

**Before the Hearing Panel appointed by the
Christchurch City Council**

In the Matter of

the Resource Management Act
1991 (**Act**)

And

In the Matter of

Proposed Plan Change to the
Christchurch City Council: Marshs
Road Industrial

**Statement of Evidence of
Andrew Francis Leckie (Traffic) for
Calder Stewart Development Limited**

Dated: 2 October 2026

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INTRODUCTION

Qualifications and Experience

1. My name is Andrew Francis Leckie.
2. I have a Bachelor of Engineering (Hons) in Civil Engineering and a Master of Engineering in Transportation, both from the University of Canterbury. I am a Chartered Professional Engineer and a Chartered Member of Engineering New Zealand.
3. I have specialised as a transportation engineering consultant for the last 12 years. In my current role as a Principal Transportation Engineer with Stantec New Zealand, I am involved in transportation engineering assessment and design for a broad range of land use activities.
4. My work includes integrated transport assessments, traffic modelling, road safety assessments, traffic engineering design and expert witness services for resource consent and plan change processes.
5. I am very familiar with the South West Hornby area and its surrounding transport network. I have undertaken transport assessments for numerous industrial developments within the area, including developments on Marshs Road and Bruce Stewart Drive. I have also provided transport advice for development of the wider industrial subdivision network, undertaken detailed design of the Bruce Stewart Drive and Sir James Wattie Drive signalised intersections on Shands Road, and completed road safety audits within the South West Hornby area.
6. I have been instructed by Calder Stewart Development Limited (**Calder Stewart**) to give expert traffic evidence in respect of Private Plan Change 19: Marshs Road Industrial (**PC19**), being a private plan change application to rezone approximately 19.5 hectares of land zoned Rural Urban Fringe Zone (**RUFZ**) to a combination of Industrial Heavy Zone (**IHZ**) and Industrial General Zone (**IGZ**) (**Site**).
7. I am familiar with the Site and surrounding transport environment through my involvement in transportation assessments relating to PC19.

Code of Conduct

8. While this is not an Environment Court hearing I have read and agree to comply with the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2023. This evidence is within my area of expertise, except where I state that I am relying on material produced by another person. 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. My evidence will deal with the following:
 - (a) executive summary;
 - (b) background and role;
 - (c) the existing and future transport environment surrounding the Site;
 - (d) description of PC19;
 - (e) the traffic-related effects of PC19;
 - (f) response to traffic-related issues raised in submissions;
 - (g) response to traffic-related issues raised in section 42A report; and
 - (h) conclusions.

EXECUTIVE SUMMARY

10. I prepared the Integrated Transport Assessment (**ITA**) in support of PC19 and remain of the opinion that there are no transport-related reasons why PC19 should not be approved.
11. Development enabled by PC19 would facilitate completion of the Bruce Stewart Drive connection between SH1 and Shands Road, as anticipated through the Christchurch District Plan.
12. The ITA concluded that the connection would provide a range of transport-related benefits including a more connected road network, reduced travel times and travel distances, reduced reliance on Marshs Road and improved accessibility to surrounding industrial areas.
13. Traffic modelling of the future network, including development enabled by PC19 and the Bruce Stewart Drive connection to SH1, indicated that most key intersections would continue to operate at a similar level and that the SH1 / Pound Road intersection would continue to operate acceptably with the future fourth leg in place.
14. There is a high degree of agreement between my evidence, the transport evidence of Liqi Chen for the Christchurch City Council (**Council**) and the section 42A report.

The principal area of disagreement relates to the assessment of potential transport effects associated with development occurring prior to completion of the SH1 connection.

15. In my opinion, that issue was expressly considered in Section 10.3 of the ITA and assessed at a level proportionate to the scale of the Site and its anticipated contribution to future traffic demand.

BACKGROUND AND ROLE

16. I have been involved in the transport assessment of PC19 since 2022.
17. I prepared the ITA dated April 2023 in support of PC19. The ITA assessed the transport effects of rezoning the Site for industrial activities and considered the ability of the surrounding transport network to accommodate development enabled by PC19. The assessment included consideration of future transport network conditions and future industrial development within the wider South West Hornby area.
18. In November 2024, I responded to transport-related queries raised by the Council regarding the ITA and associated transport modelling. The queries related to matters including modelling assumptions, traffic growth forecasts, traffic distribution, and the operation of the future road network. Following consideration of those matters, I did not identify any reason to alter the conclusions reached in the ITA.
19. In March 2026, I undertook additional assessment relating to concerns raised by New Zealand Transport Agency Waka Kotahi (**NZTA**) regarding the SH1 / Marshs Road intersection. This work quantified the likely proportion of traffic generated by PC19 that would use the SH1 / Marshs Road intersection and considered the resulting implications for the operation and safety of that intersection.

EXISTING TRANSPORT ENVIRONMENT AT THE SITE

20. The Site is located on the south-eastern corner of the Main South Road (**SH1**) and Marshs Road intersection. SH1 forms the northern boundary of the Site and operates as a major arterial route providing a key connection into and around Christchurch. Marshs Road forms the western boundary of the Site and currently provides a connection between SH1 and the Christchurch Southern Motorway interchange at Shands Road. Pound Road is located opposite the Site on the northern side of SH1 and provides an important north-south arterial route connecting SH1 with the wider Hornby and Islington industrial areas.

21. The wider South West Hornby industrial area has developed around the road network connecting to Shands Road and the Christchurch Southern Motorway interchange. Bruce Stewart Drive currently extends north from Shands Road into the industrial area south of the Site. Access to public transport, walking and cycling networks is available in the surrounding area, including bus services on Waterloo Road, major cycle routes on Waterloo Road and Shands Road, and shared path facilities on SH1, Pound Road and Bruce Stewart Drive.
22. Since preparation of the ITA, I am aware that NZTA has commenced wider strategic transport planning investigations for the Hornby area. I recently met with NZTA representatives involved in this work. My understanding is that the study is considering the long-term transport needs of the wider Hornby area over approximately a 30-year planning horizon and includes the state highway and arterial road network extending from Templeton through to north of Christchurch Airport. The SH1 / Pound Road intersection forms one component of this wider strategic planning work.
23. I am also aware that the Pound Road Industrial Development was approved through the Fast-track Approvals Act process in 2026. That approval includes traffic monitoring requirements and provision for future upgrades to the SH1 / Pound Road and Pound Road / Waterloo Road intersections if specified traffic thresholds are reached. The approved upgrade concept includes an additional right-turn lane from Pound Road onto SH1 and an additional southbound approach lane on Pound Road approaching Waterloo Road.

DESCRIPTION OF PLAN CHANGE 19

24. PC19 seeks to rezone the Site from RUFZ to a combination of IHZ and IGZ. The proposed rezoning would extend the South West Hornby Industrial Area and provide for future industrial development consistent with the surrounding industrially zoned land.
25. From a transportation perspective, a key component of PC19 is the extension of Bruce Stewart Drive through the Site to SH1 opposite Pound Road. This would create a future fourth leg at the existing SH1 / Pound Road signalised intersection. The South West Hornby Industrial Area Outline Development Plan (**ODP**) identifies the minor arterial road extending north from Shands Road to the boundary of the Site, while the District Plan road hierarchy anticipates its continuation through the Site to SH1. The District Plan also anticipates that this connection will replace the section of Marshs Road between SH1 and Shands Road as the minor arterial route. PC19 would enable the final section of that connection between the existing Bruce Stewart Drive corridor and SH1.

26. The proposed transport framework does not provide for any new road connections to Marshs Road or any direct property access to either SH1 or Marshs Road. Future development within the Site would instead be integrated with the surrounding industrial area through the internal road network and Bruce Stewart Drive. Access arrangements and internal road connections would be determined through future subdivision and development processes.

TRAFFIC EFFECTS

Traffic Generation and Wider Network Effects

27. The transport effects of PC19 were assessed in the ITA prepared in 2023. The assessment considered future transport network conditions and future industrial development within the wider South West Hornby area, rather than existing conditions only. In particular, traffic modelling incorporated substantial future industrial development within the surrounding area, including approximately 100 hectares of industrially zoned but undeveloped land.
28. In November 2024, the Council raised a number of queries relating to the traffic modelling and assumptions adopted within the ITA. These queries related to matters including future traffic growth, traffic distribution and network performance. Responses were provided to all queries and I did not identify any reason to alter the conclusions of the ITA.
29. The ITA adopted a traffic generation rate that had previously been established and applied within the South West Hornby industrial area. Based on the development area assessed at the time¹, development enabled by PC19 was estimated to generate approximately 200 vehicle movements per hour during peak periods. The current proposal provides for a smaller industrially developable area than was assumed in the ITA and would therefore be expected to generate lower traffic volumes.
30. A key transport-related outcome of PC19 is that it enables completion of the Bruce Stewart Drive connection between the existing South West Hornby industrial area and SH1, as anticipated in the District Plan. The connection would complete a planned arterial road link between SH1 and Shands Road, including the Christchurch Southern Motorway interchange, and provide a more connected road network for the wider area.

¹ The ITA assumed approximately 18.5 hectares of developable industrial land, based on approximately 23 hectares of land being rezoned and an allowance of approximately 20% for roads and stormwater management.

31. The ITA traffic modelling indicated that the connection would provide wider network benefits throughout the Hornby area. These benefits included reduced travel times and travel distances across the wider area and a more connected road network between SH1, the Christchurch Southern Motorway and the surrounding industrial areas. The modelling also indicated that, with development enabled by PC19 and the Bruce Stewart Drive connection to SH1 in place, most key intersections in the area would continue to operate at a similar level.
32. The traffic modelling assumed that, once the Bruce Stewart Drive connection to SH1 was in place, the SH1 / Marshs Road intersection would operate as a left-in / left-out intersection. This reflected discussions held with NZTA during preparation of the ITA, where it was indicated that such a treatment may be appropriate in the future given existing safety concerns associated with right-turn movements at the intersection.
33. Under that scenario, the modelling indicated reduced traffic volumes on Marshs Road. The ITA concluded that these reductions were attributable both to the Bruce Stewart Drive connection providing a more attractive parallel route and to the assumed restrictions on turning movements at SH1 / Marshs Road. Reduced use of Marshs Road was considered beneficial given the existing safety concerns at the SH1 / Marshs Road intersection and the rural formation of the road.
34. The ITA also considered the possibility that development within the Site could occur prior to completion of the SH1 connection, with access during that period available through the existing industrial area to the south. The Site is small relative to the wider zoned but undeveloped industrial area, and its estimated peak hour traffic generation would represent a comparatively small proportion of the future industrial traffic demand in the area. On that basis, the ITA concluded that traffic generated by development within the Site prior to completion of the SH1 connection could be accommodated on the existing road network, with the wider network benefits being realised once the connection to SH1 was completed.
35. While I have not updated the traffic modelling since the ITA was completed, I consider that the future transport network conditions assessed in the ITA remain a reasonable basis upon which to assess the transport effects of PC19. I continue to expect that completion of the Bruce Stewart Drive connection would provide the wider network connectivity and efficiency benefits identified in the assessment.

State Highway 1 / Pound Road Intersection

36. A key component of the transport assessment was consideration of a future fourth leg at the SH1 / Pound Road intersection. A concept design was prepared as part of the ITA to demonstrate the feasibility of connecting Bruce Stewart Drive to SH1

via a fourth leg at the intersection. Traffic modelling undertaken as part of the ITA indicated that the SH1 / Pound Road intersection would continue to operate acceptably with the addition of the fourth leg.

37. As discussed earlier, further planning and assessment has occurred in relation to the SH1 / Pound Road intersection since preparation of the ITA. The recently approved Pound Road Industrial Development consent includes traffic monitoring requirements and identifies potential future upgrades to the SH1 / Pound Road intersection should specified traffic thresholds be reached. While those upgrades may ultimately include an additional right-turn lane from Pound Road onto SH1, I do not consider that they would preclude provision of the future road connection associated with PC19. More recently, I have discussed the wider Hornby strategic transport investigations with NZTA representatives and understand that the future Bruce Stewart Drive connection continues to be taken into account as part of ongoing planning for the area.
38. The detailed design of the future road connection will be considered through future subdivision and development approvals, including updated assessment of intersection layout, traffic volumes and intersection performance using information available at that time.

Accessibility by Non-Car Travel Modes

39. The Site is located within walking distance of existing bus services on Waterloo Road and is connected to the surrounding area by walking and cycling facilities, including major cycle routes on Waterloo Road and Shands Road and shared path facilities on SH1, Pound Road and Bruce Stewart Drive. The ITA concluded that development enabled by PC19 would be appropriately connected to the surrounding area for non-car travel and that completion of the Bruce Stewart Drive connection would improve accessibility to the surrounding industrial areas by walking and cycling.

Summary of Effects

40. Overall, the ITA concluded that development enabled by PC19 and completion of the Bruce Stewart Drive connection to SH1 would provide a range of transport-related benefits. These included a more connected road network, reduced travel times and travel distances within the wider area, reduced use of Marshs Road and improved accessibility to surrounding industrial areas by non-car travel modes. The traffic modelling also indicated that most key intersections would continue to operate at a similar level, while the SH1 / Pound Road intersection would continue to operate acceptably with the future fourth leg in place. For these reasons, I continue to consider that there are no transport-related reasons that PC19 should not be approved.

RESPONSE TO SUBMISSIONS

New Zealand Transport Agency Waka Kotahi Submission

41. NZTA raised concerns regarding the potential for additional traffic generated by development enabled by PC19 to exacerbate existing safety concerns at the SH1 / Marshs Road intersection. NZTA considered that a left-in / left-out treatment may be an appropriate means of addressing those concerns and requested further information regarding how any controls at the intersection would be implemented. NZTA also sought assurance regarding the design and future operation of the proposed fourth leg at the SH1 / Pound Road intersection.
42. In response to NZTA's submission, I reviewed outputs from the transport model prepared for the ITA to quantify the proportion of traffic generated by development of the PC19 area that would travel through the SH1 / Marshs Road intersection. This review indicated that approximately 9% to 12% of traffic generated by development of the PC19 area would travel through the intersection on SH1, equating to approximately 18 to 24 vehicle movements per hour during peak periods. Compared with existing SH1 traffic volumes exceeding 2,000 vehicles per hour, I concluded that this level of change would not have a noticeable effect on the operation of the intersection.
43. I also noted that completion of the Bruce Stewart Drive connection to SH1 would complete a route between SH1 and Shands Road that has been planned for some time and would provide wider network benefits. The new connection would be expected to attract some traffic that would otherwise use Marshs Road and may therefore provide some benefit at the SH1 / Marshs Road intersection.
44. Following review of the additional information provided, NZTA advised that it was satisfied that development enabled by PC19 was unlikely to result in a material change to the efficiency or safety of the SH1 / Marshs Road intersection. NZTA subsequently concluded that its concerns had been suitably addressed, retained a neutral position on PC19 and advised that it no longer wished to be heard.
45. I also note that NZTA's submission raised matters relating to the detailed design and future operation of the proposed fourth leg at the SH1 / Pound Road intersection. The ITA demonstrated the feasibility of a future fourth leg and concluded that the intersection would continue to operate acceptably with development enabled by PC19. As outlined in my evidence above, I continue to hold that view. Matters relating to detailed design, lane configuration, carriageway width, road safety auditing and approval of works within the state highway network are standard components of subsequent design and consenting processes and would be addressed in consultation with NZTA as the road controlling authority.

Safety and Condition of Marshs Road

46. Several submitters raise concerns regarding the current safety and condition of Marshs Road, including the operation of the SH1 / Marshs Road intersection, the suitability of Marshs Road for heavy vehicle traffic, and its ability to accommodate additional traffic associated with development enabled by PC19.
47. As outlined at paragraphs 27 to 29, the ITA assessed the future role of Marshs Road within the transport network and concluded that traffic volumes on Marshs Road would reduce following completion of the Bruce Stewart Drive connection to SH1. The ITA identified this as a beneficial outcome given the existing safety concerns at the SH1 / Marshs Road intersection and the rural formation of Marshs Road. For these reasons, I continue to consider that development enabled by PC19 would not result in unacceptable traffic effects on Marshs Road.

Property Access to Marshs Road

48. Warren and Pauline Newell raise questions regarding access arrangements to future development within the PC19 area.
49. As discussed above, the proposed transport framework does not provide for any new road connections to Marshs Road or any direct property access to either SH1 or Marshs Road. Future development within the Site would instead be integrated with the surrounding industrial area through Bruce Stewart Drive and the internal road network.

Future Road Connection to SH1

50. Several submitters raise concerns regarding the future road connection between Bruce Stewart Drive and SH1, including the level of detail currently available and the certainty of the connection being delivered.
51. The future road connection forms part of the planned transport network for the South West Hornby area and was assessed on that basis within the ITA. As outlined above, the ITA demonstrated that Bruce Stewart Drive can be connected to SH1 via a fourth leg at the SH1 / Pound Road intersection.
52. The concept design prepared for the ITA was intended to demonstrate feasibility at the plan change stage rather than establish a final road layout. Detailed design, land requirements and implementation matters can be addressed through subsequent subdivision, design and approval processes.
53. I continue to consider that the future road connection represents an appropriate component of the planned transport network for the South West Hornby area and that there are no transport-related reasons that PC19 should not be approved.

RESPONSE TO SECTION 42A REPORT

54. I have reviewed the transport evidence of Liqi Chen and the transport-related conclusions contained within the section 42A report prepared by Kirk Lightbody. Overall, there is a high degree of agreement between my evidence, the evidence of Mr Chen and the transport-related conclusions reached within the section 42A report.
55. The principal area of disagreement relates to the assessment of potential transport effects associated with development occurring prior to completion of the Bruce Stewart Drive connection to SH1.
56. I acknowledge that the ITA did not include a separate traffic modelling scenario representing development of the PC19 area prior to completion of the SH1 connection. The ITA was a long-term transport assessment that considered future network conditions. The Bruce Stewart Drive connection to SH1 forms a key component of the planned transport network for the South West Hornby area, is anticipated through the District Plan and would be enabled by PC19. In my opinion, it was therefore appropriate for the long-term transport assessment to assess the future network with that connection in place.
57. The interim situation was nevertheless considered through Section 10.3 of the ITA. That assessment reflected the relatively small scale of the Site compared with the wider South West Hornby industrial area and the comparatively small proportion of future industrial traffic anticipated to be generated by development of the Site. The ITA also noted that approximately 100 hectares of surrounding industrial land was already zoned and capable of development independently of PC19.
58. Accordingly, while I acknowledge Mr Chen's preference for either early delivery of the road connection or an additional assessment mechanism applying prior to completion of the SH1 connection, I remain comfortable with the level of assessment undertaken in the ITA and the conclusions reached regarding the interim transport effects associated with development occurring prior to completion of the SH1 connection.
59. For these reasons, my overall transport opinion remains unchanged. I continue to consider that development enabled by PC19 would provide the transport-related benefits identified in the ITA and that there are no transport-related reasons that PC19 should not be approved.

CONCLUSION

60. PC19 would enable completion of the Bruce Stewart Drive connection between SH1 and Shands Road, as anticipated through the District Plan. The ITA concluded that this connection would provide a range of transport-related benefits, including improved network connectivity, reduced travel times and travel distances, reduced reliance on Marshs Road and improved accessibility by non-car travel modes.
61. Having reviewed the submissions, the transport evidence of Liqi Chen and the section 42A report, my overall transport opinion remains unchanged. I continue to consider that the transport effects of development enabled by PC19 have been appropriately assessed and that there are no transport-related reasons that PC19 should not be approved.



Andrew Francis Leckie

2 October 2026