

Before the Independent Hearings Panel
At Christchurch City Council

Under the	Resource Management Act 1991 (RMA or Act)
In the matter of	proposed private plan change 23 (PC 23) to the Christchurch District Plan
And	LMM Investments 2012
	Applicant

Joint Witness Statement for Traffic and Transportation

18th May 2026

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Introduction

- 1 This Joint Witness Statement (JWS) responds to Commissioner's Minute 3 regarding caucusing on Transport matters.
- 2 Caucusing sessions took place on:
 - (a) 13 May 2026;
 - (b) 14 May 2026; and
 - (c) 18 May 2026.
- 3 Attendees at the caucusing were:
 - (a) Mr Nick Fuller (on behalf of the Applicant);
 - (b) Mr Dave Smith (on behalf of the Council); and
 - (c) Mr Grant Smith (on behalf of the Ouruhia Residents Group).

Code of conduct

- 4 Although this is not an Environment Court hearing, in preparing this statement the experts have read and understood the Code of Conduct for Expert Witnesses included in the Environment Court Practice Note 2023 and agree to comply with it.

Areas of agreement

General

- 5 The experts agree that:
 - (a) The residential traffic generation rate is appropriate;
 - (b) The method of determining the residential distribution was pragmatic, but there are ways this could have been done better (more discussion is provided in relation to traffic modelling later in this JWS). The resultant distribution of residential traffic to the network is intuitively correct;
 - (c) The proposed walking and cycling connections are appropriate noting the addition of a shared path to Spencerville and direct shared path connection along Turners Road (between Teapes Road and the school) as requested by Dave and addressed by Nick in evidence.
 - (d) The experts agree that Safe System Audits will be required for the internal roads and road upgrades, including the design of the Turners Road / Teapes Road

intersection. There are engineering solutions that can be implemented to improve the safety at this intersection, including accounting for the development traffic.

Spencerville Road one-lane bridge capacity

- 6 Dave has reviewed the observed and estimated traffic volumes for three existing one-lane bridges (with data taken from Mobileroad.org online resource) with which the experts are familiar in peri-urban environments. These include:
 - a) Arthurs Point (Edith Cavell) bridge north of Queenstown – the experts consider this to be operating at capacity with 7700 vehicles per day in 2023;
 - b) SH7A (Hanmer Springs) bridge – the experts consider this generally operates with low levels of delay outside of tourist peaks with 1950 vehicles per day in 2021; and
 - c) SH73 one-lane bridge on eastern approach to Arthurs Pass township – the experts consider this to operate well with low levels of delay at 1500 vehicles per day in 2021.
- 7 The Spencerville Road one-lane bridge has a traffic estimate of 500 vehicles per day which operates well below the levels of these other one-lane bridges and is less than 10% of the traffic volume of the Edith Cavell bridge which is considered operating at capacity.
- 8 On this basis the experts consider that there is capacity at the Spencerville Road one-lane bridge to accommodate a substantial increase in traffic including any increase due to the Plan Change without a noticeable deterioration in performance (subject to the caveat under the Commercial Centre heading in paragraph 11 below).

Areas of partial agreement or disagreement

- 9 The following sets out the areas of partial agreement or disagreement and the reasons for the differing views.

Commercial Centre

- 10 The experts agree that the potential impact of the commercial centre on the operation of the transport network will be sensitive to the scale and mix of activities. There is the potential that higher traffic generating activities could have effects beyond the Plan Change Site. Inclusion of a supermarket is the biggest risk in terms of traffic generation.
- 11 In Dave and Grant's view, if the scale of the commercial centre is out-of-step with the residential catchment it may draw traffic from further afield including Spencerville and west of Marshland Road. Without the benefit of modelling Dave and Grant are of the view there is uncertainty of the impacts on the Marshland Road / Spencerville Road and / or the Marshland Road / Turners Road intersections, and Grant also remains concerned about the operation of the Spencerville Road one-lane bridge.

- 12 In Nick's opinion the operation on the one-lane bridge would be acceptable, and the scale of development would not draw as far as the Marshland Road as there are other centres that would be more attractive to that catchment (such as the Prestons New World supermarket and Belfast Supa Centre).
- 13 Grant would like a monitoring clause with regard to the bridge operation.

Primary Vehicle Access to the Development (Turners Rd vs Lower Styx Rd)

- 14 The use of Turners Road as the primary access to the Plan Change is the crux of Grant's objection to the development. There has been no analysis reported of the effects of a direct vehicle access to Lower Styx Road, nor the internal engineering issues that might arise within the development. When moving away from an existing plan which is relied on by the local residents, Grant believes it is incumbent on the proponents to show why the current planned infrastructure provisions cannot work before subjecting residents to a traffic environment that has never been envisaged.
- 15 Dave and Nick agree that a vehicle connection to Lower Styx Road is not required if there is suitable assessment of and mitigation provided for Turners Road, including the intersection with Marshland Road.
- 16 If the commissioner accepts that Lower Styx Road cannot be used for vehicle access, and is also minded to approve the Plan Change, then the experts agree that the mitigation as proposed in Nick's evidence is appropriate and should be suitably reflected in the Plan Provisions and ODP, noting that further commentary on the timing of the Marshland / Turners intersection upgrade is provided in paragraph 38-40.
- 17 Grant considers the consequences of the above would be to reclassify Turners Road as a minor arterial and bring it up to a standard commensurate with that classification. Nick agrees with the needs to reclassify the road and considers the appropriate status would be a Collector Road given its future function in the road hierarchy.
- 18 The experts reference NZS4404: 2010¹ as an appropriate source of road standards and further consider figure E8 (excerpt included in Attachment A) to be a suitable standard for Turners Road with the development traffic. Noting that pedestrians and cyclists would have a shared path separated from traffic available (with a safe crossing for the school), the proposed widening to 6m plus 0.5m shoulders both sides of the carriageway is considered appropriate.

Spencerville Road - LCSIA

- 19 The experts agree that a Level Crossing Safety Impact Assessment (LCSIA) is required for the Spencerville Road rail crossing. They understand this would provide recommendations as to upgrades for the current environment and then again in the

¹ New Zealand Standard for Land Development and Subdivision Infrastructure.

future environment with the Plan Change traffic added to the road network. It is agreed that the existing crossing is deficient and would be exacerbated by the development.

- 20 An LCSIA will isolate any improvements required under current traffic volumes as well as any further improvements that are required as traffic volumes increases as a result of the Plan Change. This enables any upgrade works required to make the level crossing operate safely, to be apportioned into those required to address the existing environment and those required to accommodate the increases in traffic.
- 21 Dave and Grant consider that any improvements identified through the LCSIA as a result of the increases in Plan Change traffic should be at the expense of the Applicant.
- 22 Nick considers that these additional improvements should be covered through development contributions, as they are addressing existing concerns plus there is a level of traffic that could have been generated over this crossing by the current Zoning that would not have been required to assess the effects at this location.

Spencerville Road Cross Section

- 23 The experts agree that the recent road safety record for Spencerville Road demonstrates the corridor in its current form is deficient. The experts agree that the Spencerville Road corridor between Turners Road and Marshland Road is generally 6.5m in sealed width with some sections of 6.0m sealed width and no sealed shoulders. The current carriageway cross-section requirement would be similar to E3 of NZS4404: 2010 which is 5.5-5.7m width with additional 0.5m sealed shoulders on each side of the road for full sealed width of 6.5-6.7m. This would change to E8 with the development as traffic volumes will increase from approximately 1000 vpd to 2500 vpd with development traffic. To meet the NZS4404:2010 standards the carriageway would require a sealed width of 7.5m on Spencerville Road because there is no shared path (unlike the proposed Turners Road upgrade).
- 24 Dave and Grant consider that the change in cross section requirements as a result of increased traffic from the Plan Change site, would provide for a safer environment as there is more available width for road users. The upgrade to 7.5m sealed width is in their view required because of development traffic and should be at the expense of the applicant.
- 25 Nick considers that these additional improvements should be covered through development contributions, as they are addressing existing concerns plus there is a level of traffic that could have been generated on Spencerville Road by the current zoning that would not have been required to widen this road.

Construction Traffic Effects

- 26 The experts agree that a Construction Traffic Management plan is a suitable mechanism for managing effects relating to construction traffic.
- 27 Dave and Grant consider that no construction traffic should use Turners Road. Spencerville Road is more suitable route for construction access and it would be appropriate to reflect this in the planning provisions or this could be annotated in the ODP.
- 28 Nick agrees with the above comments regarding the routing of traffic and considers this would be the natural outcome of undertaking the Construction Traffic Management Plan. However, he considers this is best managed through the Construction Traffic Management Plan process rather than being a matter for the ODP.

Traffic modelling – general approach

- 29 The traffic modelling described in the ITA includes two levels of modelling. Network modelling has been undertaken using Council's CTM/CAST model suite to determine the distribution of traffic and network-wide effects. The corresponding changes in flows at two key intersections have then been run using Sidra Intersection modelling software. These intersections are:
- (a) Marshland Road / Turners Road
 - (b) Marshland Road / Main North Road / Spencerville Road
- 30 Grant's concerns in relation to traffic modelling are set out in his evidence. The experts sought clarification from QTP on a number of points but the response did not resolve concerns raised by Grant.
- 31 All experts agree that these matters cannot be resolved within the scope of the conferencing as the applicant's modellers (QTP Limited) have not prepared formal evidence outlining the modelling process and are not party to the conferencing.
- 32 All experts note that with respect to traffic modelling, it is typical for models to have limitations and often these relate to the age and condition of the models, as well as the time and resource available to undertake a modelling assessment. This notwithstanding it is the experts' view that the modelling process needs to be transparent and well understood to determine the validity and robustness of the models. All models include a degree of uncertainty and rely on assumptions being made. It is the role of the modeller to justify any such assumptions and to provide advice on the extent to which the model can be relied upon.
- 33 Dave has reviewed the CAST modelled traffic volumes along Marshland Road in the vicinity of the Turners and Spencerville Road intersections. Dave concludes that:

- a) The models match observed traffic counts along the corridor (which may be expected because of the calibration process adopted by the CAST modellers);
- b) The level of background growth in traffic along Marshland Road between 2025 and 2038 reflects a substantial increase in southbound morning peak and northbound evening peak traffic which may occur as Kaiapoi and surrounding areas continue to develop.

34 Grant and Nick accept Dave's findings.

Traffic modelling – intersection modelling

35 Dave has reviewed the Sidra Intersection modelled traffic volumes along Marshland Road in the vicinity of the Turners and Spencerville Road intersections and reviewed the Sidra modelling files relied upon (and supplied) by Nick to establish whether intersection upgrades are required.

- a) The traffic volumes have been accurately transferred from the CAST model to Sidra Intersection models, with one exception being a lack of southbound morning peak growth in traffic at the Marshland / Main North / Spencerville intersection (which is a matter corrected and tested by Dave);
- b) Several default parameter settings used within Sidra follow a different approach to Dave's preferred approach which he has tested for both intersections;
- c) Irrespective of approach and following the correction of the southbound morning peak background growth issue, the modelling is generally robust and the conclusions arrived at by Nick are accepted. This includes that the upgrade to include a left turn lane on the Turners Rd approach to Marshland Road is required prior to the completion of the development, and that no capacity upgrades are required at the Marshland / Main North / Spencerville intersection.

36 The Sidra modelling at the Marshland / Turners intersection includes sensitivity tests which add up to 30% more development traffic through the Turners Road intersection than that forecast by the CAST model. Noting there are unresolved questions in relation to the CAST model, it is plausible that a higher level of traffic may eventuate along the Turners Road corridor. If this is the case the quantum of development that can be supported prior to the proposed intersection upgrade may be less.

37 Grant and Nick accept Dave's analysis.

38 The experts note that the 700 lot threshold represents a point in time at which the intersection reaches capacity and delays for right turning traffic approach 50 seconds during the morning peak hour. We note that this may be frustrating for existing road users who are used to short delays to access Marshland Road, therefore bringing the

works earlier has potential benefits in reducing these frustrations, and any associated road safety effects such as motorists taking dangerously short gaps in the traffic.

- 39 Bringing the works earlier also provides some flexibility in approach should the modelled distribution of traffic under-represent the level of use of Turners Road. The experts recommend that at every stage of development this should be considered, but in any event the intersection upgrade should occur before more than 500 residential lots are created. We recommend that ODP Section 3 clause c be updated accordingly.
- 40 Grant agrees with the approach in paragraphs 38-39 if it is not possible to achieve a direct vehicle connection to Lower Styx Road.

Dated this 18th May 2026



Nick Fuller



Dave Smith



Grant Smith

Attachment A: Extracts from NZS4404:2010

PLACE CONTEXT			DESIGN ENVIRONMENT				LINK CONTEXT				TYPICAL PLAN AND CROSS SECTION	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)		
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, & 3.4.1.6		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)	
Live and play		Access to housing	1 to 150 du	70	15	12.5%	Shared (on shoulder and berm)	Total shoulder 1.0 m, sealed shoulder 0.5 m	Shared (in movement lane)	5.5 - 5.7	Local road (~ 1000 vpd)	E3
		All (serving land uses 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
All other situations (where not specified elsewhere)			-	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