

**BEFORE THE CHRISTCHURCH REPLACEMENT  
DISTRICT PLAN INDEPENDENT HEARINGS PANEL**

**IN THE MATTER** of the Resource Management  
Act 1991 and the Canterbury  
Earthquake (Christchurch  
Replacement District Plan) Order  
2014

**AND**

**IN THE MATTER** of the Specific Purpose  
(Burwood Landfill and Resource  
Recovery Park) Zone Proposal  
(Stage 3)

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**STATEMENT OF EVIDENCE OF STUART CAMP  
ON BEHALF OF CHRISTCHURCH CITY COUNCIL**

**NOISE**

**12 November 2015**

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## 1. INTRODUCTION

- 1.1 My full name is Stuart Camp. I am a Principal in the national acoustical consulting firm of Marshall Day Acoustics. I hold a Science degree from Auckland University, majoring in Mathematics and Acoustics. I have worked in the field of acoustics with Marshall Day Acoustics for the last 32 years. I established the Christchurch office in 1997.
- 1.2 I have been engaged by the Christchurch City Council (**Council**) to provide evidence in relation to submissions relating to noise standards for the Specific Purpose (Burwood Landfill and Resource Recovery Park) Zone.
- 1.3 I have been providing the Council with my expertise in relation to noise as part of the Replacement Plan process since February 2014.
- 1.4 I have also assisted in revising noise rules for Ashburton, Invercargill, and Hurunui.
- 1.5 I have previously provided evidence to the proposed Replacement District Plan Hearings Panel as part of the Commercial and Industrial Chapters in relation to noise around Lyttelton Port, and I have prepared evidence in relation to the Rural Quarry Zone.
- 1.6 I acknowledge that I have read and am familiar with the Environment Court's Code of Conduct for Expert Witnesses, contained in the Environment Court Practice Note 2014, and agree to comply with it. My qualifications as an expert are set out above. Other than where I state that I am relying on the advice of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

## 2. SCOPE

- 2.1 The specific parts of the Proposal that my evidence relates to are:
  - (a) Rule 21.12.2.1 which states that rules and procedures in Chapter 6.1 Noise apply to activities in the Specific Purpose (Burwood Landfill and Resource Recovery Park) Zone (**Zone**).
  - (b) Objective 21.12.1.1 in respect to the final closure of the zone.

**2.2** My evidence will cover the following matters sought in submissions:

- (a) The appropriateness of the noise standards in Chapter 6.1 being applied to disposal of earthquake waste and earthquake waste processing activities;
- (b) The appropriateness of any non-compliance with the Chapter 6.1 noise rules being a controlled, non-notified activity.

**3. SUBMITTER 3444**

**3.1** Submitter 3444 (Burwood Resource Recovery Park Limited) seeks (submission point 3444.19) to exempt the Zone from the general noise rules contained in chapter 6.1.

**3.2** I agree in principle that it is appropriate to provide less restrictive noise standards for the Zone, on the basis that:

- The Recovery Park is a limited duration activity, solely for the purpose of assisting with earthquake recovery;
- The operating hours of the Park are restricted, such that it cannot operate at night, nor on Sundays; and,
- The land adjoining the Zone is the Bottle Lake Forest, which is not particularly sensitive to noise. While the forest is a popular recreation area, users are transient, and are involved in active pursuits, as opposed to a large open park where quiet contemplation would be more common, for example.

**3.3** However, I do not agree that there should be no noise standards applying to activities taking place with the Zone, because this could potentially result in adverse noise effects at the residential zones beyond the forest.

**3.4** In my view, it would be appropriate to allow an exemption from compliance with the noise standards at the surrounding Open Space zone, but continue to require compliance with the noise standards at any residential zone.

**3.5** In practice, this is unlikely result in any operational restrictions on earthquake waste processing and disposal activities. As an example, my company has measured noise from a number of mobile concrete crushers. These are arguably the noisiest source which will exist at the Recovery Park. Our

measurements show that these typically produce a noise level of about 75 dB  $L_{Aeq}$  at a distance of 20 metres. This is equivalent to 47 dB  $L_{Aeq}$  at a distance of 500 metres, which complies with the proposed daytime residential noise standard of 50 dB  $L_{Aeq}$ . The processing and disposal sites are all at least 500 metres from any residential zone.

- 3.6** In other words, I expect normal operation of the activities anticipated in the Zone to comply with the residential noise standards. However, applying these standards would provide an assurance to residents that the operations aren't able to produce as much noise as they like. Compliance with the residential noise standards would, by default, also provide some control on noise within the Open Space zone.
- 3.7** I understand that the access route into the Recovery Park is not within the Zone. It has been zoned Open Space (Natural) through Stage 2 of the pRDP. Furthermore, it is not identified as a Transport Zone.
- 3.8** The consented access route has been realigned to address potential noise issues, with earth mounds and acoustic fences added to provide further noise mitigation. I have inspected this treatment and calculated the level of truck noise received at nearby dwellings. I understand that there are around 150 truck movements along this access route per day. I have taken a conservative approach of assuming up to 40 movements in any 1-hour period. On this basis, I predict that noise from trucks on Landfill Avenue currently complies with the residential noise standards at all existing dwellings, and I expect this to continue throughout the life of the Recovery Park. As such, it is my view that it does not really matter whether or not the access route is required to comply with the District Plan noise standards.
- 3.9** Submitter 3444 also seeks to retain non-notified controlled activity status for all activities in the Zone. I note that an exceedance of the residential zone noise standards by up to 10 dB would trigger the requirement for a consent for a restricted discretionary activity. I consider this appropriate given that such an exceedance will only occur if earthquake waste processing and disposal activities are generating extremely high levels of noise.
- 3.10** I do not support controlled activity status for exceedance of the noise standards in surrounding residential zones. In my view, any such exceedance would result in adverse noise effects on existing residents, and this would be contrary to policy 21.12.1.1.2 which seeks to minimise adverse effects on

residential amenity. In such circumstances, I consider it appropriate for the consent authority to have the power to refuse consent.

**4. SUBMITTERS 3570 AND 3719**

**4.1** These two submitters request a guaranteed closure date, with point 3570.2 requesting 2020 and 3719.1 seeking no extension beyond the previously consented date of 2017.

**4.2** As already noted, I agree that earthquake waste processing and disposal activities should be of limited duration. These submissions will be addressed further in the Council's planning evidence. However, I do not consider it necessary to specify a firm closure date from a noise perspective. I expect that noise from these operations will gradually reduce over time as the quantity of material diminishes, and the proposed definition of earthquake waste will ensure that the Park cannot continue indefinitely. I am also satisfied that these operations currently produce noise levels well below the residential noise standards, and I therefore consider any adverse noise effects to be less than minor.



**STUART CAMP**

**12 November 2015**