

BEFORE THE CHRISTCHURCH CITY COUNCIL

UNDER the Resource Management Act 1991

IN THE MATTER of an application by Ryman Healthcare Limited for resource consent to establish and operate a comprehensive care retirement village at 100-104 Park Terrace and 20 Dorset Street, and 78 Park Terrace, Christchurch

**STATEMENT OF EVIDENCE OF ANTONI FACEY ON BEHALF OF CENTRO
ROYDVALE LIMITED**

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- 1 My name is Antoni Peter Facey.
- 2 I am the Director of Avanzar Consulting Ltd.
- 3 I hold a degree in Civil Engineering from Auckland University and am a Charter Member of Engineering NZ. I am a member of the Transportation Group of Engineering NZ.
- 4 I have over 34 years of experience as a Road Safety Engineer and as a Traffic and Transportation Engineer.
- 5 My experience has included road safety audits (including Dorset Street and Dublin Street upgrades) and crash reduction studies as well as many transport assessments for major hotel developments in Tekapo, Queenstown and Christchurch (including the Centro Hotel on Dorset Street) which involve both loading facilities and underground car parking facilities as well as residential and industrial developments. My clients have included local authorities (including Christchurch City Council), Government departments and private clients.

Code of Conduct

- 6 I am familiar with the Code of Conduct for Expert Witnesses in the Environment Court Practice Note (2014), and have complied with the Code in preparing this evidence. This evidence is within my area of expertise, except where I state that I am relying upon the specified evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

Scope of Evidence

- 7 My evidence assesses the traffic implications associated with the use of the access at 20 Dorset Street for servicing of the Bishopspark site. This access is immediately adjacent to the access/egress point for the Centro Hotel development on the corner of Dorset Street/Victoria Street.
- 8 In particular, I have been asked to consider potential safety impacts associated with trucks reversing from the site for pedestrians on Dorset Street and impact on traffic using Dorset Street, either accessing the hotel or parked opposite the access.
- 9 In preparing my evidence I have reviewed the following documentation:
 - 9.1 Transportation Assessment Report by Commute Transportation Consultants dated 27 March 2020;
 - 9.2 Section 92 Response by Commute Transportation Consultants dated 17 November 2020;
 - 9.3 Evidence of Mike Calvert; and

9.4 Evidence of Leo Hills on behalf of Ryman.

10 I have noted that access for construction traffic via Dorset Street is no longer proposed for the development of the Bishopspark site. From a transportation effects perspective, I agree that this is appropriate.

Deficiencies in Transportation Assessment

11 In my opinion, there are a number of shortcomings in the transportation assessments prepared in support of the Ryman development. These are in respect of:

- (a) Utilisation of the Loading Bay;
- (b) Tracking Curve Analysis;
- (c) Sight Distances on Dorset Street
- (d) Access for emergency vehicles

Utilisation of Loading Bay

12 The application is silent on what the purpose of the loading bay is and how it will be used. Especially given that it does not appear that the driveway from Park Terrace can be used by trucks as designed. The applicants tracking curves show only a small, custom vehicle that occupies the full manoeuvre area of the roundabout on site. Therefore, a truck of any size is unlikely to be able to use this roundabout.

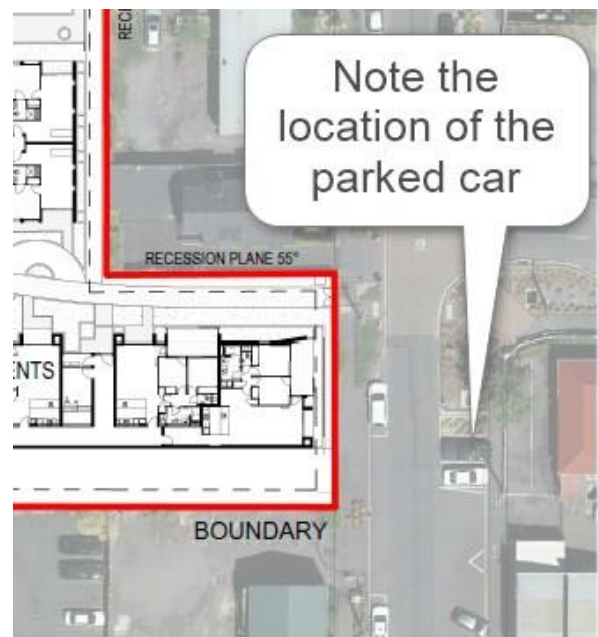
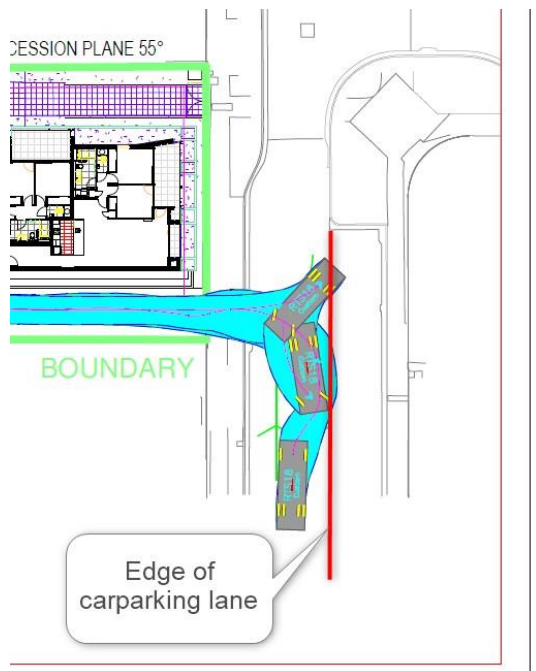
13 It is noted that there are a number of waste rooms distributed within the basement separate from the main waste room located adjacent to the hotel on the eastern boundary of the applicant's site. I have assumed that all waste will be brought to the loading bay for removal. Similarly, the commercial kitchen and all other storage areas in the basement will need to be supplied from the loading bay.

14 The type of trucks could include large single unit trucks delivering furniture for residents when moving into the complex. It should also be noted that from another project I have worked on that Envirowaste operate a waste collection vehicle that is 9.3 metres length so an 8 metre truck is considered the bare minimum and larger trucks are likely.

15 The number of truck movements could be significant but the applicant has provided no assessment of these numbers or the type of trucks that may use the loading bay.

Tracking Curves

- 16 Tracking curves have been provided for a truck reversing onto Dorset Street then driving towards Victoria Street. No tracking analysis has been provided for a truck exiting the site and driving towards Park Terrace. Since the applicant has no control over the direction of travel of the trucks after servicing the site, an assessment of how trucks will exit and travel towards Park Terrace should also be provided.
- 17 It should be noted that the tracking curves shown on the Applicant's plans do not include any clearances. RTS 18 "NZ On road tracking curves for heavy motor vehicles" recommends that minimum clearances of 500mm should be provided with greater clearances if possible. These clearances are required to allow for driver errors in particular. Clearances should be provided for all tracking curves.
- 18 The Applicant's tracking curves shown for a truck reversing from the site are shown below. I have added a red line where vehicles can be parked on the northern side of Dorset Street. An example of a vehicle parked in the area can be seen in the aerial photo below so it is clear that vehicles can be parked in this location.



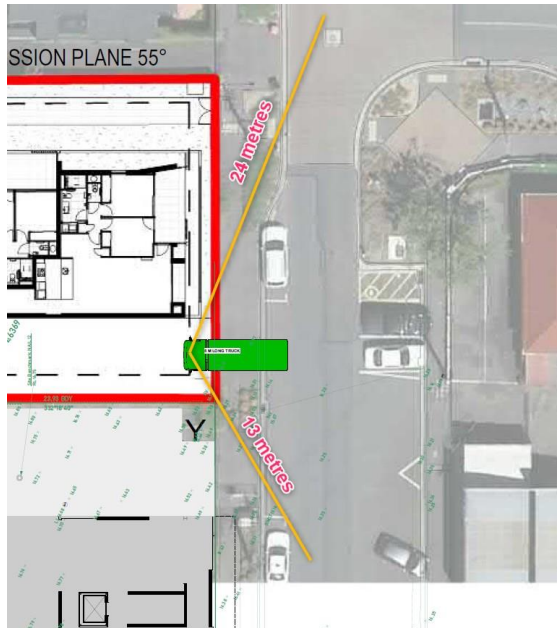
- 19 The Applicant's tacking curves show that an 8 m truck reversing from the site cannot do so without encroaching on the carparking space by a considerable distance. If a car is parked in the space, the applicant must show how a truck will exit the site. This may require the truck to exit the site towards Park Terrace. In that case, the truck is expected to reverse onto the wrong side of the road to perform the turn.
- 20 A similar assessment should be carried out for the larger trucks that are expected to use the Site.

Sight distance along Dorset Street

- 21 The applicant has used RTS 6 "Visibility at Driveways" to assess the sight distance required at the vehicle accesses. Given that the Christchurch District Plan does not have a requirement for sight distance from a vehicle access, this would be an appropriate standard to use. The guideline requires a sight distance of 40 metres to be provided.
- 22 The applicant claims that there will be over 40 metres of sight distance along Dorset Street from the loading bay access. While this is correct when measured in accordance with RTS 6, I do not consider it to be appropriate to use RTS 6 in this instance because the proposal is for the trucks to reverse from the site onto Dorset Street.
- 23 RTS 6 (and any other guideline such as AS/NZS 2890.1 "Parking facilities-Part 1 Off street car parking" and the AUSTROADS design guides) all assume the vehicle is being driven out of the site in a forwards direction. This allows the driver to see along the road in both directions while they are still protected on the site and are not obstructing either the footpath or the carriageway.
- 24 The drawing below shows an 8 m truck reversing from the site. The truck has been located on the line of the parked vehicle and the kerb extension. This is approximately 2 metres into the carriageway. Although undesirable, the truck should not be blocking the carriageway since the kerb extension in particular will prevent drivers on Dorset Street from driving closer to the kerb than this. As can be seen from the drawings below, the driver's location in the truck is still about 2 metres within the Site. The sight distance could then be reduced to 24 metres or less depending on conditions on the boundary. This is insufficient for a driver to safely exit the site.
- 25 Sight distance to the east is potentially only 13 metres due to the Orion kiosk on the boundary reducing sight distance. The cab of the truck itself will also create a larger blind spot adjacent to the truck where the mirror will not be effective.
- 26 A 12 m truck has also been shown in the same position. The sight distance is reduced even further.

Emergency Vehicles

27 The Applicant's traffic assessment claims that "the internal road layout is also able to support emergency vehicles such as ambulances and fire engines." No tracking curves have been supplied to show a fire engine using the site and it would appear unlikely that a fire engine could use the Bishopspark site internal road network as claimed.



Potential Impact on Pedestrians

- 28 The District Plan requirement for a visibility splay is consistent with other pedestrian guidelines in the dimensions of the splay. Similar splay requirements with varying dimensions are shown in Figure 14.11 of the NZTA Pedestrian Planning and Design Guide and Figure 3.3 of AS/NZS 2890.1. The drawings that accompany the requirement show a vehicle leaving the site in a forwards direction and being able to see the full area of the footpath in front of them and pedestrians approaching within 2 metres on either side of the vehicle crossing. The extract below is Figure 14.11 from the NZTA Pedestrian Planning and Design Guide. They simply do not envisage a vehicle reversing onto the road.

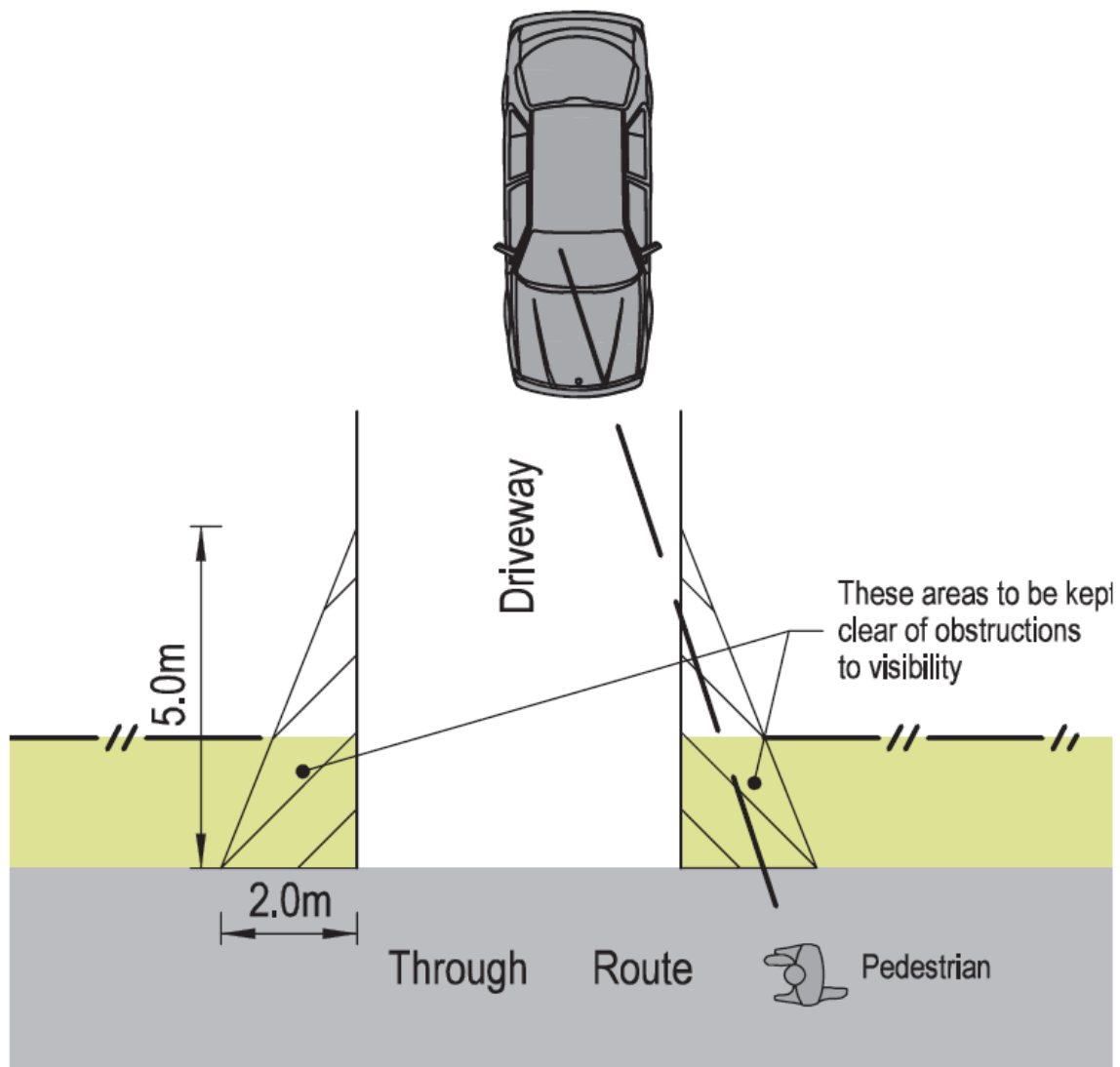


Figure 14.11 – Driveway visibility splays for high-volume driveways

- 29 When reversing from the driveway, a truck driver has a large blind spot behind them where they cannot see anything directly behind the vehicle. While a reversing camera may assist, not all vehicles are fitted with cameras and their use is not mandatory.

30 Because the driver can only look in one mirror at a time, the driver cannot see if pedestrians are approaching from the side of the vehicle they are not watching. A pedestrian is visible to the truck driver for less than 2 seconds assuming the driver is looking in the appropriate mirror at that time. Pedestrians have the legal right of way on a footpath and the truck driver must give way to them. Pedestrians may keep walking assuming the truck driver has seen them and will stop and give way to them. The extra length of the splay does not provide any mitigation for this problem. Therefore, this is a very unsafe situation for pedestrians on Dorset Street.

Safety audit

31 While the Council has required a safety audit of the pedestrian aspects of this design, I consider this to be a bare minimum.

32 In my view as an experienced safety auditor, I consider that there are many aspects of this proposal that require independent consideration in a safety audit. This includes the issues around the servicing vehicles reversing out onto Dorset Street as well as the proposed new layout of the accesses onto Park Terrace. The issues relate to interaction of the vehicles accessing or leaving the site with other vehicles on road.

33 Although there may be concerns with on-site manoeuvring and interaction between vehicles and pedestrians on site, these are within the private property and the applicant will be responsible for any traffic related conflict within the site.

Solutions to these problems

34 In priority order, my preferred solutions to likely traffic safety impacts are:

34.1 Provide turning for trucks on site so they can exit in a forwards direction. In this I am fully in agreement with the Councils traffic engineer that this is the best solution. Given the scale of the Bishopspark site, I do not consider this to be an unreasonable requirement.

34.2 Provide access and loading for trucks from Park Terrace.

34.3 Assuming the applicant can show through tracking that a truck can physically manoeuvre safely onto Dorset Street without colliding with parked vehicles, a traffic management plan should be prepared using a person to control Dorset Street pedestrians and traffic each time a truck exits.

35 The first and second solutions would both reduce the level of potential safety effects to less than minor, however the reliance on human performance in perpetuity in the third option introduces risk of failure. Failure would essentially elevate the safety effect to more than minor with truck drivers being put in a difficult position of having to undertake a dangerous manoeuvre to leave the site.

Evidence of Leo Hills on Behalf of Ryman

- 36 Having read the Evidence of Mr. Hills, I have reviewed my earlier analysis of the transportation effects of the proposal and make the following comments. I note that the Applicant now proposes to reverse trucks from Dorset Street onto the site instead of reversing from the site onto Dorset Street.
- 37 In para 37 of Mr Hills evidence, I continue to disagree that the sight distance requirements of RTS 6 are met due to the truck reversing out of the site. The driver cannot achieve those minimum sight distances until the vehicle is well into the carriageway and blocking the road.
- 38 In para 40, it is also important to consider mobility scooter users in the assessment and not only cyclists and pedestrians, particularly when the applicants activity revolves around elderly residents who are the most likely to be using mobility scooters. These scooters can achieve high speeds on footpaths and need particular consideration around vehicle crossings.
- 39 I also consider that the splay is ineffective when reversing from a site, as I have discussed above.
- 40 In para 41, there is a statement that "*loading movements are infrequent*". However, the frequency of these movements is not detailed. While it is most important to consider the effect of any movement in this case because of the effect on all road users on each occasion, it is also important to understand how many movements and what vehicles are expected to use the loading access.
- 41 In para 43, there is a statement that all trucks are able to reverse onto the site which is a complete reversal of the initial position that trucks would reverse onto Dorset Street. No assessment has been provided to show that all trucks can reverse onto the site from Dorset Street. This also needs to be supported by the assessment of what trucks will be expected to reverse onto the site. Without knowing what trucks are proposed to reverse onto the site, how often these trucks will perform the manoeuvre and seeing the tracking curves with appropriate clearances as required by RTS 18 to demonstrate the movement can actually be carried out, it is not possible to conclude that this is correct.
- 42 While not of relevance to the Dorset Street access, I note that para 48 considers that the ramp arrangement proposed on the Peterborough site is appropriate for a rubbish truck. However, AS/NZS 2890.2 "Commercial Vehicle Parking" requires a different set of ramp criteria for commercial vehicles. Since the rubbish trucks are intended to use the ramps, they become the design vehicle and the ramps should be designed to accommodate them, or an assessment made of why they should not comply with the appropriate recognised standard. In addition, cyclists may use the ramps and if the ramps are steep, the cyclist may need to walk the bike up the ramp. Consideration should also be given to such pedestrian movements.

43 Para 124 suggests that AS/NZS 2890.1 has been complied with. However, below is a direct quote from section 2.5.2 (c) of the Standard which contradicts this statement. Section 2.5.2 (c) states: *"Intersection areas designed for use by one vehicle at a time shall be designed for use by the B99 vehicle. Areas in which it is necessary for two vehicles to pass one another shall be designed for a B85 vehicle to pass a B99 vehicle. In both cases areas shall be checked using single turn swept path templates for the B99 vehicle and the B85 vehicle, generated in accordance with Appendix B, Paragraph B3.1, which include the swept path clearances specified in Paragraph B3.2. The swept path clearances shall clear any kerbs at the boundary of the intersection area."* Paragraph B3.2 states that clearances of 300 mm shall be provided on each side of the vehicle for areas with a speed of less than 10 km/hr and an additional 300 mm on one side only where speed are greater than 10 km/hr.

District Plan Provisions

44 Rule 7.4.3.4 b iv *"Manoeuvring for parking and loading areas"* requires that for *"any activity with a vehicle access to a heavy vehicle bay required by Rule 7.4.3.3, on site manoeuvring area shall be provided to ensure that a vehicle can manoeuvre in a forward gear onto and off a site"*.

45 Council's discretion in this matter includes *"whether there would be any adverse effects on the safety and amenity values of users of transport modes within and passing the site, and/or the function of the frontage road."*

46 I also note that Rule 14.5.9: *Retirement Villages* includes the following matter of discretion:

*Integration of access, parking areas and garages in a way that is **safe for pedestrians and cyclists**, and that does not visually dominate the development, particularly when viewed from the street or other public spaces*

47 Based on the above analysis, in my opinion the Applicant has failed to demonstrate that proposal for access to and from the Dorset Street will not compromise the safety of users of Dorset Street including vehicles and pedestrians.

Antoni Facey

18 January 2021