

**BEFORE THE HEARINGS COMMISSIONERS
APPOINTED BY THE WAITAKI DISTRICT COUNCIL**

UNDER

the Resource Management Act 1991

IN THE MATTER

of a submission on the Waitaki Proposed
District Plan

BY

ANDREW RODWELL

Submitter

STATEMENT OF EVIDENCE OF ANDREW DAVID CARR

Dated: 8 October 2026

Statement of Evidence of Andrew David Carr

Introduction

- [1] My name is Andrew ('Andy') David Carr.
- [2] I am a Chartered Professional Engineer and an International Professional Engineer (New Zealand section of the register). I hold a Masters degree in Transport Engineering and Operations and also a Masters degree in Business Administration.
- [3] I served on the national committee of the Resource Management Law Association between 2013-14 and 2015-17, and I am a past Chair of the Canterbury branch of the organisation. I am also a Chartered Member of Engineering New Zealand (formerly the Institution of Professional Engineers New Zealand), and an Associate Member of the New Zealand Planning Institute.
- [4] I have more than 37 years' experience in traffic engineering, over which time I have been responsible for investigating and evaluating the traffic and transportation impacts of a wide range of land use developments, both in New Zealand and the United Kingdom.
- [5] I am presently a director of Carriageway Consulting Ltd, a specialist traffic engineering and transport planning consultancy which I founded in early 2014. My role primarily involves undertaking and reviewing traffic analyses for both resource consent applications and proposed plan changes for a variety of different development types, for both local authorities and private organisations. I have previously been a Hearings Commissioner and acted in that role for Greater Wellington Regional Council, Ashburton District Council, Waimakariri District Council and Christchurch City Council.
- [6] Prior to forming Carriageway Consulting Ltd I was employed by traffic engineering consultancies where I had senior roles in developing the business, undertaking technical work and supervising project teams primarily within the South Island.

- [7] I have previously provided advice for a number of commissions that involve land rezonings, either through District Plan reviews or private plan changes. This has included providing transportation evidence to support submissions to the Auckland, Waimakariri, Selwyn, Ashburton, Timaru, Central Otago, and Queenstown Lakes Proposed District Plans, and numerous private plan change requests throughout the South Island relating to rezonings for residential, commercial and industrial activities.

Code of Conduct for Expert Witnesses

- [8] I confirm 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

- [9] I have been instructed by the Submitter, Mr Rodwell, to provide advice regarding the transportation implications associated with his submission to rezone 192 Beach Road, Ōamaru (**the site**), from General Rural Zone to Rural Lifestyle Zone. The specific matters that I have been asked to comment on are the extent of traffic generation that is likely to arise, and the ability of Beach Road to accommodate this extra traffic (in terms of safety and capacity).
- [10] In order to do this I have firstly reviewed the prevailing transportation environment before moving on to evaluate the traffic-related effects of the submission.
- [11] Prior to being instructed to prepare this Statement of Evidence, I was not involved in the submission.

Transportation Environment

- [12] The site is located on the western side of Beach Road, approximately 3.3km from Ōamaru town centre. Beach Road is classified as a Rural Collector Road in the operative Waitaki District Plan and as a Secondary

Collector Road under the proposed Waitaki District Plan. In each case, this classification indicates a role in providing for both local access and for through traffic.

- [13] At the site, Beach Road is formed with a 6m carriageway (one 3m traffic lane in each direction) plus a minimum of 0.5m sealed shoulders on either side. The legal width of the road is 22m. The alignment of the road at the site is flat and straight, but approximately 120m to the north of the site's northern boundary the road descends to pass beneath a bridge. Approximately 120m south of the site's southern boundary, the road curve towards the southwest to run alongside the coast.
- [14] I understand that the coastal section of Beach Road just southwest of this curve has been temporarily closed due to issues associated with coastal erosion. A decision on how and when to reopen the road, whether to formally stop the road, has not yet been made.
- [15] The speed limit on Beach Road is 100km/h (as set out in the National Speed Limit Register). However, the TomTom 'Move' database records actual vehicle speeds and after interrogating this I have found that the average vehicle speed of Beach Road adjacent to the site is 51km/h in the northbound direction and 62km/h in the southbound direction. In my view this reflects the effects of the curve towards the south. The curve will slow all traffic, but as vehicles generally take more time and a longer distance to accelerate than to brake, this results in lower speeds in the northbound direction than in the southbound direction.
- [16] I have reviewed the NZTA Crash Analysis System to determine the number and type of reported crashes for a distance of 300m from the site, for the past ten years (2016 to 2025, and the partial year of 2026). This shows that four crashes have been reported, with all four associated with vehicles leaving the road at the curve to the south.
- [17] Only one of the four crashes resulted in any injuries (which were minor). In two of the four crashes, the report notes that the driver swerved to avoid wildlife and in both of these instances, the driver was intoxicated.

- [18] In my view this crash record does not indicate that Beach Road has an existing adverse road safety record.
- [19] The MobileRoad website notes that Beach Road at the site carries 960 vehicles per day. This is noted as being a count from 2023 and since the road has subsequently been closed, I expect that traffic flows are currently much lower. However if the decision was made to reopen the road, then I would expect that traffic flows will return to previous levels, and therefore for the purposes of assessing the submission, I have allowed for Beach Road to carry this volume of traffic.

Traffic Generation

- [20] The amount of traffic generated by any site depends on its size and the nature of the proposed activity. In this case, I am advised that if the site is rezoned then a maximum of 13 rural residential lots could be established under the zoning. There is already one lot on the property, and thus the net increase is 12 lots.
- [21] Traffic generated by residential developments is known to vary for a variety of reasons, with one such reason being the proximity (or otherwise) to employment and community facilities. Where a dwelling is some distance from these types of facilities, the traffic generation rates tend to be lower than for residences that are closer due to 'trip chaining', that is, the tendency of a resident to carry out multiple visits to different destinations during the same trip away from the dwelling.
- [22] The distance to Ōamaru in this case suggests that some proportion of trip chaining will arise, but in practice, since that the yield of the site is relatively small, I have simply applied a standard traffic generation rate from NZTA Research Report 453 ('Trips and Parking Related to Land Use') for rural dwellings of 1.1 vehicle movements in the peak hours, and 8.5 vehicle movements per day.
- [23] For the 12 additional lots, this equates to 13 or 14 extra vehicle movements using Beach Road in the peak hours, and 102 extra vehicle movements using Beach Road per day. These will be split 50-50 between vehicles entering the site and vehicles that are exiting.

Traffic Effects

- [24] The increase of up to 102 vehicle movements per day and 14 vehicles in the peak hours is easily accommodated by the current configuration of Beach Road. In other words, Beach Road would not need upgrading to accommodate the traffic generated by development of the site, because the traffic volumes expected are so low.
- [25] By way of comparison, the national Standard NZS4404:2010 ('Land Development and Subdivision Infrastructure') sets out that a Collector Road with traffic lanes of 5.5m to 5.7m is able to accommodate up to 2,500 vehicles per day at speeds of up to 100km/h. The volume of traffic on Beach Road with development of the site would be 1,062 vehicles, less than half of this, and as set out above, traffic speeds on the road are much lower than 100km/h.
- [26] Taken over the whole peak hour, the increase in traffic flow equates to an average of one additional vehicle movement every 4.3 to 4.6 minutes. Even if there were to be short periods of more intensive traffic movements, this would be offset by periods of lower (or no) traffic movements. In my view, an increase of 13 or 14 vehicle movements on a road in the busiest hours is unlikely to be perceptible.
- [27] The existing road safety record does not indicate that the additional traffic would result in adverse road safety outcomes.
- [28] It will be important to ensure that any site access is designed appropriately. However the legal width of Beach Road (which is 22m as noted above) means that an intersection layout which meets current design guides and standards can easily be achieved.
- [29] It is also important that any access or intersection has sufficient sight distance available so that drivers approaching the access/intersection are able to see vehicles turning (and vice versa). Accordingly, I have considered whether there is a location at the site frontage where suitable sightlines are available.
- [30] As I set out above, there is a curve in Beach Road to the south and a bridge to the north which the road passes beneath. Both of these have

the effect of limiting sight distances (the former through the horizontal alignment and the latter through the vertical alignment).

- [31] Based on the Austroads Guide to Road Design Part 4A ('Unsignalised and Signalised Intersections'), for the operating speeds of the road I consider that a sight distance to the north of 145m is required, with a distance of 120m required towards the south.
- [32] Based on an inspection of aerial photographs, I consider that a sight distance of 140m is available from the site's southern boundary and a sight distance of 90m is available from the site's northern boundary. On this basis then, I confirm that there is a section of the site frontage between the southern boundary and approximately 60m north of this southern boundary, where a new road or access could be formed and which would have suitable sight distances for the operating speed of the road.

Conclusions

- [33] As this is a submission for rezoning, my assessment has been undertaken at a high level and with the purpose of ensuring that there are no major impediments to accommodating the traffic generated through development of the rezoned site.
- [34] On the basis of my assessment, I consider that the current formation of Beach Road is able to accommodate the expected traffic, and that a site access layout can be achieved that meets current guides/standards and that provides appropriate sight distances.
- [35] Consequently, I consider that there are no transportation-related reasons why the site could not be rezoned as requested through the submission.



Andy Carr

8 October 2026