

**BEFORE THE ENVIRONMENT COURT**  
**I MUA I TE KOOTI TAIAO O AOTEAROA**

**IN THE MATTER** of the Resource Management Act 1991 (**RMA**)

**AND**

**IN THE MATTER** of a direct referral application under section 87G of the RMA for resource consents for the necessary infrastructure and related activities associated with holding the America's Cup in Auckland

**BETWEEN** **PANUKU DEVELOPMENT AUCKLAND LIMITED**

(ENV-2018-AKL-000078)

Applicant

**AND** **AUCKLAND COUNCIL**

Regulatory Authority

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**STATEMENT OF EVIDENCE OF GLEN WRIGHT  
ON BEHALF OF THE AUCKLAND COUNCIL**

**(LIGHTING)**

**Dated 21 August 2018**

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**BROOKFIELDS  
LAWYERS**

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## 1. INTRODUCTION

- 1.1 My full name is Glen Andrew Wright.
- 1.2 My evidence is given on behalf of the Auckland Council (the **Council**) in its regulatory capacity in relation to the direct referral application filed by Panuku Development Auckland Limited (**Applicant**) seeking resource consents for the construction, occupation, use and maintenance of permanent and temporary infrastructure and undertaking of activities within the coastal marine area and on land, associated with the America's Cup (the **Application**). My evidence relates to the lighting aspects of the Application.

## 2. QUALIFICATIONS AND EXPERIENCE

- 2.1 I am employed as a Principal Electrical Engineer by Stephenson & Turner New Zealand Limited, an Architectural and Engineering Consultancy. I have a New Zealand Certificate of Engineering (Electrical), I am a Registered Engineering Associate, an Associate Member of the Illuminating Engineering Society of Australia and New Zealand and a Member of Engineering New Zealand.
- 2.2 I have 28 years' experience in lighting design, application and review. This includes exterior lighting for amenity, security and appearance, and also includes public spaces, carparks, walkways, sports fields and buildings in urban and rural environments. I am a recipient of five national lighting awards. I have provided lighting effects advice to Auckland, Whangarei, Wellington, Porirua, Upper Hutt and Napier Councils.

## 3. MY ROLE

- 3.1 I prepared a report<sup>1</sup> on the lighting aspects of the Application (**Report**). My Report was attached as Appendix O to the Council's section 87F Report by Nicola Broadbent. I reaffirm the contents and conclusions of my Report, subject to the matters noted below.
- 3.2 In preparing my Report and this evidence, I carried out a number of site visits on the following dates:
- a. 18 December 2017 at night time to familiarise myself with the subject site;
  - b. 19 December 2017 to familiarise myself with the site during the day time; and

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<sup>1</sup> CB150, page 3901 onwards.

- c. 27 July 2018 during the day to assist with understanding the interaction between the proposed activities and the existing light sensitive areas.
- 3.3 I participated in expert witness conferencing with the Applicant's lighting expert, John McKensey, and was a signatory to the resulting Joint Witness Statement (**JWS**) dealing with the lighting aspects of the Application dated 30 July 2018<sup>2</sup>.
- 3.4 In preparing this evidence I have reviewed the following documents and reports:
- (a) The documents listed in paragraph 4.1 of my Report;
  - (b) Submissions and section 274 notices lodged by Body Corporate 199318<sup>3</sup> (**The Point**), Fu Wah New Zealand Limited<sup>4</sup> (**Fu Wah**) and Barry Jeffery<sup>5</sup>, who have raised issues regarding potential lighting effects;
  - (c) The statement of evidence of John Mckensey (Lighting) for the Applicant, including the draft Construction Lighting Management Plan (**CLMP**) attached to Mr Mckensey's evidence as Appendix B updated on 31 July 2018<sup>6</sup>;
  - (d) The statement of evidence of Paul Kennedy (Coastal Environment) for the Applicant<sup>7</sup>;
  - (e) The statement of evidence of Kurt Grant (Construction Methodology) for the Applicant, including the draft Construction Environmental Management Plan (**CEMP**) as Attachment B dated 3 August 2018<sup>8</sup>; and
  - (f) The statement of evidence of Karl Cook and Vijay Lala (Planning) for the Applicant, including the Proposed Conditions of Consent (**Proposed Conditions**) as Attachment A and the America's Cup Wynyard Hobson Building, Yard and Public Open Space Design Requirements (**Design Requirements**) as Attachment C, both dated 7 August 2018<sup>9</sup>.

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<sup>2</sup> E25, page 1303 onwards.

<sup>3</sup> CB90, page 2968 onwards.

<sup>4</sup> CB100, page 3069 onwards.

<sup>5</sup> CB64, page 2707 onwards.

<sup>6</sup> E12, page 759 onwards.

<sup>7</sup> E16, page 0965 onwards.

<sup>8</sup> E9, page 311 onwards (particularly sections 6.10 and 7.5 of the draft CEMP beginning at page 362).

<sup>9</sup> E19, page 1060 onwards.

#### 4. CODE OF CONDUCT

4.1 I have read the Code of Conduct for Expert Witnesses (**Code**) outlined in the Environment Court's Consolidated Practice Note 2014 and have complied with it in preparing this evidence. I also agree to follow the Code when presenting evidence to the Court. I confirm that the issues addressed in this brief of evidence are within my area of expertise, except where I state that I rely upon the evidence of other expert witnesses. I also confirm that I have not omitted to consider material facts known to me that might alter or detract from my opinions.

#### 5. SCOPE OF EVIDENCE

5.1 This statement of evidence covers the following:

- (a) A summary of my evidence (**Executive Summary**);
- (b) A brief overview of the assessment of the lighting aspects of the Application contained in my Report (**Assessment of the Application**);
- (c) An overview of the outcome of expert witness conferencing, referring to the JWS where appropriate, and a brief response to the Applicant's evidence (**Update Following Expert Witness Conferencing / Response to Applicant's Evidence**);
- (d) Comments on proposed conditions (**Conditions**); and
- (e) Conclusions.

#### 6. EXECUTIVE SUMMARY

6.1 I have assessed the lighting effects of the proposed development during the construction, business as usual (**BAU**) and event phases.

6.2 In my opinion, the proposal's lighting effects on the receiving environment will be less than minor, provided the final installation of the proposed lighting complies with the relevant conditions of consent (amended in accordance with my recommendations in section 9 below), and the Lighting Management Plans.

## **7. ASSESSMENT OF THE APPLICATION**

- 7.1 I carried out a review of the lighting aspects of the Application. I have set out key points from my Report on the Application below.
- 7.2 I identified light sensitive locations which included the surrounding hotels, the closest being the Park Hyatt Hotel and the Hilton Hotel, and also existing and developing apartment complexes.
- 7.3 I noted that no specific lighting design had been provided and therefore no light effects assessment calculations had been provided. Therefore, the control of adverse effects from BAU, base building, construction and event lighting would be reliant on the final lighting designs complying with the permitted activity standards in Chapter E24 Lighting in the Auckland Unitary Plan – Operative in Part (**AUP**).
- 7.4 While the absence of a detailed lighting design to review was not ideal, I stated that I was confident that lighting solutions meeting the requirements of the AUP and the conditions proposed can be provided.
- 7.5 I agreed with the Applicant's Coastal Environmental Effects statement that no adverse effects on ecological resources in Freemans Bay were anticipated from the proposed lighting.
- 7.6 In section 7 of my Report, I recommended a number of amendments to the Applicant's proposed conditions, or new conditions to address the matters discussed in my Report.
- 7.7 It was my expert opinion that provided the final installation of the proposed lighting complied with the relevant conditions of consent (amended in accordance with my recommendations), the proposal's effects will be less than minor.

## **8. UPDATE FOLLOWING EXPERT WITNESS CONFERENCING / RESPONSE TO APPLICANT'S EVIDENCE**

### **Outcome of Expert Witness Conferencing**

- 8.1 As the JWS records, there were no matters of disagreement between Mr Mckensey and me as part of our expert conferencing. The JWS identified a number of agreed amendments to the proposed conditions of consent. I have reviewed the lighting-related conditions in the set of Proposed Conditions attached to the Applicant's planning evidence by Mr Lala and Mr Cook, and am content that they adequately

reflect our agreement, subject to the matters discussed below and in section 9 of my evidence.

- 8.2 I also note that, since completing my Report, the Applicant has provided a Construction Lighting Management Plan (**CLMP**), draft Revision A. I reviewed and provided comments on that version of the CLMP on 12 July 2018. A later version of this CLMP draft Revision C, dated 31 July 2018, is appended to Mr Mckensey's evidence. I have reviewed this latest version of the CLMP, and note that my earlier comments have been incorporated. I have no further comment on the draft CLMP.
- 8.3 In this section of my evidence, I comment on several lighting-relating topics, referring to the JWS and / or Mr Mckensey's evidence as appropriate.

### **Light sensitive areas**

- 8.4 In my Report, I had included hotels as lawfully established dwellings when considering the AUP lighting rules. It was agreed in the lighting JWS, at section 2, that, within the AUP, visitor accommodation does not fit within the definition of a dwelling. The general standards in E24.6.1 of the AUP set limits for spill light (rule (6)) and glare (rule (8)) when experienced at a dwelling. The provisions are silent with respect to such effects at other locations other than those occupied by a dwelling, and are therefore silent with respect to effects on the surrounding hotels.
- 8.5 Mr Mckensey proposes a definition of "light sensitive areas" for this project at paragraph 5.2 of his evidence. I agree that a definition is important for the purposes of the conditions, the CLMP and the ELMP, and I propose some amendments to Mr Mckensey's definition in section 9 below.
- 8.6 Appendix A to Mr Mckensey's evidence depicts the relevant light sensitive areas. I note that Mr Mckensey's "Light Sensitive Areas" drawing identifies additional light sensitive areas in addition to those originally identified in Figure 1 to my Report (Sofitel Hotel, Latitude 37 Apartments, 120 Customs Street Apartments and M Social Hotel). I agree that Mr Mckensey's drawing accurately identifies the relevant light sensitive locations.
- 8.7 In paragraph 5.6 of his evidence, Mr Mckensey states that he has also considered areas that are located further from the event site that may have visibility of the site and therefore, potentially the lighting. In particular, this includes St Mary's Bay and many parts of the North Shore. The separation distance will ensure that there will be no measurable light spill at these locations. With respect to glare, the lights may

be visible, but with the constraints proposed in the draft conditions and management plans, and when the potential light points are considered as a very small part of the wider view of the highly illuminated city centre, in my opinion any potential glare effects will be negligible. I agree with Mr Mckensey.

### **Spill light**

- 8.8 In my Report, I proposed to restrict the spill light rule (rule E24.6.1(6)) to rule (6)(b). I confirm that it was agreed in the lighting JWS, at section 3, that either rule (6)(a) (light spill at the boundary) or rule (6)(b) (light spill at the dwelling window) could be used for compliance with AUP.

### **Construction lighting**

- 8.9 Mr Mckensey in paragraph 5.11 of his evidence states with respect to construction lighting that (emphasis added):

With respect to tilt, the actual angle selected by the lighting designer will be subject to the performance required and the equipment characteristics, cognisant of the need to satisfy the obtrusive lighting limits as described in the draft conditions. **It is neither practical nor necessary to set a specific limit with respect to tilt.**

I accept the statement in bold, as Mr Mckensey prequalifies it with the statement that the actual angle selected by the lighting designer will be subject to the performance required and the equipment characteristics, cognisant of the need to satisfy the obtrusive lighting limits as described in the draft conditions.

- 8.10 My concern is that the draft CLMP proposes using portable tower lights and my experience is that these are frequently tilted too high by construction workers with resultant unacceptable glare experienced beyond the construction site. Thus Section 5.3 in the CLMP, relating to monitoring, will be key to ensuring tower lights are correctly used.
- 8.11 I comment on the Applicant's revised wording of condition 113(a) in section 9 below.

### **Event big screens**

- 8.12 Mr Mckensey in paragraph 5.23 of his evidence proposes a change to the additional consent condition 183K(h) that was agreed in the lighting JWS, at section 8, with respect to Event big screens. He proposes that automatic dimming of screens would provide better mitigation than tilting the screen.

- 8.13 At paragraph 5.24 of his evidence, Mr Mckensey proposes that rule E23.6.1(3) in Chapter 23 of the AUP (Signs) would be suitable for ensuring the appropriate Event big screen automatic dimming is provided. This change to, what is now proposed consent condition 183M(h), has been included in the Proposed Conditions attached to the evidence of Mr Karl Cook and Mr Vijay Lala (dated 7 August 2018) as Attachment A. I support this change.

#### **Event lighting – The Point**

- 8.14 At paragraph 7.6 of his evidence, Mr Mckensey responds to the concern expressed by The Point apartments regarding Event lighting effects. He states that actual effects to The Point apartments will be suitably controlled by the conditions requiring compliance with AUP, section E24.6.1 general standards for lighting, and do not require additional qualification in terms of light orientation or tilt. I concur with Mr Mckensey. Compliance with E24.6.1 of the AUP controls the effects. Light orientation is a mitigation consideration to be addressed within the ELMP (see e.g. proposed condition 183M(e)).

#### **Fu Wah**

- 8.15 Mr Mckensey in paragraphs 7.7 and 7.8 of his evidence responds to a request that the Park Hyatt should be considered as a sensitive light receiver. I agree with Mr Mckensey that the Park Hyatt Hotel should be added to the group of light sensitive areas, and note that it has been included in the proposed definition of “Light Sensitive Areas” (discussed further in section 9 below).
- 8.16 Mr Mckensey in paragraph 7.10 of his evidence responds to a request by Richard Aitken of Fu Wah that light monitoring equipment be set up on the boundary of the Hyatt. Mr Mckensey does not recommend the installation of light monitoring equipment. I concur with Mr Mckensey, as it is my expert opinion that, when one considers the level of effects expected, light monitoring equipment is not warranted.
- 8.17 I otherwise generally agree with Mr Mckensey’s evidence.

#### **Other evidence**

##### ***Paul Kennedy – Coastal Environment***

- 8.18 Mr Kennedy addresses the effects of additional lighting to be installed on new structures within Freemans Bay on the ecological resources within the surrounding



environment.<sup>10</sup> He considers that provided lighting is installed according to the Proposed Conditions of consent, the effects will be no more than minor. I concur with Mr Kennedy's conclusion.

### ***Mr Lala and Mr Cook – Planning***

- 8.19 I have seen the proposed Design Requirements attached to Mr Lala's and Mr Cook's evidence<sup>11</sup>, and note that they contain a number of provisions relating to lighting. I support the inclusion of lighting considerations in the proposed Design Requirements to ensure that lighting will be designed in a way that avoids potential effects and minimises light spill on the surrounding environment.

## **9. CONDITIONS**

- 9.1 Subject to the matters noted below, I am satisfied with the amended lighting-related conditions attached to Mr Lala's and Mr Cook's evidence (conditions 111-113 relating to the CLMP; conditions 183K-183M relating to the ELMP; and conditions 202 and 203 relating to illuminated signage and BAU lighting respectively),.
- 9.2 As noted above, I support the revised wording of proposed condition 183M(h) (event screens automatic dimming in lieu of tilting screens). I also support the changes to condition 202 (illuminated signage).

### **Conditions 1, 113 and 183 – Definition of Light sensitive areas**

- 9.3 I recommend that a definition of light sensitive areas for this project is added to condition 1, for the purposes of consent conditions 113 Construction Lighting Management Plan (CLMP) and 183 Event Lighting Management Plan (ELMP), with the references to the expression "Light Sensitive Areas" capitalised in those conditions to draw attention to the existence of a relevant definition.
- 9.4 I agree with Mr Mckensey's proposed definition subject to the following amendments:

**Light sensitive areas** comprise ~~adjacent~~ dwellings (being permanent or temporary accommodation with kitchen facilities as more fully defined in the AUP:OP), public roads within and adjacent to the event site, ~~adjacent~~ hotels (Hilton, Hyatt, Sebel & M-Social) and commercial outdoor dining areas ~~along North Wharf and Princes Wharf directly fronting the Waitemata Harbour and~~ with a view of the construction ~~and event~~ areas. Dwellings are located in the apartment buildings ~~adjacent the site~~.

<sup>10</sup> E16, page 0994 onwards, paragraphs 9.11 and 13.9.

<sup>11</sup> E19, page 1250 onwards.

**Condition 113(a)**

- 9.5 I recommend the following minor amendments to condition 113(a) (assuming my suggestion of inserting a definition into condition 1, as above, is adopted):

Details of construction lighting columns and luminaires, that shall be selected, tilted and/or aimed to ensure that spill light and glare to Light Sensitive Areas ~~light sensitive areas~~ is controlled to ensure:

- (i) Spill light at the boundary with dwellings shall be no more than the limits in AUP:OP rule E24.6.1(6);
- (ii) Glare to dwellings shall be no more than the limits in AUP:OP rule E24.6.1(8); and
- (iii) Other ~~potentially~~ Light Sensitive Areas ~~light sensitive areas~~, where the AUP:OP lighting rules do not apply shall also be protected from unnecessary lighting glare effects as reasonably practical. In particular, this refers to non-dwelling residential uses such as hotels and commercial outdoor dining, such as the eateries along North Wharf and Princes Wharf.

**10. CONCLUSIONS**

- 10.1 If the installation of the construction lighting complies with proposed consent conditions 111, 112 and 113 and the CLMP, it is my expectation that the construction lighting effects will be less than minor. I consider that the draft CLMP meets the requirements of the Proposed Conditions and is appropriate for controlling the effects of the proposed construction lighting.
- 10.2 If the installation of the event lighting complies with proposed consent conditions 183K, 183L, and 183M and the ELMP, it is my expectation that the event lighting effects will be less than minor.
- 10.3 If the installation of illuminated signage complies with proposed condition 202, and the installation of BAU lighting complies with proposed condition 203, it is my expectation that the relevant lighting effects will be less than minor.

**Glen Wright**

**21 August 2018**