

**BEFORE INDEPENDENT HEARING COMMISSIONERS AT  
WELLINGTON**

**IN THE MATTER** of the Resource Management Act 1991

**AND**

**IN THE MATTER** the hearing of submissions on the  
Proposed Wellington City District Plan

**STATEMENT OF EVIDENCE OF GARY PAUL CLARK ON BEHALF OF**

**STRATUM MANAGEMENT LIMITED (SUBMITTER 249)**

**HEARING STREAM 9 – INFRASTRUCTURE**

**10 JUNE 2024**

**1. INTRODUCTION**

1.1 My full name is Gary Paul Clark. I hold the position of Director of Traffic Concepts Limited.

1.2 I have been engaged by Stratum Management Limited (“SML”) to provide evidence in support of its submission to the Proposed District Plan (“PDP”). The submission seeks to remove the cycling requirements set out in Rule TR – S2 and Table 7 as they apply to the City Centre Zone.

## **Qualifications and Experience**

- 1.3 I am a Chartered Professional Engineer and hold a New Zealand Certificate in Civil Engineering. I meet the standards to be a Registered Engineers Associate (REA) and I am a Chartered Member of Engineering New Zealand and its specialist Transportation Group. I specialise in traffic engineering and transportation planning.
- 1.4 I hold postgraduate qualifications and have completed masters papers in traffic engineering, advanced traffic engineering, and accident prevention and reduction. I am also a Certified Safe System and Road Safety Auditor. I was part of the working group that prepared the original “Road Safety Audit Procedures for Projects” publication released by the NZ Transport Agency (“NZTA”). I also co-published the NZTA document “The Ins and Outs of Roundabouts”. I was a certified Commissioner after completing the Making Good Decisions Commissioners Course. I chose not to be recertified due to other work commitments.
- 1.5 I have been working in the road and traffic industry since the end of 1981. The knowledge and experience I have gained over 40 years relates to most road and traffic related matters, and in particular elements around planning, design and safety. I have prepared transportation assessments for both small and large developments throughout New Zealand. These projects have included cycle design, planning and safety audits.
- 1.6 I have worked for the Ministry of Works, Ministry of Transport, local authorities and multi-national consultancies. More recently I was Transportation Manager at Tasman District Council and worked for Traffic Design Group (TDG) where I was a Senior Associate and Branch Manager of the Nelson Office. In July 2018 I decided to return to my own consultancy which has been operating since July 2004. I am the Director of that company.
- 1.7 As an experienced and recognised road safety auditor I have conducted road safety audits for NZTA, Councils and developers. For more than 30 years I have been involved in crash investigation studies and developing measures to address road safety issues. I have also been engaged in the development of strategies for road and traffic related issues.
- 1.8 I have designed, reviewed and prepared designs for roads, intersections, developments, road safety schemes and town centre redevelopments. I have also been involved in overseeing cycling and walking projects.

1.9 I have been involved in a large number of residential and commercial developments in Wellington and the wider region. These have included multi-unit developments outside of the central area and multi-level apartment buildings in the central area.

1.10 I have presented evidence in resource consent hearings and the Environment Court for applications in my specialist area of traffic engineering, road safety, transportation planning and road design.

### **Code of conduct**

1.11 While this is not an Environment Court hearing I have met the standards in that Court for giving expert evidence.

1.12 I confirm that I have read the Code of Conduct for Expert Witnesses which is included in the Environment Court Practice Note 2023 and that I agree to comply with it. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express, and that this evidence is within my area of expertise, except where I state that I am relying on the evidence of another person.

1.13 I have no commercial or other interest in the outcome of this application, nor any conflict of interest of any kind.

## **2. SCOPE OF EVIDENCE**

2.1 My evidence provides a review of the need for cycle parking for residential developments in the City Centre Zone and comments on the Section 42A report.

2.2 In preparing this evidence, I have considered:

- (a) The SML submission to the PDP; and
- (b) The Council's Section 42A report for this Hearing Stream and the associated evidence of Mr Lieswyn; and
- (c) The provisions of the PDP, and specifically the Transport Chapter.

2.3 My evidence will focus on the PDP standards relating to the provision of cycle parking in the City Centre Zone.

### **3. BACKGROUND**

- 3.1 I consider that it is worth noting that in the past I have worked for Wellington City Council as an Area Traffic Engineer being responsible for different parts of the city. As part of that role, I was tasked with the implementation of various resident parking schemes around Wellington and the Coupon Parking Scheme.
- 3.2 At the time of the first District Plan, Wellington City Council took the major innovative step of removing minimum parking requirements from the Central Area and Suburban Centres. Wellington was the only Council in the country at that time to actively discourage the provision of parking in the Central Area as part of its objective to reduce commuter traffic and the associated need for parking.
- 3.3 This fundamental change in parking requirements led to developers having the choice of how much parking they may or may not provide. Over that time, some apartment developers provided a car park per unit and at the other end of the spectrum, some provided none. The overall trend over time also appears to be a reduction in on-site car parking provision. With changing behaviours in the community and climate change, the parking demand for a typical apartment building seems to be settling down at around one space per five units. Any more than this, and the car parks become hard to sell and the oversupply becomes inefficient and costly.
- 3.4 Also of note was the original District Plan provision of one visitor space for every four residential units outside the Central Area and Suburban Centre Zones. Over time these requirements were amended and ultimately removed. This was due to the cost of providing on-site visitor car parks, the management of them and the lack of demand. There was no factual based data that could be pointed to justify the need or the level of requirement. Most recently the National Policy Statement on Urban Development has required the removal of minimum car parking requirements altogether.
- 3.5 The provision of parking, no matter what type, comes at a significant cost as part of an apartment building. It is typical that parking is purchased by a future owner and is allocated to that unit. This is also the case for storage lockers in apartment buildings.
- 3.6 What this has shown is that market dynamics will decide what the right number of car park spaces are for a given apartment development. This will also be true for the provision of cycle parking.

3.7 SML seeks to remove the cycle parking requirements for residential developments from the City Centre Zone. I note that the cycle parking requirements for residential zones, where SML is also active, are accepted.

#### 4. CONTEXT

4.1 The City Centre Zone as set out in the PDP broadly covers the flat area of the Wellington City Centre which is shown in the figure below.



4.2 Wellington City is a relatively compact city with very good public transport. It is also a very walkable city. It is around 1.5 kilometres from the centre of the city to most parts of the City Centre Zone.

4.3 The suggested need for cycle parks for commuting in the City Centre Zone seems to ignore the walkability, excellent public transport and compact nature of the Wellington central area.

4.4 The short distances within the central area allow residents to walk to work, educational institutions, shops and entertainment reducing the need for a vehicle or cycle. More simply put the need for cycles to be provided for commuting to work and accessing shops in the City Central Zone generally does not exist and not at the rate of one space per unit. It is acknowledged that some residents may own a bike for recreational purposes or occasional commuting.

## **5. CYCLE RULES AND STANDARDS**

5.1 As the Commissioners will be aware the Rules and Standards are contained in the Transport chapter of PDP. My focus in my evidence is on the standard TR-S2 and Table 7 and in particular as it applies to residential development in the City Centre Zone. I have also considered the associated Figure 1, introduced through the Section 42A report.

5.2 There are two key components to the provision of cycle parking and that is the appropriate number per dwelling along with the design of the cycle area if they are provided.

### Cycle Parking Provision

5.3 I have reviewed the requirements for one cycle park per apartment/unit along with the Section 42A report and evidence by John Lieswyn.

5.4 I have not been able to find within these documents and others by reference in the evidence any factual material on actual cycle demands for inner city apartments or for that matter for any residential land use. The documents I have read provide information around the objective of increasing the use of cycling through provisions of facilities like cycle parks and showers. However, there is no survey data that I have been able to find to justify a position where each apartment requires a cycle park or that there is a high level of demand that needs to be met.

5.5 This also appears to be the case for some other District Plans which I have briefly reviewed. These District Plans require cycle parking but again there is no justification for the actual requirement. It does not appear to come from an evidence-based approach.

5.6 This is particularly important as the same approach was taken with visitor car parking in some District Plans, including Wellington. When it came to applying the rule of one visitor car park for every four units, it was apparent that it was not demand based, unworkable from a management perspective, difficult to accommodate without significant cost and compromised the development as a whole. Ultimately the visitor car parking standard was modified and mostly ignored.

5.7 As with any robust assessment and analysis, at least a basic understanding of the need (demand) and its practicality should be carried out to ensure that any cycle facilities that are provided are appropriate and achievable.

- 5.8 From my review, guidance suggests that a good starting point is to allocate at least one cycle park per residential unit, but this can vary based on local context and preferences. Guidance also suggests that the number of cycle parks for residents should be based on demand. It is also important to tailor the provision of cycle parks to the specific factors including the proximity to public transport, the proximity of employment, goods and services and recreational activities.
- 5.9 My opinion that providing one cycle park per unit in the City Centre Zone is a blunt instrument to change behaviour and increase cycle usage that has not been tailored to the Wellington context. It also has significant implications for apartment buildings. The simple assumption that each unit has a demand for one cycle park has no validation and is not realistic.
- 5.10 In order to better understand demand, I have arranged for surveys to be carried out on some apartments that SML developed and manage. These surveys of inner-city apartments showed a range of existing cycle parking. The number of cycles per unit sat within a range of one cycle park per 3.5 units to one cycle park per 30.7 units.
- 5.11 One of the surveyed apartment buildings had dedicated cycle storage and had an occupancy rate of one cycle for every 3.5 units.
- 5.12 The lower cycle parking demand was associated with an apartment building with more than 150 units.
- 5.13 None of the surveyed sites had cycle demand close to the one space per unit requirement of the PDP. In terms of the building referenced above that has 1 park to 3.5 unit rate, it was also noted that the cycle parking available was not fully used with it having a utilisation factor of around 90%. This would suggest that the cycle parking area provided on this site exceeded the demand created by the residents.
- 5.14 Based on a limited number of surveys a more reasonable and appropriate cycle parking requirement would be a rate of one cycle park for every four units.

#### Cycle Parking Design

- 5.15 Cycle parking design standards are useful. They allow applicants to better design these areas as well as provide for different types of cycle parking, even if the demand for those different types is not robustly informed by survey data.

- 5.16 I thought it would be useful to demonstrate the issue around the requirement of one cycle per unit and including one space for a “large cycle” for every four cycles, as set out in TR-S2 and Table 7 of the PDP, along with the newly proposed Figure 1.
- 5.17 SML has recently applied for a resource consent for a new 135-unit apartment building in Central Wellington. As part of that development the design included cycle storage of up to 34 cycles (8 large and 26 regular) on the ground floor. Due to the orientation of the building, the cycle storage area will occupy potential retail frontage. The ground floor also needs to provide on-site loading as per the District Plan and retail frontage.
- 5.18 I have reviewed the design based on Figure 1 TR: Cycle and micromobility parking. My review based on the design standards shows the actual number of cycle parks in the area allocated would be reduced to around 18 spaces to comply with the PDP Standards. This assumes that 50% of the regular cycles are hanging. This equates to a rate of one cycle park for every 7.5 apartments. Based on the costs provided by Mr Stewart, the cost of providing this area that would (per the PDP standards) provide for 18 spaces, would be in the order of \$422,000.
- 5.19 Under the PDP the development would be required to provide 135 cycle parks of which 34 would need to be for large cycles (cargo bikes).
- 5.20 I have used the design standard set out in Figure 1 of PDP and the floorplate for the proposed new building to determine the floor area needed to meet the standard. Based on the standard and accounting for obstructions, the area needed to accommodate 135 cycles is around 580 m<sup>2</sup> (approximately one and a third floors) of the new building.
- 5.21 Applying the costs provided by Mr Stewart, the value of that floor area is approximately \$7.6M.
- 5.22 I note that this design does not include provision for hanging racks etc. The provision of vertical or hanging racks would require additional internal structure and cost. The provision of hanging racks would not necessarily lead to less space due to inefficiencies created by the building structural layout.
- 6. SECTION 42A REPORT.**
- 6.1 The reporting planner Mr Wharton has provided his assessment of SML’s submission in paragraphs 228 to 232 and 240 to 249 of the section 42A report.



I have the following comments on his assessment as well as Mr Lieswyn's (Appendix D) evidence.

- 6.2 I agree with part of Mr Wharton's statement in paragraph 228 that the PDP's minimum standards are an efficient and effective method of achieving the goals. However, as I have noted above, the assumption that each unit needs a minimum of one cycle space is not based on demand or a pragmatic analysis of the need. This will lead to too much valuable floor area being set aside for a demand that does not exist.
- 6.3 Paragraph 229 discusses the costs of providing parking. I do not agree that you can simply isolate a car park space to provide 10 cycle spaces. Based on Figure 1 of the PDP there are requirements that also must be met. A standard car park in an apartment building is 2400mm wide by 5000mm long. A cycle park is 1000mm wide by 1800mm long. While it is possible to put five on ground and hang five based on the standard, no allowance has been made to access the cycle parks and other minimum design requirements.
- 6.4 Paragraph 230 notes other submitters views on the benefits of people having cycle parks available and the benefits of lower greenhouse gases and road congestion. I can agree with this statement but note that inner city residents in apartment buildings have reduced rates of car ownership as only very limited on-site parking is provided. These residents already play their part in reducing congestion and greenhouse gases by living and working in the city centre and not owning a car. The provision of cycle parking on the site or not, will have negligible effect on greenhouse gases or congestion. Rather the issue is one of accommodating bicycle parking demand appropriately, and I do not agree with the underlying assumption that each unit will create a demand signalled in the PDP.
- 6.5 I agree with the statements in paragraphs 240 to 249 around cycle design.
- 6.6 Appendix D contains Mr Lieswyn's statement of evidence. Mr Lieswyn specifically comments on the SML submission under the heading of affordability which I have provided some extracts below.

....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 approximately \$500 installed.

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....

- 6.7 I do not agree that the cost of providing cycle parking is substantially less than car parking for apartments in the city centre. The first point is parking is not required for a development and they are not provided for each unit in most cases. So, converting car parks to cycle parks is not available. The second point is that a structure for a carpark would be same to that needed for cycle parking making the costs similar. The PDP cycle requirement will reduce the number of apartments to meet this new provision.
- 6.8 As demonstrated in the example above, the floor area needed to meet the PDP cycle requirements is around one and a third floors (around 580 m2) based on the new SML apartment building. For the new SML apartment this would mean the removal of around 13 apartments based on the current design. This is a significant cost to the development.
- 6.9 It is suggested that two cycle parks are around \$500 installed. That is not the case within an apartment building as compared with a multi-unit development. The costs of cycle parking would have to include the structure needed to provide the parking, the aisles and other infrastructure for access.
- 6.10 Mr Stewart's evidence provides a dollar value to the cost of floor areas for apartment buildings. Based on those costs and the required PDP provisions of 135 cycle parks for the new SML apartment building, the cost of meeting this requirement is around 7.6 million dollars.
- 6.11 This design did not include hanging cycles. Even conservatively providing around 30% of the spaces that could be hanging (making the floor area 400 m2), the cost of providing cycle parking is 5.2 million dollars.

## **7. CONCLUSION**

- 7.1 The PDP is requiring all residential developments in Wellington to provide one cycle park per unit under TR-S2 and Table 7. The cycle park is to be designed to Figure 1. This requirement includes the City Centre Zone.
- 7.2 While the provision of one space per unit might be seen as a logical starting point, the demand must be factored in to ensure it does not lead to poor outcomes and unnecessary cost. There is no evidence that has been provided to demonstrate that this provision is reasonable in a city centre context. It appears to be based on the assumption that every unit within a development will have a bicycle.

- 7.3 Wellington city has a relatively compact centre where walking and good public transport is readily available. Residents in the city centre are able to access employment, goods and services with ease and without the need for a cycle.
- 7.4 Surveys of a small number of apartments show a significantly smaller demand for on-site parking than one space per unit. At one of the surveyed sites where cycle parking was provided, it had an occupancy rate of around 90%. The same apartment building had the highest cycle parking demand of one space for 3.5 units. Other buildings showed significantly lower demand.
- 7.5 It has been suggested in evidence that the provision of cycle parking at one space per unit is affordable by converting car parks. Most new apartments provide very few car parks, if at all. As noted in my assessment the cost for a specific apartment building by SML would result in a cost to the development of 7.6 million dollars to meet the PDP provisions. This is a significant cost.
- 7.6 In reviewing the survey data and taking into account the Wellington environment, it is my view that a more realistic provision of one cycle park for every four units meets the needs of residents, without creating space that may not be used.

*Dated 27 May 2024*



*Gary Paul Clark*