

**BEFORE THE NEW PLYMOUTH DISTRICT COUNCIL
INDEPENDENT HEARING COMMISSIONERS**

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of a request for Private Plan Change NPDC PLC18/00048
by Oakura Farm Park Limited to rezone land at Oakura
within the New Plymouth District

**STATEMENT OF FURTHER EVIDENCE OF ANDREW SKERRETT ON BEHALF OF
OAKURA FARM PARK LIMITED**

Dated 11 October 2019

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INTRODUCTION

1. Further to the direction of the commissioners this supplementary traffic evidence covers matters raised in the hearing, the council officers report and subsequent changes to the proposed structure plan.

EXECUTIVE SUMMARY

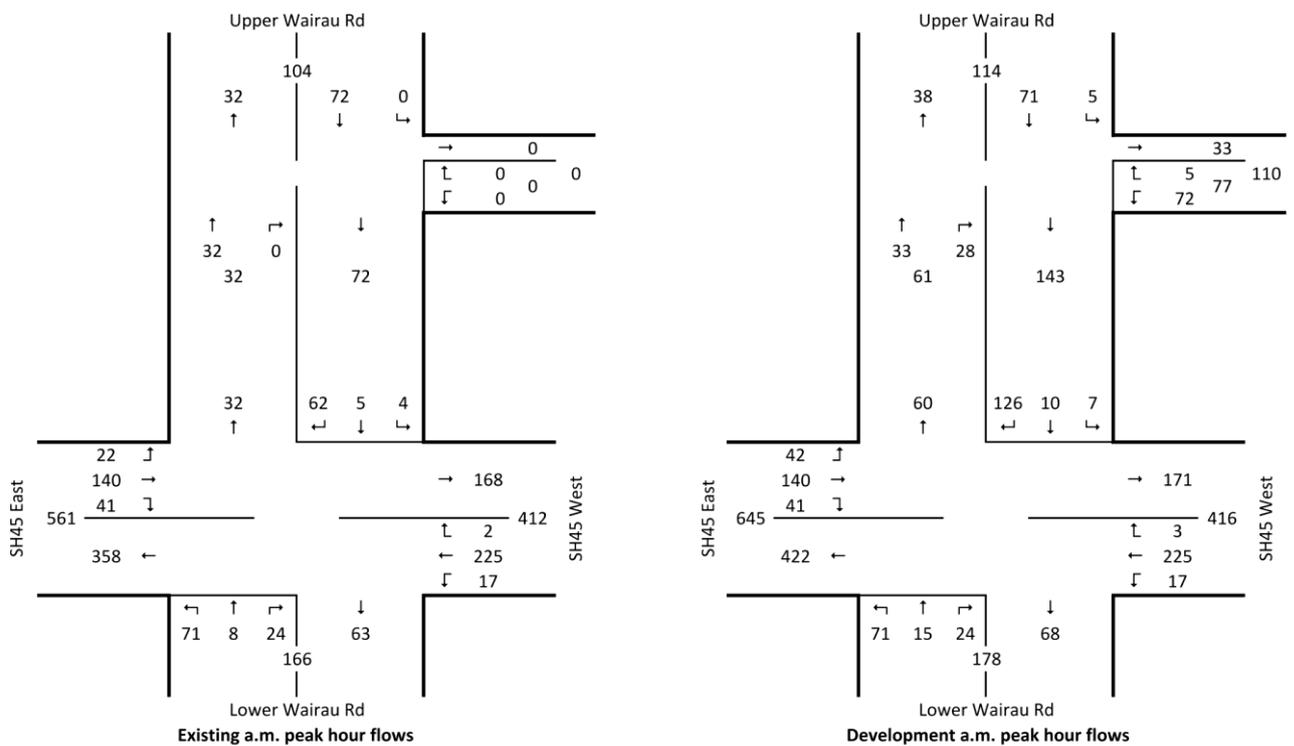
2. My evidence concludes that the proposed development can be designed to ensure the traffic effects from the proposed plan change can be sufficiently mitigated.

Traffic Impact Assessment (TIA)

3. A revised structure plan has been prepared by McKinley Surveyors (Dwg No. H-06 FUDA) based on Richard Bain's updated landscape assessment and new structure plan (**new structure plan**) which indicates a number of changes to the original application that are pertinent to my evidence including the following;
 - a) new yield of 144 lots,
 - b) single road connection to Wairau Rd,
 - c) no underpass under State highway 45 (SH45), and
 - d) provision for future road connections.
4. The new structure plan and evidence from Mr Doy indicates that the development is proposed over five stages with just under 30 lots per stage.

5. During the expert conferencing it was agreed that a trip generation rate of 8.5 trips/lot was appropriate for the proposed development. Therefore the 144 lots are likely to generate 1,224 vehicle trips per day when fully developed.

6. In order to determine the effects of the additional traffic the morning peak was modelled as this was deemed to be the greatest impact due to the high percentage of vehicles turning right at the Wairau Rd / SH45 intersection. The additional traffic turning movements were determined from applying the existing turning proportions and a 9% morning peak hour flow which gives the following flows:



7. These flows were modelled in Sidra 8 and the results indicate that for existing a.m. peak hour for SH45 the level of service (LOS) is A for all movements. For Upper Wairau Rd the right turn out is LOS B and all other movements are LOS A and for Lower Wairau Rd left turn out is LOS A and the other movements are LOS B.
8. For the development flows the LOS remained unchanged although there were modest increases in the average delays for the side road movements but all of less than 1 second.
9. Since the development will take some time to occur a sensitivity analysis was undertaken with 10 years growth applied to the traffic volumes at 2% on the State highway and 1% on the local roads. The results indicated a small increase in the average delay to the side road turning movements but all remained at LOS A or B.
10. With the increase in traffic flows there is an increase in risk of crashes occurring as stated in the original traffic impact assessment the intersection current performs better than 0.25 injury crashes per year the crash prediction models indicate. With the increased flows the crash prediction models increase the injury crash rate to 0.37 injury crashes per year an increase of 0.12 or an additional injury crash every 8 or so years. Given the current injury crash rate at the intersection is 0.1, an increase of 0.12 as predicted by the crash models increases the rate to 0.22 injury crashes per year, which is still less than the predicted crash rate for the current flows.
11. Given the predicted traffic volumes I don't consider right turn bays are warranted for the intersection as they would increase the length of the crossing movements requiring a larger gap in the traffic increasing the delays of the crossing movement and the potential for crashes to occur.

12. During expert conferencing NZTA's expert acknowledged that the proximity of the Wairau Rd intersection to the speed limit is of concern and that traffic calming is required to slow traffic down. This could be achieved by relocating the 50kph zone further to the south, implementing a formal traffic calming scheme with vertical and horizontal elements installed near on the approach to the threshold and narrowing of lanes lines at the signs in accordance with NZTA's speed management guide.
13. The volume of traffic on Upper Wairau Rd will increase between SH45 and the access to the proposed development to the order of 2,500vpd. Currently the road layout has developed in an ad-hoc manner and is a mix of urban and rural in style and varies along its length. The proposed development changes the nature of traffic activity on the road between SH45 and the access road to the development to be more suburban in nature. NZS 4404:2010 recommends the following typical road cross section for such a suburban road:

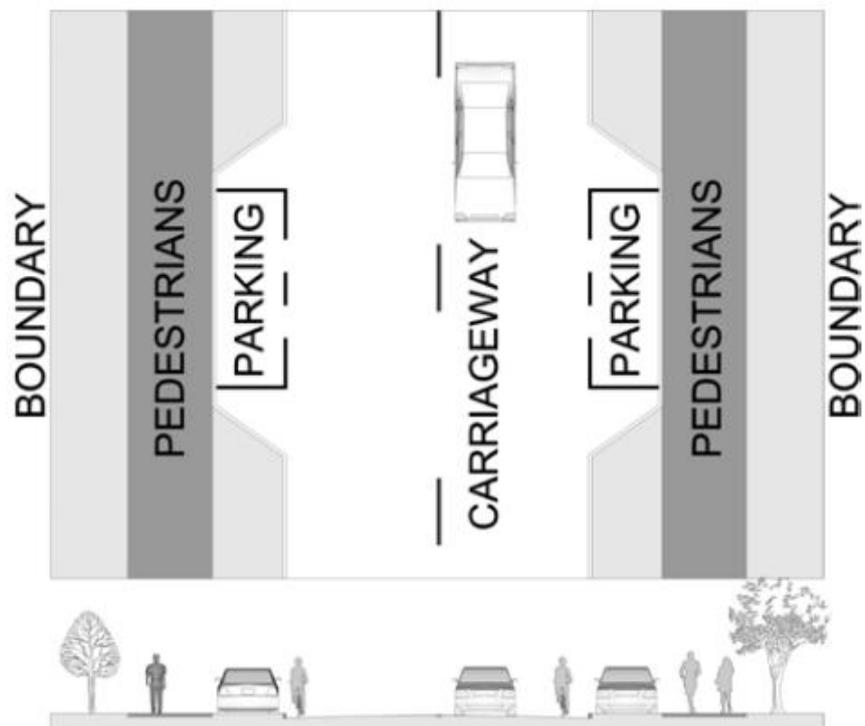


Figure E13 – Suburban, live and play, primary access to housing (up to 800 du)

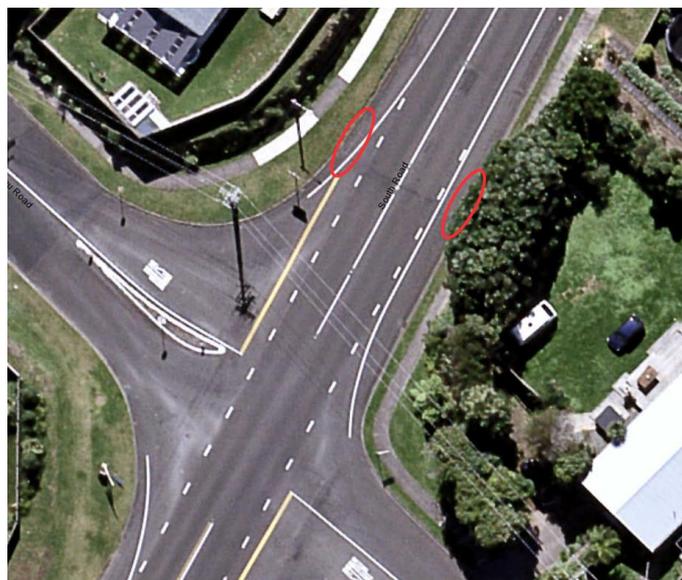
14. Upper Wairau Rd should therefore be upgraded to a standard agreed with Council in line with the standard as the development is completed.

Pedestrians and cyclists

15. As previously stated the new structure plan does not include the installation of an underpass under SH45. This is because the nature of the proposed development has moved away from the mix of urban/rural/equestrian lifestyle blocks to a more urban style only development. The underpass was designed to principally serve the equestrian community. However, with the removal of that aspect, and the overall reduction in scale, the underpass is unnecessary. Rather, the proposed structure plan indicates a significant network of footpaths around the development linking to Wairau Road and the existing walkway on the esplanade strip of the Wairau Stream tributary.
16. As previously mentioned, Upper Wairau Rd should be upgraded to reflect the typical cross-section of Fig. E13 from NZS4404. This will cater for any pedestrian and cycling traffic generated by the proposed development. A crossing place should be established at the footpath link to Donnelly St to assist crossing Wairau Rd.
17. The footpath in the esplanade strip exits on to SH45 some 18m to the west of the speed limit signs as shown in the following aerial image:



18. A link should be formed on the berm of the highway to connect the footpath back to Wairau Rd. This would need to be incorporated into any speed calming measures implemented by NZTA.
19. At the SH45/Wairau Rd intersection the existing footpaths would need to be widened to meet the new cross section of Wairau Rd.
20. Given that Lower Wairau Rd has a footpath only on its eastern side a crossing point should be considered near the crest of the curve to east of the intersection to cater for those wishing to head to or from the beach an indicative location is shown below:



21. As previously indicated the revised structure plan has the provision for future roading links, I believe these are essential for long term planning if further development occurs then it can be connected to this proposal and potentially to a new access onto State Highway 45. Protecting and providing for these potential future network connections is recommended.

CONCLUSION

22. I consider that the information provided demonstrates that with the new structure plan and its associated reduced lot yield, the predicted reduced traffic generation can be accommodated within the local road network without capacity improvements to the SH45 / Wairau Rd Intersection.
23. Upper Wairau Rd will need to be improved to the appropriate cross-section from NZS4404 to cater for the increased traffic, cycling and pedestrian volumes, with a crossing point located at the Donnelly St pedestrian link.
24. NZTA needs to implement some speed calming measures on State highway 45 and, as part of this, a footpath link between Upper Wairau Rd and the esplanade strip needs to be created.
25. The existing footpaths at the Wairau Rd intersection need to widen to match that proposed on the remainder of Wairau RD and a crossing point created to the east of the intersection.
26. The extent of the proposed upgrades can be determined at the sub-division consent stage, including any staging strategies in line with the development stages of the proposal.

Andrew Skerrett

11 October 2019