Before the Independent Hearings Panel
At Wellington City Council

Under Schedule 1 of the Resource Management Act 1991

In the matter of the Proposed Wellington City District Plan

Statement of evidence of John Lieswyn

Date: 18 April 2024

INTRODUCTION

1 My full name is John Lieswyn. I am a director of ViaStrada Limited, a transportation planning and design company specialising in road safety, public transport, walking and cycling.

2 I have prepared this statement of evidence on behalf of the Wellington City Council (the **Council**) in respect of matters raised by submitters in the Transport Chapter of the Proposed Wellington City District Plan (the **PDP**) that relate to provision and design of cycle and micromobility parking.

3 I am authorised to provide this evidence on behalf of the Council.

QUALIFICATIONS AND EXPERIENCE

4 I hold a Masters of Engineering (Transport) from the University of Canterbury, an Institute of Transportation Engineers certified Professional Transportation Planner, and a Fellow of the Chartered Institute of Highways and Transportation.

5 My relevant experience includes leading the development of Waka Kotahi New Zealand Transport Agency's Cycle Parking Planning and Design Guide (2020, updated in 2022), research on the turning requirements of cargo bicycles for the NZTA relating to guidance on speed management devices for pathways (2023), and preparation of a chapter on end of trip facilities for the World Bank's Reducing Car Dependency in Pacific Island Countries (2024).

CODE OF CONDUCT

6 I have read the Code of Conduct for Expert Witnesses contained in the Practice Note issued by the Environment Court, which came into effect on 1 January 2023. I have complied with the Code of Conduct in preparing my evidence and will continue to comply with it while giving oral evidence before the Environment Court. My qualifications as an expert are set out above. Except where I state that I rely on the evidence of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from my expressed opinions.

SCOPE OF EVIDENCE

7 My statement of evidence addresses the submission points raised on cycle/micromobility parking space dimensions and design.

TR-S3 Cycling and micromobility parking design and Table 7 – TR – Minimum number of on-site cycling and micromobility device parking spaces

Matters raised by submitters	Evidence
On applicability of TR-S3	
Amos Mann [172.15] (inferred), Restaurant Brands [349.23], Restaurant Brands [349.24] and Ministry of Education [400.39] support TR-S3 as notified.	In my opinion, TR-S3 as notified exempts too many land uses and areas from the requirement to provide bicycle and micromobility parking. I agree with other submitters that the quantity and size of such parking spaces must be increased city-wide.
WIAL [406.196] supports TR-S3 because it is not relevant to the Airport Zone.	In my opinion, TR-S3 should be amended to include the Airport Zone. Wellington Airport is providing a minimal number of cycle and shared micromobility parking spaces, which I use frequently and always observe others also using. These spaces are insufficient to meet existing demand or Council's First to Zero / Paneke Pōneke target mode shift and mode share. As the bike network has recently been extended to connect the airport to the city, the increase in both travellers and airport staff using active modes to access the airport is clearly visible. The bike and micromobility operators have recently expanded the number of spaces and devices provided at the airport in response to this demand, and adjusted the no-parking zones to allow shared device parking in designated parking areas. I agree with other submitters e.g. NZTA and Paihikara ki Pōneke that the number of spaces provided throughout the city (and I include the airport in that) should be increased. I am not aware of any precedents in New Zealand to base a requirement from, so I recommend capacity utilisation monitoring to establish a maximum observed usage and then doubling that to provide for the current growth. Compared to Christchurch Airport, the bicycle parking is more than three times longer walk to the main doors and there is no or poor parking wayfinding signage for travellers arriving at or departing the terminal. It is recommended that WIAL improve the coherence of the route in terms of facility type, kerb ramps and signage and consideration be given to moving the cycle and micromobility parking closer to the terminal doors.
The Retirement Villages [350.53, 350.54] oppose TR-S3 (as referenced in TR-R1) applying to retirement villages.	In my opinion, the Retirement Villages are making an incorrect assumption about older persons travel mode choices, the staff who serve them, and people who visit them. E-bikes in particular have opened up a new world of mobility for older people.[1] Older people use bicycles for recreation and visit one another, and need a safe and functional place to park. Older people also are much more likely to use mobility tricycles than the general public, and are likely to do so more often if there was a place to park them both at their retirement villages, those of their friends, and the destinations they ride to (or would ride to). Even e-scooters come with seated options that are suitable for and attractive to older people.
On affordability Stratum [249.14, 249.15] asks to remove the bicycle and micromobility parking	Regarding the cost of providing for bicycles and micromobility, I note that the cost is substantially less than providing for car parking. Even if no car parking is provided, a typical Sheffield cycle stand providing two parking spaces is

[1] Although hard data on the use of bikes and e-bikes by older adults is limited, a 2020 study showed that nearly two-thirds of e-bikes are purchased by people over the age of 40. https://www.nzta.govt.nz/assets/resources/research/reports/678/678-impacts-of-a-public-sector-e-bike-scheme.pdf

Matters raised by submitters	Evidence
requirements due to extra cost and affordability.	approximately $500 installed.[2] Long term staff parking may not require any hardware at all if in a secure area, or can be as simple as a pipe rail bolted to the side of a building under an existing canopy. It is acknowledged that cost is not simply the cost of the parking materials (e.g. stands, hooks, and lockers) but also the opportunity cost of the space. However the space required for cycle and micromobility parking is far less than for cars – at least 10 bikes can fit in a single car park, and in constrained developments there are inventive ways to fit in parking. The parking can also cater for prams and mobility scooters – providing for all ages and abilities. Showers and lockers are an amenity that in addition to supporting active travel helps attract staff who may want to exercise during the workday.
On size of parking spaces Jill Ford [163.6, 163.7], Patrick Wilkes [173.12, 173.13], Bruce Crothers [319.7, 319.8] and Joan Fitzgerald [323.3, 323.4] support TR-S3 but asks that the spaces be designed to the 90th percentile for current e-bikes and cargo bikes, accounting for manoeuvring and charging. Paihikara Ki Pōneke [302.25, 302.27] supports TR-S3 but want the dimensions expanded to fit cargo cycles and spaces for all ages and abilities. Waka Kotahi [FS103.15] supports designing bike parks for extra-large bikes. GW [351.114] wants TR-S3 to have longer and wider dimensions for cargo and multi-passenger e-bikes, referencing Proposed RPS Change 1 policies CC.1 and CC.3. Stride [FS107.17] and Investore [FS108.17] oppose GW's point, considering the	I agree with submitters that the notified TR-S3 standards do not provide enough space for the variety of cycles and micromobility devices, and do not account for manoeuvring. This is different from the Section 32 – Transport report response to Draft District Plan 2021 feedback, which was to only have minimum dimension standards for a regular bike. The report said the specific larger cycle sizes were not known, nor how regularly they will be used[3]. There is now reliable evidence for both of these aspects as I will summarise. I have compared PDP TR-S3 with the latest Waka Kotahi guidance technical note: *Cycle parking planning and design: Cycling Network Guidance technical note, Waka Kotahi 9 December 2022*[4] that I was the lead author for. This is a December 2022 update to the "Cycle Parking Planning and Design, Waka Kotahi 2019" referred to in the notified PDP. I recommend updating this reference in the PDP. I have also referenced NZTA's March 2024 *Accessible cycling infrastructure design guidance note*.[5] This note identifies that the mobility trike design vehicle is 1.2 m wide, 2.6 m long. I personally have owned two cargo bikes, both popular models in New Zealand readily available in Wellington and seen on the streets in increasing numbers over the last two years. They range from 2.4 m long (the Bullitt) to 2.64 m (the Reise und Muller Load 75, likely the longest cargo bike currently on the market). I consider that 2.4 m is a reasonable compromise as a design value for the length of cargo bike and mobility trike spaces. The Council's 2023 transport survey[6] records that more e-bikes than regular pedal pikes are now being used in Wellington City to commute to work. Many of these are e-cargo bikes used to carry children, pets, and the shopping. Cycles used by students and for mountain-biking may weight the ratio back towards regular cycles, but this survey result indicates that cycles in the City are getting larger, and heavier. In my own observations of Wellington and information received from Council staff installing public cycle facilities, it is considered that approximately one in five cycles is noticeably longer than a

[2] Costs vary depending on the quantity of stands purchased and the materials and finish. The $500 figure is a rough cost for a galvanised steel hoop stand, surface bolted.

[3] Wellington City Council Proposed District Plan Section 32 Evaluation Report. Part 2: Transport, Appendix 1 – Feedback on Draft District Plan 2021.

[4] Cycle parking planning and design: Cycling Network Guidance technical note, Waka Kotahi 9 December 2022.

[5] https://www.nzta.govt.nz/assets/resources/accessible-cycling-infrastructure/accessible-cycling-infrastructure-design-guidance-note-draft.pdf

[6] Pōneke/Wellington Transport Survey, 2023. Usual mode of commute to work question: "How do you usually travel from home to work?" The respondents are reasonably representative of the age, gender, ethnicity and employment distribution in Wellington City.

Matters raised by submitters	Evidence
provisions are inflexible and may become irrelevant. WCCERG [377.54] supports TR-S3 but want it amended to reflect the 85th percentile for current e-bikes and cargo bikes. For example Auckland Plan Change 79 uses cycle parking dimensions of 1.9 m length x 1.25 m height x 0.7 m width. Richard Hovey [280.1] asks for the bicycle and micromobility parking standards to include reasonable space, security and access for large, heavy and expensive e-bikes, e-scooters and e-cargo bikes.	standard cycle and would not fit within a 1.8 m long cycle park envelope. Based on these two factors, I recommend that every fourth cycle/micromobility park should be at least 2.4 m long. The Waka Kotahi 2022 cycle parking technical note *Figure 16: cycle parking envelopes, typical stand dimensions and layouts* has standards to fit regular and large cycles. In my opinion, these standards are better and more detailed than the standards in TR-S3. This is because they are based upon envelopes and various situations and angles of installation, and were developed through real-world testing in collaboration with staff of multiple councils. They cater better for large cycles, for example e-bikes, tricycles, cycles with kid seats, cargo bikes, and also larger micromobility devices such as mobility scooters. I recommend replacing the PDP version of TR-S3.1.a: "Stands must be sized and spaced to accommodate cycle dimensions of 1200mm high, 1800mm long and 600mm wide" and all other dimensions with Table 5 and Figure 16 of the Waka Kotahi 2022 technical note, or reference to same. The following text should from the technical note should accompany the table and figures: • Note that all dimensions are based on cycle envelopes and a 1.0 m long cycle stand. Adjust if using different stands or if providing for different types of cycles. • Where a range is given, the upper value is preferred for ease of use, and the lower value may be used if space is limited and/or greater capacity is required. • The minimum aisle width for manoeuvring cycles to/from parking, per Australian Standard 2890.3 should be 1.5 m. Allow 2.0 m for multi-tier parking or cycle lockers. Aisle widths are measured between the parking space envelopes, not between stands. The following additional text missing from the technical note is also important to include: • Hanging racks or vertical stands that require lifting of the bicycle may not exceed 50% of number of spaces. I agree with Mr Hovey and Paihikara ki Pōneke that the PDP TR-S3 standard should better provide space and security for expensive e-bikes and mobility devices for long-stay parking. This is particularly true where long stay parking spaces may be excluded from the general public, but may have easy access by hundreds of staff or residents, for example in office buildings, apartment buildings, medical centres. This significantly increases the risk of cycles/micromobility devices being stolen. As Mr Hovey points out these devices are high value targets for theft. This risk in turn discourages cycling and micromobility use. To address these submissions, I recommend that long-stay cycling and micromobility device parking that is not in a lockable, residential unit-specific storage facility such as a garage or storage locker dedicated to that residential unit: • Must meet the minimum spacing dimensions previously referenced. • Must provide a locking point that is securely anchored to an immovable object and must allow the frame and at least one wheel to be secured, with the frame able to be secured by a U-lock (also known as a "D-lock").
On the number of spaces Paihikara ki Pōneke [302.16] considers that facilities should	I agree with the submitters that the number of cycle parks should be increased across the city. Responding to the earlier claims of Investore and Stride that the rules are inflexible, I suggest that Council consider the

<table>
<tr><th>Matters raised by submitters</th><th>Evidence</th></tr>
<tr><td>meet increasing demand for secure parking.

Living Streets Aotearoa [482.41] asks for the number of micromobility and cycle parking to be adjusted to relate to the number of carparks provided, noting that the cycle/micromobility park location is also important.

Waka Kotahi [FS103.14] agrees, suggesting linking number of cycle parks with the number of car parks, or TR-Table 7 numbers if greater.</td><td>language adopted within the Christchurch District Plan section 7.4.4.3 on matters of control and discretion.

The requirements listed in Table 7 are clearly based on a target cycling mode share of 10%, given that most of the values are 0.1 spaces per person. In my opinion this is a conservative value and may result in an under-supply of cycle parking as the number of people riding in Wellington is rapidly increasing (15% annual growth 2020-2021, per Paneke Pōneke Bike Plan). These requirements may need to be revised upwards in future plan changes.

In my opinion, visitor cycle and micromobility parking cannot be left to the Council to provide within the road reserve and other public spaces. While many land owners build up to the boundary and this is to be encouraged for good urban design, other land owners provide off-street car parking. Wherever and whenever car parking is provided, cycle and micromobility parking should also be provided.

I recommend Christchurch District Plan Appendix 7.5.2 as a reference for minimum number of cycle parks; this has been updated since the NZTA technical note was revised and therefore supersedes the middle column of the sample district plan guidance in the note's appendix.</td></tr>
<tr><td>Retirement Villages [350.41, 350.42, 350.53, 350.54, 350.57, 350.58] oppose the TR-S2 and TR-Table 7 content (as referenced in TR-R1) applying to retirement villages. If retained for retirement villages, they want TR-Table 7 to have a different rate for retirement villages given residents' mobility constraints: no short stay cycle parks, and minimum 1 cycle/micromobility park and 0.1 per staff member.</td><td>As previously stated, bicycles and mobility trikes are viable means of transport for older persons and they should have accessible parking for them. The recommended minimum requirement is:
<table><tr><th>Short stay / visitor</th><th>Long term / residents & staff</th></tr><tr><td>Minimum 1, plus
0.1 per residential unit</td><td>Minimum 1, plus
0.1 per residential unit
0.1 per staff member</td></tr></table></td></tr>
<tr><td>On reference to the Residential Design Guide guidance GC 99-102

Jill Ford [163.4] and Patrick Wilkes [173.10] support the Residential Design Guide guidance GG 99-102 on external bike storage and ask for it to be referenced to specific rules, policies and objectives.</td><td>While I understand that the Hearings Panel has earlier recommended removing the Residential Design Guide content that Ms Ford and Mr Wilkes support, I consider that these are best addressed as standards in the Transport chapter with my recommended amendments.

I agree Ms Ford and Mr Wilkes that in general, cycle/micromobility storage that meets the TR-S3 standards will usually be best external to the residential unit. I would support adding a clarification to the notified TR-Table 7 requirement "A lockable, residential unit-specific storage facility such as a garage or storage locker is an acceptable solution" that the minimum cycle/micromobility parking space for a residential unit cannot be located within the residential unit itself. The reason for this is that (a) it can be difficult to bring a bicycle into a unit over steps and through narrow doorways, (b) wet bicycles can damage internal floor coverings, and (c) there is typically insufficient space within a residential unit for one cycle much less multiple cycles for a household.</td></tr>
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Date: 18 April 2024

John Lieswyn