

**BEFORE INDEPENDENT HEARING COMMISSIONERS
IN CHRISTCHURCH**

TE MAHERE Ā-ROHE I TŪTOHUA MŌ TE TĀONE O ŌTAUTAHU

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of the hearing of submissions on Private Plan Change 23
Whisper Creek, Spencerville to the Christchurch District Plan

**STATEMENT OF PRIMARY EVIDENCE OF DAVID JOHN ROBERT SMITH ON
BEHALF OF CHRISTCHURCH CITY COUNCIL**

Dated: 20 April 2026

TABLE OF CONTENTS

TABLE OF CONTENTS	1
EXECUTIVE SUMMARY	2
INTRODUCTION	3
Qualifications and experience	4
Code of conduct.	5
Scope of evidence	5
REVIEW OF INTEGRATED TRANSPORT ASSESSMENT REPORT	5
Vehicle access and connectivity	7
Walking and cycling access	10
Public transport access	11
Network effects	12
Road safety effects	13
STRATEGIC PLANNING FRAMEWORK	16
Christchurch District Plan	17
Canterbury Regional Policy Statement (CRPS)	18
Greater Christchurch Spatial Plan	19
Canterbury Regional Land Transport Plan 2024-34	19
REVIEW OF SUBMISSIONS	20
Vehicle movements and congestion	20
Network Safety	20
Lack of Public Transport	21
Lack of Lower Styx Road Access	22
Traffic lights	22
Tsunami evacuation risk	22
Insufficient sight lines	24
Level crossing at Chaney's corner	24
Transport-related Carbon emissions	25
CONCLUSION	25

EXECUTIVE SUMMARY

1. My full name is David John Robert Smith. I am employed as Technical Director of Transportation Planning at Abley Limited.
2. I have prepared this statement of evidence on behalf of the Christchurch City Council (the **Council**) in respect of matters arising from the submissions and further submissions on Private Plan Change 23 Whisper Creek, Spencerville to the Christchurch District Plan (the **District Plan**; **PPC23**).
3. My evidence focuses on traffic and transportation matters.
4. I have reviewed the Integrated Transportation Assessment (ITA) report prepared by Novo Group, RFI responses, relevant sections of the Section 32 report, proposed District Plan amendments and transport-related submissions and concluded that there are unmitigated or potentially unidentified safety and efficiency effects.
5. I have recommended that more assessment be undertaken as follows:
 - (a) A safety assessment along the Spencerville Road corridor including the intersection of Marshland / Main North / Spencerville Road, and identify any mitigation required to offset increasing road safety risk as a result of Plan Change traffic.
 - (b) Sidra Intersection modelling of the Marshland / Main North / Spencerville Road intersection to determine if further works are required to accommodate Plan Change traffic.
 - (c) Consider establishing a direct vehicular connection to Lower Styx Road from the Plan Change site, which has the potential to change travel patterns including reducing traffic volumes in the vicinity of the School.
 - (d) Assess the extent to which the Plan Change site along the northern property boundary (if established with fences or vegetation in the future) could potentially impede sight distances for traffic exiting the northern access, and if required vest this land as road reserve.
 - (e) Undertake a multi-modal accessibility assessment for the full Plan Change site in line with CCC ITA guidelines

6. I have further recommended that the Outline Development Plan and/or amended planning provisions be updated to address the following matters.
- (a) Provide a direct pedestrian and cycle corridor connecting the site between Teapes Road and the Ouruhia Model School via Turners Road.
 - (b) Provide a pedestrian and cycle corridor along Spencerville Road to connect the site to the intersection of Lower Styx Road and Spencerville Road.
 - (c) Prepare a Level Crossing Safety Impact Assessment (LCSIA) in line with Kiwirail guidance on the Spencerville Road level crossing to the west of the site, to identify any required improvements prior to occupation of the Plan Change site.
 - (d) Include proposed infrastructure upgrades identified in the ITA including:
 - (i) Turners Road From Spencerville Road to Marshland Road is proposed to be upgraded to a 6.0m carriageway width 0.5m sealed shoulders.
 - (ii) Teapes Road is proposed to be upgraded to 5.5m wide carriageway with 0.5m sealed shoulders when development commences that accesses Teapes Road.
 - (iii) The Turners Road / Teapes Road intersection including squaring up the intersection.
 - (iv) Turners Road / Spencerville Road intersection – land is to be vested for sight line improvements to the east along Spencerville Road.
7. I am unable to support the proposal in its current form. I consider that additional assessment is required to understand traffic effects, and amendments to the planning provisions and ODP as listed above are required to mitigate traffic safety effects associated with the Plan Change.

INTRODUCTION

8. My full name is David John Robert Smith. I am employed as Technical Director of Transportation Planning at Abley Limited. I have been in this position since 2018 and have been at Abley for 14 years.

9. I have been engaged by Christchurch City Council to prepare evidence in relation to traffic and transportation matters for PPC23.
10. In preparing this evidence I have:
- (a) Reviewed the following documents:
 - (i) Integrated Transportation Assessment (ITA) prepared by Novo Group dated 16 April 2025 (Section 32 Appendix E).
 - (ii) Transport-related Request for Information (RFI) responses.
 - (iii) Relevant section of the Section 32 report and District Plan amendments (Section 32 Appendix K).
 - (iv) Summary of submissions received prepared by Council.
 - (b) Undertaken a site visit on Friday 13th February 2026 between 9am and 10am to understand the transport environment in relation to the Site.
11. I am authorised to provide this evidence on behalf of the Council.

Qualifications and experience

12. I hold a Bachelor of Technology with Honours in Industrial Operations Research and Master of Philosophy in Operations Research from Massey University. I am a Chartered Member of the Institute of Logistics and Transport (CMILT), a member of Engineering New Zealand (MEngNZ) and a member of the NZ Modelling User Group sub-group of Engineering NZ. I have previously been appointed to the NZ Transport Agency Independent Professional Advisors panel for Transportation Modelling. I am also certified as a Hearings Commissioner having completed the Making Good Decisions course in 2019.
13. My previous experience includes 25 years of transportation planning and engineering work. I have managed and led numerous projects related to transportation business cases, transportation research and RMA related matters for public and private sector clients.
14. I have been engaged by the Environmental Protection Authority, Auckland Council, Auckland Transport, Selwyn District Council, Queenstown-Lakes District Council, Taupo District Council, Foodstuffs South Island Limited, Ports of Auckland and Fonterra as a transportation expert witness. I have

extensive experience working as a transportation planner and modeller in the Greater Christchurch area.

Code of conduct.

15. While this is a Council hearing, I have read the Code of Conduct for Expert Witnesses (contained in the 2023 Practice Note) and agree to comply with it. Except where I state I rely on the evidence of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from my expressed opinions.

Scope of evidence

16. My statement of evidence addresses the following matters:
- (a) Review of PPC23 ITA Report;
 - (b) Review of responses to the request for further information; and
 - (c) Review of transport-related matters raised through submissions.
17. I address each of these points in my evidence below.

REVIEW OF INTEGRATED TRANSPORT ASSESSMENT REPORT

18. Some of the key transport-related aspects of the proposal are as follows:
- (a) The proposal seeks to rezone from Specific Purpose (Golf Resort) Zone to a Residential New Neighbourhood Zone. This would enable approximately 800 dwellings, and includes community hub / commercial area to be developed.
 - (b) Three external Collector Road intersections are proposed, to Spencerville Road (north), Turners Road (west) and Teapes Road (southwest). There is no direct property access to Turners Road or Spencerville Road
 - (c) The 800 dwellings are assumed in the ITA to generate 720 two-way vehicle trips in peak hour and 6,560 per day which corresponds to 0.9 trips per dwelling in peak hour and 8.2 trips per day. I consider these rates to be in line with industry best practice but note that there is no trip generation assumed for the community hub / commercial area. The

ITA states that trip generation was not considered because it is intended to serve the local area only.

- (d) Several infrastructure upgrades are proposed as part of the Plan Change including:
 - (i) Turners Road From Spencerville Road to Marshland Road is proposed to be upgraded to a 6.0m carriageway width 0.5m sealed shoulders.
 - (ii) Teapes Road is proposed to be upgraded to 5.5m wide carriageway with 0.5m sealed shoulders when development commences that gains access via Teapes Road.
 - (iii) The Turners Road / Teapes Road intersection is also proposed to be upgraded, including squaring up the intersection.
 - (iv) Marshland Road / Turner Road intersection to improve capacity (with dedicated left and right turn lanes after 700 lots are created).
 - (v) Turners Road / Spencerville Road intersection – land is to be vested for sight line improvements to the east along Spencerville Road.
 - (vi) Shared User Path that links the site to Ōuruhia Model School. This would follow Styx River (providing part of Council's proposed Source to Sea¹ route), travels through the Styx Loop Conservation Park with 400m of path on Turners Road to link to the school.
 - (vii) Shared User Path on Lower Styx Road to link with Te Korari Street and adjacent bus services. The existing Styx River Bridge at the southern end of Teapes Road would be retained to connect to a new Shared User Path on Lower Styx Road.

19. I note that the proposed upgrades do not include frontage upgrades to Spencerville Road and Turners Road which form the northern and western boundaries of the Plan Change area. In an urban context a Plan Change of this scale and nature would usually be accompanied by frontage upgrades including consideration of parking, footpaths, provision for cyclists and the

¹ <https://ccc.govt.nz/assets/Documents/Environment/Water/Vision-2000-2040-The-Styx.pdf>

construction of kerb and channel. PPC23 does not propose direct access to either corridor therefore from a traffic effects perspective I do not consider that urban frontages are a requirement when considering this Plan Change in isolation.

20. However, should the immediately surrounding area (which I understand is currently zoned Rural Urban Fringe) be urbanised in the future, I would recommend frontage upgrades be provided to avoid development occurring in isolated pockets. Such upgrades would demonstrate that the area is urban in nature, may be accompanied by lower speed limits as is consistent with an urban traffic environment (and in turn would provide safer outcomes than a higher speed rural or peri-urban environment) and would improve connectivity for all modes between development areas. I note that Ms Schroder and Ms Smetham will be assessing this aspect from urban design and visual perspectives.

Vehicle access and connectivity

21. The current Outline Development Plan under the Specific Purpose (Golf Resort) zoning includes road accesses to Lower Styx Road and Spencerville Road and the Service Vehicle only access to Teapes Road. The existing ODP for the site is shown in Figure 1.
22. The proposed PPC23 ODP (refer Figure 2) proposes vehicle connections to Spencerville Road, Turners Road and the end of Teapes Road, but proposes to only provide a walk/cycle connection at the existing bridge across the Styx River to Lower Styx Road.
23. The traffic modelling undertaken by QTP and appended to the ITA estimates that 70% of traffic to/from the site will access the wider network via Turners Road then connecting to Marshland Road to the west. It is not clear from the ITA how attractive a direct connection to Lower Styx Road would be or whether this has been considered in detail.
24. I have calculated the distance from the Turners / Teapes intersection to the Marshland Rd / Lower Styx Road intersection via Turners Rd and via a direct Lower Styx Road connection and concluded that both routes are approximately 3.4km. This indicates that they would be approximately equally attractive for travel to/from Christchurch.

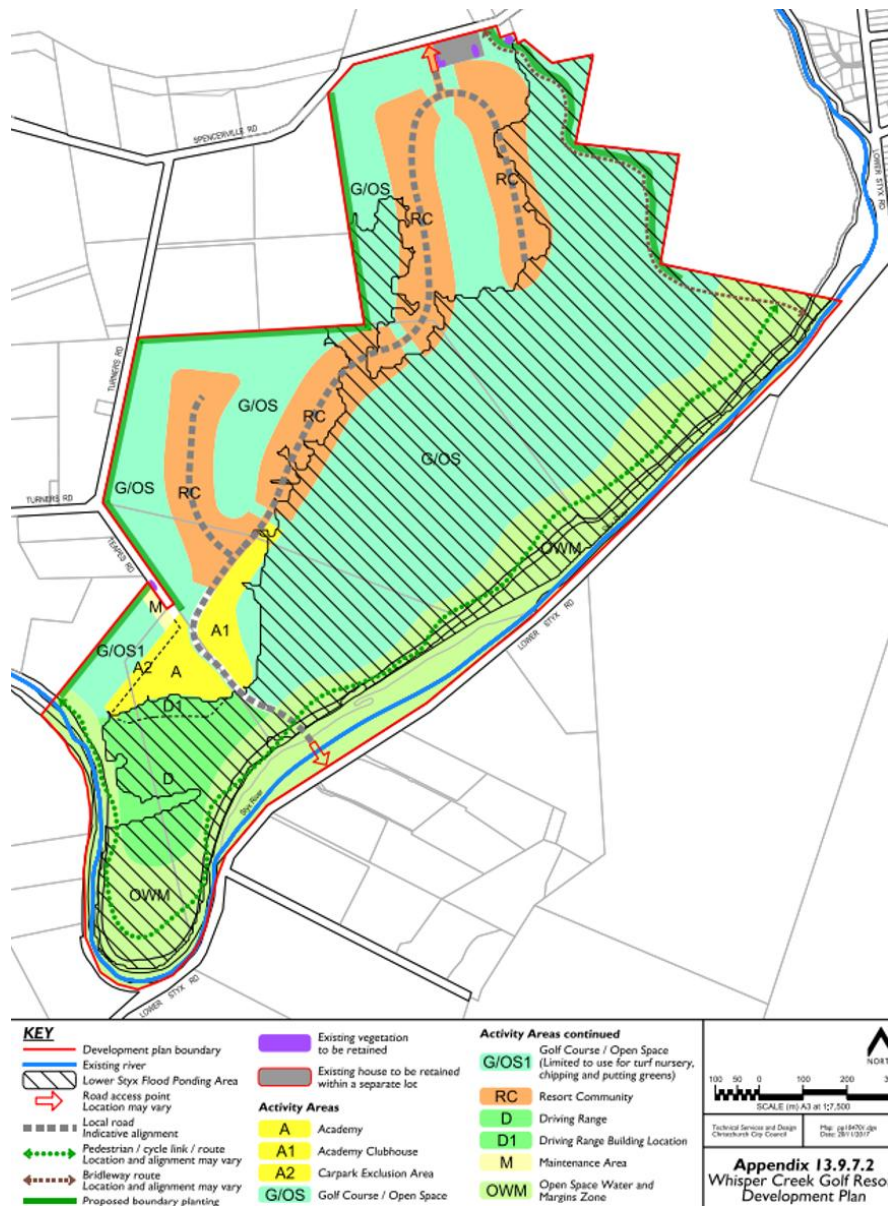


Figure 1 Specific Purpose (Golf Resort) Whisper Creek ODP²

² Source: <https://districtplan.ccc.govt.nz/?docId=uRxTmAf4Rgc%3d>

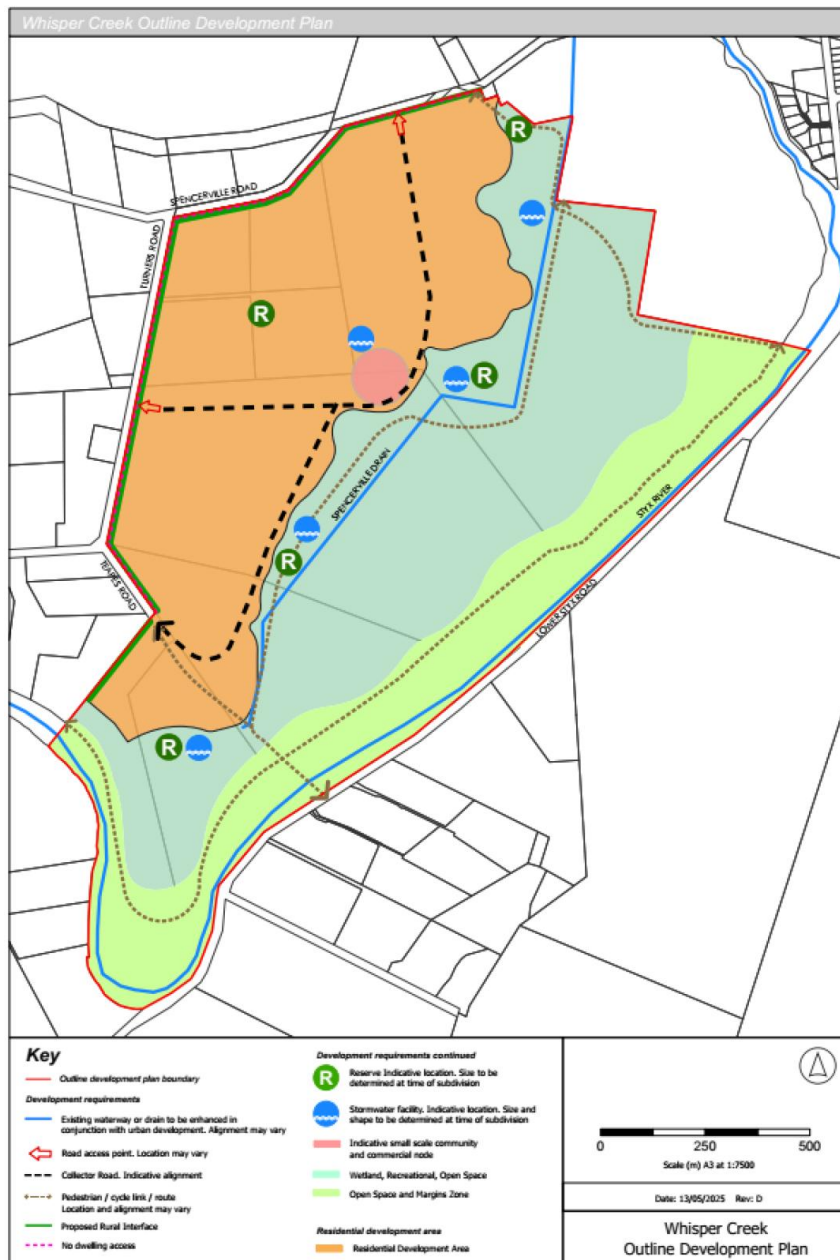


Figure 2 Plan Change 23 ODP³

25. There is a lack of assessment of the merits of a direct connection onto Lower Styx Road (as signalled in the current Special Purpose zone ODP in Figure 1). In my view a direct connection would have the potential to reduce traffic volumes on Turners Road including in the vicinity of Ōuruhia Model School. However I note that a new intersection on Lower Styx Road (which is a higher speed 80 kph environment compared to Turners and Marshland Road and therefore may be less safe) would be required. It is recommended that further assessment be undertaken in relation to the merits of retaining this direct connection for general traffic.

³ Source: Notified Plan Change 23 Appendix K page 7

Walking and cycling access

26. There is currently a lack of pedestrian and cycle facilities in vicinity of the site which is not atypical given its current rural nature. The applicant proposes to construct shared paths connecting the site to the Ōuruhia Model School (the school) and along Lower Styx Road to the Prestons subdivision. I support their inclusion in provisions as part of the Plan Change.
27. I recommend two further additions to connect provide a satisfactory level of walk and cycle connectivity:
- (a) There are no walking or cycling connections to connect between the site and Spencerville settlement. Although the traffic modelling in the ITA only assumes a small quantum (3%) of residential traffic interacts with Spencerville, I consider that this connection is important as the community job / commercial centre⁴ within the Site are likely to be convenient and attractive for Spencerville settlement residents where there are few amenities available. I recommend that a shared path is provided along Spencerville Road between the site access and Lower Styx Road to provide for pedestrians and cyclists. This is of primary importance for visitors from Spencerville to the community hub / commercial centre within the Site, but would also be an important recreational connection to the beach and adjacent walking and cycling tracks.
 - (b) Whilst the construction of a shared path to the school is supported, it is noted that residents in the Plan Change area would need to walk or cycle to the southwest corner of the urban area, and then loop around the local recreational track down to the Styx River and back to access the Shared Path (shown by the blue arrows on Figure 3). This is not a direct and convenient connection in my view. Instead, I recommend that a shared path be formed along the length of Turners Road between the school and the Turners/Teapes intersection. This could replace the proposed (blue arrows) connection and in doing so provides a safe and direct connection as shown by the red arrow in Figure 3. The black arrow shows the portion of shared path along Turners Road as proposed - I recommend the school should be

⁴ As noted on page 10 of the Section 32 report

accessed via the red and black route rather than the less direct blue and black route proposed in the application.

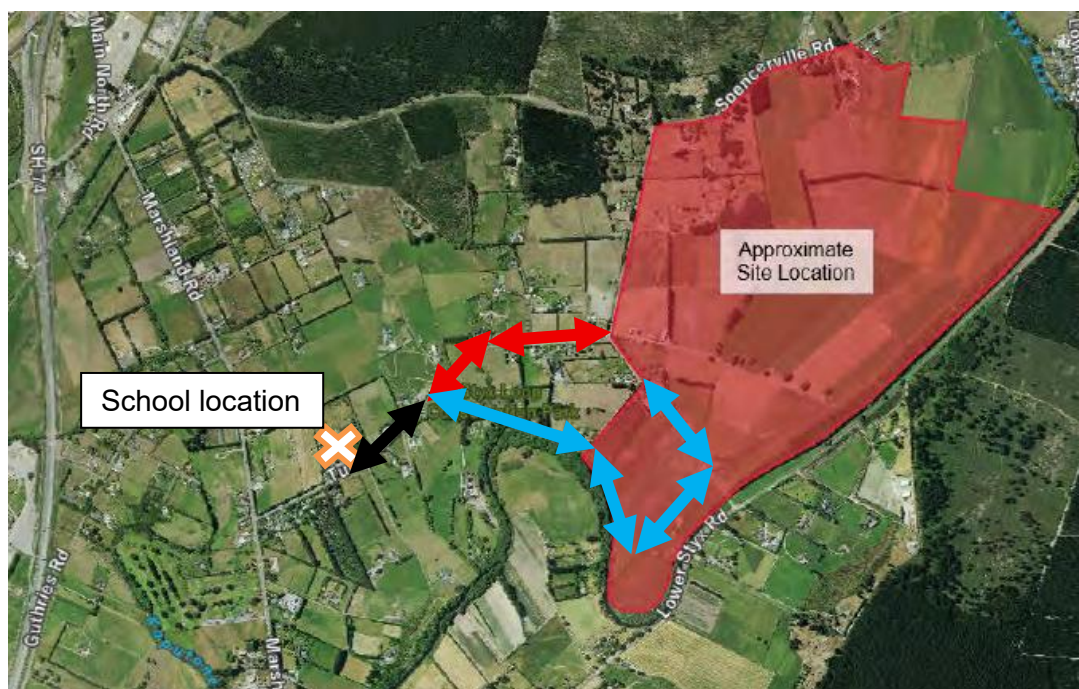


Figure 3 PPC23 site with walk and cycle connections to school (blue arrow is proposed and red arrow is recommended)⁵

Public transport access

28. The nearest public transport services are currently the 135 service which travels to the top end of Prestons subdivision. It is acknowledged that the applicant proposes building a shared path along Lower Styx Road to connect the site to the footpath and local roads at Prestons. This will provide a degree of connectivity to this existing service forming a walking and cycling connection of approx. 3km from the Turners/Teapes intersection to the current 135 service.
29. The ITA states that “*Collector Roads within the Site will be designed to accommodate bus services, should these be proposed by Environment Canterbury*”. This is supported and is recommended to be annotated in the ODP. The provision of future public transport services to the Plan Change site is a matter for Environment Canterbury, and by designing to enable future bus movement through the site, and such services would not be precluded. The potential future routes shown in figure 27 of the ITA is a logical extension of the existing network.

⁵ Source is figure 1 of the Novo Group ITA

Network effects

30. I have reviewed the traffic modelling presented in the ITA and have concluded that this is generally undertaken in line with best practice. Notably the modelling demonstrates that the Marshland / Turners intersection will require upgrading before full development of the site is realised. The proposed addition of a left turn lane on the Turners Road approach is supported and appears achievable within the current road reserve. The addition of the left turn lane reduces Turners Rd right turn out delays from 57 to 28 seconds and left turn out delays from 35 to 15 seconds.
31. Although I support the upgrade it is not entirely clear why the threshold of 700 lots has been selected for the intersection upgrade. Related to this, there is little information available in relation to the performance of the Marshland / Main North / Spencerville Road intersection. For northbound traffic from the site in the morning peak, a right turn at one of Turners or Spencerville Roads is required, therefore in my view the operation of one intersection cannot be fully understood in isolation.
32. It is understood that 23-42% (and an average of 28%) of the traffic associated with the Site travels along Spencerville Road⁶ and the majority of these in the morning peak period are turning right out of Spencerville Road onto Main North Road. The Plan Change generates 720 two-way vehicle movements in the peak hour, 28% of which represents an additional 202 vehicles per hour on Spencerville Road and travelling through this intersection (or one vehicle every 18 seconds). The majority of these movements in the morning peak hour will be through movements or right turns out of Spencerville Road. Figure 6.4 from ITA Appendix 1 shows 140 such movements in the morning peak hour.
33. This means that the number of through and right turning vehicles from Spencerville Road will be considerably higher than the number modelled at Turners Road. In my view there is insufficient analysis to understand the impacts of the Plan Change traffic on the operation of the Marshland / Main North / Spencerville Road intersection.
34. The results of an assessment of the traffic impacts on the Marshland / Main North / Spencerville Road intersection, may have a bearing on the timing or

⁶ Refer Table 5.1 from ITA Appendix 2

need to upgrade the Marshland / Turners Road intersection, especially if a need to upgrade the Marshland / Main North / Spencerville Road intersection is established.

35. The modelling indicates a very small amount of interaction with Spencerville (3% of all movements or approx. 20 per hour) however this is based on residential travel demand only. I note there is a two-way one-lane bridge to the east of the site on Spencerville Road. The Plan Change will add approximately one vehicle every three minutes across this bridge and in my view this small increase is very unlikely to result in any safety or operational concerns. However, the traffic modelling in the ITA did not consider traffic generation of the community hub / commercial centre as it is intended to serve the local area only. Should these facilities be established it is unclear to what extent this may increase traffic volumes across the bridge which has not been assessed.
36. I note from my site visit that there are no road markings or signage at the Spencerville / Lower Styx Road intersection to establish which intersection leg has priority (see Figure 4).



Figure 4 Spencerville Rd approach to Lower Styx Road

37. This creates a potentially confusing scenario for traffic approaching from Spencerville Road and is recommended to be addressed through the installation of appropriate signage and road marking. I consider this to be a matter which should be addressed by Council.

Road safety effects

38. The crash history of the local network is presented in paragraphs 17-19 of the ITA report. This identifies several crash trends, specifically:
- (a) Loss of control crashes along Spencerville Road – citing anti-social activity as a potentially contributing factor (ice and speed are recorded factors),

- (b) Failure to give way at the Marshland / Main North / Spencerville Road intersection – and notes that these generally occurred prior to the Christchurch Northern Corridor opening which resulted in a step change reduction in traffic volumes on Marshland Road (in April 2020 13,267 vehicles per day⁷ has reduced to 8,345 vpd⁸ by 2022).

39. These explanations for the crash trends are acknowledged. However it is noted that 28% of the traffic associated with the Plan Change is anticipated to access the wider network via Spencerville Road to the west. Table 8 of the ITA estimates that total traffic generation of the site is 6,560 vehicles per day (vpd), therefore the increase in traffic on Spencerville Road is an approx 1,837 vpd. The current traffic volume on Spencerville Road is noted in the ITA to be 534-1,066 vpd, so the traffic volume is anticipated to double or triple (increase by up to 200%) when the site is fully developed.
40. This is considered a step change increase in the level of activity along the corridor so there is some likelihood that the safety performance will worsen as a result of the increase in traffic.
41. I have undertaken an assessment of the level of risk along the corridor both with and without the Plan Change traffic using the Infrastructure Risk Rating (IRR) model. This is a “*a proactive method for assessing road safety risk developed by NZ Transport Agency Waka Kotahi*”⁹. The model enables the number of predicted Death and Serious Injury (DSI) crashes to be calculated over a five-year period based on a selection of road environment parameters including daily traffic volume. By changing the traffic volume in the model, the estimated change in DSI crashes can be modelled. The results of my assessment are including in Table 1.

Table 1 Spencerville Road IRR Road Safety Risk Analysis

Parameter	Spencerville Rd W of Railway	Spencerville Rd W of Railway	Spencerville Rd E of Railway	Spencerville Rd E of Railway
	Current	With PCP23	Current	With PPC23
IRR Score	2.49		1.78	
Road length (km)	0.28		1.94	
Daily Traffic (vpd)	1050	2887	790	2,627
Predicted DSI (5-Yr)	0.094	0.257	0.271	0.902
Change in DSI (5-year period)		0.163		0.631

⁷ <https://ccc.govt.nz/transport/improving-our-transport-and-roads/traffic-count-data/links-traffic-counts-dashboard>

⁸ Table 3 of ITA

⁹ <https://www.nzta.govt.nz/resources/infrastructure-risk-rating-manual>

42. The analysis demonstrates that over a five year period the total number of DSI along the corridor (added up both sides of the railway line) increases from 0.365 to 1.159 DSIs. In my view this is a substantial increase in the road safety risk and associated number of death or serious injury crashes along the corridor. I anticipate that upgrades to the corridor may be required to improve the safety performance (or at the very least, ensure that it does not deteriorate as a result of the Plan Change).
43. The Spencerville Road corridor currently has an approx. 6m wide carriageway with grass shoulders. Noting the increase in usage I have considered the appropriateness of the carriageway with future traffic volumes in the order of 2,500-3,000 vpd.
44. Standards New Zealand have published Land Development and Subdivision Infrastructure Standards (NZS 4404:2010) which include road cross sections in a variety of urban and rural contexts. I consider that the future Spencerville Road environment (that is if the Plan Change site were fully developed) is best represented by Figure E8 from Table 3.2 of NZS 4404:2010. I have copied the corresponding cross section details in Figure 5 below with E8 details highlighted in the red box.

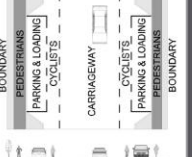
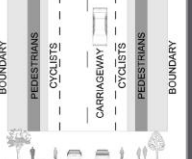
PLACE CONTEXT			DESIGN ENVIRONMENT				LINK CONTEXT					TYPICAL PLAN AND CROSS SECTION SEE APPENDIX E FOR LARGER VERSION OF FIGURES	FIGURE NUMBER
Area	Land use	Local attributes	Locality served	Target operating speed (km/h)	Min. road width (m)	Max. grade	Pedestrians	Passing, parking, loading, and shoulder	Cyclists	Movement lane (excluding shoulder)	Classification		
Notes	See 3.2.4, table 3.1 & 3.3.1.6	See table 3.1	See table 3.1	See 3.3.5	See 1.2.2, 3.3.1.9, & 3.4.16		See 3.3.11	See 3.3.6 & 3.3.1.4	See 3.3.1.5, 3.3.7, & 3.3.11.2	See 1.2.2, 3.3.1.1, 3.3.1.2, 3.3.1.3, 3.3.1.10, 3.3.11.3	See 3.2.4.2 & 3.3.1.6 (typical max. volumes)		
Rural (3.3.1.7, 3.3.1.8, & 3.3.1.9)	Access to office and education		1 to 200 lots	up to 60	20	10%	1.5 m each side	Parking and loading may occur in movement lane or be separate and recessed. Refer clause 3.3.6. Total shoulder 1.0 m, sealed shoulder 0.5 m	On sealed shoulder where it is a local authority defined cycle route	5.5 - 5.7	Local road (~ 1,000 vpd)		E7
	All other situations (where not specified elsewhere in this table)		-	up to 100	20	10%	Separate from the carriageway, 1.5 m each side	Total shoulder 1.5 m, sealed shoulder 1.0 m	On sealed shoulder where it is a local authority defined cycle route	5.5 - 5.7	Connector/collector (~ 2,500 vpd)		E8

Figure 5 NZS 4404:2010 Table 3.2 rural cross-section excerpt

45. This standard recommends a 5.5-5.7m wide carriageway with sealed shoulder of 1.0m. This would require a sealed width of 7.5-7.7m. Based on my assessment using online resources I have established the sealed component of the carriageway to vary in width in the range of 6-7m with generous grass shoulders. Noting my concerns in relation to the increased crash risk, I recommend that further consideration be given to the design standard of the Spencerville Road corridor to determine if localised or more widespread upgrades are required.

46. I note that the Standard also refers to pedestrian and cycle (only if on a defined cycle route) facilities. In this instance I do not consider these are desirable on Spencerville Road to the west of Turners Road as they would not connect to other pedestrian or cycle infrastructure. The shared paths I have recommended to connect directly to the school and Lower Styx Road, coupled with the applicant's proposed shared path to connect to Preston's subdivision provide, in my opinion, satisfactory walk and cycle connectivity to the wider network.
47. The Spencerville Road corridor includes a rail level crossing located approx. 250m to the west of the Marshland Road intersection. I observed that there are bells in operation and advance signage but no barrier arms. I would anticipate with the anticipated increase in traffic resulting from the Plan Change, barrier arms and potentially other safety features may be required to maintain the safe operation of the level crossing.
48. I recommend that a Level Crossing Safety Impact Assessment (LCSIA) be undertaken in line with Kiwirail guidance¹⁰. The guidance states (on page 7) *"a new facility installed nearby to a rail corridor that would likely increase the cycling / pedestrian / vehicle volume over a level crossing location, would constitute a 'change in use' activity for the crossing location and require an LCSIA."*
49. I recommend an LCSIA should be undertaken prior to the occupation of development in the Plan Change site, and any improvements identified through the LCSIA (such as the installation of barrier arms) should be undertaken at the expense of the applicant. This requirement should be reflected in the planning provisions.

STRATEGIC PLANNING FRAMEWORK

50. The single transport-related RFI matter requested (by Mr McGonigal, CCC Transport Network Planner prior to my involvement) a review of the Plan Change against several policies and plans, specifically:
- (a) Canterbury Regional Policy Statement (CRPS), including the relevant transport objectives and policies in Chapter 5 and 6.
 - (b) Greater Christchurch Spatial Plan (GCSP).

¹⁰ <https://www.kiwirail.co.nz/assets/Uploads/documents/Level-Crossing-Risk-Assessment-Guidance.pdf>

- (c) Greater Christchurch Transport Plan.
- (d) Canterbury Regional Land Transport Plan 2024-2024.
- (e) Ōtautahi Christchurch Future Transport 2024–54.

51. The RFI response directed Council to the ITA and provided no additional context other than stating the “*application included a detailed assessment against the relevant strategic policy framework that manages urban growth, urban form, and the requirements of a ‘well-functioning urban environment’, with this assessment including consideration of transport matters and connectivity*”. I have checked the Assessment of Environment Effects section 32 report and note that the CRPS and GCSP are assessed but the other three plans are not referenced. The objectives and policies of the Christchurch District Plan are assessed in Appendix J of the Section 32, but does not specifically address transport objectives and policies.

Christchurch District Plan

52. Under section 7.2 of the Christchurch District Plan two objectives (supported by a number of policies) are stated as follows:

7.2.1 Objective - Integrated transport system for Christchurch District

a. An integrated transport system for Christchurch District:

- i. that is safe and efficient for all transport modes;*
- ii. that is responsive to the current recovery needs, future needs, and enables economic development, in particular an accessible Central City able to accommodate projected population growth;*
- iii. that supports safe, healthy and liveable communities by maximising integration with land use;*
- iv. that reduces dependency on private motor vehicles and promotes the use of public and active transport;*
- v. that is managed using the one network approach.*

7.2.2 Objective - Adverse effects from the transport system

a. Enable Christchurch District's transport system to provide for the transportation needs of people and freight whilst managing adverse effects from the transport system.

53. In my review of the Integrated Transport Assessment report I have raised concerns in relation to gaps in walking and cycling connectivity, a lack of safety assessment along the Spencerville Road corridor (including the level

crossing) and a lack of assessment of the performance of the Marshland / Main North / Spencerville Road intersection (Chaney's Corner).

54. I consider that without these matters being satisfactorily resolved that it is unclear whether the plan change is consistent with the objectives.

Specifically, in my view:

- (a) additional assessment of Spencerville Road (mid-block) and the Spencerville / Main North / Marshland Road intersection is required to demonstrate the safe and efficient operation of the transport network, and safe and direct infrastructure is required for pedestrians and cyclists to connect to the Ōuruhia Model School and Spencerville settlement (7.2.1 (a)(i)),
- (b) without the aforementioned pedestrian and cycling infrastructure, active transport is not satisfactorily promoted (7.2.1 (a)(iii))
- (c) more assessment is required to demonstrate that adverse effects are suitably identified, and if necessary managed or mitigated (7.2.2 (a)).

Canterbury Regional Policy Statement (CRPS)

55. The key transport-related objective from the CRPS is objective 5.2.3 Transport network (Wider Region) and is stated as follows:

“A safe, efficient and effective transport system to meet local regional, inter-regional and national needs for transport, which:

- 1. supports a consolidated and sustainable urban form;*
- 2. avoids, remedies or mitigates the adverse effects of transport use and its provision;*
- 3. provides an acceptable level of accessibility; and*
- 4. is consistent with the regional roading hierarchy identified in the Regional Land Transport Strategy.”*

56. The concerns raised in relation to the safe and efficient operation of the transport network for all modes, and the potential for unidentified adverse effects in the assessment against the CDP objectives, also apply to the CRPS objective 5.2.3. I consider that with reference to *“provides an acceptable level of acceptability”* this is met with respect to public transport accessibility through the provision of a shared path connection along Lower Styx Road to existing bus services. However, I retain concerns about pedestrian and cycle accessibility in closer proximity to the site which would

be resolved through the provision of direct and safe infrastructure connecting to the school and Spencerville settlement.

Greater Christchurch Spatial Plan

57. There were several other plans mentioned in Council's RFI which have not been assessed.

58. The Greater Christchurch Spatial Plan includes Opportunity 6 as follows:

"Prioritise sustainable and accessible transport choices to move people and goods in a way that significantly reduces greenhouse gas emissions and enables access to social, cultural and economic opportunities."

59. This is assessed in the Section 32 report and whilst I generally agree with this assessment including with respect to public transport provision, I remain of the view that a direct pedestrian and cycle connection to the School and Spencerville settlement are required to prioritise alternative transport choices. I also envisage that these connections would contribute to reducing transport related emissions as with greater uptake of walking and cycling there would be less reliance on driving.

Canterbury Regional Land Transport Plan 2024-34

60. The Regional Land Transport Plan 2024-2034 has five transport investment priorities as follows: *"Create a well-maintained network; Manage risk of exposure to extreme events; Support and develop connected public transport and active transport networks; Implementing safer systems (Road to Zero); and Support and develop freight systems connecting to air, rail, and sea"*.

61. I have made several recommendations arising from my transport review that include providing improvements to the connectivity of the active transport network, and undertaking further safety assessment of the Spencerville Road corridor including the intersection with Marshland / Main North Road and a future LCSIA at the level crossing.

62. I note the priority in relation to exposure to extreme events. This is a matter which I address later in my response to submissions relating to tsunami evacuations.

REVIEW OF SUBMISSIONS

63. I have extracted the key themes from transport-related submission points and discuss each in turn below.

Vehicle movements and congestion

64. There are multiple submissions relating to the operation of the transport network including concerns in relation to congestion. The ITA presents a traffic modelling assessment to understand the network effects of traffic generated by PPC23. I have reviewed the modelling included as Appendix A to the ITA and conclusions drawn in the ITA and discussed my findings in paragraphs 30-37.
65. Whilst I am generally satisfied with the modelling undertaken, I have recommended that more assessment of the Marshland / Main North Road / Spencerville Road is required to understand the impacts of the growth in traffic along Spencerville Road seeking to travel through or turn right at this intersection. I have also recommended that further consideration be given to establishing a direct vehicular connection to Lower Styx Road from the Plan Change site, which has the potential to change travel patterns including reducing traffic volumes past the School.

Network Safety

66. There were a number of submissions raising concern in relation to road safety. These generally sought for more assessment or for no development until suitable transport upgrades were in place, and included concerns about the:
- (a) safety of horse-riders in the vicinity.
 - (b) narrow Lower Styx Road corridor.
 - (c) one-lane Spencerville Rd bridge.
 - (d) safety of Chaney's corner intersection.
 - (e) safety of Spencerville and Turners Roads including for biking and for access to Ōuruhia Model School.
67. I have observed horse-riders on the grass berm in the vicinity and note that this is a matter addressed in the New Zealand road code, relying on the courtesy of drivers. Should the area become increasingly urbanised there

will be an increase in traffic and therefore risk associated with vehicles passing horses in the berm. It is also noted that with proposed widening of carriageways there would be less berm available for horses. Additional signage could be installed to increase awareness of horses in the vicinity.

68. As is currently proposed, the Plan Change is unlikely to add traffic to Lower Styx Road as there is no direct vehicle connection. I also consider that the one-lane Spencerville Road bridge is unlikely to require upgrades in relation to vehicular safety. However I have made recommendations in relation to providing a shared path on the eastern extent of Spencerville Road which would require consideration of pedestrian and cycle safety in vicinity of the one-lane bridge. This may take the form of 'share the road' signage with appropriate advisory speed limits across the bridge and this could be resolved through future engineering approval and safety audit processes.
69. The safety record of the Chaney's corner (ie the Marshland Road / Main North Road / Spencerville Road intersection) has markedly improved in recent years as a result of changes in posted speed and reductions traffic along Marshland Road when the Christchurch Northern Corridor (CNC) opened. However, the Plan Change increases the number of conflicts at this intersection - I have recommended more assessment be undertaken by the proponent to understand the safety effects.
70. I have similarly raised concerns in relation to road safety along Spencerville Road between the site access and Marshland Road and have recommended further assessment be undertaken in this regard. I have highlighted the lack of safe and direct provision for pedestrians and cyclists accessing the school via Turners Road and Spencerville settlement via Spencerville Road (east of the site) and recommended that shared paths be provided in both instances.

Lack of Public Transport

71. I address public transport provision in paragraphs 28-29 and have concluded that the proposal to provide walk and cycle connectivity to connect to existing services via Lower Styx Road coupled with designing to accommodate future services (should Environment Canterbury seek to provide them) is satisfactory.

Lack of Lower Styx Road Access

72. Several submissions recommend a vehicular connection to Lower Styx Road including citing concerns about increased traffic flows along Spencerville and Turners Roads. I consider this to be a matter which has not been addressed in the ITA supporting the Plan Change. I have recommended further consideration be given to establishing a direct vehicular connection to Lower Styx Road from the Plan Change site, which has the potential to change travel patterns including reducing traffic volumes past the School.

Traffic lights

73. Two submissions raise questions regarding whether traffic signals are required including whether they are needed at Chaney's corner. I have reviewed the modelling assessment of the intersection of Marshland Road / Turners Road intersection and am satisfied that signals are not required at that location as the recommended infrastructure upgrade proposed to be delivered through the Plan Change is an appropriate engineering solution.
74. However, I have recommended more assessment be undertaken at Chaney's corner on the basis that the traffic modelling has recognised high through and right turn demands in the morning peak period. The traffic assessment has not demonstrated that impact of this demand on the operation or safety of this intersection.

Tsunami evacuation risk

75. Multiple submissions raise concerns relating to congestion which may occur during a tsunami evacuation. One submitter requested updated tsunami evacuation travel time modelling and there was also a specific mention of the one-lane bridge on Spencerville Road too.
76. I note the site is observed to be located within the yellow evacuation zone based on CCC classifications (refer Figure 6). The yellow classification description is *"This is an area that is least unlikely to be affected by tsunami but still possible in a very large tsunami. It's unlikely you'll need to leave this zone in your lifetime"*. CCC recently undertook a traffic modelling exercise¹¹ which sought to understand the evacuation times for the New Brighton suburb. The event considered was an earthquake in the Hikurangi

¹¹ <https://ccc.govt.nz/assets/Documents/The-Council/Request-information/2024/LGOIMA-Pages-Road-Bridge-Renewal-Traffic-Modelling.pdf>

subduction zone with an evaluation target time of 1 hour

<https://ccc.govt.nz/services/civil-defence/tsunami-evacuation-zones-and-routes>, being the anticipated length of time between an earthquake and tsunami.

77. I have undertaken a coarse assessment based on every household evacuating using one vehicle (800 vehicles) over the course of a one-hour period. Noting there are two exit roads (Turners Road and Spencerville Road) this equates to approx 400 vehicles per road on an evacuation rate of one vehicle at least every 9 seconds on each corridor. Typically, vehicles can comfortably enter traffic streams in 3-4 second intervals, so I would expect that theoretically the Whisper Creek development of 800 households could comfortably be evacuated within an hour. The situation becomes more complicated as Whisper Creek traffic joins other traffic seeking to head inland but the provision of two connections from the Plan Change site to the wider arterial network is considered satisfactory to enable timely evacuation of the immediate area to occur. Traffic would no longer be located in the yellow zone when they get to (or are on the approach to) Marshland Road as shown in Figure 6.

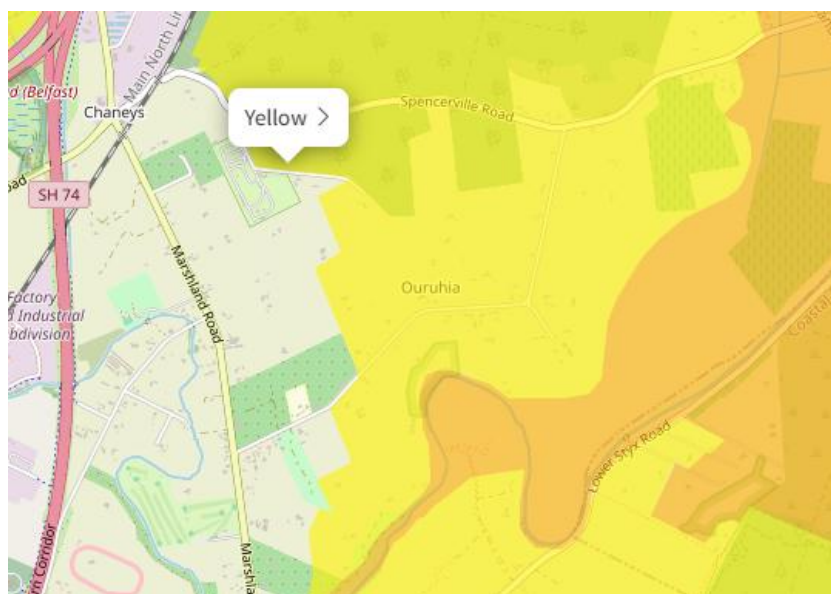


Figure 6 CCC tsunami evaluation zones in relation to Site

78. I further note that in the event of a tsunami residents are extremely unlikely to travel east and exacerbate any congestion on the Spencerville Road one-lane bridge which lies to the east of the site. Any traffic from Spencer Park would have priority over Plan Change site traffic as it passes the intersection of Spencerville Road and the site access and the Turners Road intersection.

Insufficient sight lines

79. A submission received from the neighbouring property directly opposite the Spencerville Road access raises concerns about visibility at this location. I have reviewed the assessment provided in the ITA report and note these have been designed to achieve the minimum 151m sight distance which based on industry guidance¹² is suitable at a 70km/h design speed (where the design speed is 10km/h faster than posted speed).
80. The visibility to the west could be impeded by future fences or vegetation along the Plan Change site boundary (see highlighted yellow section on Figure 7). It is recommended that a small section of the property be vested as road reserve to maintain the minimum sight distance.

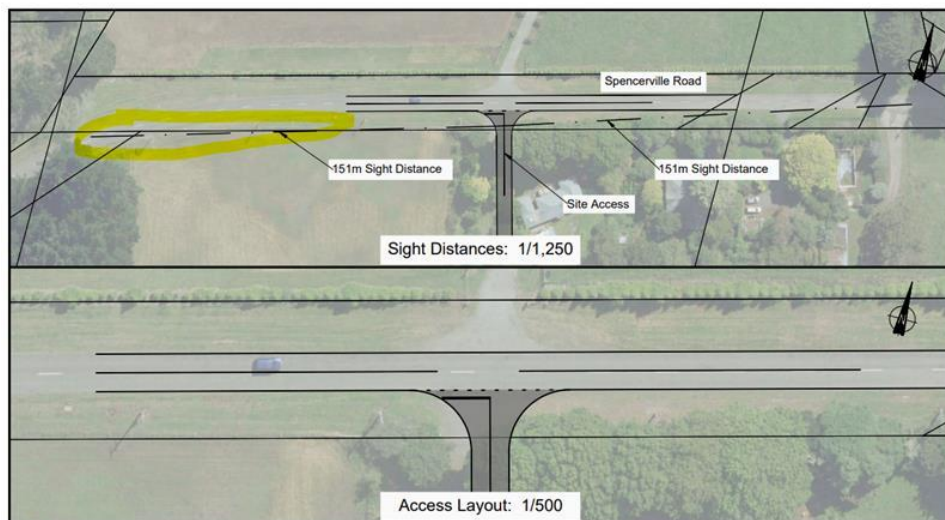


Figure 7 Property boundary visibility risk (source: ITA Appendix 3)

Level crossing at Chaney's corner

81. Two submissions raise concerns about limited visibility or lack of barriers at the Spencerville Road level crossing located to the east of Chaney's corner. I have considered the safety of the current level crossing in paragraphs 47-49 and concluded that the anticipated increase in traffic associated with the plan change will increase risk at this location. I have recommended that a LCSIA in accordance with Kiwirail guidance be undertaken prior to occupation of the Plan Change site, to establish whether barrier arms or other safety features are required.

¹² Austroads Guide to Road Safety Part 4A Table 3.2

Transport-related Carbon emissions

82. Two submissions raise the issue of carbon emissions with one requesting the provision of a transport emissions and vehicle kilometres travelled (VKT) analysis. There is little guidance in my industry around what level of emissions or VKT may be acceptable and what is not. Almost invariably for residential developments, any development will increase vehicle-related emissions and VKT on the transport network.
83. When considering these matters I focus on whether a development has a suitable level of provision such that residents have mode choice and are not entirely reliant on private vehicle use. In the context of PPC23 I note that:
- (a) Some provision for walking and cycling is proposed through the delivery of shared paths. I have proposed further connectivity external to the site to provide genuine mode choice for residents accessing surrounding areas including the school and Spencerville settlement.
 - (b) The site is designed with future public transport services in mind, noting that the provision of public transport is a matter for Environment Canterbury.
 - (c) A small commercial centre is proposed of a scale which would provide for future residents, avoiding the need for longer trips for 'neighbourhood centre'-style goods and services.
 - (d) A Plan Change of this scale would typically include an assessment of the accessibility to essential services for the development. The Christchurch City Council ITA guidelines¹³ sets out a methodology for undertaking a multi-modal accessibility assessment which is a helpful method to understand how car-dependent a development proposal is. This assessment has not been provided.
84. Accordingly, I recommend that an accessibility assessment in line with CCC ITA guidelines be undertaken.

CONCLUSIONS

85. I have reviewed the transportation assessment and considered the effects of the PPC23 application. I retain concerns in relation to unmitigated or

¹³ Refer pages 11-12 of <https://www.ccc.govt.nz/assets/Documents/Consents-and-Licences/resource-consents/ITAGuidelines.pdf>

potentially unidentified safety and efficiency effects. I recommend the following:

- (a) Update planning provision 8.10.3X.D(2)(d) to provide a direct pedestrian and cycle corridor connecting the site between Teapes Road and the Ouruhia Model School via Turners Road.
- (b) Add a further planning provision 8.10.3X.D(2)(f) and update 8.10.3X.C(4) to provide a pedestrian and cycle corridor along Spencerville Road to connect the site to the intersection of Lower Styx Road and Spencerville Road.
- (c) Add a further planning provision requiring a Level Crossing Safety Impact Assessment (LCSIA) to be undertaken in line with Kiwirail guidance on the Spencerville Road level crossing to the west of the site, and any improvements identified through the LCSIA (such as the installation of barrier arms) should be undertaken prior to occupation of the Plan Change site.
- (d) Update the planning provisions or add advice notes to the ODP to include for other proposed infrastructure upgrades identified in the ITA including:
 - (i) Turners Road From Spencerville Road to Marshland Road is proposed to be upgraded to a 6.0m carriageway width 0.5m sealed shoulders. This is briefly noted in 8.10.3X.D(3)(c) but is lacking in detail.
 - (ii) Teapes Road is proposed to be upgraded to 5.5m wide carriageway with 0.5m sealed shoulders when development commences that accesses Teapes Road. This is absent from provisions.
 - (iii) The Turners Road / Teapes Road intersection including squaring up the intersection. This is absent from provisions.
 - (iv) Turners Road / Spencerville Road intersection – land is to be vested for sight line improvements to the east along Spencerville Road. This is absent from provisions.
- (e) Undertake a safety assessment along the Spencerville Road corridor including the intersection of Marshland / Main North / Spencerville

Road, and identify any mitigation required to offset increasing road safety risk as a result of Plan Change traffic.

- (f) Undertake Sidra Intersection modelling of the Marshland / Main North / Spencerville Road intersection to determine if further works are required to accommodate Plan Change traffic.
- (g) Further consideration be given to establishing a direct vehicular connection to Lower Styx Road from the Plan Change site, which has the potential to change travel patterns including reducing traffic volumes in the vicinity of the School.
- (h) Assess the extent to which the Plan Change site along the northern property boundary (if established with fences or vegetation in the future) could potentially impede sight distances for traffic exiting the northern access, and if required vest this land as road reserve.
- (i) Undertake a multi-modal accessibility assessment for the full Plan Change site in line with CCC ITA guidelines.

Date: 20 April 2026

David Smith