

Addendum Evidence from Nicole Phillips in relation to Applications for resource consents made by WW1&WW2, WW4 and WW5.

1. I have reviewed the changes made to the applications from September 5 onwards and consider that my evidence should be considered still relevant.
2. My brief of evidence refers to N and P loss using Overseer v6.3.1. The most recent Overseer modelling has used v6.3.2.
3. For clarity the N and P loss comparison between the two versions have been included below.
4. Overseer v6.3.2 shows the same outcome as v6.3.1; Modelled N and P loss shows either no change or a decrease on a kg/ha/yr basis under the proposed barn scenarios for all WW1, 2, 4 and 5 when compared to the current modelling provided.
5. Stock number comparisons have been included to provide clarification as to my understanding of the stock numbers used in current, proposed and barn scenarios (where applicable).

WW1, WW2 and Horner block

Table 1 and 2: WW1, WW2 and Horner block N and P loss comparison

WW1 and WW2	V6.3.1	V6.3.2
Year end 2014	40	41
Year end 2015	46	47
Year end 2016	38	39
Year end 2017	41	41
WW1 and WW2 Proposed	38	39
Horner current	20	20
Horner proposed	19	19

WW1 and WW2	V6.3.1	V6.3.2
Year end 2014	No information available	0.8
Year end 2015	No information available	0.7
Year end 2016	No information available	0.7
Year end 2017	No information available	0.7
WW1 and WW2 Proposed	0.7	0.7
Horner current	0.1	0.1
Horner proposed	0.1	0.1

6. To confirm WW1 and WW2 have been modelled together in the one Overseer file, that also includes the SH96 and marcel block (changed in applicant evidence to the name "Block.
7. The most recent modelling provided for WW1 and WW2 is the Year end 2017.
8. Stock numbers have been detailed below to clarify those figures I have used in my evidence.

Table 3 and 4: Stock numbers by months for Year end 2017 and Proposed

Year end 2017

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Dairy	900	1249	1206	1206	1206	1218	1186	1186	1174	1049	977	900
Replacements	-	98	275	275	-	-	-	-	-	-	-	-
Beef	1130	-	-	-	-	-	-	-	-	-	-	1130

9. Only the Year end 2017 figures have been detailed as this reflects the most recent stock numbers provided.

Proposed stock numbers

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Dairy	1250	1500	1500	1500	1500	1515	1425	1425	1410	1305	1215	1250
Replacements	-	220	417	417	-	-	-	-	-	-	-	-

10. These tables show dairy cow numbers increasing under the proposed scenario from a Peak of 1249 in the Year end 2017 file to 1500 in the proposed file.
11. Replacement numbers also change, but the months on farm are the same.
12. Beef stock wintered have been removed in the proposed scenario.

WW4

Table 5 and 6: WW4 N and P loss comparison

WW4 – N loss	V6.3.1	V6.3.2
Current Year sheep farm	29	29
Current season 2012-13 to 16-17		
Proposed consent adj area 2019	28	29
ConsentBarnFinalProposal2019	23	24

WW4 – P loss	V6.3.1	V6.3.2
Current Year sheep farm	0.9	0.9
Current season 2012-13 to 16-17		
Proposed consent adj area 2019	0.8	0.8
ConsentBarnFinalProposal2019	0.9	0.9

Table 7, 8 and 9: Stock numbers by months for Current 2012-13 to 16-17, proposed and barn scenario

Current season 2012-13 to 16-17

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Dairy	20	420	805	795	775	795	790	765	755	750	710	-
Beef	790	390	-	-	-	-	-	-	-	-	215	810

Proposed consent adj area 2019

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Dairy	20	430	850	840	830	850	835	805	795	785	720	-
Beef	930	420	-	-	-	-	-	-	-	-	225	850

13. The proposed consent scenario shows an increase in dairy cow numbers from peak milking 805 in the current season 2012-13 to 16-17 to 850 in the proposed.

Proposed winter barn WW4

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Dairy	30	535	1029	1015	1000	1020	1000	960	950	930	865	295
Replacements	233	27	-	-	-	-	-	-	-	-	263	263
Beef	769	469	-	-	-	-	-	-	-	-	-	474

14. Dairy cow numbers increase again under the proposed barn scenario to peak milking 1029.

WW5

Table 10 and 11: WW5 N and P loss comparison

WW5 – N loss	V6.3.1	V6.3.2
Current Year sheep farm	48	48
Current season 2012-13 to 16-17		
Proposed consent adj area 2019	48	49
ConsentBarnFinalProposal2019	43	44

WW5 – P loss	V6.3.1	V6.3.2
Current season 2012-13 to 16-17	0.7	0.8
Proposed consent xtra effluent	0.7	0.7
Winter Barn incl R2 Hfr April 2019	0.7	0.7

Table 12,13 and 14 : Stock numbers by month for current, proposed and barn scenario

Current season 16-18 effluent adj

Months	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Dairy	20	363	640	673	670	685	685	650	630	625	580	-
Beef	825	317	40	-	-	-	-	-	-	-	305	880

Proposed Consent Xtra effluent

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Dairy	30	535	1029	1015	1000	1020	1000	960	950	930	865	295
Beef	780	374	40	-	-	-	-	-	-	-	344	800

15. The proposed scenario shows a significant increase in dairy cow numbers from a maximum of 685 in the current 16-18 to 1029 maximum in the proposed consent xtra effluent.

16. Beef stock numbers vary across the months on farm with higher numbers on farm in May and August and lower numbers in June, July and September.

Proposed Winter Barn incl R2 Hrf April 2019

	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Dairy	30	485	962	945	930	950	930	890	880	870	795	260
Replacements	218	27	-	-	-	-	-	-	-	-	248	248
Beef	715	450	-	-	-	-	-	-	-	-	-	455

17. Peak dairy cow numbers decrease in the proposed barn scenario when compared to the consent xtra effluent scenario, whilst replacements are included for the first time and the beef stock numbers are reduced when compared to the proposed consent scenario.

Overseer consent conditions

18. I note that recent resource consent granted for M and C Adams allowed for a four-year rolling average to be used to show compliance with the Nitrogen limit on the consent.
19. If the Court was to grant this consent application, in my opinion a three-year rolling average would be more appropriate. This is consistent with the minimum time period specified in the "Using Overseer in Regulation report".
20. I have formed this opinion based on the numerous changes made across the nutrient budgets from my initial review, the complexities of the farm holding and the number of farms that these applications relate to.
21. The ability of the farm owners to potentially shift stock around the many different properties and the potential changes to effluent generated on the farms allow for a degree of risk associated with these applications.
22. A rolling three-year average would potentially allow a property to exceed the consented N limit on only one year in the period whilst a four year rolling average would potentially allow an exceedance of the N limit for two years of the four year period.