written my own custom software to facilitate shading analysis and preparation of sun transit diagrams together with developing techniques to integrate sun transit methodology into Google Sketchup models.

2003	152-156 Adelaide Road - accommodation block	Consent application
2003	19 Oriental Tce – Existing Dwelling	District plan review
2006	73 Jackson St – New apartment block	Notified application
2006	Hilton Hotel - Wellington	EC Appeal
2006	10 Customhouse Quay – Office block	Notified application
2008	109 Featherston St – Office block	Notified application
2009	148 Owen Street (Regent Park Redevelopment)	Notified application
2010	2 Stafford Street – Residential	Notified application
2010	90 Hanson St – Healthcare facility	Notified application
2010	Kate Sheppard Place – Office block	Notified application
2012	11 Ogilvie Tce – New dwelling	Consent application
2013	1 Palliser Rd – New dwelling	Consent application
2013	39 Tahi Street (Marshall Court)	Notified application
2014	33 Military Rd – retirement village	Plan change & LUC