Before the Independent Hearing Panel
Appointed by the Dunedin City Council

Under	the Resource Management Act 1991 (**RMA**)
In the matter of	an application by **Dunedin City Council** and the **Department of Conservation** for consent to construct and operate a carpark at Tunnel Beach, Dunedin
	Dunedin City Council and **Department of Conservation**
	Applicants

Statement of evidence of Hayden Wallace Trumper

20 April 2022

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Qualifications and experience

1 My name is **Hayden Wallace Trumper**.

2 I hold the qualifications of Master of Engineering in Transportation and Bachelor of Engineering from University of Canterbury. I am a Member of Engineering New Zealand.

3 I currently hold the position of Associate at Beca Limited ("**Beca**"). I have approximately 9 years of experience in traffic and transportation engineering with core experience in transport planning, traffic engineering and road safety.

4 I have previously provided expert evidence as part of the Network Waitaki development in Weston, Otago (near Oamaru). This included consideration of a service depot within a rural environment and the associated impact on the local road network. This included consideration of vehicles generated by the proposed development and the impact on the adjoining road network.

5 I have prepared Transportation Assessments for other recreation facilities as part of the Nga Puna Wai Sports Hub development in Christchurch. My role on this project was as the lead Traffic Engineer and I was responsible for advising the design team on the transportation related aspects of the development.

6 Aside from my involvement in transport planning and traffic engineering, I have been involved in several road safety improvement projects through my involvement as the Road Safety lead for the following Safe Roads Alliance projects and Speed and Infrastructure projects for Waka Kotahi New Zealand Transport Agency (Waka Kotahi):

(a) SH74 Marshlands Road to Burwood Safety Improvements;

(b) SH71 Rangiora to Kaiapoi Safety Improvements;

(c) SH73 Yaldhurst to West Melton Safety Improvements;

(d) SH1 Tram Road to Saltwater Creek Safety Improvements; and

(e) SH1 Rakia to Ashburton Safety Improvements.

7 I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2014. This evidence has been prepared in accordance with it and I agree to comply with it. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

Scope of evidence

8 I have been asked to prepare evidence in relation to Transport Planning and Transport Engineering. This includes:

(a) summarising the Project and its effects, as it relates to transport matters;

(b) addressing the Council Officer's report, as it relates to transport matters;

(c) responding to submissions lodged that raise transport matters; and

(d) comment on the Proposed Conditions.

Executive summary

9 I consider that the Beca Transport Assessment Report (TAR) and subsequent Section 92 response letters have comprehensively assessed the Project. In my opinion, the proposed project will improve road safety by providing a suitably designed off-street car park to address the current safety concerns as a result of the current car park arrangements.

10 As a result of a concern raised in submissions on the proposed Project, I recommend that a Construction Management Plan is developed in consultation with the adjacent landowners to minimise the impact of construction related traffic.

11 Overall, it is considered that the proposed car park will improve the safe operation on Tunnel Beach Road for people accessing the Tunnel Beach Track. I consider the Project will have positive transport effects and that the potential adverse transport effects, relating to the construction phase, can be satisfactorily addressed by a Construction Management Plan.

Involvement in the Project

12 I have developed the Transport Assessment Report of the proposed project that was submitted as part of the Assessment of Environmental Effect and assisted in the Section 92 responses provided by Beca dated 23 February 2021. I have undertaken a site visit on 14 April 2022.

Assessment of Transportation Effects

Existing car park arrangement

13 Mr Van Der Hurk has stated in his evidence that Department of Conservation (DOC) rangers have observed the existing car park is full on

busy days with car regularly parked on the Tunnel Beach Road up to 160m from the car park. Prior to COVID, DOC rangers have observed cars parking along the entire verge of Tunnel Beach Road. Photos have been taken by DOC rangers and are supplied in Appendix A.

14 I have reviewed the photographs, and in my opinion, the following safety issues arise due to the car parking overflow:

(a) Vehicles parked on the sides Tunnel Beach Road result in narrower traffic lanes, forcing vehicles into the opposing traffic lane;

(b) Campervans and buses, which are too long to use the angled parks, parallel park across multiple carparks or protrude into the carriageway lane when they use the angled parking;

(c) Vehicles partially blocking accesses, while parked on the shoulder making it difficult for residents to get into their property;

(d) Pedestrians walking in live lanes outside cars parked on shoulders;

(e) Large buses parked on the shoulder, require pedestrians to walk in the carriageway; and

(f) Vehicles blocking the road, while opening/closing the access gate for the western accessway.

15 In my opinion, the current turnaround facilities are unsuitable to easily facilitate larger vehicles, such as large tour buses, where these vehicles may need several movements to turn around. However, the current turn around facilities do not restrict vehicles turning around enough to supress the demand for these vehicles.

Parking demand

16 The Project will provide 58 car parks, four campervan parks, two mobility parks and a bus stop for buses whilst removing and installing no stopping at all times lines for the existing 18 car parks. This will provide more vehicles with formal car parking, where vehicles can park and manoeuvre off-street. In my opinion, this will improve safety on Tunnel Beach Road during the operational time of the car park when the most demand for on-street parking is expected.

17 As stated by Mr Van der Hurk, it is expected that approximately 50% of people will stay for 30 minutes with the remaining 50% of people staying for 120 minutes once the Project is completed. This results in 102 independent vehicle movements assuming the car park is at capacity. Visitor counts

provided by Mr Van der Hurk indicate that peak hourly visitor counts are typically less than 100 visitors per hour which equates to a parking demand of approximately 45 spaces[1] which is less than the proposed car park capacity. This indicates that the assumed peak parking demand of the 100% occupancy of the car park is a conservative estimate of the day-to-day parking demand.

18 Pictures taken by Mr Van der Hurk, vehicles show cars parked close to Tunnel Beach Road / Blackhead Road intersection, which is approximately 300m from Tunnel Beach Walkway. This indicates that people are willing to park up to 300m (4-5 minute walk) from Tunnel Beach Walkway. There are up to 95 spaces available for cars on Tunnel Beach Road, which indicates an absolute peak parking could be up to 95 spaces. Typically, car parks are designed to accommodate the day-to-day peak demands rather than the absolute peak demands as designing to absolute peak demands would result in overdesign of car parking. As a result, there may be some overflow onto on-street car parking when parking demand exceed the car park capacity. However, I expect this to occur less frequently as the Project results in a net increase in formal car parking available, allowing more cars to park in safer locations.

19 Visitor surveys have been undertaken DOC where no responses from visitors stated that they arrived by bus. However, these surveys are a sample of people who have visited the site and as such there may still be people that arrive to the site by bus based on pictures provided by Mr Van der Hurk. Therefore, in my opinion, the assumption of 3 buses per hour arriving at the site is a conservative estimate of the peak number of buses expected to visit the site.

20 In my opinion, the availability and proximity of parking is not currently affecting visitor demand, however, there are safety issues associated with the accommodating the current parking demand. The provision of additional car parking is not expected to induce additional parking demand, however, the proposed car park will address safety issues related to the current car parking behaviour. There is not expected to be any additional impact on the wider transport network.

Access and manoeuvring

21 Vehicles exiting the car park will be required to give way to vehicles using the private accesses. The impact of exiting vehicles on the private accesses

[1] Based on typical vehicle occupancy and underreporting

is not expected to be significant due to the low volume of vehicles (~250 vehicles/day[2]) using Tunnel Beach Road, which includes vehicles utilising the private accesses. Should traffic volumes on Tunnel Beach Road double to 500 vehicle/day, the impact on private accesses in not expected to be significant due to the low traffic volumes. The proposed access retains the existing access with the same level of accessibility such that I do not expect that access to adjoining properties will be impacted.

22 The proposed design would improve manoeuvrability for trucks/buses with the internal circulation within the new carpark designed to provide the necessary turning circles for larger vehicles.

23 A new access gate is to be provided for the western private road, approximately 10m from the access to the new car park. This is expected to provide sufficient queuing space for vehicles using this access to open the gate without interfering with the operation of the proposed car park access and Tunnel Beach Road.

24 The new footpath on Tunnel Beach Road is expected to increase pedestrian safety, if any visitors need to park on Tunnel Beach Road at peak times. The 'no stopping' area will improve the visibility of approaching vehicles for pedestrians crossing the access for 40 and 50 Tunnel Beach Road by removing vehicles parking on Tunnel Beach Road near the crossing point.

25 The speed limit on Tunnel Beach Road was reduced from 80km/h to 60km/h in December 2021[3]. As such, the proposed access meets visibility requirements for access onto a road with a 60km/h speed limit based on the DCC 2GP. In my opinion, compliance with this speed limit is likely to be good based on on-site observations and an operating speed of 20km/h identified in MegaMaps Edition III. For these reasons, I consider the visibility provided at the proposed access to be adequate for the vehicle approach speeds to the proposed access.

26 As part of the Beca Section 92 response letter, Beca provided further information relating to Freedom Camping on Tunnel Beach Road, swept path of buses, removal of zebra crossings within the car park, confirmation of ground clearance for buses, clarification on turn around whilst the car park is closed and surfacing of mobility parking spaces. I confirm that I have reviewed this information. I have addressed each of these matters below:

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[2] Extracted from Mobile Road website (https://mobileroad.org/desktop.html) Accessed, 28 March 2022

[3] https://www.dunedin.govt.nz/services/roads-and-footpaths/road-safety/speed-limit-changes

(a) Freedom camping in Dunedin City's Road Reserve can managed by the Camping Control Bylaw 2020 at DCC's discretion;

(b) In my opinion, the removal of zebra crossings from the original design submitted as part of the TAR will not have a significant safety impact due to the low traffic speeds and open sightlines at the pedestrian crossings within the car park;

(c) I have reviewed the vertical profile and I consider there is sufficient clearance provided in the current design for buses. However, there is little separation between the road surface and underside of the bus, so this will be sensitive to level changes that may occur as part of further design. Consideration of vertical tracking for buses will be considered as part of the normal ongoing design process to ensure the layout provides suitable access and circulation;

(d) There is a concern that the proposed car park will not improve the ability for vehicles to turn around while the car park is closed. I agree that the turnaround facilities are not improved whilst the car park is closed. In my opinion, I do not consider this to be a significant safety concern as there is currently sufficient space for general traffic to turn around and traffic volumes are expected to be low when the car park is closed. However, I expect that the majority of the demand for turnaround facilities occurs when the car park is open to match the demand for Tunnel Beach walkway; and

(e) I can confirm that the proposed surfacing for the mobility car parks is to be chipsealed which complies with the requirements set out in the Dunedin 2GP and AS/NZS2890.6:2009[4].

Summary of Transport Effects

27 In summary, the proposed facility will result in a net increase in the number of car parks with more vehicles able to park in a dedicated off street facility. In my opinion, this will address the existing safety concerns on Tunnel Beach Road during the operational time of the car park when the highest demand for on-street parking is expected. The proposed car parking is not expected to induce additional trips and as such there is not expected to be any impact on the wider transport network.

[4]Australian/New Zealand Standard, Parking facilities – Part 6: Off-street parking for people with disabilities

28 I consider the design of the car park to be adequately designed such that, in my opinion, the design of the car park and associate access does not introduce additional safety concerns.

Response to Section 42A report

29 In the s42A Report Ms Lindsay reports that Councils traffic engineer considers that based on the information in the application that people will park up to 200m away, and taking into account the existing 18 angled spaces, the engineer considers that this would indicate a typical peak demand for at least 45 parking spaces during the peak hour. As discussed in point 17, I estimate the peak parking demand when the car park is at capacity to be 64 spaces during the peak hour.

30 I agree with the proposed traffic related conditions. However, the removal of existing on-street parking and opening of the car park will need to be coordinated as part of the Construction Management Plan such that there will be parking available when Tunnel Beach Walkway is open.

Response to Submissions

31 I have reviewed the two submissions received on the proposed Project and I provide the following comment on the transport matters raised in those submissions. The transport matters are:

(a) The potential for an increase in the number of visitors to the site;

(b) Use of the existing right of way;

(c) Maintaining access to nearby properties; and

(d) Construction quality.

Visitor demand

32 Mr Varsanyi and Ms Durling assert that the proposed car park is significantly larger than the parking that currently exists and therefore demand will increase significantly.

33 I do not agree with this assertion as Mr Van der Hurk has provided photos of vehicles parked along the length of Tunnel Beach Road, indicating people are willing to park along the length of Tunnel Beach Road. Tunnel Beach Road is 300m long, which equates to a walk of up to 4-5 minutes. As discussed in Point 18, there is ample parking available within a short walk of the existing Tunnel Beach Walkway to accommodate demand. For this reason, in my opinion, the traffic demand visiting Tunnel Beach Road

would not be expected to change significantly due to the provision of the proposed car park.

34 Mr Varsanyi and Ms Durling assert that the proposed car park will result in large bus loads of visitors to visit the site. These large bus loads can carry more people to the Tunnel Beach walkway compared to smaller buses or cars and vans.

35 I do not agree with this assertion as there are currently opportunities for tour operators to access the current facilities using smaller buses. Similarly, as the current accesses can accommodate heavy vehicles, larger buses are currently able to turn around at the end of Tunnel Beach Road using a three-point turn.

36 Therefore, I do not agree that the provision of safer and more appropriate arrangements for bus parking and turn around facilities will increase people or bus movements to and from the site. Indeed, I consider that the proposed bus stops provide an opportunity for a tour operator, who may be currently using multiple smaller vehicles, due to the current site constraints, to reduce the number of vehicle movements by utilising a larger buses.

37 Mr Varsanyi and Ms Durling propose that the car park is limited to 25 spaces. It has been noted by Mr Van Der Hurk that on-street parking has been observed parking up to 160m from the car park often vehicles parking on Tunnel Beach Road current on-street car parking often exceeds the existing capacity of 18 spaces. Based on the current demand, I consider the proposed car parking provision is appropriate to reduce the likelihood that car parking overflow onto Tunnel Beach Road will occur, except at peak times.

Use of existing right of way

38 Mr Varsanyi and Ms Darling consider that the proposed access arrangements will have adverse effects on their existing right of way.

39 The proposed access does traverse over a portion of the existing right of way and the existing gate is relocated.

40 From a traffic perspective, I consider the proposed access arrangement to be acceptable, as the existing access retains that same practical level of accessibility and the relocation of the gate allows for vehicles opening the gate to wait clear of traffic on Tunnel Beach Road.

Access to nearby properties

41 Ms Towers has stated that she wishes for a condition of consent to be that contractors do not block their access during construction.

42 Generally, I consider that this is a reasonable request. However, there will be certain construction activities that will necessarily involve access being partially restricted at times. For example, the installation of the new gates for the right of way will result in some short term disruption. In my opinion, the transport related effects of construction can be addressed through the preparation of a Construction Management Plan.

43 Ms Towers has identified a need to retain access for a truck and trailer to 50 Tunnel Beach Road. Currently there are constraints which affect the tracking of vehicles into the existing access for 40 and 50 are shown in Figure 1. The Project does not seek to alter these constraints, nor the existing sealed and unsealed road widths. Therefore, in my opinion the Project won't affect the existing access arrangements to 50 Tunnel Beach Road or its Right of Way.

Figure 1: Constraints that impact vehicle tracking into existing accesses

Construction quality

44 Ms Towers has stated a need for any work undertaken in the road carriageway to be done to a high standard.

45 The Project is not expected to require significant changes to the existing carriageway with any changes to the carriageway to be undertaken in accordance with DCC Code of Subdivision and Development 2010.

Summary and Conclusion

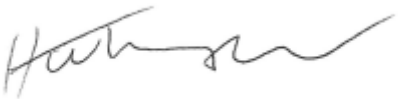
46 The current parking arrangements for people accessing the Tunnel Beach Walkway are 18 angled on-street car parks with on-street car park available for overflow parking. The on-street car parking behaviour noted in the site photos taken by Mr Van Der Hurk and attached to the application demonstrates poor parking behaviour and pedestrians from overflow parking walking along a narrow shoulder or within the live lane. In my opinion, this behaviour is unsafe resulting in an increased risk of pedestrians and vehicles being involved crashes.

47 The proposed car park seeks to remove the existing 18 angled on-street car park and provide 58 off-street car parks, so parking and manoeuvring can occur in an off-street car park. This increases the capacity of formal car parking for Tunnel Beach track with a dedicated off-street car park. In my opinion, the proposed off-street carpark improves safety for pedestrians and vehicles by providing dedicated facilities for visitors.

48 The proposed car park is not expected to induce additional trips and as such there is not expected to be any impact on the wider transport network.

49 There is not expected to be any changes to the current public bus services, however, the proposed car park does provide a single bus parking bay. In my opinion this will improve safety for buses as they can utilise the car park to turn around compared with the limited manoeuvrability currently available for buses on Tunnel Beach Road.

50 Overall, it is considered that the proposed car park will improve the access and safety for people accessing the Tunnel Beach Track and on Tunnel Beach Road. There may be some negative impacts during construction, however, in my opinion these can be adequately managed as part of Construction Management Plan, Therefore, it is considered that the implementation of the proposed facility and its transport effects are acceptable.



Hayden Wallace Trumper

20 April 2022

APPENDIX A

Memorandum

To:	Dunedin City Council	**Date:**	1 October 2020
From:	James Taylor	**Our Ref:**	3336298-1141558477-62
Copy:			
Subject:	Existing Parking at Tunnel Beach Road		

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