

Financial Implications of the Proposed Waikato Regional Plan Change 1

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Inspiring Agriculture

Table 1. Typical industry parameters.

Industry	N leaching (kg N/ha/yr)	P loss risk (kg P/ha/yr)
Dairy	29–49	0.8–2.1
Sheep and Beef	8–18	0.1–0.5
Forestry	2	0.1

Source: AgResearch (Kaye – Blake et al 2013)

Table 2. Fertiliser applications on Waikato dairy farms

Waikato Owner/Operators				
	2014-15	2015-16	2016-17	2017-18p
No: of farms	231	225	209	116
Nitrogen applied kg N/ha/yr	127	132	138	143
<p>p = provisional . As at 11 Feb 2019, 2017-18 data was still being collected, so this number is subject to change.</p> <p>Source: DairyBase</p>				

Image 1



Image 2

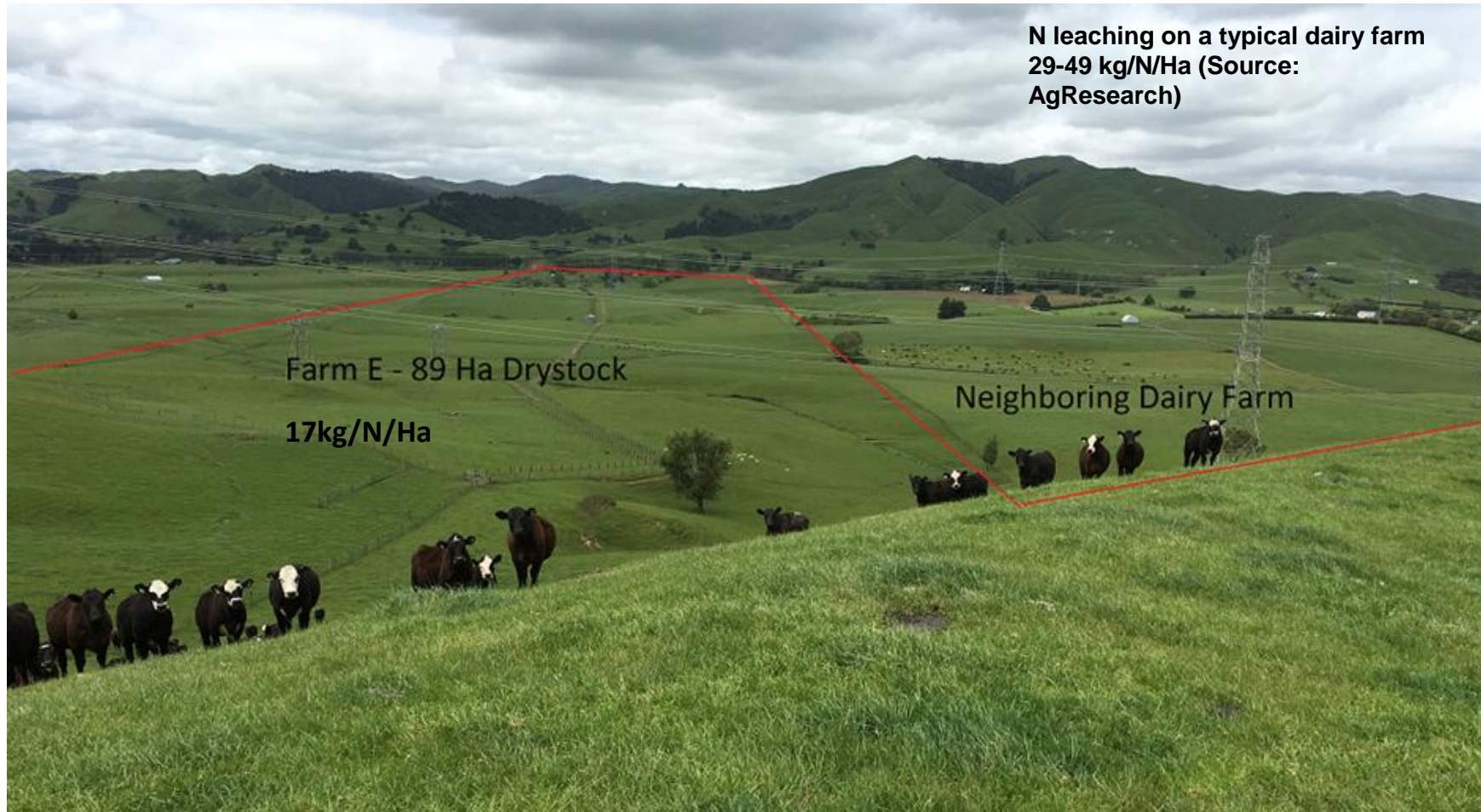


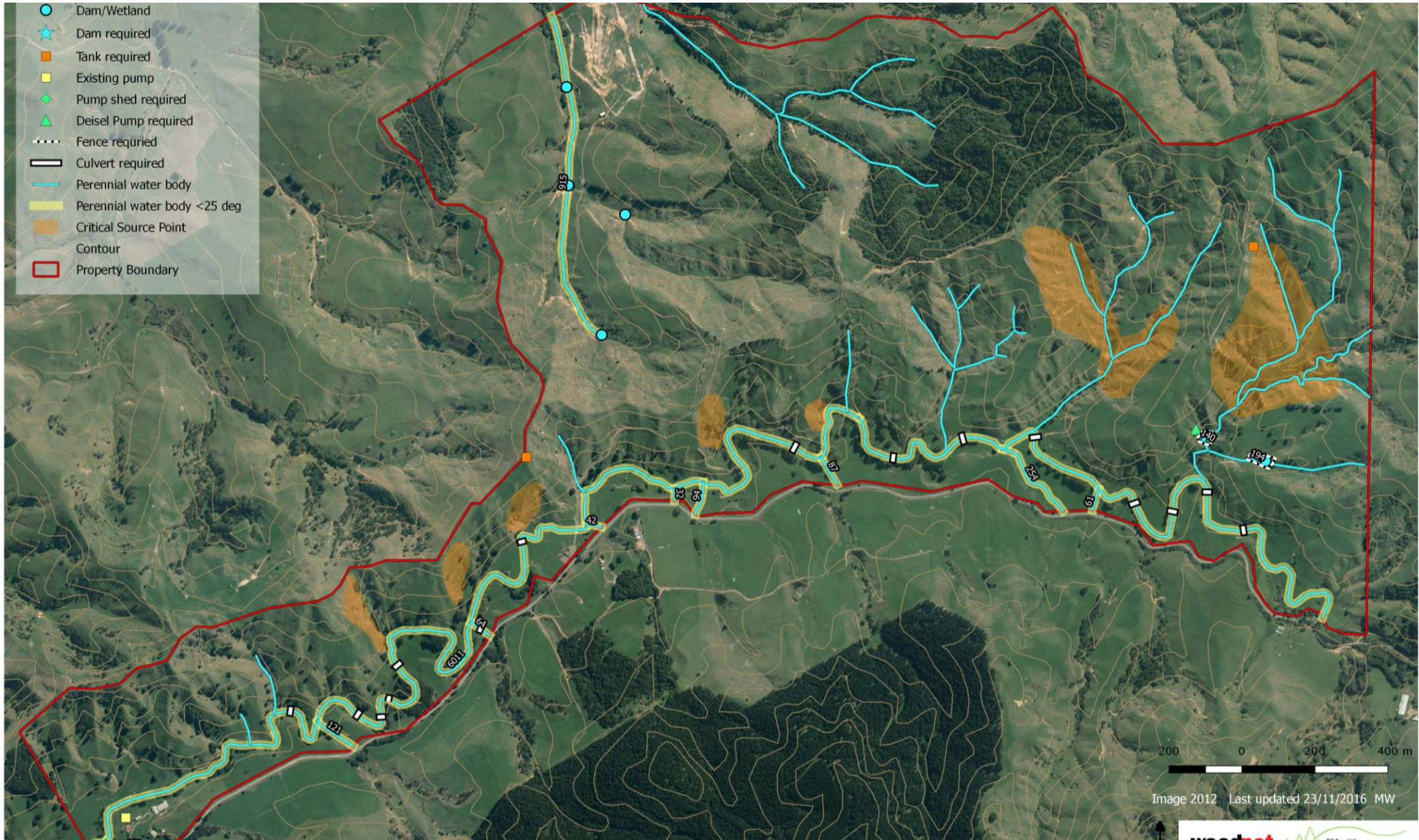
Table 3.

Nitrogen Reference Point (NRP) Results					Alternative Scenarios Modelled in Overseer				
Farm Name	Description	2014-15	2015-16	NRP (Highest)	Stocking Rate & Cattle Ratio to B+LNZ Class 4 Mean	Stocking Rate & Cattle Ratio to B+LNZ Class 5 Mean	Stocking Rate & Cattle Ratio to B+LNZ Class 4 Top 10%	Dairy on 150Ha. Drystock operation to B+LNZ Class 4 Mean	Grow 80ha Maize Followed by Annual RG and Winter Lamb Trade
		N leaching (kg/ha)	N leaching (kg/ha)	N leaching (kg/ha)	N leaching (kg/ha)	N leaching (kg/ha)	N leaching (kg/ha)	N leaching (kg/ha)	N leaching (kg/ha)
Farm A	461 ha Drystock	12	11	12	14				
Farm B	323 ha Drystock	14	14	14					
Farm C	900 ha Drystock	7	7	7	8		10	12	
Farm D	550 ha Drystock	15	15	15		18			18
Farm E	89 ha Drystock	13	17	17					

Key: Red equals an increase in the Farms NRP . Red equals the property exceeding its nitrogen reference point based on the alternative policy scenario.

Note: N loss reported using Overseer v 6.2.3. The NRP data as stated above should not be used for consenting or compliance purposes. BakerAg used WRC protocols as at November 2016, these may change as the plan becomes operative.

Image 3



Images 4 & 5



Images 6 & 7



Farm B Costings

Upfront Capital Costs to Comply with the PC1

Farm environmental plan			
*Average cost of preparing a Farm Environment Plan (AgFirst Estimate) excluding the NRP assuming the farm doesn't have an electronic map			\$3,980
Recent soil tests to set up Overseer file			
	Tests	\$/Test	
	0	200	\$0
Initial nutrient budget 2015 & 2016 Yr. to set NRP			
	Hrs	\$/Hr	
Farm visit	5	150	\$750
Travel 100Km @ 80c km			\$80
Set up Overseer files 2 years	13	150	\$1,950
Further correspondence with accountant & farmer	1	150	\$150
<i>Note: Ballacne environmental team Est range \$800-2880 for 2 files they have indicated \$3000</i>			\$2,930
Stock Exclusion as per schedule C			
Fencing water bodies from which cattle, horses, deer and pigs must be excluded			\$240,788
Mitigation measures as per schedule 1			
		Poles/Yr.	
Erosion Control -Poles planted to control erosion and ^CSPs		100	\$2,739
Water Reticulation - Hill block mitigation (Perennial streams that are above 25 degrees and impracticable to fence)			\$155,900
Riparian planting per year			\$2,500
Livestock crossing structures Waipuna Stream (14 crossing points currently - 6 is bare minimum	6	\$20,600	\$123,600
Engineering and Consent estimate for crossings			\$9,000
Total Costs			\$541,437

Farm B Costings

Ongoing Annual Costs to Comply with the PC1			
Yearly Overseer updates to test policy change on NRP and compliance with the maximum NRP			
	Hrs.	\$/Hr.	
Farm visit	3.5	150	\$525
Travel			\$80
Set up overseer file	1.5	150	\$225
Further correspondence with accountant & farmer	0.5	150	\$75
			\$905
Ongoing mitigation measures as per schedule 1			
		Poles/Yr.	
Erosion Control -Poles planted to control erosion and CSPs		100	\$2,739
Riparian planting & maintenance per year			\$2,500
Water Riticulation - Ongoing annual costs			
*Additional R&M & Labor with new system \$20/Trough			\$1,292
Annual Depreciation 40 Yr. Lifespan			\$3,898
Interest @ 7%			\$10,913
		Total Costs	\$16,103
* Fixing water leaks, replacing trough fittings, maintenance of pumps, maintenance of trough surrounds with metal etc.			

Farm B Costings

Fencing - Stock Exclusion - Ongoing annual costs			
*Additional R&M Labor Required ^1% Capital Value			\$2,408
Annual Depreciation 20 Yr. Lifespan			\$12,039
Interest @ 7%			\$16,855
	Total Costs		\$31,302
<p>*More fences to look after, more flood damage, erosion damage, stock pushing 1 wires, Keeping electrics going, finding faults, spraying lines to keep power up. ^Lincoln financial budget manual 12-13</p>			
Maintenance of livestock crossing structures			
Maintenance of culverts - Repairing eroded surrounds, clearing flood debris, * 3% Capita			\$3,708
* Lincoln financial budget manual 12-13			
Interest @ 7%			\$9,282
	Total Costs		\$12,990
Additional Administration & Farm labour			
Monitoring, record keeping, reporting and gathering information to demonstrate and/or monitor compliance with the Farm Environmnet Plan and NRP			
	Hrs	\$/Hr	
	24	\$30	\$720
Additional time spent shifting stock after reducing Waipuna stream crossings from 14 down to 6 (Extra 3 Hours/week stock work)	144	\$25	\$3,600
Total Annual Costs			\$70,859
Effective Ha			323
% increase in farm working costs/Ha (Based on class 4 B+LNZ Farm Survey)			\$/Ha
			\$219
			33%