

In the Environment Court of New Zealand  
Auckland Registry

I Mua I Te Kōti Taiao O Aotearoa  
Ki Tāmaki Makaurau

**ENV-2023-AKL-160**

Under the Resource Management Act 1991

In the matter of An application for a direct referral to the Environment Court under section 87G of the Act for an order granting the applicant's resource consent applications to construct and operate a new asphalt plant at 54 Aerodrome Road, Mt Maunganui, together with an application for consent to authorise the continued operation of the existing asphalt plant on the site pending construction of the new plant

Between **Allied Asphalt Limited**

Applicant

And **Bat of Plenty Regional Council and Tauranga City Council**

Consent Authorities

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**Statement of Evidence of Mathew John Cottle**

29 February 2024

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**Counsel acting:**

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## Qualifications and experience

- 1 My full name is Mathew John Cottle.
- 2 I have a Master of Design Science (Audio and Acoustics) qualification from the University of Sydney, New South Wales, Australia. I am a current Member of the Acoustical Society of New Zealand and the Resource Management Law Association.
- 3 I have worked in the field of acoustics noise measurement and control in both New Zealand and Australia for more than 17 years. My experience in New Zealand includes the measurement, prediction, modelling and assessment of noise and vibration from large municipal water transfer, storage and treatment projects; grid-scale electrical infrastructure; large renewable energy schemes; dairy manufacturing; through to commercial and industrial developments; analysis of acoustic issues; and the recommendation of mitigation measures.
- 4 I have provided expert evidence on acoustic matters in Council-level hearings and in the Environment Court.
- 5 My role in relation to Allied Asphalt Limited's (**Allied**) application for resource consents for a new asphalt plant and the continued operation of an existing plant pending construction of the new plant at 54 Aerodrome Road, Mt Maunganui (**Application**) has been to provide advice in relation to potential acoustic effects. I was the author of the assessment of noise effects report (**ANE**) to the Assessment of Environment Effects (**AEE**) accompanying the Application, which appears at Appendix 12 of the AEE.
- 6 My assessment is based upon the proposal description included in the planning evidence of Mr Craig Batchelar. I will not repeat the description in this evidence.
- 7 In preparing this statement of evidence I have considered the following documents:
  - (a) the AEE accompanying the Application;
  - (b) submissions relevant to my area of expertise;
  - (c) the relevant acoustic performance standards from the operative Tauranga City Plan (**TCP**);
  - (d) the Bay of Plenty Regional Council and Tauranga City Council s87F report (**s87F report**);

- 8 I confirm that I will have visited the Application Site prior to attending the hearing.

### **Code of Conduct for Expert Witnesses**

- 9 I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court of New Zealand Practice Note 2023 and that I have complied with it when preparing my evidence. Other than when I state I am relying on the advice of another person, this evidence is 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.

### **Scope of evidence**

- 10 I have prepared evidence in relation to:
- (a) the existing noise environment of the Application Site;
  - (b) the key findings of the ANE;
  - (c) matters raised by submitters on the Application;
  - (d) matters raised in the s87F report; and
  - (e) proposed conditions of consent.

### **The existing environment**

- 11 An assessment of noise effects typically quantifies the existing environment through measurement using either attended noise measurements or via unattended noise logging. Neither method was necessary for this project, in my opinion, on the basis that the Application site is located in an Industrial Zone (**IZ**).
- 12 I now expand on the reasons why this is the case.
- 13 The IZ permits a wide range of industrial activities to locate in the zone. Implicit in the zone is the expectation of low acoustic amenity. This is evidenced by the permissive noise performance standards for the zone (I discuss these in paragraph 18).
- 14 IZ receivers are less sensitive to noise from other IZ activities as they themselves will typically emit elevated noise. Therefore, demonstrating general compliance with the IZ noise limits is considered sufficient to demonstrate that the noise generating aspects of an activity will not adversely affect other activities in the same zone.

- 15 I note that exceedances of the IZ noise limits can be permitted where it is shown that adverse effects will not occur. This can be due to the infrequency of non-compliant activities; the extent of the non-compliance being minor; or that adjoining industrial activities are not noise sensitive.
- 16 The closest residential zone is the Suburban Residential Zone (**SRZ**) located a minimum 530m to the east of the Site, on Maunganui Road. The measured existing daytime noise level at the boundary of the SRZ is around 68 dB  $L_{Aeq}$ <sup>1</sup>. I consider traffic movements on the surrounding road network control the daytime noise environment.
- 17 I have not measured noise during the night-time at the SRZ boundary (the asphalt plant may operate at night on occasion). However, I anticipate an ambient noise level of around 56 dB  $L_{Aeq}$  will be present in the middle of the night<sup>2</sup> and would be primarily due to heavy commercial vehicle movements on the road network.

### **Assessment of effects**

- 18 The key findings from the ANE are that:
- (a) The proposed Marini BE Top Tower 2500 asphalt plant has a claimed performance of 59 dB  $L_{Aeq}$  at 100m;
  - (b) There will be ~32 HCV<sup>3</sup>s per shift for the 250T production scenario;
  - (c) There will be ~108 HCVs per day for the 1,000T production scenario;
  - (d) The relevant TCP performance standards are:
    - (i) 65 dB  $L_{Aeq}$  at adjoining IZ sites<sup>4</sup>; and
    - (ii) 55 dB  $L_{Aeq}$  within SRZ boundaries during daytime<sup>5</sup>;
    - (iii) 45 dB  $L_{Aeq}$  / 70 dB  $L_{AFmax}$  within SRZ boundaries at night; and

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<sup>1</sup> MDA performed daytime spot measurements on 6 May 2022 at 575 Maunganui Road

<sup>2</sup> Between 2am and 3am

<sup>3</sup> Heavy Commercial Vehicle – a rigid truck with / without a trailer and an articulated truck with / without a trailer

<sup>4</sup> TCP Rule 4E.2.3(b). A limit of 85 dB  $L_{AFmax}$  also applies in this zone at night

<sup>5</sup> TCP Rule 4E.2.3(a)

- (iv) The relevant limits from construction noise standard NZS 6803:1999 are the “long term” duration limits during typical work hours of 0730 to 1800 hours Monday to Saturday<sup>6</sup>.
- (e) Operational noise for a typical 250T scenario<sup>7</sup> is predicted to range between 53 and 62 dB  $L_{Aeq}$  at the closest IZ receivers. This complies with Rule 4E.2.3(b);
- (f) Operational noise for the 250T scenario (predicted to be no more than 29 dB  $L_{Aeq}$ ) readily complies with Rule 4E.2.3(a) when assessed at the closest SRZ boundary;
- (g) My predictions of operational noise for the 1,000T scenario<sup>8</sup> range between 60 and 69 dB  $L_{Aeq}$  at the closest IZ receivers. I predicted non-compliances of up to 4 decibels with Rule 4E.2.3(b). Note that this is for the worst-case (infrequent) high production scenario;
- (h) Predicted operational noise from the 1,000T scenario (35 dB  $L_{Aeq}$ ) readily complies with Rule 4E.2.3(a) when assessed at the closest SRZ boundary;
- (i) With respect to operational noise effects, I concluded that noise experienced by all receivers would be reasonable in the context of s16 for the following reasons:
  - (i) the new asphalt plant will operate in an established IZ;
  - (ii) the new asphalt plant is state-of-the-art and I anticipate emitted noise will be similar to or, more likely, less than the existing, much older, plant; and
  - (iii) The noise character generated by the operation of the new plant will be similar to the existing plant's character.
- (j) In addition to these reasons, I anticipate that sound from the proposed asphalt plant will range between faintly audible and inaudible at the closest SRZ boundary.
- (k) Short-term construction noise exceedances of the relevant limits from NZS 6803:1999 are predicted for IZ receivers. As these exceedances

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<sup>6</sup> TCP Rule 4E2.14(a)

<sup>7</sup> Approximately five hours of production

<sup>8</sup> Approximately 24-hours production. This would likely occur only 1-2 times per annum

are constrained to the IZ and will be for a finite (short-term) period, no adverse effects will occur.

- (l) Construction noise received in the SRZ will range between faintly audible to inaudible (as it will occur during the daytime). For these reasons, no adverse effects will occur.

### **Key findings from an additional scenario**

- (m) I have also assessed noise from a scenario in which 3,500T of asphalt is produced in one day. Mr Palmer has advised me that this is the maximum that could be produced and that this level of production is a 'once in a blue moon' event. I understand that a considerable amount of stockpiling would be required to enable this to occur. For this reason alone, the plant could only sustain this level of production (and resulting noise) for a day or so at most.
- (n) There is estimated to be up to 293<sup>9</sup> HCVs on the day of the 3,500T production scenario.
- (o) I predict operational noise for the 3,500T scenario will range between 61 and 69 dB L<sub>Aeq</sub> at the closest IZ receivers. I predict non-compliances of up to 4 decibels with Rule 4E.2.3(b). I note that overall, the level range remains similar to the 1,000T scenario except that noise received at two of the closest IZ receivers increases by no more than 2 decibels<sup>10</sup>.
- (p) I predict operational noise from the 3,500T scenario of no more than 36 dB L<sub>Aeq</sub> when assessed at the closest SRZ boundary. This readily complies with Rule 4E.2.3(a).
- (q) My conclusion with respect to potential noise effects from the 3,500T scenario remains the same as for the 1,000T scenario I note in paragraph 18(i).

### **Matters raised by submitters**

- 19 I have read the submissions that mention noise matters.
- 20 Several express general concern about noise from the Application. I consider the ANE fully addresses these.

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<sup>9</sup> Sourced from Table 10 of Ms. Makinson's evidence. Note that 293 HCVs equates to 586 HCV trips

<sup>10</sup> 67 dB L<sub>Aeq</sub> for 44 Aerodrome Road; 69 dB L<sub>Aeq</sub> for 60 Aerodrome Road

- 21 The remainder of the noise submissions express concern about construction noise.
- 22 The relevant matters raised in submissions that I address are summarised below:
- (a) Noise from 'ongoing' construction;
  - (b) Noise during earthworks and its impact on the community; and
  - (c) 'Excessive' noise from construction traffic (trucks).

### **Noise from 'ongoing' construction**

- 23 A number of submissions expressed concern about 'ongoing' construction.
- 24 Construction will be for a finite period. Having regard to the estimated construction and other site works timeframes described in Mr Palmer's evidence I applied the 'long-term' duration noise limits from NZS 6803:1999 (the construction noise standards) in the ANE. These limits are the strictest within the suite of NZS 6803:1999 limits and apply to projects with a construction duration of more than 20 weeks.
- 25 Construction noise is highly variable in nature. In my experience some days are louder than others; some activities are loud (such as piling) whilst others are quieter (such as internal fitout of structures). Given this variability construction noise, in my view, can be deemed to be reasonable where it complies with the relevant limits.

### **Noise during earthworks and its impact on the community**

- 26 A number of submissions were concerned about earthworks construction noise and resulting impacts on the community.
- 27 I understand that minor earthworks are expected to occur on site<sup>11</sup>.
- 28 I note that all submitters with this concern are located outside the IZ in which the Project would be constructed.
- 29 Construction noise levels received in non-industrial zones would be lower because these receiver zones are located significantly further from the site than IZ receivers.

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<sup>11</sup> Paragraph 1 Section 2.2 Beca Infrastructure and Services Assessment (22 November 2022)

- 30 I predict construction noise received in the closest SRZ, as a worst case, would be approximately 35 dB L<sub>Aeq</sub> or less. In most cases, given the large separation distances involved (more than 650m), I anticipate that construction noise will be inaudible. Intervening buildings between the Site and receiver locations would act to reduce received noise.
- 31 Construction of the Project would only occur during the daytime.

**'Excessive' noise from construction traffic (trucks)**

- 32 A number of submissions expressed concern that noise from HCV traffic during earthworks construction would be 'excessive'.
- 33 I note that State Highway 2<sup>12</sup> (**SH2**) is located within 200m of the site at its closest point. The road network immediately surrounding the site supports industrial activities.
- 34 Given the Site's proximity to SH2 HCVs entering or leaving the Site will do so without having to travel along roads through residential zones or commercial (shopping) precincts. This avoids unnecessary adverse noise effects on the community.
- 35 Once HCVs have entered on to SH2, truck noise will form part of the existing acoustic environment. The noise will be of similar level and character to the existing environment<sup>13</sup>. Therefore, no adverse effects will occur in my opinion.

**Matters raised by s87F report**

- 36 I have reviewed the s87F report as it relates to my area of expertise. The report's author, Ms Bougen, relies on the expert opinion of Council's acoustic specialist, Ms Roper.
- 37 Ms Bougen confirms (and agrees) that Ms Roper is satisfied that any effects associated with minor operational non-compliances (when received in the IZ) will be acceptable on the basis that the effects will be temporary, infrequent and experienced at non-sensitive industrial sites.
- 38 This conclusion also applies to construction noise.
- 39 Ms Bougen and Ms Roper generally accept the conditions proposed in the ANE albeit, with one exception. Condition 20 proposed by Council requires

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<sup>12</sup> SH2 has an estimated annual daily traffic flow of 17,787 vpd 8.7% of which are HCVs (source: Mobileroad.org)

<sup>13</sup> In paragraph 16 I observe that traffic movements control the existing acoustic environment



construction effects to be managed via a construction noise and vibration management plan (**CNVMP**).

40 I discuss the necessity for a CNVMP in the following section.

### **Proposed consent conditions**

41 I confirm that I have reviewed the noise conditions as proposed by Council and support them as being appropriate, albeit with two exceptions.

42 Condition 20 as proposed by Council requires a CNVMP to be prepared and submitted to Council for certification.

43 Associated condition 21 directs that the consent holder shall not commence work until the CNVMP, as required by condition 20, is certified by Council, unless a period of 15 days passes without a response from Council.

44 I am of the view that a CNVMP is not necessary for the following reasons:

- (a) The closest receivers are IZ receivers. I discuss why IZ receivers are less sensitive to noise in paragraph 13;
- (b) The non-compliances predicted in the ANE are short-term. Construction noise is inherently variable in nature. Not all construction is noisy. These are mitigating factors; and
- (c) Ready compliance is predicted for SRZ receivers. CNVMPs are designed to mitigate and manage noise and vibration effects on sensitive receivers. I am of the view that implementing a CNVMP for IZ receivers will have limited benefit and only create additional administrative paperwork for the Council.

### **Conclusion**

45 Having reviewed submissions on the Application and the noise matters raised in the s87F report I have not changed my opinion with respect to effects.

46 Where the Project is constructed and operated to comply with the conditions of consent proposed by the Applicant no adverse noise effects will occur.

**Mathew John Cottle**

Dated this 29<sup>th</sup> day of February 2024