

*under:* the Fast-track Approvals Act 2024

*in the matter of:* applications for resource consents and archaeological authorities and notices of requirement by the New Zealand Transport Agency Waka Kotahi to develop a rapid transit link and associated infrastructure and connections between Brigham Creek and Auckland City centre, alongside State Highway 16, known as 'North West Rapid Transit'

*applicant:* **New Zealand Transport Agency**  
*Requiring Authority and Applicant*

Statement of Evidence of Siiri Wilkening for New Zealand  
Transport Agency Waka Kotahi

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**STATEMENT OF EVIDENCE OF SIIRI WILKENING FOR NEW ZEALAND  
TRANSPORT AGENCY WAKA KOTAHI**

- 1 My full name is Siiri Wilkening. I am the author of the Construction and Operational Noise and Vibration Assessments (*Noise Assessments*) lodged with the Application.<sup>1</sup>
- 2 My qualifications and experience are set out in the Noise Assessments. I reaffirm the Code of Conduct statement set out in the Noise Assessments.
- 3 My evidence has been prepared to support the New Zealand Transport Agency Waka Kotahi's (*NZTA*) response to comments on its notices of requirement (*NORs*) and applications for resource consents and archaeological authorities (together, *Application*) for the North West Rapid Transit Project (*Project* or *NWRT*).

**SCOPE OF EVIDENCE**

- 4 My evidence responds to noise and vibration-related aspects of the comments from:
  - 4.1 National Trading Company of NZ Limited;
  - 4.2 Restaurant Brands Limited;
  - 4.3 Cabra Industrial Limited, Cabra Fred Taylor Limited and Foundry Industrial Limited; and
  - 4.4 Alwyn Avenue, Te Atatu South residents.

**NATIONAL TRADING COMPANY OF NZ LIMITED**

- 5 National Trading Company of NZ Ltd (*NTC*) comments on potential construction noise and vibration effects on the New World supermarket at Point Chevalier.<sup>2</sup>
- 6 Mr Arbuthnot acknowledges that, in principle, NZTA's proposed construction noise and vibration conditions (including the requirements to prepare a Construction Noise and Vibration Management Plan (*CNVMP*) and Schedules to the *CNVMP*) provide an appropriate framework for managing construction noise and vibration effects.<sup>3</sup>

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<sup>1</sup> Part 6 – Attachment 6.13 – Assessment of Construction Noise and Vibration Effects (*CNV Assessment*); Part 6 – Attachment 6.18 – Assessment of Operational Noise and Vibration Effects (*ONV Assessment*).

<sup>2</sup> Evidence of Mark Arbuthnot on behalf of the National Trading Company of New Zealand Limited (Planning) dated 26 May 2026 (*NTC Planning Evidence*), section 6.

<sup>3</sup> NTC Planning evidence, paragraph 6.2 and 6.3.

**New World supermarket building not included in the construction noise and vibration figures**

- 7 Mr Arbuthnot notes that the New World supermarket building is not shown on the construction noise and vibration figures in the CNV Assessment.<sup>4</sup> That is correct in relation to the construction noise figures, but not the construction vibration figures. The building was inadvertently not shown on the figures due to changes to the designation boundary during preparation of the Application, however that is not material to my assessment or recommendations.
- 8 The construction noise figures (Figures 7 and 8) show indicative noise levels from earthworks and piling for the Indicative Design. The buildings shown on the figures are at similar (and slightly further) distances from the Indicative Design than the New World supermarket building. These buildings are marked in red, representing noise levels up to 80 dB L<sub>Aeq</sub>. I therefore expect similar (or slightly higher) noise levels would be predicted at the closest façade of the New World supermarket building.
- 9 The construction vibration contour figure (Figure 9) does not show any buildings but just indicative vibration envelopes. Any building located within these envelopes (irrespective of them being shown in the aerial photograph) would be captured by these contours.
- 10 I consider my recommendations for the management and mitigation of construction noise and vibration effects (set out in Section 5 of the CNV Assessment and included in the NZTA's Proposed Conditions) are appropriate for the New World supermarket site. The CNVMP (and any Schedules required) will apply to the New World supermarket building.

**Potential construction vibration effects on the New World supermarket**

- 11 I prepared a technical memorandum addressing potential construction vibration effects on the New World supermarket that was provided to NTC in advance of comments being lodged.<sup>5</sup> I adopt the contents of that memorandum as evidence for these proceedings.
- 12 Mr Arbuthnot accepts that the NZTA's proposed vibration criteria and conditions "are capable of protecting" the New World supermarket building.<sup>6</sup>
- 13 Mr Arbuthnot notes that amenity is particularly relevant to the supermarket's functions.<sup>7</sup> I agree with this comment and the CNV Assessment discusses the fact that construction vibration can be

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<sup>4</sup> NTC Planning evidence, paragraph 6.4.

<sup>5</sup> Legal Submissions on behalf of NTC dated 26 May 2026, Appendix A.

<sup>6</sup> NTC Planning evidence, paragraph 6.9.

<sup>7</sup> NTC Planning evidence, paragraph 6.9.

disturbing to people.<sup>8</sup> For that reason, Proposed Designation Condition 18 contains criteria to address people's amenity, and only if it is not practicable to meet that criteria, the Category B criteria would apply. The Category B criteria are designed to protect buildings from any damage (as well as protecting amenity for occupied sensitive use buildings at night).

- 14 Mr Arbuthnot says that the New World supermarket's operational characteristics need to be taken into account when determining construction methodology and timing.<sup>9</sup> I consider it is important that mitigation measures are informed by the operational characteristics of the New World supermarket at the time of the construction works (which could be different to now). At that time, any mitigation measures, such as timing of works, would be discussed with the supermarket operator when preparing a Schedule to the CNVMP (Proposed Designation Condition 20(c)(vi)).

#### **Construction noise and vibration condition framework**

- 15 Mr Arbuthnot recognises that NZTA's proposed condition framework is based on "*monitoring, consultation and adaptive management*".<sup>10</sup> I consider this approach is the most appropriate way to address construction noise and vibration that may be generated in the future.
- 16 The CNV Assessment is based on the Indicative Design and indicative construction methodology with sensitivity testing. The mitigation measures will be designed to address the final design in accordance with the condition framework.
- 17 Therefore, I consider that having a robust conditions framework to manage and mitigate noise and vibration is appropriate for a dynamic activity such as construction. I continue to support NZTA's Proposed Designation Conditions 17 – 20 as providing such a framework.

#### **RESTAURANT BRANDS LIMITED**

- 18 Restaurant Brands Limited's comment acknowledges that NZTA's proposed conditions provide an appropriate mechanism for managing construction noise and vibration effects "*in principle*".<sup>11</sup> However, the comment also says construction noise and vibration may be disruptive to the drive-through ordering process.<sup>12</sup>

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<sup>8</sup> CNV Assessment sections 3.3.2 and 4.1.2, as well as in the memorandum provided by NTC (Legal Submissions on behalf of NTC dated 26 May 2026, Appendix A).

<sup>9</sup> NTC Planning evidence, paragraph 6.10–6.11.

<sup>10</sup> NTC Planning evidence, paragraph 6.12–6.13.

<sup>11</sup> Restaurant Brands comment, paragraph 6.22.

<sup>12</sup> Restaurant Brands comment, paragraph 6.23.

- 19 The existing drive-through ordering point is south of the KFC buildings on Great North Road, Pt Chevalier, adjacent to Parr Road North. It is accessed from the existing Service Lane running behind the KFC building. Based on the Indicative Design, Project construction in the area will include minor upgrades to Parr Road North and the Service Lane, and the construction of a turning circle south of the Service Lane, some 25m from the ordering point. The busway and station works would be some 40m from the ordering point.
- 20 I anticipate no disruption to the operation of the drive-through due to construction noise or vibration. At the distances set out above, noise levels from normal road construction would be in the order of 70 dB  $L_{Aeq}$  (i.e. the relevant noise criterion for buildings during daytime). A vehicle would provide additional noise reduction of 5-10 decibels as it would be between the drive-through microphone and the works.
- 21 Vibration would not affect communication at the drive-through.
- 22 If any additional noise mitigation is required for the drive-through, it could be provided in the form of localised temporary construction barriers along the Service Lane, Parr Road North and the entrance to the drive-through. The need for any such measures should be determined at the time of construction when final design, equipment and timing, and current operation of the KFC, will be known. Those measures would be included in the CNVMP.
- 23 I consider that Proposed Designation Conditions 17 - 20 appropriately enable management and mitigation of potential construction noise or vibration effects on the drive-through operation.

**CABRA INDUSTRIAL LIMITED, CABRA FRED TAYLOR LIMITED AND FOUNDRY INDUSTRIAL LIMITED**

- 24 The Cabra Industrial Limited, Cabra Fred Taylor Limited and Foundry Industrial Limited (*Foundry Group*) comments incorporate advice provided by Mr Alex Jacob, acoustics specialist at Earcon, but Mr Jacob has not provided those comments in his statement of evidence.<sup>13</sup> I therefore respond to the construction noise and vibration matters raised in the Foundry Group comments. I understand operational noise and vibration matters will be addressed elsewhere in NZTA's response.
- 25 The Foundry Group comments relate to [REDACTED] [REDACTED] immediately south of the proposed Brigham Creek Rarawaru station and Park and Ride. The closest site boundaries are

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<sup>13</sup> Comment 32 – Foundry Group (*Foundry Group Comment*).

about 100m from the station access road and about 25m from the closest local bus stop based on the Indicative Design.

**Operational noise and vibration**

- 26 Foundry Group comments that noise from the proposed Brigham Creek Rarawaru station and Park and Ride would not be compliant with the residential night-time noise limit, should the neighbouring Future Urban Zone (*FUZ*) sites be rezoned to be residential.<sup>14</sup>
- 27 As the land is currently zoned *FUZ* and there are no active plans to provide for residential rezoning, I consider the appropriate assessment location for noise effects is the notional boundary of existing dwellings, as applied in my ONV Assessment.
- 28 Any future rezoning or resource consent could take account of the NWRT designation and could apply appropriate land use planning controls and mitigation, should this be necessary to achieve a suitable noise environment.

**Condition 18 – Vibration criteria**

- 29 Foundry Group comments<sup>15</sup> that the night-time Category B vibration criteria are omitted from the wording in Proposed Designation Condition 18(a). The intention of the wording in Condition 18(a) is to signal that:
- 29.1 Construction should comply with the Category A and night-time Category B (amenity) criteria where practicable, and if they cannot be met, further management, mitigation and engagement is triggered; and
- 29.2 If construction cannot practicably comply with the Category A (amenity) criteria, then the BPO shall be reviewed and refined to, as far as practicable, comply with the Category B (building protection) criteria.

In either case, a Schedule would be prepared.

- 30 Foundry Group comments that "*there should be a limit associated with the protection of structures*", e.g. "*an upper limit of vibration levels on structures that cannot be overridden*" with a Schedule.<sup>16</sup> While I agree that construction works should be undertaken in a manner that ensures that buildings are protected from potential vibration damage, I note that some of the buildings adjacent to the works do not fall under the residential typology on which the Category B daytime criteria are based. I consider non-residential buildings may receive higher vibration limits without risk of damage.

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<sup>14</sup> Foundry Group Comment, pages 6 and 7.

<sup>15</sup> Foundry Group Comment, page 8.

<sup>16</sup> Foundry Group Comment, page 8.

In addition, I note that the criteria for unoccupied buildings (i.e. those of table B.2 of BS 5228-2 referenced in the Table in Condition 18) are also designed to protect buildings from damage (refer my technical memorandum prepared in response to NTC<sup>17</sup>). These criteria are the upper level required to be complied with where practicable by condition 18.

**Condition 19 – CNVMP**

- 31 Foundry Group comments that Condition 19 should include a requirement for the management of complaints. This matter is already addressed in Condition 19(c)(vii) which requires the CNVMP to include "*procedures for communication and engagement with nearby residents and stakeholders, including [...]management of noise and vibration complaints.*"

**Condition 20 – Schedules to the CNVMP**

- 32 Foundry Group comments that Schedules apply for all situations where compliance with the noise and/or vibration criteria cannot practicably be achieved. This is an accurate description of the intent of Schedules.
- 33 Foundry Group also comments that Condition 20 "only requires consultation". This is incorrect.
- 34 The preparation of a Schedule includes many aspects:
- 34.1 Consultation with the affected party or parties is one of the most important aspects as it results in specific information about the receiver that would not otherwise be known (e.g. if someone is at home, where the bedrooms and living rooms are located, or if there are other circumstances making the receiver more susceptible to noise or vibration);
  - 34.2 Specific predictions of noise and/or vibration levels for an activity, with knowledge of duration, timing, equipment, and other details that would not be known in that detail when the CNVMP was prepared;
  - 34.3 Re-evaluation of best practice mitigation measures that may or may not be appropriate and effective, specific to this activity and location;
  - 34.4 Determination of measurement requirements and locations to capture the works;
  - 34.5 Potential requirements for building condition surveys (should vibration exceedances be predicted); and

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<sup>17</sup> Legal Submissions on behalf of NTC, Appendix A.

- 34.6 Specification of any mitigation and management that has been developed taking into consideration all of the above. These mitigation measures will be tailored for the location and activity that is subject to the Schedule and will not be simply a copy of CNVMP measures into a Schedule.
- 35 I therefore consider that Schedules (as required by Proposed Designation Condition 20) are a very important document in relation to noise and vibration management because much effort will be put into them to determine the most appropriate mitigation measures for each scenario.
- 36 Foundry Group comments that "self-certification" of Schedules is not appropriate as it may incentivise the contractor to use larger equipment to save time and therefore increase noise and/or vibration levels.
- 37 While I understand this concern, experience shows that the use of Schedules ensures good environmental outcomes for affected residents. I am familiar with several large scale roading projects where Schedules were used effectively to address any exceedances. An example of an NZTA project where Schedules are provided to Council for information, is the SH1 Papakura to Drury project. The Schedules are prepared by a suitably qualified person, internally reviewed and then provided to Council (in advance) for information. So far, no comments have been received from Council that requested any changes to the submitted Schedules.
- 38 NZTA has set out a comprehensive guide of how to prepare a CNVMP and Schedules, including independent peer reviews. NZTA also has strict requirements of its contractors to fulfil the requirements of the guide. I am therefore confident, based on my extensive experience, that the well-established methodology (and NZTA practice) of preparing Schedules and providing them to Council for information and feedback will result in appropriate outcomes.
- 39 I consider that NZTA's proposed conditions will achieve an appropriate outcome for construction noise and vibration management.

### **ALWYN AVENUE RESIDENTS**

- 40 Three residents<sup>18</sup> of Alwyn Avenue, Te Atatu South, comment on the proposed partial removal of the existing bund north of Alwyn Ave.

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<sup>18</sup> Comment 22 - Aaron & Fiona Bridges, Comment 24 - Blayne Kriletich, and Comment 25 - Alex and Kim Milne.

The comments suggest that the residents have interpreted the noise level predictions in the ONV Assessment Appendix B.4 such that they will be adversely affected by increased operational noise due to the removal of the bund. This is not correct.

- 41 The predicted noise level increase shown in the 2051 contours in Appendix B.4 will result from an increase in traffic volume on SH16. This is reflected in the predicted 2051 levels for the existing and do-nothing scenario. The existing scenario is the current situation in 2025, while the do-nothing scenario reflects the current road layout (i.e. excluding the busway but including the existing bund) for the design year in 2051. Comparing the two columns, noise levels would increase by 1 to 2 decibels, irrespective of the Project being constructed.
- 42 When comparing the do-nothing scenario noise level with the mitigation scenario (the last column in Appendix B.4), it can be seen that noise levels will not change with the Project in place and the bund partially removed. This means that the partial removal of the bund has no detrimental impact on noise levels received in Alwyn Ave, and that the busway will not add to the overall traffic noise levels. The Project therefore has no operational noise impact on the commenters' properties.
- 43 In any event, all of the residents on the southern side of Alwyn Avenue have been identified as PPFs. This classification means that if any of the outcomes change during detailed design, alternative mitigation (e.g. a noise barrier or adjusted noise bund) may be investigated as set in the Proposed Designation Conditions 28 – 37.

**Siiri Wilkening**  
**3 June 2026**