

## 1.0 Overview

This report provides details and commentary on the nutrient budgeting that has been undertaken for Woldwide Runoff (WR) and forms part of two wider resource consent applications for expanded dairying at Woldwide 1, 2, 4 & 5. Background information and details of the nutrient budgeting for Woldwide 1, 2, 4, 5 and Horner Block can be found in the detailed reports produced for those farms by Ravensdown and Farm Source.

WR is comprised of two separate blocks being the 385ha (~338ha effective) Merriburn Block and the 507ha (~321ha effective) Merrivale Block. The Merrivale Block is owned by WR with the Merriburn Block being leased; however they are both run as a single farm. The two properties are located in Western Southland to the north east of Tuatapere.

WR is used to graze young stock from five dairy farms with baleage being made during periods of surplus grass production. Baleage is used to supplement the winter grazing of young stock at WR and is also sold to Woldwide Farms and the Woldwide dairy farms. In addition to the raising of young stock and baleage production, WR also has approximately 100ha of commercial pine plantation and 60ha of Beech forest under a sustainable management plan.



The Merriburn Block was incorporated into WR in the 2017-18 dairy season, however there was only limited information made available on its production potential and previous stocking rates. This was largely due to the passing away of one of the previous owners who had overseen the property.

This has resulted in difficulties being able to source information to model the use of the Merriburn Block prior to 2017. In general terms it is known that the property was used for the rearing and wintering of young stock (R1's and R2's) for the former Milkpride dairy management company.

It is important that the use of the land prior to the property being leased to WR is reflected as the available evidence indicates it was a significantly more intensive use than what is proposed and currently occurring on the Merrivale Block. This is significant as in 2017-18 WR was understocked, resulting in considerable difficulty controlling pasture growth, which in turn impacted on pasture quality and animal growth rates.

Only using the 2017-18 land use to determine baseline nitrogen and phosphorus losses would result in further reductions in nutrient losses being required from a baseline that already reflects significant reductions in nitrogen and phosphorus loss compared to past years. On this basis a 2016-17 nutrient budget has also been produced, which reflects the actual inputs for the Merrivale Block (which was under the ownership of WR) and a conservative estimate of the land use occurring on the Merriburn block.

	16/17	17/18	Average	Proposed	% Change
<b>Total N Loss (kg)</b>	26134	19931	23033	22603	-1.9
<b>N Loss/ha (kg)</b>	29	22	26	25	
<b>Total P Loss (kg)</b>	500	532	516	489 (454)*	-5.2 (-12)*
<b>P Loss/ha (kg)</b>	0.6	0.6	0.6	0.5	
<b>Pasture Grown (kg/DM/ha/yr)</b>	12639	11024	11832	13282	

\*Additional P reductions calculated outside of Overseer (See Phosphorus Mitigation Plan)

## 2.0 Pre-Expansion Land Use

Two pre-expansion nutrient budgets have been produced covering the period from August 2016 to July 2018. An overview of the pre-expansion files is provided below with details of the inputs used contained in Section 9.

### 2.1 August 2016 – July 2017

In 2016/17 there were 850 rising 1 year olds (R1's) and 850 rising 2 year olds (R2's) on the Merrivale Block. R2 numbers were trimmed by 115 cows in March due to a cull of empty cows (not in calve). In addition to the R1's and R2's there were 25 empty carry over cows. On the Merriburn Block stock data estimates have been provided by the former farm manager who estimated there were 600 R1's and 600 R2's on the property. All stock were wintered on. In addition to this there would have also been some carry over cows (conservative number of 25 used) and mating bulls. 70 mating bulls (1<sup>st</sup> November to 10<sup>th</sup> January) have been used across both properties, as per what currently occurs.

Kale was grown on both blocks to facilitate the winter grazing of 1450 R1's and 600 R2's. The Dairy NZ crop calculator has been used to determine the area of winter crop required for the 600 R2's (480kg/lwt) on the Merriburn Block with 650 (220kg/DM) bales of baleage also fed. The calculator determined approximately 38ha of kale is required to provide sufficient feed for 2 months (June & July).

In addition to this, 850 R1's were wintered on the Merrivale Block on 30ha of kale with approximately 600 bales of baleage. On Merriburn the Dairy NZ crop calculator was again used to determine the required area of kale crop for 600 R1's (210kg/lwt) with 400 bales (220kg/DM) of baleage also fed. The calculator determined approximately 20ha was required.

In order to support the winter grazing assumptions made for the Merriburn Block aerial imagery (Google Earth) has been used to look at areas of the farm that were under cultivation. The most recent image of the farm prior to it being leased to WR is December 2015. The areas cultivated at this time have been placed onto a farm map (Appendix 3) showing paddocks and their subsequent size. The area under cultivation was approximately 120ha. Assuming half of this area was returning to grass (which is unlikely as some paddocks would be double cropped) then 60ha would have been utilised for winter grazing. This can be compared to the 58ha under winter crop in the Merriburn Block in the 2016/17 Nutrient Budget.

Fertiliser inputs into the nutrient budget are based on purchase records from Ravensdown for the 2016-17 season for the Merrivale Block, with soil test results entered as an Olsen P level of 25, which is the long term objective for WR. On certain areas of the Merrivale Block capital applications of phosphorus were applied in 16/17 to lift Olsen P levels. Fertiliser inputs for the Merriburn Block have been based on conservative fertiliser inputs of both nitrogen and phosphorus (below maintenance requirements) on pasture blocks and standard fertiliser recommendations for the kale crops.

Supplements in the form of baleage was made on Merrivale in the form of 1200 bales (220-240kg/DM) which were utilised on crop paddocks, on normal pasture blocks to cover feed shortages and exported off farm to other Woldwide operations. It is assumed baleage would also have been made on the slightly larger Merriburn Block and a conservative estimate of 1100 bales (220-240kg/DM) were produced and utilised on crop paddocks.

	<b>Total 16/17</b>	<b>Per/ha 16/17</b>
<b>Nitrogen Loss (kg/N)</b>	26134	29
<b>Phosphorus Loss (Kg/P)</b>	500	0.6
<b>Pasture Production (kg/DM)</b>		12,639

## 2.2 August 2017 – July 2018

In 2017/18 there were 1265 R1's and 1265 R2's at WR. R2 numbers were trimmed to approximately 1150 in March due to a cull of empty cows. In addition to the R1's and R2's there were 37 empty carry over cows 70 mating bulls (1<sup>st</sup> November to 10<sup>th</sup> January) grazing on WR.

In 2017/18 there was 52ha of Kale was grown on WR (36.5ha on Merriburn and 15.5ha on Merrivale) to facilitate the wintering of 1265 R1's between the 20<sup>th</sup> May and the 10<sup>th</sup> August. In addition to Kale

the R1's were also feed approximately 1188 bales of baleage (240kg/DM).

Fertiliser inputs into the nutrient budget are based on the purchase records from Ravensdown for the 2017-18 season, with soil test results entered as an Olsen P level of 25, which is the long term objective for WR. On certain areas of the Merrivale Block capital applications of phosphorus were applied in 17/18 to lift Olsen P levels. In addition to this paddocks on steeper topography didn't receive fertiliser.

4048 bales (240kg/DM) of baleage were made on WR which were utilised on crop paddocks and exported off farm to other Woldwide operations.

As mentioned previously, during 2017/18 it became clear to the owners of WR that the farms were understocked as pasture growth couldn't be adequately controlled resulting in poor quality pasture and stock growth issues. This is reflected in the lower pasture production figures for the 2016/17 season as Overseer back calculates pasture growth from animal feed demands not actual pasture grown. A more realistic Overseer pasture production figure would be 13T/DM/ha, which shows the under utilisation of pasture during the 16/17 season.

	Total 17/18	Per/ha 17/18
Nitrogen Loss (kg/N)	19931	22
Phosphorus Loss (Kg/P)	532	0.6
Pasture Production (kg/DM)		11,024

### 3.0 Proposed Land Use

In the proposed scenario there are no changes to the total size of WR although an additional 12ha of pasture on the Merrivale Block is planted in trees. This reduces the effective area of the Merrivale Block to ~309ha and the overall effective area of the farm to ~647ha.

It is proposed to continue to rear 1265 R1's and 1265 R2's on the properties with R2 numbers dropping to 1165 in March. Carry over cow and mating bull numbers are based on the 2017-18 figures of 37 carry overs and 70 bulls. The main change in the proposed budget from the 2017-18 season is the wintering of 450 R2's over June and July. Previously R2's have been wintered on support blocks in the Heddon Bush area close to the Woldwide dairy farms. The proposed scenario results in 55% of the R2's for the Woldwide dairy farms being wintered in barn facilities that are to be constructed/expanded as part of the expanded dairying consent applications for Woldwide 1, 2, 4. The majority of R2's not wintered indoors will be moved out of the Heddon Bush area where soils are more prone to nitrate leaching.

To facilitate the winter grazing of the 1265 R1's and 450 R2's it is proposed to grow 78ha of Kale supplemented by 1332 bales of baleage.

Fertiliser inputs into the nutrient budget are based on maintaining Olsen P levels at 25, although a small allowance has been made for paddocks that may require capital applications of fertiliser to raise Olsen p levels to 25. Total nitrogen fertiliser inputs are based on usage in the 17-18 season.

Supplements in the form of baleage (3500 – 240kg/DM bales) and silage (3 cuts off the Merrivale Block – 1050T/DM) are proposed to be produced off WR. Approximately 1300 bale will be utilised on WR with the rest exported to the five Woldwide dairy farms.

	Total Proposed	Per/ha Proposed
Nitrogen Loss (kg/N)	22603	25
Phosphorus Loss (Kg/P)	489	0.5
Pasture Production (kg/DM)		13,282

#### 4.0 Modelling Inputs

To construct the nutrient budgets the following input data has been used;

##### 4.1 Blocks

WR has been split into the following blocks:

Block Name	Soil Type	16/17	17/18	Proposed
Merriburn	Ihak_23a.1	290.5 (86%)	140	290.5 (86%)
Merriburn	Apar_6a.1	47.3 (14%)	27.5	47.3 (14%)
Merriburn Lower Fert	Ihak_23a.1		139.7	
Merriburn Lower Fert	Apar_6a.1		21.1	
Merriburn No Fert	Ihak_23a.1		9.5	
Merrivale	Waiki_36a.1		176.5	220.3 (79%)
Merrivale	Makar_3b.1		31.9	30.7 (11%)
Merrivale	Malok_3a.1			27.8 (10%)
Merrivale Lower Fert	Waiki_36a.1		42.7	
Merrivale Lower Fert	Malok_3a.1		27.7	
Merrivale No Fert	Malok_3a.1		28.1	14.3 (47%)
Merrivale No Fert	Waiki_36a.1		14.3	16.1 (53%)
Merrivale (High N/High P)	Waiki_36a.1	56.8 (83%)		
Merrivale (High N/High P)	Makar_3b.1	11.6 (17%)		
Merrivale (High N/Med P)	Waiki_36a.1	72.1 (91%)		
Merrivale (High N/Med P)	Makar_3b.1	7.1 (9%)		
Merrivale (Low N/Med P)	Malok_3a.1	36.7 (67%)		
Merrivale (Low N/Med P)	Waiki_36a.1	18.1 (33%)		
Merrivale (Med N/High P)	Waiki_36a.1	30.8 (72%)		
Merrivale (Med N/High P)	Malok_3a.1	4.7 (11%)		
Merrivale (Med N/High P)	Makar_3b.1	7.3 (17%)		
Merrivale (Med N/Med P)	Waiki_36a.1	44.0(84%)		
Merrivale (Med N/Med P)	Malok_3a.1	3.1 (6%)		
Merrivale (Med N/Med P)	Makar_3b.1	5.2 (10%)		
Merrivale (No Fert)	Waiki_36a.1	10.4 (44%)		
Merrivale (No Fert)	Malok_3a.1	11.4 (48%)		
Merrivale (No Fert)	Makar_3b.1	1.9 (8%)		

Kale	Rotating	Rotating (88)	Rotating (52)	Rotating (78)
<b>Effective Farm Area</b>		<b>659</b>	<b>659</b>	<b>647</b>
Plantation Forest		100	100	112
Beech Forest		60	60	60
Non-Productive		73	73	73
<b>Total Farm Area</b>		<b>892</b>	<b>892</b>	<b>892</b>

- Soil areas were obtained from Smap/Environment Southland.
- Soil settings were obtained from SMap for all soil types.

#### 4.2 Climate Data

- Location setting = Southland
- Climate station tool used for block climate data
  - 1147 - 1185mm of rainfall
  - 9.9 - 10°C mean annual temperature
  - 731-1450mm daily rainfall pattern. Low variation.
  - 737 - 743mm mean annual PET

#### 4.3 Farm System Inputs

Description	16/17	17/18	Proposed
Stock On Farm	<u>R1's – Friesian</u>	<u>R1's – Friesian</u>	<u>R1's – Friesian</u>
	July – 0	July – 0	July – 0
	Aug – 0	Aug – 0	Aug – 0
	Sep – 0	Sep – 0	Sep – 0
	Oct – 0	Oct – 0	Oct – 0
	Nov – 1450	Nov – 1265	Nov – 1265
	Dec – 1450	Dec – 1265	Dec – 1265
	Jan – 1450	Jan – 1265	Jan – 1265
	Feb – 1450	Feb – 1265	Feb – 1265
	Mar – 1450	Mar – 1265	Mar – 1265
	Apr – 1450	Apr – 1265	Apr – 1265
	May – 1450	May – 1265	May – 1265
	June – 1450	June – 1265	June – 1265
	<u>R2's – Friesian</u>	<u>R2's – Friesian</u>	<u>R2's – Friesian</u>
	July – 1450	July – 1265	July – 1265
	Aug – 1450	Aug – 1265	Aug – 1265
	Sep – 1450	Sep – 1265	Sep – 1265
	Oct – 1450	Oct – 1265	Oct – 1265
	Nov – 1450	Nov – 1265	Nov – 1265
	Dec – 1450	Dec – 1265	Dec – 1265
	Jan – 1450	Jan – 1265	Jan – 1265
	Feb – 1450	Feb – 1265	Feb – 1265
	Mar – 1335	Mar – 1150	Mar – 1165
	Apr – 1335	Apr – 1150	Apr – 1165
	May – 1335	May – 1150	May – 1165

	<p>June – 600 July - 600</p> <p><u>Carry Overs</u> July – 50 Aug – 50 Sep – 50 Oct – 50 Nov – 50 Dec – 50 Jan – 50 Feb – 50 Mar – 50 Apr – 50 May – 50 June – 50</p> <p><u>Mating Bulls</u> July – 0 Aug – 0 Sep – 0 Oct – 0 Nov – 70 Dec – 70 Jan – 23 Feb – 0 Mar – 0 Apr – 0 May – 0 June – 0</p>	<p>June – 0</p> <p><u>Carry Overs</u> July – 37 Aug – 37 Sep – 37 Oct – 37 Nov – 37 Dec – 37 Jan – 37 Feb – 37 Mar – 37 Apr – 37 May – 37 June – 37</p> <p><u>Mating Bulls</u> July – 0 Aug – 0 Sep – 0 Oct – 0 Nov – 70 Dec – 70 Jan – 23 Feb – 0 Mar – 0 Apr – 0 May – 0 June – 0</p>	<p>June – 450 July – 450</p> <p><u>Carry Overs</u> July – 37 Aug – 37 Sep – 37 Oct – 37 Nov – 37 Dec – 37 Jan – 37 Feb – 37 Mar – 37 Apr – 37 May – 37 June – 37</p> <p><u>Mating Bulls</u> July – 0 Aug – 0 Sep – 0 Oct – 0 Nov – 70 Dec – 70 Jan – 23 Feb – 0 Mar – 0 Apr – 0 May – 0 June – 0</p>
<b>Description</b>	<b>16/17</b>	<b>18/19</b>	<b>Proposed</b>
Crop Area and Inputs	<p><u>50ha Kale</u> 12T/DM/ha</p> <p>Direct Drilled November</p> <p>128kg/ha/N 49kg/ha/P 48kg/ha/K</p> <p>Grazed 24hrs day 20<sup>th</sup> May – 10<sup>th</sup> August by R1's</p> <p><u>38ha Kale</u> 12T/DM/ha</p> <p>Conventional Cultivation November</p>	<p><u>52ha Kale</u> 12T/DM/ha</p> <p>Direct Drilled November</p> <p>82kg/ha/N 49kg/ha/P 48kg/ha/K</p> <p>Grazed 24hrs day late May to early August by R1's</p>	<p><u>78ha Kale</u> 12T/DM/ha</p> <p>Direct Drilled November</p> <p>94kg/ha/N 40kg/ha/P 48kg/ha/K</p> <p>Grazed 24hrs day late May to early August by R1's &amp; R2's</p>

	136kg/ha/N 50kg/ha/P 50kg/ha/K  Grazed 24hrs day June & July by R2's.		
<b>Description</b>	<b>16/17</b>	<b>17/18</b>	<b>Proposed</b>
Supplements made on Farm	<u>Baleage (240kg)</u> 2299 Bales 1750 – Kale 150 – Pasture Blocks 399 – Exported	<u>Baleage (240kg)</u> 4048 Bales 1191 – Kale 2857 - Exported	<u>Baleage (240kg)</u> 3500 Bales 1332 – Kale 2168 – Exported  <u>Silage (DM)</u> 1050T - Exported
<b>Description</b>	<b>16/17</b>	<b>17/18</b>	<b>Proposed</b>
Fertiliser	<u>Merriburn</u> 98kg/N/ha (Sept, Dec, Feb) 20kg/P/ha (Dec) 12kg/K/ha (Dec)  <u>Merrivale (High N/High P)</u> 119kg/N/ha (Oct, Dec-Feb) 79kg/P/ha (Dec-Jan) 121kg/K/ha (Dec-Jan)  <u>Merrivale (High N/ Med P)</u> 106kg/N/ha (Oct, Jan-Feb) 31kg/P/ha (Jan) 40kg/K/ha (Jan)  <u>Merrivale (Low N/Med P)</u> 21kg/N/ha (Feb) 30kg/P/ha (Feb)  <u>Merrivale (Med N/High P)</u> 68kg/N/ha (Oct, Dec-Jan) 80kg/P/ha (Dec-Jan) 108kg/K/ha (Dec-Jan)  <u>Merrivale (Med N/Med P)</u> 62kg/N/ha (Oct, Feb) 32kg/P/ha (Feb) 31kg/K/ha (Feb)	<u>Merriburn</u> 136kg/N/ha (Sep, Dec, Feb) 20kg/P/ha (Dec) 26kg/K/ha (Dec)  <u>Merriburn Lower Fert</u> 36kg/N/ha (Sep, Dec, Feb) 25kg/P/ha (Dec) 16kg/K/ha (Dec)  <u>Merrivale</u> 165kg/N/ha (Aug, Nov, Sep, Feb) 59kg/P/ha (Nov & Jan) 99kg/K/ha (Nov & Jan)  <u>Merrivale Lower Fert</u> 57kg/N/ha (Sep & Nov) 22kg/P/ha (Nov) 25kg/K/ha (Nov)	<u>Merriburn</u> 121kg/N/ha (Sep, Dec, Feb) 32kg/P/ha (Dec) 26kg/K/ha (Dec)  <u>Merrivale</u> 121kg/N/ha (Aug, Nov, Feb) 40kg/P/ha (Nov, Jan) 110kg/K/ha (Nov, Jan)



## 5.0 Modelling Results

	16/17	17/18	Average	Proposed	% Change
<b>Total N Loss (kg)</b>	26134	19931	23033	22603	-1.9
<b>N Loss/ha (kg)</b>	29	22	26	25	
<b>Total P Loss (kg)</b>	500	532	516	489 (454)*	-5.2 (-12)*
<b>P Loss/ha (kg)</b>	0.6	0.6	0.6	0.5	
<b>Pasture Grown (kg/DM/ha/yr)</b>	12639	11024	11832	13282	

\*Additional P reductions calculated outside of Overseer (See Phosphorus Mitigation Plan)

## 6.0 Modelling Conclusions

Using Overseer, nutrient budgets have been developed for WR, comparing the nutrient losses of the 2016/17 and 2017/18 farm systems against the proposed farm system post expansion of the Woldwide dairy farms. Overseer has predicted that the nitrogen and phosphorus losses will decrease.

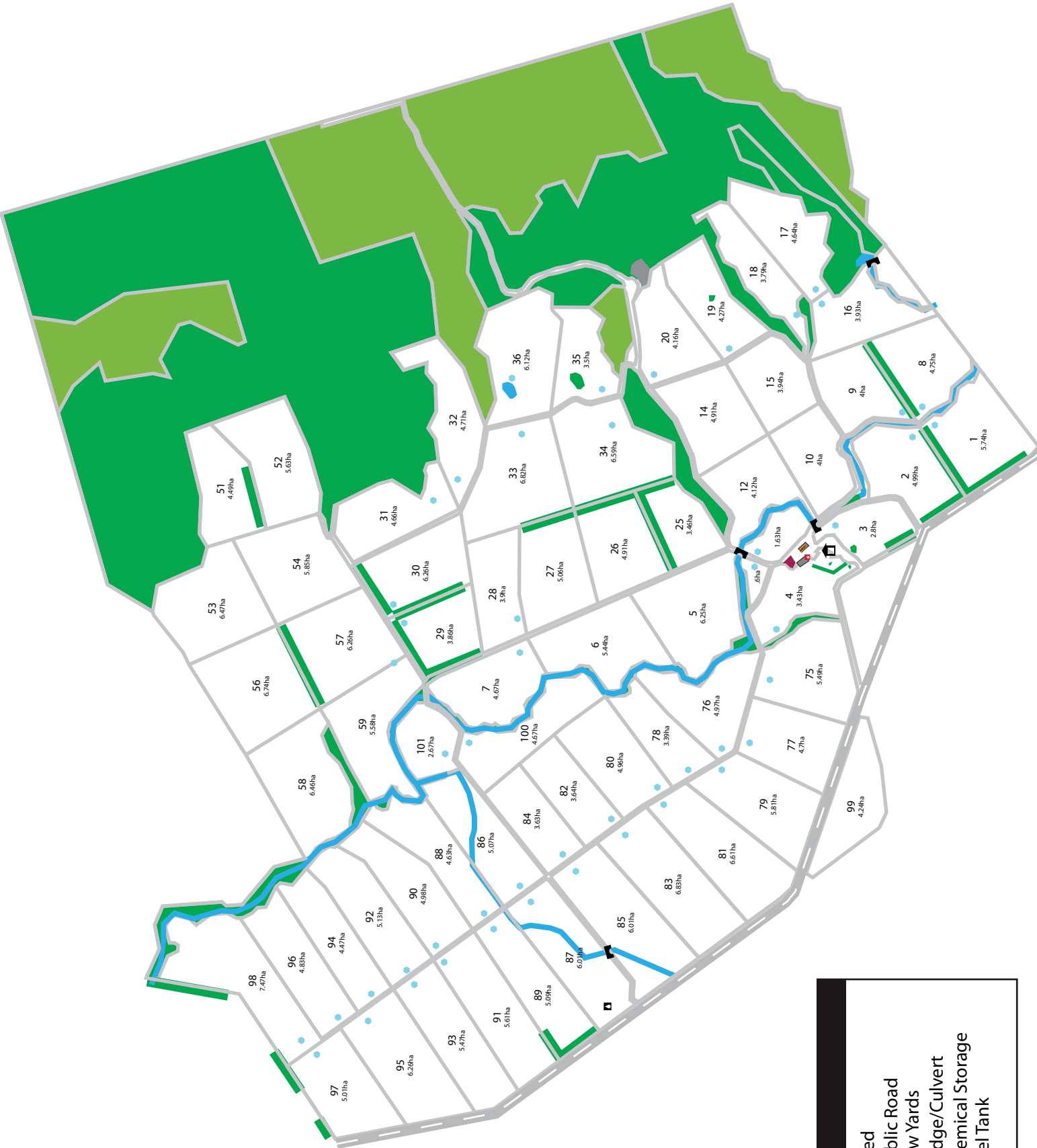
Key drivers for the reduction in nitrogen losses are:

- Reduction in cows wintered compared to 16/17 season
- Additional land planted in trees
- More efficient use of nitrogen fertiliser

Key drivers for the reduction in phosphorus are:

- Additional land planted in trees
- Reducing large applications of phosphorus fertiliser
- Reduction in cows wintered compared to 16/17 season
- Mitigations outside of Overseer - See Phosphorus Mitigation Plan

## Appendix 1 – Block & Farm Maps

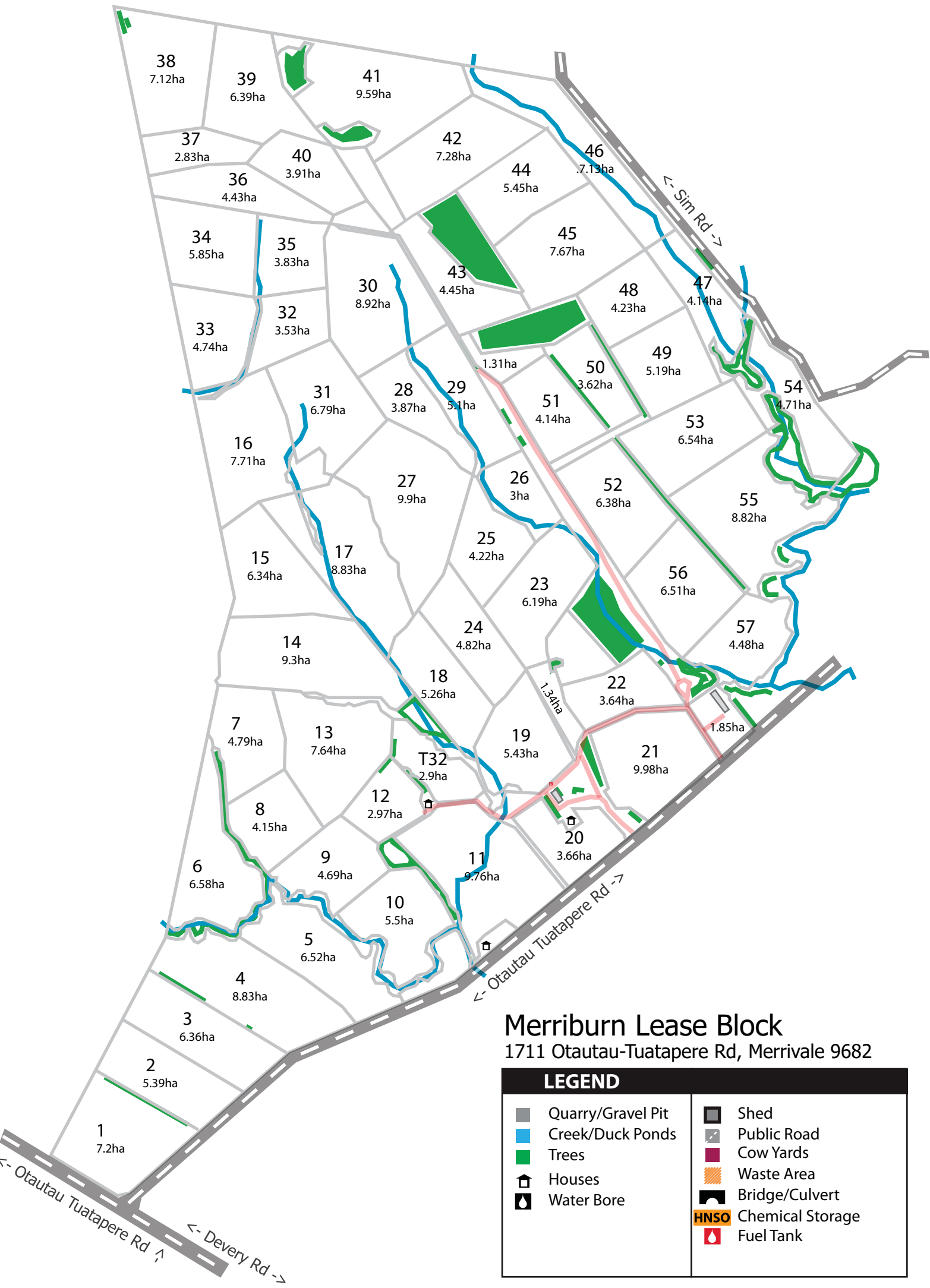


# Woldwide Run-Off

20 Gill Rd, Merrivale 9682

**LEGEND**

	Quarry/Gravel Pit		Shed
	Creek/Duck Ponds		Public Road
	Trees		Cow Yards
	Houses		Bridge/Culvert
	Water Bore		Chemical Storage
			Fuel Tank



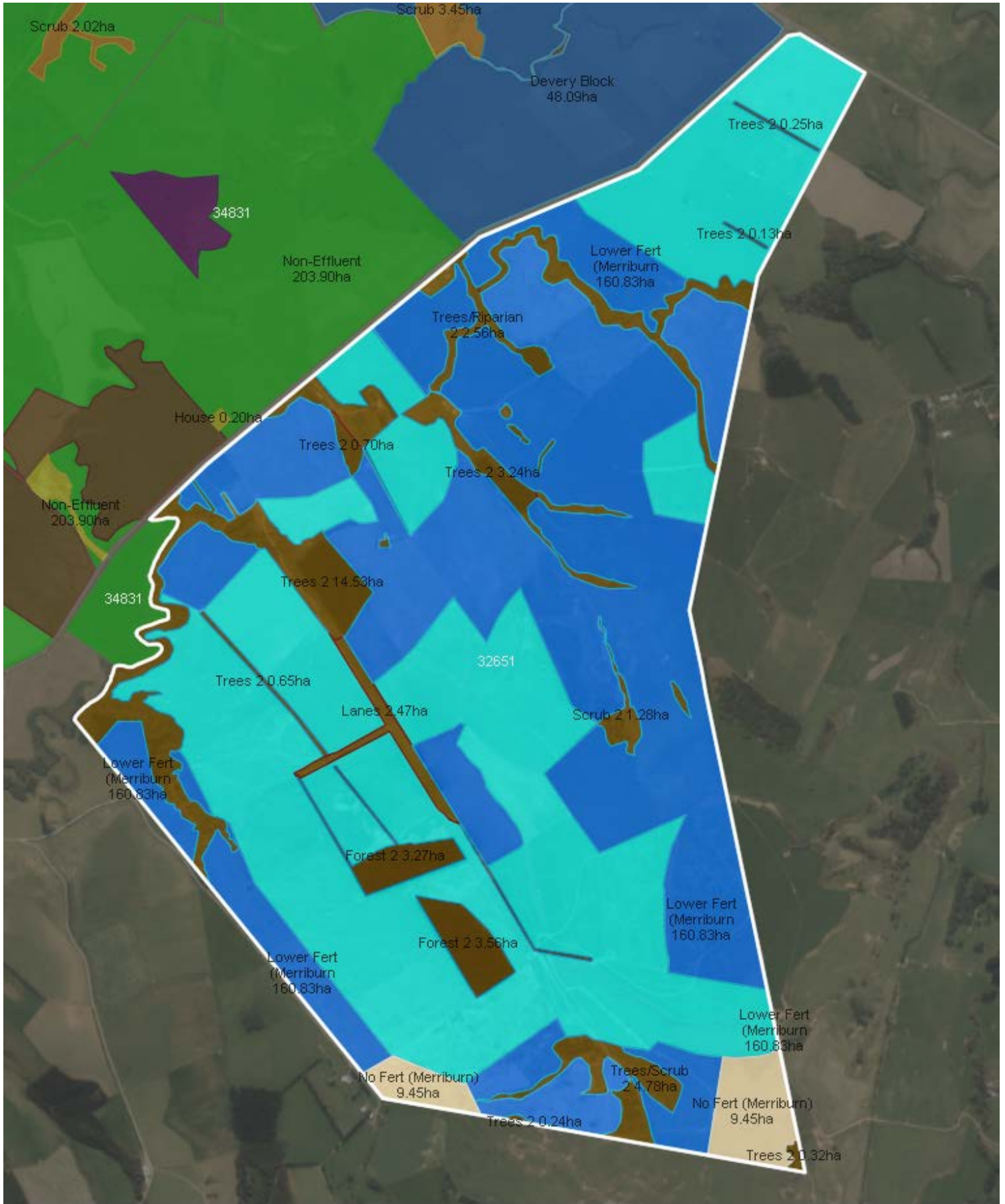
## Merriburn Lease Block

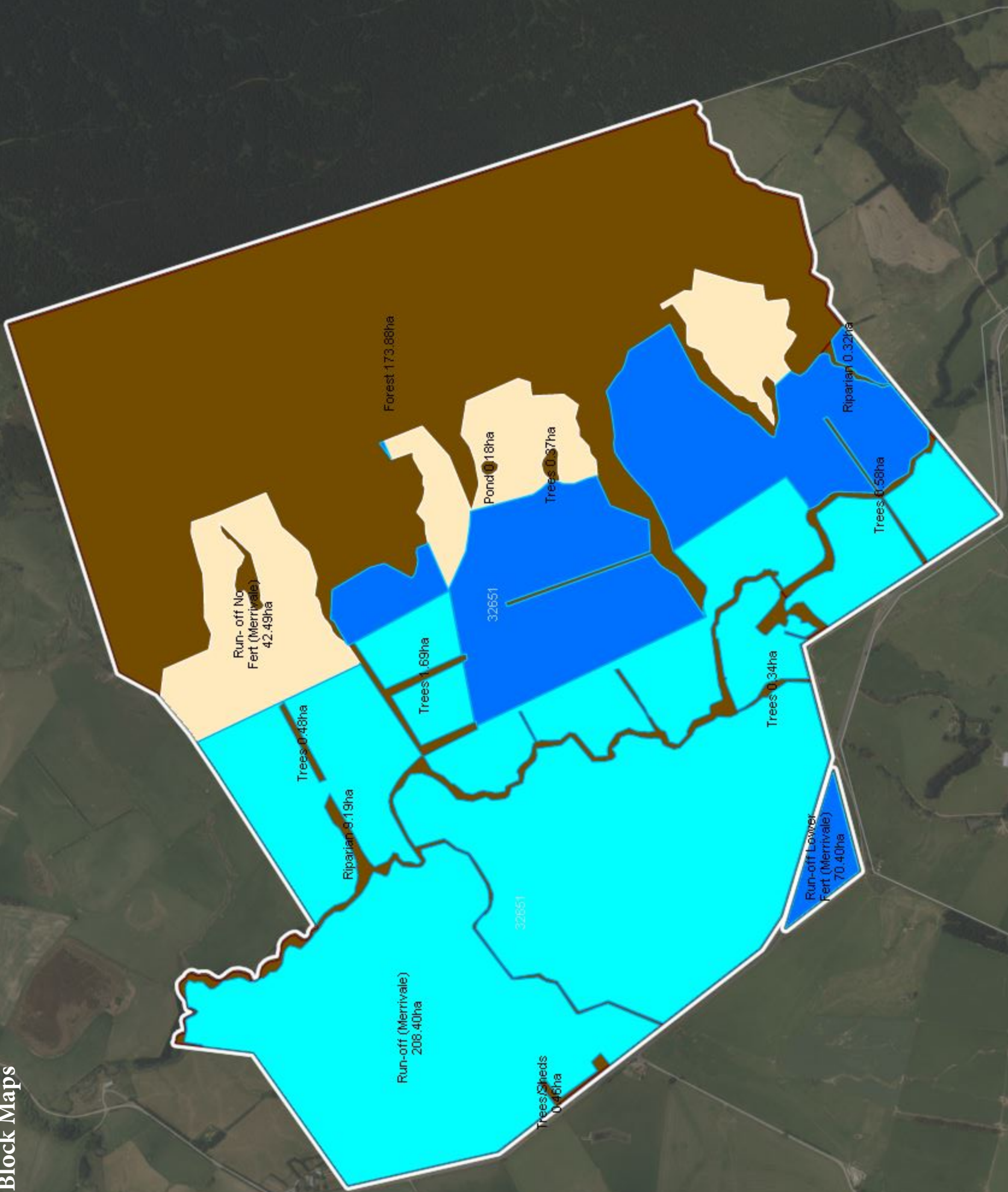
1711 Otautau-Tuatapere Rd, Merrivale 9682

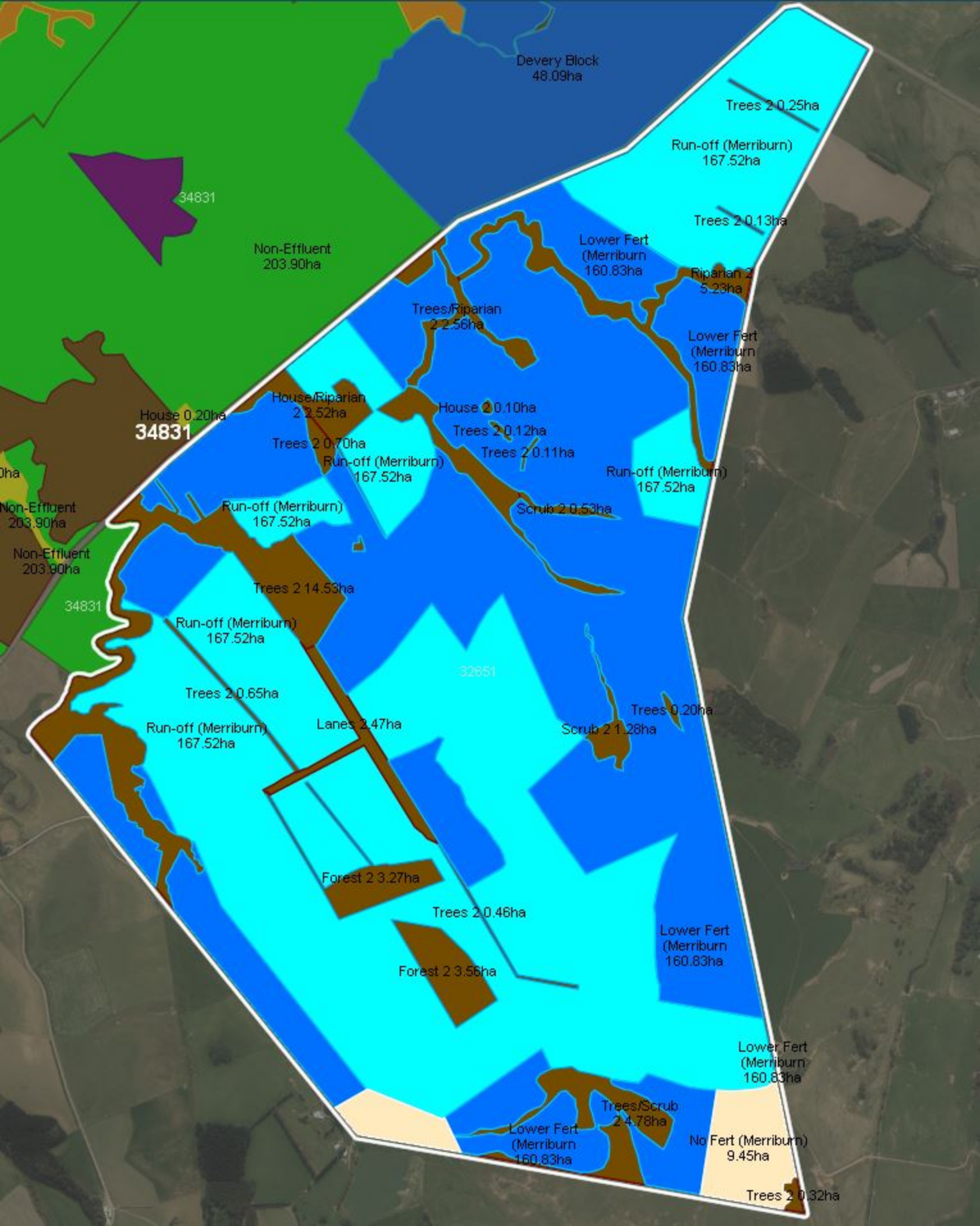
LEGEND			
	Quarry/Gravel Pit		Shed
	Creek/Duck Ponds		Public Road
	Trees		Cow Yards
	Houses		Waste Area
	Water Bore		Bridge/Culvert
			HNSO Chemical Storage
			Fuel Tank

# 2016/17 Block Maps











## Appendix 2 – Nutrient Budgets & Block Reports



**Woldwide Runoff Limited**  
1328 Otautau-Tuatapere Rd, Merrivale 9682, Ne...



## Year ending 2017

Analysis type	Year end
Is publication	No
Application version	2.6.0.5
Printed date	28 Jul, 2019, 11:51PM
Model version	6.3.1

## Farm details

N: **26134** N/ha: **29** P: **500** P/ha: **0.6** GHG/ha: **5337** NCE: **16%**

Total area	892 ha
Productive block area	659.10 ha
Nitrogen conversion efficiency (NCE)	16%
N Surplus	106 kg/ha
Region	Southland

## Blocks

NAME	TYPE	AREA (HA)	N LOSS	N LOSS/HA	N SURPLUS/HA	P LOSS	P LOSS/HA
Merriburn	Pasture	337.8	7527	25.6	139	157	0.5
Merrivale (High N / High P)	Pasture	68.4	1582	27.1	140	51	0.9
Merrivale (High N / Med P)	Pasture	79.2	2041	29.8	138	47	0.7
Merrivale (Low N / Med P)	Pasture	54.8	1531	32.4	103	37	0.8
Merrivale (Med N / High P)	Pasture	42.8	958	26.2	121	31	0.8
Merrivale (Med N / Med P)	Pasture	52.4	1287	28.5	121	28	0.6
Merrivale (No Fert)	Pasture	23.7	673	28.3	94	18	0.8
Kale	Fodder crop	50	5735	115	189	20	0.4
Kale (R2's) Merriburn	Fodder crop	38	4005	105	179	16	0.4
Beech Forest	Trees and scrub	60	180	3	0	6	0.1
Plantation Forest	Trees and scrub	100	250	2	0	12	0.1
Other sources	Other	-	363	-	-	77	-

# Farm nutrient budget

## LOSSES FROM ROOT ZONE

	TOTAL LOSS (KG/YR)	LOSS PER HA (KG/YR)
Nitrogen	26,134	29
Phosphorus	500	0.6

NUTRIENTS ADDED (KG/HA/YR)		N	P	K	S	CA	MG	NA
Fertiliser, lime and other	✓	68	26	25	29	15	0	0
Irrigation		0	0	0	0	0	0	0
Supplements	✓	0	0	0	0	0	0	0
Rain/clover fixation	✓	58	0	2	5	3	7	30

NUTRIENTS REMOVED (KG/HA/YR)		N	P	K	S	CA	MG	NA
Leached from root zone	✓	29	0.6	8	33	30	6	25
As product		18	4	1	2	9	0	0
Transfer	✓	0	0	0	0	0	0	0
Effluent exported		0	0	0	0	0	0	0
To atmosphere	✓	34	0	0	0	0	0	0

CHANGE IN POOLS (KG/HA/YR)		N	P	K	S	CA	MG	NA
Organic pool	✓	37	6	1	-5	0	0	0
Inorganic mineral	✓	0	2	-15	0	-2	-3	-3
Inorganic soil pool		7	12	43	0	-21	3	8



**Woldwide Runoff Limited**  
1328 Otautau-Tuatapere Rd, Merrivale 9682, Ne...



## Year ending 2018

Analysis type	Year end
Is publication	No
Application version	2.6.0.5
Printed date	28 Jul, 2019, 11:51PM
Model version	6.3.1

## Farm details

N: **19931** N/ha: **22** P: **532** P/ha: **0.6** GHG/ha: **4572** NCE: **23%**

Total area	892 ha
Productive block area	659.00 ha
Nitrogen conversion efficiency (NCE)	23%
N Surplus	92 kg/ha
Region	Southland

## Blocks

NAME	TYPE	AREA (HA)	N LOSS	N LOSS/HA	N SURPLUS/HA	P LOSS	P LOSS/HA
Merriburn (lhak_23a.1)	Pasture	140	2668	21	132	72	0.6
Merriburn (Apar_6a.1)	Pasture	27.5	449	18	133	14	0.6
Merriburn Lower Fert (lhak_23a.1)	Pasture	139.7	2506	20	101	73	0.6
Merriburn Lower Fert (Apar_6a.1)	Pasture	21.1	335	18	101	11	0.6
Merriburn No Fert (lhak_23a.1)	Pasture	9.5	193	20	77	7	0.8
Merrivale (Waiki_36a.1)	Pasture	176.5	5048	32	140	97	0.6
Merrivale (Makar_3b.1)	Pasture	31.9	606	21	141	62	2.1
Merrivale Lower Fert (Waiki_36a.1)	Pasture	42.7	889	21	96	32	0.8
Merrivale Lower Fert (Malok_3a.1)	Pasture	27.7	690	25	98	22	0.8
Merrivale No Fert (Malok_3a.1)	Pasture	28.1	711	25	80	21	0.7
Merrivale No Fert (Waiki_36a.1)	Pasture	14.3	304	21	78	10	0.7
Kale	Fodder crop	52	4777	92	150	23	0.4
Plantation Forest	Trees and scrub	100	250	2	0	12	0.1
Beech Forest	Trees and scrub	60	180	3	0	6	0.1
Other sources	Other	-	325	-	-	71	-

# Farm nutrient budget

## LOSSES FROM ROOT ZONE

	TOTAL LOSS (KG/YR)	LOSS PER HA (KG/YR)
Nitrogen	19,931	22
Phosphorus	532	0.6

NUTRIENTS ADDED (KG/HA/YR)	N	P	K	S	CA	MG	NA
Fertiliser, lime and other <input checked="" type="checkbox"/>	79	25	33	34	48	0	1
Irrigation	0	0	0	0	0	0	0
Supplements <input checked="" type="checkbox"/>	0	0	0	0	0	0	0
Rain/clover fixation <input checked="" type="checkbox"/>	41	0	2	5	3	7	31

NUTRIENTS REMOVED (KG/HA/YR)	N	P	K	S	CA	MG	NA
Leached from root zone <input checked="" type="checkbox"/>	22	0.6	8	39	24	6	25
As product	14	4	1	2	7	0	0
Transfer <input checked="" type="checkbox"/>	0	0	0	0	0	0	0
Effluent exported	0	0	0	0	0	0	0
To atmosphere <input checked="" type="checkbox"/>	28	0	0	0	0	0	0

CHANGE IN POOLS (KG/HA/YR)	N	P	K	S	CA	MG	NA
Organic pool <input checked="" type="checkbox"/>	38	7	1	-5	0	0	0
Inorganic mineral <input checked="" type="checkbox"/>	0	2	-15	0	-2	-3	-3
Inorganic soil pool	3	9	34	0	18	3	8



## Woldwide Runoff Limited

1328 Otautau-Tuatapere Rd, Merrivale 9682, Ne...



# Woldwide Run-off Proposed (Final)

Analysis type Predictive  
 Is publication No  
 Application version 2.6.0.5  
 Printed date 28 Jul, 2019, 11:26PM  
 Model version 6.3.1

## Farm details

N: **22603** N/ha: **25** P: **489** P/ha: **0.5** GHG/ha: **4823** NCE: **38%**

Total area 892 ha  
 Productive block area 647.00 ha  
 Nitrogen conversion efficiency (NCE) 38%  
 N Surplus 90 kg/ha  
 Region Southland

## Blocks

NAME	TYPE	AREA (HA)	N LOSS	N LOSS/HA	N SURPLUS/HA	P LOSS	P LOSS/HA
Merriburn	Pasture	337.8	7209	24.4	147	166	0.6
Merrivale	Pasture	278.8	5340	21.6	82	185	0.8
Merrivale No Fert	Pasture	30.4	894	29.4	108	21	0.7
Kale	Fodder crop	78	8369	107	138	32	0.4
Plantation Forest	Trees and scrub	112	280	2	0	13	0.1
Beech Forest	Trees and scrub	60	180	3	0	6	0.1
Other sources	Other	-	330	-	-	64	-

# Farm nutrient budget

## LOSSES FROM ROOT ZONE

	TOTAL LOSS (KG/YR)	LOSS PER HA (KG/YR)
Nitrogen	22,603	25
Phosphorus	489	0.5

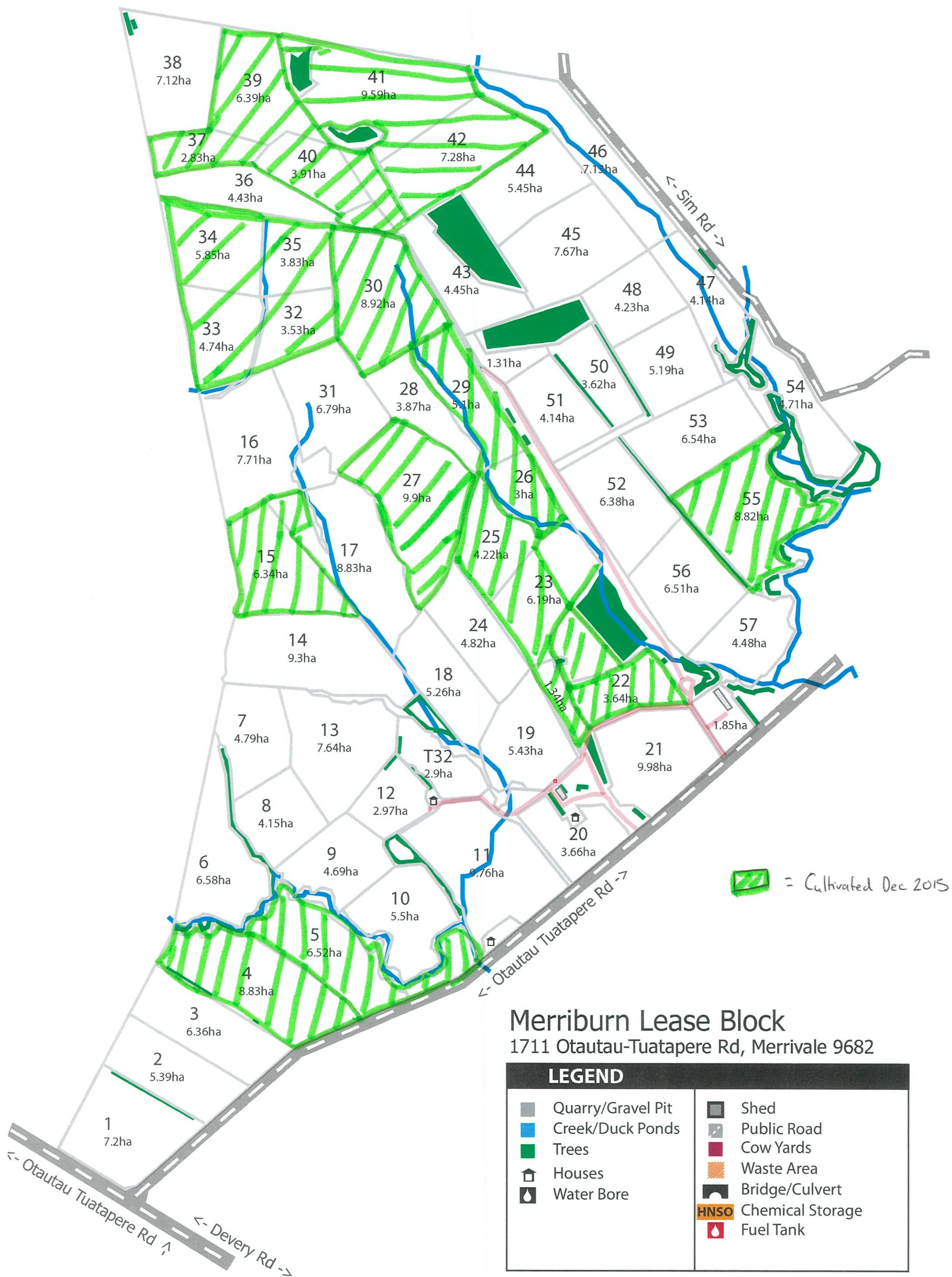
NUTRIENTS ADDED (KG/HA/YR)		N	P	K	S	CA	MG	NA
Fertiliser, lime and other	✓	82	25	43	35	47	0	1
Irrigation		0	0	0	0	0	0	0
Supplements	✓	0	0	0	0	0	0	0
Rain/clover fixation	✓	64	0	2	5	3	7	31

NUTRIENTS REMOVED (KG/HA/YR)		N	P	K	S	CA	MG	NA
Leached from root zone	✓	25	0.5	8	37	27	6	26
As product		15	4	1	2	7	0	0
Transfer	✓	0	0	0	0	0	0	0
Effluent exported		0	0	0	0	0	0	0
To atmosphere	✓	29	0	0	0	0	0	0

CHANGE IN POOLS (KG/HA/YR)		N	P	K	S	CA	MG	NA
Organic pool	✓	29	6	1	-5	0	0	0
Inorganic mineral	✓	0	2	-17	0	-2	-2	-3
Inorganic soil pool		6	8	27	0	9	1	7

## Appendix 3 – Evidence/Records





**Merriburn Lease Block**  
 1711 Otautau-Tuatapere Rd, Merrivale 9682

LEGEND	
	Quarry/Gravel Pit
	Creek/Duck Ponds
	Trees
	Houses
	Water Bore
	Shed
	Public Road
	Cow Yards
	Waste Area
	Bridge/Culvert
	Chemical Storage
	Fuel Tank

= Cultivated Dec 2015

## Nutrient summary report

WORLDWIDE RUNOFF LTD - 60842387

Query range : 01 Jun 2016 to 31 May 2017

Name	Date	Area (ha)	Product	Rate (kg/ha or l/ha)	N kg/ha	P kg/ha	K kg/ha	S kg/ha	Ca kg/ha	Mg kg/ha
1	13/10/2016	5.1	UREA BULK	90	41	-	-	-	-	-
	09/01/2017	5	WW R/off Balage Maintenance	1388	22	54	100	66	312	3
	27/01/2017	4.9	WW R/Off Pot super/Flexi/Lime	994	22	32	31	39	260	3
	24/03/2017	5.4	UREA BULK	87	40	-	-	-	-	-
<b>Area weighted total</b>					<b>112</b>	<b>74</b>	<b>113</b>	<b>90</b>	<b>491</b>	<b>5</b>
10	07/10/2016	3.7	UREA BULK	89	41	-	-	-	-	-
	17/02/2017	3.9	HILL BLOCK MIX	237	25	35	-	30	15	-
	<b>Area weighted total</b>					<b>62</b>	<b>34</b>	<b>-</b>	<b>29</b>	<b>15</b>
100	07/10/2016	4.2	UREA BULK	89	41	-	-	-	-	-
	13/01/2017	4.2	WW R/Off Pot super/Flexi/Lime	1044	23	33	33	41	273	3
	24/03/2017	4.3	UREA BULK	91	42	-	-	-	-	-
	<b>Area weighted total</b>					<b>96</b>	<b>30</b>	<b>29</b>	<b>37</b>	<b>246</b>
101	13/10/2016	2.4	UREA BULK	88	40	-	-	-	-	-
	22/12/2016	2.4	WW R/off Balage Maintenance	1472	23	57	106	70	331	3
	13/01/2017	2.5	WW R/Off Pot super/Flexi/Lime	1054	23	34	33	41	276	3
	24/03/2017	2.5	UREA BULK	92	42	-	-	-	-	-
<b>Area weighted total</b>					<b>119</b>	<b>84</b>	<b>128</b>	<b>103</b>	<b>560</b>	<b>5</b>
12	07/10/2016	3.6	UREA BULK	90	41	-	-	-	-	-
	17/02/2017	3.8	HILL BLOCK MIX	234	25	34	-	29	15	-

	<b>Area weighted total</b>			<b>59</b>	<b>31</b>	-	<b>27</b>	<b>14</b>	-
14	07/10/2016	4.6	UREA BULK	92	-	-	-	-	-
	17/02/2017	4.8	HILL BLOCK MIX	261	39	-	33	17	-
	<b>Area weighted total</b>			<b>67</b>	<b>37</b>	-	<b>32</b>	<b>16</b>	-
15	22/02/2017	3.7	HILL MIX	237	35	-	30	15	-
	<b>Area weighted total</b>			<b>23</b>	<b>32</b>	-	<b>28</b>	<b>14</b>	-
16	22/02/2017	2.6	HILL MIX	240	35	-	30	15	-
	<b>Area weighted total</b>			<b>17</b>	<b>24</b>	-	<b>20</b>	<b>10</b>	-
16b	22/02/2017	0.5	HILL MIX	212	31	-	27	14	-
	<b>Area weighted total</b>			<b>11</b>	<b>16</b>	-	<b>13</b>	<b>7</b>	-
17	22/02/2017	3.8	HILL MIX	258	38	-	32	16	-
	<b>Area weighted total</b>			<b>22</b>	<b>31</b>	-	<b>27</b>	<b>13</b>	-
18	22/02/2017	3.5	HILL MIX	240	35	-	30	15	-
	<b>Area weighted total</b>			<b>23</b>	<b>33</b>	-	<b>28</b>	<b>14</b>	-
19	22/02/2017	4.2	HILL MIX	234	35	-	30	15	-
	<b>Area weighted total</b>			<b>24</b>	<b>34</b>	-	<b>29</b>	<b>15</b>	-
2	22/09/2016	4.6	Urea	81	-	-	-	-	-
	13/10/2016	4.3	UREA BULK	87	-	-	-	-	-
	27/01/2017	4.3	WW R/off Pot super/Flexi/Lime	1017	33	32	40	266	3
	24/03/2017	4.5	UREA BULK	90	-	-	-	-	-
	<b>Area weighted total</b>			<b>125</b>	<b>28</b>	<b>28</b>	<b>35</b>	<b>231</b>	<b>2</b>
20	<b>Area weighted total</b>			<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
25	22/12/2016	1.6	WW R/off Balage Maintenance	1488	58	107	71	335	3
	22/12/2016	1.7	WW R/off Balage Maintenance	1318	51	95	63	297	3
	17/02/2017	3.3	HILL BLOCK MIX	234	34	-	29	15	-
	<b>Area weighted total</b>			<b>45</b>	<b>85</b>	<b>97</b>	<b>92</b>	<b>317</b>	<b>3</b>



	19/12/2016	5.2	WW R/off Balage Maintenance	1707	27	66	123	81	384	3
	17/02/2017	5.7	HILL BLOCK MIX	256	27	38	-	32	16	-
	<b>Area weighted total</b>				<b>75</b>	<b>88</b>	<b>105</b>	<b>96</b>	<b>341</b>	<b>3</b>
34	17/02/2017	6.1	HILL BLOCK MIX	241	25	36	-	30	15	-
	<b>Area weighted total</b>				<b>23</b>	<b>33</b>	-	<b>28</b>	<b>14</b>	-
35	22/02/2017	2.7	HILL MIX	247	26	36	-	31	16	-
	<b>Area weighted total</b>				<b>20</b>	<b>28</b>	-	<b>24</b>	<b>12</b>	-
36	22/02/2017	5.4	HILL MIX	245	26	36	-	31	16	-
	<b>Area weighted total</b>				<b>23</b>	<b>32</b>	-	<b>27</b>	<b>14</b>	-
4a	<b>Area weighted total</b>				-	-	-	-	-	-
4b	29/09/2016	3	Urea	81	37	-	-	-	-	-
	22/12/2016	2.7	WW R/off Balage Maintenance	1420	23	55	102	68	320	3
	17/02/2017	3.1	HILL BLOCK MIX	248	26	37	-	31	16	-
	<b>Area weighted total</b>				<b>75</b>	<b>78</b>	<b>82</b>	<b>83</b>	<b>270</b>	<b>2</b>
5	07/10/2016	5.8	UREA BULK	86	40	-	-	-	-	-
	22/12/2016	5.6	WW R/off Balage Maintenance	1387	22	54	100	66	312	3
	27/01/2017	5.6	WW R/Off Pot super/Flexi/Lime	1003	22	32	31	39	262	3
	<b>Area weighted total</b>				<b>76</b>	<b>77</b>	<b>118</b>	<b>94</b>	<b>515</b>	<b>5</b>
51	<b>Area weighted total</b>				-	-	-	-	-	-
52	<b>Area weighted total</b>				-	-	-	-	-	-
53	07/10/2016	6.2	UREA BULK	91	42	-	-	-	-	-
	27/01/2017	6.1	WW R/Off Pot super/Flexi/Lime	1076	24	34	34	42	281	3
	<b>Area weighted total</b>				<b>62</b>	<b>32</b>	<b>32</b>	<b>40</b>	<b>265</b>	<b>3</b>
54	07/10/2016	5.5	UREA BULK	110	51	-	-	-	-	-

	27/01/2017	5.2	WW R/Off Pot super/Flexi/Lime	1113	24	36	35	44	291	3	
	<b>Area weighted total</b>										
56	22/09/2016	6.5	Urea	80	37	-	-	-	-	-	
	13/10/2016	6.4	UREA BULK	86	39	-	-	-	-	-	
	21/12/2016	6.4	WW R/off Balage Maintenance	1438	23	56	104	68	324	3	
	16/01/2017	6.6	WW R/Off Pot super/Flexi/Lime	971	21	31	30	38	254	3	
	24/03/2017	6.6	UREA BULK	86	39	-	-	-	-	-	
	<b>Area weighted total</b>										
				154	84	128	102	556	5		
57	13/10/2016	6	UREA BULK	84	39	-	-	-	-	-	
	19/12/2016	6.1	WW R OFF BALAGE MIX	1367	22	53	99	65	308	3	
	16/01/2017	6	WW R/Off Pot super/Flexi/Lime	1009	22	32	32	39	264	3	
	24/03/2017	6	UREA BULK	87	40	-	-	-	-	-	
	<b>Area weighted total</b>										
				118	83	127	101	554	5		
58	07/10/2016	6.1	UREA BULK	85	39	-	-	-	-	-	
	19/12/2016	6.1	WW R OFF BALAGE MIX	1367	22	53	99	65	308	3	
	16/01/2017	6.2	WW R/Off Pot super/Flexi/Lime	999	22	32	31	39	261	3	
	24/03/2017	6.2	UREA BULK	87	40	-	-	-	-	-	
	<b>Area weighted total</b>										
				117	81	124	99	542	5		
59	07/10/2016	5.3	UREA BULK	90	41	-	-	-	-	-	
	22/12/2016	5.2	WW R/off Balage Maintenance	1609	26	63	116	77	362	3	
	27/01/2017	5.1	WW R/Off Pot super/Flexi/Lime	1068	23	34	33	42	279	3	
	24/03/2017	5.4	UREA BULK	94	43	-	-	-	-	-	

	<b>Area weighted total</b>				<b>126</b>	<b>90</b>	<b>139</b>	<b>110</b>	<b>593</b>	<b>6</b>
6	22/09/2016	5.1	Urea	82	38	-	-	-	-	-
	22/12/2016	4.7	WW R/off Balage Maintenance	1385	22	54	100	66	312	3
	27/01/2017	3.4	WW R/Off Pot super/Flexi/Lime	989	22	32	31	39	259	3
	<b>Area weighted total</b>				<b>68</b>	<b>66</b>	<b>106</b>	<b>81</b>	<b>430</b>	<b>4</b>
7	22/09/2016	4.4	Urea	87	40	-	-	-	-	-
	22/12/2016	4.2	WW R/off Balage Maintenance	1549	25	60	112	74	349	3
	17/02/2017	4.3	HILL BLOCK MIX	226	24	33	-	29	14	-
	<b>Area weighted total</b>				<b>82</b>	<b>85</b>	<b>101</b>	<b>93</b>	<b>329</b>	<b>3</b>
75	29/09/2016	5.2	Urea	77	36	-	-	-	-	-
	20/12/2016	5	WW R/off Balage Maintenance	1388	22	54	100	66	312	3
	09/01/2017	4.9	WW R/Off Pot super/Flexi/Lime	1000	22	32	31	39	262	3
	24/03/2017	5.3	UREA BULK	87	40	-	-	-	-	-
	<b>Area weighted total</b>				<b>112</b>	<b>78</b>	<b>119</b>	<b>95</b>	<b>517</b>	<b>5</b>
76	07/10/2016	4.5	UREA BULK	89	41	-	-	-	-	-
	09/01/2017	2.2	WW R/Off Pot super/Flexi/Lime	1036	23	33	32	40	271	3
	13/01/2017	2.3	WW R/Off Pot super/Flexi/Lime	1031	23	33	32	40	270	3
	<b>Area weighted total</b>				<b>58</b>	<b>30</b>	<b>29</b>	<b>37</b>	<b>246</b>	<b>3</b>
77	29/09/2016	4.5	Urea	81	37	-	-	-	-	-
	20/12/2016	4.1	WW R/off Balage Maintenance	1419	23	55	102	68	319	3
	09/01/2017	2.2	WW R/Off Pot super/Flexi/Lime	1083	24	35	34	42	283	3

	09/01/2017	2.3	WW R/Off Pot super/Flexi/Lime	983	22	31	31	38	257	3
	<b>Area weighted total</b>				<b>78</b>	<b>80</b>	<b>121</b>	<b>98</b>	<b>539</b>	<b>5</b>
78	22/09/2016	3.3	Urea	83	38	-	-	-	-	-
	13/10/2016	3.2	UREA BULK	88	40	-	-	-	-	-
	13/01/2017	3.2	WW R/Off Pot super/Flexi/Lime	1044	23	33	33	41	273	3
	24/03/2017	3.3	UREA BULK	93	43	-	-	-	-	-
	<b>Area weighted total</b>				<b>138</b>	<b>31</b>	<b>31</b>	<b>38</b>	<b>257</b>	<b>3</b>
79	29/09/2016	5.6	Urea	83	38	-	-	-	-	-
	16/01/2017	5.7	WW R/Off Pot super/Flexi/Lime	1014	22	32	32	40	265	3
	24/03/2017	5.5	UREA BULK	86	40	-	-	-	-	-
	<b>Area weighted total</b>				<b>97</b>	<b>32</b>	<b>31</b>	<b>39</b>	<b>260</b>	<b>3</b>
8	22/09/2016	4.5	Urea	81	37	-	-	-	-	-
	17/02/2017	4.6	HILL BLOCK MIX	224	24	33	-	28	14	-
	<b>Area weighted total</b>				<b>58</b>	<b>32</b>	<b>-</b>	<b>27</b>	<b>14</b>	<b>-</b>
80	13/10/2016	4.8	UREA BULK	81	37	-	-	-	-	-
	13/01/2017	4.8	WW R/Off Pot super/Flexi/Lime	1008	22	32	32	39	264	3
	24/03/2017	4.9	UREA BULK	85	39	-	-	-	-	-
	<b>Area weighted total</b>				<b>96</b>	<b>31</b>	<b>31</b>	<b>38</b>	<b>257</b>	<b>3</b>
81	22/09/2016	6.5	Urea	82	38	-	-	-	-	-
	16/01/2017	6.4	WW R/Off Pot super/Flexi/Lime	979	21	31	31	38	256	3
	24/03/2017	6.4	UREA BULK	83	38	-	-	-	-	-
	<b>Area weighted total</b>				<b>94</b>	<b>31</b>	<b>30</b>	<b>37</b>	<b>250</b>	<b>3</b>
82	22/09/2016	3.5	Urea	81	37	-	-	-	-	-
	13/01/2017	3.6	WW R/Off Pot super/Flexi/Lime	985	22	31	31	38	258	3



	24/03/2017	3.6	UREA BULK	82	38	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>95</b>	<b>31</b>	<b>30</b>	<b>38</b>	<b>252</b>	<b>3</b>			
83	07/10/2016	6.7	UREA BULK	82	38	-	-	-	-	-	-	-	-
	14/01/2017	5	WW R/Off Pot super/Flexi/Lime	1050	23	34	33	41	275	3			
	16/01/2017	1.4	WW R/Off Pot super/Flexi/Lime	908	20	29	28	35	238	2			
	24/03/2017	6.7	UREA BULK	85	39	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>96</b>	<b>30</b>	<b>30</b>	<b>37</b>	<b>249</b>	<b>3</b>			
84	22/09/2016	3.5	Urea	80	37	-	-	-	-	-	-	-	-
	13/10/2016	3.5	UREA BULK	88	40	-	-	-	-	-	-	-	-
	13/01/2017	3.5	WW R/Off Pot super/Flexi/Lime	966	21	31	30	38	253	3			
	14/01/2017	0	WW R/Off Pot super/Flexi/Lime	484	11	15	15	19	127	1			
	24/03/2017	3.6	UREA BULK	93	43	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>137</b>	<b>30</b>	<b>29</b>	<b>37</b>	<b>246</b>	<b>3</b>			
85	22/09/2016	6.4	Urea	83	38	-	-	-	-	-	-	-	-
	20/12/2016	5.8	WW R/off Balage Maintenance	1407	22	55	101	67	317	3			
	09/01/2017	6.4	WW R/Off Pot super/Flexi/Lime	1046	23	33	33	41	274	3			
	24/03/2017	6.7	UREA BULK	87	40	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>111</b>	<b>75</b>	<b>112</b>	<b>91</b>	<b>504</b>	<b>5</b>			
86	07/10/2016	4.6	UREA BULK	86	40	-	-	-	-	-	-	-	-
	20/12/2016	3.9	WW R/off Balage Maintenance	1404	22	55	101	67	316	3			
	13/01/2017	4.4	WW R/Off Pot super/Flexi/Lime	1033	23	33	32	40	270	3			
	24/03/2017	4.6	UREA BULK	93	43	-	-	-	-	-	-	-	-

	<b>Area weighted total</b>		<b>112</b>	<b>70</b>	<b>106</b>	<b>86</b>	<b>475</b>	<b>5</b>
87	29/09/2016	5.5 Urea	40	-	-	-	-	-
	27/01/2017	5.1 WW R/Off Pot super/Flexi/Lime	24	35	34	42	283	3
	24/03/2017	5.5 UREA BULK	42	-	-	-	-	-
	<b>Area weighted total</b>		<b>95</b>	<b>30</b>	<b>29</b>	<b>36</b>	<b>242</b>	<b>3</b>
88	22/09/2016	4.3 Urea	39	-	-	-	-	-
	13/01/2017	4.3 WW R/Off Pot super/Flexi/Lime	23	33	33	41	272	3
	24/03/2017	4.5 UREA BULK	44	-	-	-	-	-
	<b>Area weighted total</b>		<b>100</b>	<b>31</b>	<b>30</b>	<b>38</b>	<b>254</b>	<b>3</b>
89	29/09/2016	4.8 Urea	37	-	-	-	-	-
	14/01/2017	4.7 WW R/Off Pot super/Flexi/Lime	23	33	32	40	271	3
	24/03/2017	4.9 UREA BULK	43	-	-	-	-	-
	<b>Area weighted total</b>		<b>98</b>	<b>30</b>	<b>30</b>	<b>37</b>	<b>248</b>	<b>3</b>
9	22/09/2016	1.5 Urea	35	-	-	-	-	-
	<b>Area weighted total</b>		<b>14</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
90	07/10/2016	4.7 UREA BULK	39	-	-	-	-	-
	13/01/2017	4.8 WW R/Off Pot super/Flexi/Lime	23	33	32	40	269	3
	24/03/2017	4.9 UREA BULK	41	-	-	-	-	-
	<b>Area weighted total</b>		<b>99</b>	<b>32</b>	<b>31</b>	<b>39</b>	<b>260</b>	<b>3</b>
91	22/09/2016	5.4 Urea	35	-	-	-	-	-
	13/10/2016	5.4 UREA BULK	40	-	-	-	-	-
	14/01/2017	5.2 WW R/Off Pot super/Flexi/Lime	21	30	30	37	248	3
	24/03/2017	5.3 UREA BULK	36	-	-	-	-	-
	<b>Area weighted total</b>		<b>125</b>	<b>28</b>	<b>28</b>	<b>35</b>	<b>231</b>	<b>2</b>

92	09/01/2017	4.8	WW R/Off Pot super/Flexi/Lime	1024	22	33	32	40	268	3
	24/03/2017	5	UREA BULK	79	37	-	-	-	-	-
	<b>Area weighted total</b>				<b>56</b>	<b>31</b>	<b>30</b>	<b>37</b>	<b>250</b>	<b>3</b>
93	29/09/2016	5.2	Urea	78	36	-	-	-	-	-
	20/12/2016	4.9	WW R/off Balage Maintenance	1410	22	55	102	67	317	3
	09/01/2017	5.1	WW R/Off Pot super/Flexi/Lime	973	21	31	30	38	254	3
	<b>Area weighted total</b>				<b>74</b>	<b>78</b>	<b>119</b>	<b>95</b>	<b>521</b>	<b>5</b>
94	29/09/2016	4.3	Urea	89	41	-	-	-	-	-
	06/01/2017	4.3	WW R/Off Pot super/Flexi/Lime	1026	22	33	32	40	268	3
	24/03/2017	4.4	UREA BULK	87	40	-	-	-	-	-
	<b>Area weighted total</b>				<b>100</b>	<b>31</b>	<b>31</b>	<b>38</b>	<b>257</b>	<b>3</b>
95	22/09/2016	6	Urea	79	36	-	-	-	-	-
	13/10/2016	6.1	UREA BULK	88	40	-	-	-	-	-
	22/12/2016	5.8	WW R/off Balage Maintenance	1352	22	53	97	64	304	3
	13/01/2017	2.3	WW R/Off Pot super/Flexi/Lime	1099	24	35	34	43	287	3
	14/01/2017	4	WW R/Off Pot super/Flexi/Lime	954	21	31	30	37	250	3
	24/03/2017	6.2	UREA BULK	91	42	-	-	-	-	-
	<b>Area weighted total</b>				<b>157</b>	<b>82</b>	<b>123</b>	<b>100</b>	<b>549</b>	<b>5</b>
96	07/10/2016	4.5	UREA BULK	89	41	-	-	-	-	-
	06/01/2017	4.6	WW R/Off Pot super/Flexi/Lime	1061	23	34	33	41	278	3
	24/03/2017	4.6	UREA BULK	80	37	-	-	-	-	-
	<b>Area weighted total</b>				<b>95</b>	<b>32</b>	<b>31</b>	<b>39</b>	<b>262</b>	<b>3</b>

97	29/09/2016	4.7	Urea	78	36	-	-	-	-	-	-	-	-
	06/01/2017	4.8	WW R/off Pot super/Flexi/Lime	1121	25	36	35	44	293	3			
	<b>Area weighted total</b>				<b>57</b>	<b>34</b>	<b>34</b>	<b>42</b>	<b>280</b>	<b>3</b>			
98	13/10/2016	6.9	UREA BULK	84	39	-	-	-	-	-	-	-	-
	19/12/2016	4.7	WW R/off Balage Maintenance	1361	22	53	98	65	306	3			
	20/12/2016	1.9	WW R/off Balage Maintenance	1393	22	54	100	66	313	3			
	06/01/2017	6.8	WW R/off Pot super/Flexi/Lime	1034	23	33	32	40	270	3			
	24/03/2017	7	UREA BULK	92	42	-	-	-	-	-	-	-	-
99	<b>Area weighted total</b>				<b>115</b>	<b>78</b>	<b>117</b>	<b>95</b>	<b>521</b>	<b>5</b>			
Drain 2	<b>Area weighted total</b>				-	-	-	-	-	-	-	-	-
Pump Shed	<b>Area weighted total</b>				-	-	-	-	-	-	-	-	-
<b>Weighted average rate based on applied areas and rates for selected areas</b>					<b>74</b>	<b>44</b>	<b>50</b>	<b>51</b>	<b>257</b>	<b>2</b>			

Note: Total and average rates assume product applications cover effective area of paddock(s) selected.  
This is dependent on positional accuracy of paddock boundaries

## Nutrient summary report

WORLDWIDE RUNOFF LTD - 60842387  
 Query range : 01 Jun 2017 to 31 May 2018

Name	Date	Area (ha)	Product	Rate (kg/ha or l/ha)	N kg/ha	P kg/ha	K kg/ha	S kg/ha	Ca kg/ha	Mg kg/ha
1	16/08/2017	5.3	RZR - AMM SE	134	48	-	-	13	-	-
	08/12/2017	5.2	WW R/off Post Cut Maintenance	1410	22	55	102	67	317	3
	13/02/2018	5.3	UREA BULK	109	50	-	-	-	-	-
<b>Area weighted total</b>					<b>110</b>	<b>50</b>	<b>93</b>	<b>73</b>	<b>289</b>	<b>3</b>
10	16/08/2017	1.7	RZR - AMM SE	130	46	-	-	12	-	-
	13/02/2018	3.8	UREA BULK	110	51	-	-	-	-	-
	<b>Area weighted total</b>				<b>67</b>	-	-	<b>5</b>	-	-
100	16/08/2017	3.9	RZR - AMM SE	139	50	-	-	13	-	-
	05/09/2017	3.8	UREA BULK	151	69	-	-	-	-	-
	21/11/2017	4	WW R/off Post Cut Maintenance	1403	22	55	101	67	316	3
	12/02/2018	4.1	Urea	111	51	-	-	-	-	-
	<b>Area weighted total</b>					<b>161</b>	<b>47</b>	<b>87</b>	<b>68</b>	<b>271</b>
101	16/08/2017	2.1	RZR - AMM SE	135	48	-	-	13	-	-
	05/09/2017	2.3	UREA BULK	135	62	-	-	-	-	-
	21/11/2017	2.5	WW R/off Post Cut Maintenance	1426	23	56	103	68	321	3
	12/02/2018	2.5	Urea	113	52	-	-	-	-	-
<b>Area weighted total</b>					<b>161</b>	<b>52</b>	<b>97</b>	<b>74</b>	<b>302</b>	<b>3</b>
12	16/08/2017	3.4	RZR - AMM SE	137	49	-	-	13	-	-
	08/01/2018	3.7	WW R/Off Pot super/Flexi/Lime	1052	23	34	33	41	275	3

	13/02/2018	3.7	UREA BULK	110	51	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>107</b>	<b>30</b>	<b>48</b>	<b>30</b>	<b>246</b>	<b>3</b>									
14	08/01/2018	4.6	WW R/Off Pot super/Flexi/Lime	1035	23	33	40	32	271	3									
	13/02/2018	4.7	UREA BULK	106	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>67</b>	<b>31</b>	<b>38</b>	<b>30</b>	<b>252</b>	<b>3</b>									
15	22/11/2017	2	SELENIUM SELPRILL DOUBLE 2%SE DG CL *	219	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/01/2018	1.3	WW R/Off Pot super/Flexi/Lime	1152	25	37	45	36	301	3									
	14/03/2018	3.1	UREA	107	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>47</b>	<b>12</b>	<b>15</b>	<b>12</b>	<b>101</b>	<b>1</b>									
16	22/11/2017	3.1	SELENIUM SELPRILL DOUBLE 2%SE DG CL *	224	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13/02/2018	3.7	UREA BULK	108	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>46</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16b	22/11/2017	0.4	SELENIUM SELPRILL DOUBLE 2%SE DG CL *	230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	13/02/2018	0.8	UREA BULK	121	55	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>45</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	22/11/2017	3.8	SELENIUM SELPRILL DOUBLE 2%SE DG CL *	233	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	22/11/2017	3.3	SELENIUM SELPRILL DOUBLE 2%SE DG CL *	227	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

19	13/02/2018	4.1	UREA BULK	110	50	-	-	-	-	-	-	-
	<b>Area weighted total</b>											
2	16/08/2017	4.4	RZR - AMM SE	131	47	-	13	-	-	-	-	-
	08/12/2017	4.6	WW R/off Post Cut Maintenance	1413	23	55	102	67	318	3		
	13/02/2018	4.7	UREA BULK	109	50	-	-	-	-	-	-	-
	<b>Area weighted total</b>											
20	08/01/2018	3.3	WW R/Off Pot super/Flexi/Lime	1051	23	34	33	41	275	3		
	<b>Area weighted total</b>											
25	22/11/2017	3.2	WW R/Off Pot super/Flexi/Lime	1003	22	32	31	39	262	3		
	13/02/2018	3.3	UREA BULK	110	51	-	-	-	-	-	-	-
	<b>Area weighted total</b>											
26	22/11/2017	4.3	WW R/Off Pot super/Flexi/Lime	1015	22	32	32	40	265	3		
	13/02/2018	4.5	UREA BULK	109	50	-	-	-	-	-	-	-
	<b>Area weighted total</b>											
27	22/11/2017	3.8	WW R/Off Pot super/Flexi/Lime	1049	23	34	33	41	274	3		
	13/02/2018	4.3	UREA BULK	108	50	-	-	-	-	-	-	-
	<b>Area weighted total</b>											
28	22/11/2017	3.5	WW R/Off Pot super/Flexi/Lime	1030	23	33	32	40	269	3		
	13/02/2018	3.8	UREA BULK	108	49	-	-	-	-	-	-	-
	<b>Area weighted total</b>											
29	16/08/2017	3.4	RZR - AMM SE	135	48	-	-	13	-	-	-	-
	08/01/2018	3.3	WW R/Off Pot super/Flexi/Lime	1009	22	32	32	39	264	3		
	13/02/2018	3.5	UREA BULK	110	51	-	-	-	-	-	-	-

	<b>Area weighted total</b>		<b>108</b>	<b>27</b>	<b>27</b>	<b>45</b>	<b>224</b>	<b>2</b>
2A	05/09/2017	1.6	AMMO 36 BULK	138		13	-	-
	12/02/2018	1.9	UREA BULK	123		-	-	-
	<b>Area weighted total</b>		<b>87</b>	<b>-</b>	<b>-</b>	<b>10</b>	<b>-</b>	<b>-</b>
3	16/08/2017	2.4	RZR - AMM SE	138		13	-	-
	22/11/2017	2.3	WW R/Off Pot super/Flexi/Lime	1028	33	40	269	3
	13/02/2018	2.5	UREA BULK	110		-	-	-
	<b>Area weighted total</b>		<b>105</b>	<b>27</b>	<b>26</b>	<b>44</b>	<b>221</b>	<b>2</b>
30	16/08/2017	4	RZR - AMM SE	128		12	-	-
	13/02/2018	4.4	UREA BULK	111		-	-	-
	<b>Area weighted total</b>		<b>79</b>	<b>-</b>	<b>-</b>	<b>10</b>	<b>-</b>	<b>-</b>
31	08/01/2018	4.1	WW R/Off Pot super/Flexi/Lime	1058	34	41	277	3
	<b>Area weighted total</b>		<b>21</b>	<b>30</b>	<b>29</b>	<b>37</b>	<b>246</b>	<b>3</b>
32	22/11/2017	4.2	SELENIUM SELPRILL DOUBLE 2%SE DG CL *	237		-	-	-
	<b>Area weighted total</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
33	21/11/2017	4.5	WW R/off Post Cut Maintenance	1471	57	70	331	3
	13/02/2018	5.7	UREA BULK	110		-	-	-
	<b>Area weighted total</b>		<b>58</b>	<b>38</b>	<b>71</b>	<b>47</b>	<b>220</b>	<b>2</b>
34	22/11/2017	5.9	SELENIUM SELPRILL DOUBLE 2%SE DG CL *	224		-	-	-
	13/02/2018	6.2	UREA BULK	107		-	-	-
	<b>Area weighted total</b>		<b>46</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
35	22/11/2017	2.8	SELENIUM SELPRILL DOUBLE 2%SE DG CL *	234		-	-	-



	<b>Area weighted total</b>		-	-	-	-	-	-	-	-	-	-	-
36	22/11/2017	5.3	SELENIUM SELPRILL DOUBLE 2%SE DG CL *	225									
	<b>Area weighted total</b>		-	-	-	-	-	-	-	-	-	-	-
4a	<b>Area weighted total</b>		-	-	-	-	-	-	-	-	-	-	-
4b	16/08/2017	3	RZR - AMM SE	142		51		14					
	22/11/2017	3.2	WW R/Off Pot super/Flexi/Lime	1031		23	33	40	270	3			
	13/02/2018	3	UREA BULK	112		51							
	<b>Area weighted total</b>		-	-	-	-	-	-	-	-	-	-	-
4c	<b>Area weighted total</b>		-	-	-	-	-	-	-	-	-	-	-
5	16/08/2017	5.6	RZR - AMM SE	132		47		13					
	30/11/2017	6	MURIVALE KALE	392		58	66	28					
	<b>Area weighted total</b>		-	-	-	-	-	-	-	-	-	-	-
51	<b>Area weighted total</b>		-	-	-	-	-	-	-	-	-	-	-
52	<b>Area weighted total</b>		-	-	-	-	-	-	-	-	-	-	-
53	<b>Area weighted total</b>		-	-	-	-	-	-	-	-	-	-	-
54	<b>Area weighted total</b>		-	-	-	-	-	-	-	-	-	-	-
56	16/08/2017	6.3	RZR - AMM SE	133		48		13					
	08/01/2018	6.3	WW R/Off Pot super/Flexi/Lime	990		22	32	31	259	3			
	13/02/2018	6.5	UREA BULK	108		49							
	<b>Area weighted total</b>		-	-	-	-	-	-	-	-	-	-	-
57	16/08/2017	5.5	RZR - AMM SE	128		46		12					
	22/11/2017	5.9	WW R/Off Pot super/Flexi/Lime	988		22	32	31	258	3			
	13/02/2018	5.9	UREA BULK	108		50							
	<b>Area weighted total</b>		-	-	-	-	-	-	-	-	-	-	-
58	16/08/2017	6	RZR - AMM SE	137		49		13					
	<b>Area weighted total</b>		-	-	-	-	-	-	-	-	-	-	-

	05/09/2017	5.9	UREA BULK	128	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/12/2017	5.8	WW R/off Post Cut Maintenance	1417	23	55	102	67	319	3									
	13/02/2018	6.1	UREA BULK	105	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>166</b>	<b>49</b>	<b>91</b>	<b>72</b>	<b>285</b>	<b>3</b>									
59	16/08/2017	5.2	RZR - AMM SE	137	49	-	-	13	-	-	-	-	-	-	-	-	-	-	-
	05/09/2017	5.2	UREA BULK	135	62	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/01/2018	4.9	WW R/Off Pot super/Flexi/Lime	1007	22	32	32	39	263	3									
	13/02/2018	5.3	UREA BULK	106	49	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>168</b>	<b>28</b>	<b>28</b>	<b>47</b>	<b>230</b>	<b>2</b>									
6	16/08/2017	5	RZR - AMM SE	136	48	-	-	13	-	-	-	-	-	-	-	-	-	-	-
	30/11/2017	5.3	MURIVALE KALE	396	59	67	28	3	-	-	-	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>102</b>	<b>65</b>	<b>27</b>	<b>15</b>	<b>-</b>	<b>-</b>									
7	16/08/2017	4	RZR - AMM SE	133	48	-	-	13	-	-	-	-	-	-	-	-	-	-	-
	30/11/2017	4.4	MURIVALE KALE	404	60	68	28	3	-	-	-	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>97</b>	<b>64</b>	<b>27</b>	<b>14</b>	<b>-</b>	<b>-</b>									
75	16/08/2017	5.2	RZR - AMM SE	129	46	-	-	12	-	-	-	-	-	-	-	-	-	-	-
	05/09/2017	5.3	UREA BULK	129	59	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22/11/2017	5.2	WW R/Off Pot super/Flexi/Lime	997	22	32	31	39	261	3									
	08/01/2018	5	WW R/Off Pot super/Flexi/Lime	973	21	31	31	38	254	3									
	<b>Area weighted total</b>				<b>141</b>	<b>59</b>	<b>58</b>	<b>84</b>	<b>482</b>	<b>5</b>									
76	16/08/2017	4.5	RZR - AMM SE	147	52	-	-	14	-	-	-	-	-	-	-	-	-	-	-
	05/09/2017	4.5	UREA BULK	136	63	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	22/11/2017	4.6	WW R/Off Pot super/Flexi/Lime	999	22	32	31	39	261	3									
	12/02/2018	4.5	Urea	117	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	14/03/2018	4	UREA	104	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	<b>Area weighted total</b>			<b>212</b>	<b>30</b>	<b>29</b>	<b>49</b>	<b>244</b>	<b>3</b>
77	16/08/2017	4.5	RZR - AMM SE	133			13		
	05/09/2017	4.6	UREA BULK	134					
	28/10/2017	4.5	Post Cust - Grazed mix	1062	27	65	33	256	5
	08/01/2018	4.5	WW R/Off Pot super/Flexi/Lime	1033	33	32	40	270	3
	<b>Area weighted total</b>			<b>161</b>	<b>58</b>	<b>93</b>	<b>83</b>	<b>504</b>	<b>7</b>
78	16/08/2017	3.3	RZR - AMM SE	141			13		
	05/09/2017	3.3	UREA BULK	134					
	28/10/2017	3.2	Post Cust - Grazed mix	1064	27	65	33	256	5
	08/12/2017	3	WW R/off Post Cut Maintenance	1513	59	109	72	340	3
	12/02/2018	3.3	Urea	113					
	<b>Area weighted total</b>			<b>214</b>	<b>78</b>	<b>159</b>	<b>109</b>	<b>545</b>	<b>7</b>
79	16/08/2017	5.7	RZR - AMM SE	132			13		
	05/09/2017	5.6	UREA BULK	130					
	28/10/2017	5.7	Post Cust - Grazed mix	1051	27	64	33	253	4
	08/01/2018	5.6	WW R/Off Pot super/Flexi/Lime	1002	32	31	39	262	3
	21/02/2018	5.6	UREA BULK	110					
	<b>Area weighted total</b>			<b>209</b>	<b>57</b>	<b>93</b>	<b>82</b>	<b>498</b>	<b>7</b>
8	13/02/2018	4.5	UREA BULK	108					
	<b>Area weighted total</b>			<b>47</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
80	16/08/2017	4.7	RZR - AMM SE	129			12		
	05/09/2017	4.9	UREA BULK	126					
	12/02/2018	4.9	Urea	107					
	<b>Area weighted total</b>			<b>149</b>	<b>-</b>	<b>-</b>	<b>12</b>	<b>-</b>	<b>-</b>

81	16/08/2017	6.3	RZR - AMM SE	124	44	-	-	12	-	-
	05/09/2017	6.4	UREA BULK	124	57	-	-	-	-	-
	28/10/2017	6.4	Post Cust - Grazed mix	1028	35	26	63	32	248	4
	08/01/2018	6.4	WW R/Off Pot super/Flexi/Lime	1042	23	33	33	41	272	3
	13/02/2018	5.1	UREA BULK	102	47	-	-	-	-	-
	<b>Area weighted total</b>				<b>189</b>	<b>58</b>	<b>93</b>	<b>82</b>	<b>503</b>	<b>7</b>
82	16/08/2017	3.4	RZR - AMM SE	123	44	-	-	12	-	-
	05/09/2017	3.5	UREA BULK	119	55	-	-	-	-	-
	28/10/2017	3.6	Post Cust - Grazed mix	1107	37	28	68	35	267	5
	08/12/2017	3.4	WW R/off Post Cut Maintenance	1525	24	59	110	73	343	3
	12/02/2018	3.6	Urea	100	46	-	-	-	-	-
	<b>Area weighted total</b>				<b>198</b>	<b>83</b>	<b>168</b>	<b>112</b>	<b>578</b>	<b>7</b>
83	16/08/2017	6.7	RZR - AMM SE	128	46	-	-	12	-	-
	05/09/2017	6.7	UREA BULK	129	59	-	-	-	-	-
	28/10/2017	4.7	Post Cust - Grazed mix	1062	36	27	65	33	256	5
	28/10/2017	1.9	Post Cust - Grazed mix	1001	34	26	61	31	241	4
	08/01/2018	6.5	WW R/Off Pot super/Flexi/Lime	1135	25	36	36	44	297	3
	12/02/2018	6.7	Urea	111	51	-	-	-	-	-
<b>Area weighted total</b>				<b>210</b>	<b>61</b>	<b>96</b>	<b>86</b>	<b>527</b>	<b>7</b>	
84	16/08/2017	3.2	RZR - AMM SE	125	45	-	-	12	-	-
	05/09/2017	3.5	UREA BULK	139	64	-	-	-	-	-
	28/10/2017	3.5	Post Cust - Grazed mix	1084	37	28	66	34	261	5

	08/12/2017	3.3	WW R/off Post Cut Maintenance	1466	23	57	106	70	330	3
	12/02/2018	3.6	Urea	113	52	-	-	-	-	-
	<b>Area weighted total</b>				<b>209</b>	<b>79</b>	<b>160</b>	<b>107</b>	<b>552</b>	<b>7</b>
85	16/08/2017	6.4	RZR - AMM SE	135	48	-	-	13	-	-
	05/09/2017	6.6	UREA BULK	133	61	-	-	-	-	-
	28/10/2017	6.3	Post Cust - Grazed mix	1083	37	28	66	34	261	5
	08/12/2017	6.6	WW R/off Post Cut Maintenance	1407	22	55	101	67	317	3
	12/02/2018	6.7	Urea	113	52	-	-	-	-	-
	<b>Area weighted total</b>				<b>203</b>	<b>75</b>	<b>153</b>	<b>104</b>	<b>524</b>	<b>7</b>
86	16/08/2017	4.4	RZR - AMM SE	139	50	-	-	13	-	-
	05/09/2017	4.5	UREA BULK	137	63	-	-	-	-	-
	08/12/2017	4.1	WW R/off Post Cut Maintenance	1537	24	60	111	73	346	3
	<b>Area weighted total</b>				<b>118</b>	<b>49</b>	<b>91</b>	<b>71</b>	<b>283</b>	<b>3</b>
87	16/08/2017	5.5	RZR - AMM SE	147	52	-	-	14	-	-
	05/09/2017	5.4	UREA BULK	142	65	-	-	-	-	-
	08/12/2017	0	WW R/off Post Cut Maintenance	1300	21	51	94	62	293	3
	08/12/2017	5.4	WW R/off Post Cut Maintenance	1490	24	58	107	71	335	3
	21/02/2018	5.4	UREA BULK	113	52	-	-	-	-	-
	<b>Area weighted total</b>				<b>173</b>	<b>52</b>	<b>96</b>	<b>76</b>	<b>299</b>	<b>3</b>
88	16/08/2017	4	RZR - AMM SE	135	48	-	-	13	-	-
	05/09/2017	4.3	UREA BULK	142	65	-	-	-	-	-
	28/10/2017	4.3	Post Cust - Grazed mix	1050	35	27	64	33	253	4

	08/12/2017	4.1	WW R/off Post Cut Maintenance	1444	23	56	104	69	325	3
	<b>Area weighted total</b>				<b>156</b>	<b>75</b>	<b>153</b>	<b>103</b>	<b>525</b>	<b>7</b>
89	16/08/2017	4.8	RZR - AMM SE	127	45	-	-	12	-	-
	05/09/2017	4.8	UREA BULK	136	62	-	-	-	-	-
	28/10/2017	0.6	Post Cust - Grazed mix	982	33	25	60	31	237	4
	28/10/2017	4.1	Post Cust - Grazed mix	1026	35	26	63	32	247	4
	08/12/2017	4.8	WW R/off Post Cut Maintenance	1371	22	53	99	65	309	3
	21/02/2018	4.9	UREA BULK	111	51	-	-	-	-	-
	<b>Area weighted total</b>				<b>203</b>	<b>75</b>	<b>151</b>	<b>103</b>	<b>519</b>	<b>7</b>
9	13/02/2018	3.3	UREA BULK	109	50	-	-	-	-	-
	<b>Area weighted total</b>				<b>42</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
90	16/08/2017	4.1	RZR - AMM SE	130	46	-	-	12	-	-
	05/09/2017	4.8	UREA BULK	134	62	-	-	-	-	-
	28/10/2017	4.9	Post Cust - Grazed mix	1096	37	28	67	34	264	5
	29/01/2018	4.7	WW R/off Post Cut Maintenance	1410	22	55	102	67	317	3
	<b>Area weighted total</b>				<b>155</b>	<b>79</b>	<b>162</b>	<b>107</b>	<b>557</b>	<b>7</b>
91	16/08/2017	5.3	RZR - AMM SE	114	41	-	-	11	-	-
	05/09/2017	5.4	UREA BULK	112	52	-	-	-	-	-
	28/10/2017	1.6	Post Cust - Grazed mix	1081	37	28	66	34	260	5
	28/10/2017	3.8	Post Cust - Grazed mix	1063	36	27	65	33	256	5
	08/12/2017	5.4	WW R/off Post Cut Maintenance	1287	20	50	93	61	290	3
	<b>Area weighted total</b>				<b>142</b>	<b>75</b>	<b>152</b>	<b>102</b>	<b>527</b>	<b>7</b>

92	16/08/2017	4.4	RZR - AMM SE	124	44	-	-	12	-	-
	05/09/2017	4.9	UREA BULK	119	55	-	-	-	-	-
	21/11/2017	4.7	WW R/off Post Cut Maintenance	1356	22	53	98	65	305	3
<b>Area weighted total</b>										
93	16/08/2017	5.3	RZR - AMM SE	133	48	-	-	13	-	-
	05/09/2017	5.3	UREA BULK	133	61	-	-	-	-	-
	28/10/2017	5.3	Post Cust - Grazed mix	1062	36	27	65	33	256	5
	08/12/2017	5.3	WW R/off Post Cut Maintenance	1324	21	52	95	63	298	3
	21/02/2018	5.4	UREA BULK	109	50	-	-	-	-	-
<b>Area weighted total</b>										
94	16/08/2017	3.7	RZR - AMM SE	129	46	-	-	12	-	-
	05/09/2017	4.3	UREA BULK	130	60	-	-	-	-	-
	28/10/2017	4.3	Post Cust - Grazed mix	1002	34	26	61	31	241	4
	08/12/2017	4.2	WW R/off Post Cut Maintenance	1458	23	57	105	69	328	3
	<b>Area weighted total</b>									
95	16/08/2017	6.1	RZR - AMM SE	121	43	-	-	12	-	-
	05/09/2017	6.1	UREA BULK	119	55	-	-	-	-	-
	28/10/2017	6	Post Cust - Grazed mix	977	33	25	60	31	235	4
	08/12/2017	6.1	WW R/off Post Cut Maintenance	1409	22	55	102	67	317	3
	21/02/2018	6.1	UREA BULK	100	46	-	-	-	-	-
<b>Area weighted total</b>										
96	16/08/2017	4.2	RZR - AMM SE	125	45	-	-	12	-	-
	05/09/2017	4.4	UREA BULK	122	56	-	-	-	-	-
	<b>Area weighted total</b>									

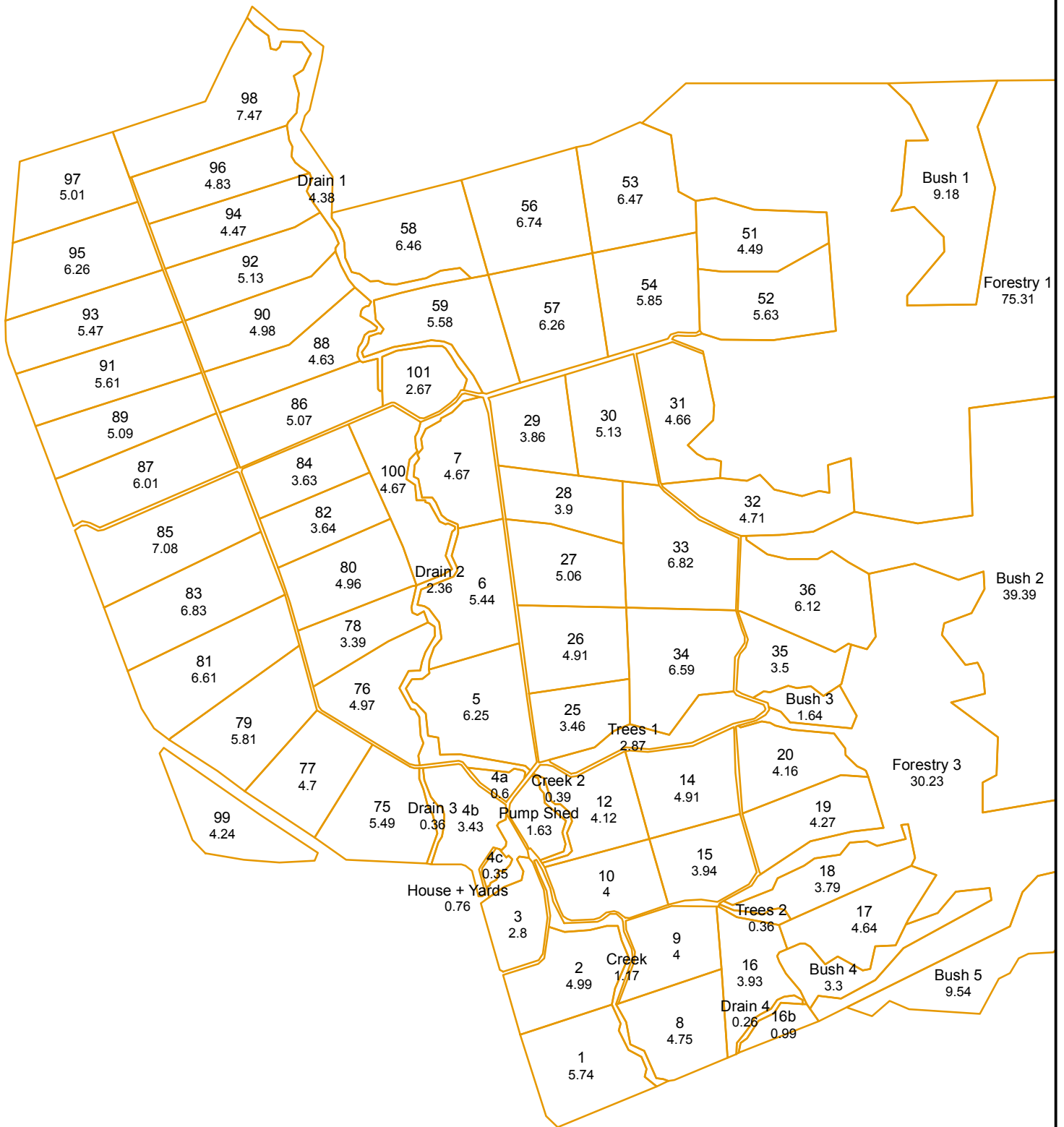
	28/10/2017	4.7	Post Cust - Grazed mix	1019	34	26	62	32	245	4
	08/12/2017	4.6	WW R/off Post Cut Maintenance	1388	22	54	100	66	312	3
	<b>Area weighted total</b>				<b>145</b>	<b>77</b>	<b>156</b>	<b>105</b>	<b>537</b>	<b>7</b>
97	16/08/2017	4.7	RZR - AMM SE	135	48	-	-	13	-	-
	05/09/2017	4.8	UREA BULK	133	61	-	-	-	-	-
	28/10/2017	4.9	Post Cust - Grazed mix	1027	35	26	63	32	247	4
	08/12/2017	4.6	WW R/off Post Cut Maintenance	1407	22	55	101	67	317	3
	21/02/2018	4.9	UREA BULK	113	52	-	-	-	-	-
	<b>Area weighted total</b>				<b>210</b>	<b>76</b>	<b>155</b>	<b>105</b>	<b>533</b>	<b>7</b>
98	16/08/2017	6.6	RZR - AMM SE	144	51	-	-	14	-	-
	05/09/2017	6.8	UREA BULK	130	60	-	-	-	-	-
	28/10/2017	7.1	Post Cust - Grazed mix	1059	36	27	65	33	255	4
	08/12/2017	0.5	WW R/off Post Cut Maintenance	1728	28	67	125	82	389	3
	08/12/2017	7.1	WW R/off Post Cut Maintenance	1420	23	55	102	68	320	3
	21/02/2018	5.3	UREA BULK	111	51	-	-	-	-	-
	<b>Area weighted total</b>				<b>193</b>	<b>83</b>	<b>167</b>	<b>114</b>	<b>573</b>	<b>7</b>
99	<b>Area weighted total</b>				<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Weighted average rate based on applied areas and rates for selected areas</b>				<b>109</b>	<b>38</b>	<b>62</b>	<b>51</b>	<b>254</b>	<b>3</b>

Note: Total and average rates assume product applications cover effective area of paddock(s) selected.

This is dependent on positional accuracy of paddock boundaries

\* The product that you have created, is missing nutrient values. This will affect any averages or totals in the Nutrient summary. Please go to the event concerned and add the nutrient values to the appropriate product.





Paddocks

## Nutrient summary report

WORLDWIDE RUNOFF LTD - 60842387

Query range : 01 Jun 2017 to 31 May 2018

Name	Date	Area (ha)	Product	Rate (kg/ha or l/ha)	N kg/ha	P kg/ha	K kg/ha	S kg/ha	Ca kg/ha	Mg kg/ha
2A	05/09/2017	1.6	AMMO 36 BULK	138	49	-	-	13	-	-
	12/02/2018	1.9	UREA BULK	123	56	-	-	-	-	-
	<b>Area weighted total</b>				<b>87</b>	<b>-</b>	<b>-</b>	<b>10</b>	<b>-</b>	<b>-</b>
A1	05/09/2017	4	AMMO 36 BULK	139	50	-	-	13	-	-
	12/02/2018	4	UREA BULK	108	50	-	-	-	-	-
	<b>Area weighted total</b>				<b>89</b>	<b>-</b>	<b>-</b>	<b>12</b>	<b>-</b>	<b>-</b>
B1	05/09/2017	6.2	AMMO 36 BULK	129	46	-	-	12	-	-
	24/11/2017	5.9	Post Cut mix to be cut again	355	58	10	54	12	22	7
	12/02/2018	6.4	UREA BULK	109	50	-	-	-	-	-
	<b>Area weighted total</b>				<b>146</b>	<b>9</b>	<b>49</b>	<b>23</b>	<b>20</b>	<b>7</b>
B2	05/09/2017	7.7	AMMO 36 BULK	144	52	-	-	14	-	-
	10/01/2018	7.8	Merriburn Grazed Maintenance+N	887	43	23	-	29	240	5
	12/02/2018	8.2	UREA BULK	115	53	-	-	-	-	-
	<b>Area weighted total</b>				<b>132</b>	<b>21</b>	<b>-</b>	<b>37</b>	<b>211</b>	<b>5</b>
barn lane?	05/09/2017	1.1	AMMO 36 BULK	122	44	-	-	12	-	-
	12/02/2018	1.2	UREA BULK	105	48	-	-	-	-	-
	<b>Area weighted total</b>				<b>78</b>	<b>-</b>	<b>-</b>	<b>10</b>	<b>-</b>	<b>-</b>
C1	05/09/2017	5.9	AMMO 36 BULK	129	46	-	-	12	-	-
	24/11/2017	6	Post Cut mix to be cut again	352	57	10	53	12	21	7
	12/02/2018	6.2	UREA BULK	110	50	-	-	-	-	-

		<b>Area weighted total</b>		<b>146</b>	<b>9</b>	<b>50</b>	<b>22</b>	<b>20</b>	<b>7</b>
C2	05/09/2017	6.2	AMMO 36 BULK	137	49	-	13	-	-
	10/01/2018	6.1	Merriburn Grazed Maintenance+CE+N	894	44	-	29	242	5
	12/02/2018	6.3	UREA BULK	110	51	-	-	-	-
		<b>Area weighted total</b>		<b>136</b>	<b>22</b>	<b>-</b>	<b>39</b>	<b>225</b>	<b>5</b>
C3	05/09/2017	3.7	AMMO 36 BULK	148	53	-	14	-	-
	08/12/2017	3.2	Post Cust - Grazed mix	1118	38	68	35	269	5
			<b>Area weighted total</b>		<b>67</b>	<b>20</b>	<b>35</b>	<b>184</b>	<b>3</b>
D1	05/09/2017	4	AMMO 36 BULK	133	48	-	13	-	-
	24/11/2017	4	Post Cut mix to be cut again	358	58	54	12	22	7
	12/02/2018	4.2	UREA BULK	114	53	-	-	-	-
		<b>Area weighted total</b>		<b>150</b>	<b>9</b>	<b>51</b>	<b>23</b>	<b>20</b>	<b>7</b>
D2	05/09/2017	4.5	AMMO 36 BULK	150	54	-	14	-	-
	24/11/2017	4.4	Merriburn Grazed Maintenance+N	932	45	-	30	252	6
	12/02/2018	4.7	UREA BULK	112	51	-	-	-	-
		<b>Area weighted total</b>		<b>133</b>	<b>21</b>	<b>-</b>	<b>38</b>	<b>216</b>	<b>5</b>
D3	05/09/2017	2.5	AMMO 36 BULK	138	50	-	13	-	-
			<b>Area weighted total</b>		<b>30</b>	<b>-</b>	<b>8</b>	<b>-</b>	<b>-</b>
	05/09/2017	1	AMMO 36 BULK	135	48	-	13	-	-
E1	24/11/2017	0.8	Merriburn Grazed Maintenance+N	972	47	-	31	263	6
	12/02/2018	1.2	UREA BULK	120	55	-	-	-	-
			<b>Area weighted total</b>		<b>114</b>	<b>15</b>	<b>29</b>	<b>157</b>	<b>4</b>
E2	05/09/2017	2.1	AMMO 36 BULK	135	48	-	13	-	-
	24/11/2017	2.9	Merriburn Grazed Maintenance+N	992	48	-	32	269	6

	12/02/2018	3.3		UREA BULK	112	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	<b>Area weighted total</b>																					
E3	05/09/2017	3.2		AMMO 36 BULK	141	51	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	
	11/01/2018	1.1		Merriburn Grazed Maintenance+N	872	42	23	-	28	-	-	-	-	-	-	-	-	-	-	-	236	
	12/02/2018	4		UREA BULK	118	54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	<b>Area weighted total</b>																					
F1	05/09/2017	3		AMMO 36 BULK	132	47	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	
	24/11/2017	2.2		Merriburn Grazed Maintenance+N	924	45	24	-	30	-	-	-	-	-	-	-	-	-	-	-	250	
	12/02/2018	3.7		UREA BULK	116	53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	<b>Area weighted total</b>																					
F2	05/09/2017	6.7		AMMO 36 BULK	144	52	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	
	11/01/2018	7.3		Merriburn Grazed Maintenance+N	913	44	24	-	30	-	-	-	-	-	-	-	-	-	-	-	247	
	12/02/2018	7.3		UREA BULK	108	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	<b>Area weighted total</b>																					
F3	05/09/2017	4.8		AMMO 36 BULK	140	50	-	-	-	13	-	-	-	-	-	-	-	-	-	-	-	
	11/01/2018	5.2		Merriburn Grazed Maintenance+N	901	44	24	-	29	-	-	-	-	-	-	-	-	-	-	-	244	
	12/02/2018	5.3		UREA BULK	113	52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	<b>Area weighted total</b>																					
F4	05/09/2017	0.7		AMMO 36 BULK	145	52	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	
	<b>Area weighted total</b>																					
G1	05/09/2017	1.4		AMMO 36 BULK	120	43	-	-	-	11	-	-	-	-	-	-	-	-	-	-	-	
	24/11/2017	1.4		Merriburn Grazed Maintenance+N	865	42	23	-	28	-	-	-	-	-	-	-	-	-	-	-	234	
	21/02/2018	1.5		UREA BULK	102	47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	<b>Area weighted total</b>																					
G2	05/09/2017	5.6		AMMO 36 BULK	145	52	-	-	-	14	-	-	-	-	-	-	-	-	-	-	-	

	24/11/2017	5.6	Merriburn Grazed Maintenance+N	956	47	25	-	31	259	6
	11/01/2018	6.6	Merriburn Grazed Maintenance+N	957	47	25	-	31	259	6
	12/02/2018	7.1	UREA BULK	114	53	-	-	-	-	-
	<b>Area weighted total</b>				<b>169</b>	<b>43</b>	-	<b>63</b>	<b>435</b>	<b>10</b>
G3	05/09/2017	5.8	AMMO 36 BULK	145	52	-	-	14	-	-
	<b>Area weighted total</b>				<b>31</b>	-	-	<b>8</b>	-	-
G4	<b>Area weighted total</b>				-	-	-	-	-	-
H1	05/09/2017	0.6	AMMO 36 BULK	136	49	-	-	13	-	-
	24/11/2017	0.6	Merriburn Grazed Maintenance+N	936	46	25	-	30	253	6
	21/02/2018	0.7	UREA BULK	104	48	-	-	-	-	-
	<b>Area weighted total</b>				<b>113</b>	<b>19</b>	-	<b>34</b>	<b>194</b>	<b>4</b>
H2	16/08/2017	4.2	RZR - AMM SE	139	50	-	-	13	-	-
	24/11/2017	4.1	Post Cut mix to be cut again	358	58	10	54	12	22	7
	<b>Area weighted total</b>				<b>100</b>	<b>9</b>	-	<b>23</b>	<b>20</b>	<b>7</b>
H3	05/09/2017	3.2	AMMO 36 BULK	141	51	-	-	14	-	-
	24/11/2017	3.1	Merriburn Grazed Maintenance+N	930	45	25	-	30	252	6
	21/02/2018	3.3	UREA BULK	119	55	-	-	-	-	-
	<b>Area weighted total</b>				<b>124</b>	<b>20</b>	-	<b>35</b>	<b>200</b>	<b>5</b>
H4	16/08/2017	2.3	RZR - AMM SE	140	50	-	-	13	-	-
	24/11/2017	0.3	Post Cut mix to be cut again	374	61	10	57	12	23	8
	08/12/2017	2.1	Post Cust - Grazed mix	1137	38	29	70	36	274	5
	21/02/2018	2.1	UREA BULK	126	58	-	-	-	-	-
	<b>Area weighted total</b>				<b>119</b>	<b>23</b>	<b>58</b>	<b>39</b>	<b>210</b>	<b>4</b>

H5	05/09/2017	3.6	AMMO 36 BULK	140	50	-	-	13	-	-
	<b>Area weighted total</b>				<b>28</b>	-	-	<b>7</b>	-	-
H6	<b>Area weighted total</b>				-	-	-	-	-	-
R1	05/09/2017	6.2	AMMO 36 BULK	138	49	-	-	13	-	-
	06/12/2017	6.6	DAP Boron/ Potash and Slugbait	399	46	52	-	3	-	1
	<b>Area weighted total</b>				<b>87</b>	<b>49</b>	-	<b>14</b>	-	<b>1</b>
R10	05/09/2017	4.2	AMMO 36 BULK	134	48	-	-	13	-	-
	29/01/2018	3.9	WW R/off Post Cut Maintenance	1389	22	54	100	66	313	3
	12/02/2018	4.3	UREA BULK	109	50	-	-	-	-	-
	<b>Area weighted total</b>				<b>99</b>	<b>41</b>	<b>77</b>	<b>61</b>	<b>239</b>	<b>2</b>
R11	05/09/2017	3.6	AMMO 36 BULK	137	49	-	-	13	-	-
	24/11/2017	3.6	Post Cut mix to be cut again	361	59	10	55	12	22	7
	12/02/2018	3.7	UREA BULK	122	56	-	-	-	-	-
	<b>Area weighted total</b>				<b>155</b>	<b>9</b>	<b>52</b>	<b>24</b>	<b>21</b>	<b>7</b>
R12	05/09/2017	8.1	AMMO 36 BULK	135	48	-	-	13	-	-
	19/10/2017	0.1	TZT - AGL SUP	155	-	7	-	9	44	-
	17/11/2017	0.1	GERMINATION MIX	612	32	44	27	54	98	-
	24/11/2017	8.3	Post Cut mix to be cut again	382	62	10	58	13	23	8
	12/02/2018	8.8	UREA BULK	111	51	-	-	-	-	-
	14/03/2018	0.2	UREA	95	44	-	-	-	-	-
	<b>Area weighted total</b>				<b>138</b>	<b>10</b>	<b>49</b>	<b>22</b>	<b>22</b>	<b>7</b>
R13	19/10/2017	7.1	TZT - AGL SUP	171	-	8	-	9	48	-
	17/11/2017	7.6	GERMINATION MIX	731	38	52	32	64	117	-
	14/03/2018	7.8	UREA	113	52	-	-	-	-	-
	<b>Area weighted total</b>				<b>79</b>	<b>52</b>	<b>28</b>	<b>63</b>	<b>139</b>	<b>-</b>
R14	16/08/2017	6.4	RZR - AMM SE	134	48	-	-	13	-	-

	12/02/2018	6.5	UREA BULK	111	51	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>												
R 15	16/08/2017	6	RZR - AMM SE	135	48	-	-	-	13	-	-	-	-
	05/09/2017	2.1	AMMO 36 BULK	122	44	-	-	-	12	-	-	-	-
	24/11/2017	8	Post Cut mix to be cut again	361	59	10	55	12	22	7			
	12/02/2018	8.2	UREA BULK	111	51	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>												
R 16	05/09/2017	3.2	AMMO 36 BULK	133	48	-	-	-	13	-	-	-	-
	08/12/2017	3.4	Post Cust - Grazed mix	1078	36	28	66	34	260	5			
	10/01/2018	3.2	Merriburn Grazed Maintenance+N	1012	49	27	-	33	274	6			
	12/02/2018	3.4	UREA BULK	109	50	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>												
R 17	16/08/2017	2.8	RZR - AMM SE	132	47	-	-	-	13	-	-	-	-
	08/12/2017	3.2	Post Cust - Grazed mix	1051	36	27	64	33	253	4			
	10/01/2018	3.1	Merriburn Grazed Maintenance+N	1029	50	27	-	33	278	6			
	12/02/2018	3.3	UREA BULK	112	51	-	-	-	-	-	-	-	-
	<b>Area weighted total</b>												
R 18	16/08/2017	2.1	RZR - AMM SE	141	50	-	-	-	14	-	-	-	-
	05/09/2017	1.2	AMMO 36 BULK	121	43	-	-	-	12	-	-	-	-
	04/12/2017	3.4	DAP Boron/ Potash and Slugbait	418	48	55	59	3	-	1			
	<b>Area weighted total</b>												
R 19	16/08/2017	3.1	RZR - AMM SE	130	46	-	-	-	12	-	-	-	-
	04/12/2017	3.4	DAP Boron/ Potash and Slugbait	432	50	57	61	3	-	2			

	<b>Area weighted total</b>		<b>82</b>	<b>50</b>	<b>54</b>	<b>12</b>	<b>1</b>
R2	05/09/2017	3.1	AMMO 36 BULK	152	54	15	-
	24/11/2017	2.9	Merriburn Grazed Maintenance+N	956	47	31	259
	12/02/2018	3.2	UREA BULK	120	55	-	-
	<b>Area weighted total</b>		<b>133</b>	<b>20</b>	<b>37</b>	<b>209</b>	<b>5</b>
R20	16/08/2017	4.4	RZR - AMM SE	131	47	12	-
	04/12/2017	4.6	DAP Boron/ Potash and Slugbait	396	46	3	1
	<b>Area weighted total</b>		<b>88</b>	<b>51</b>	<b>54</b>	<b>14</b>	<b>1</b>
R21	16/08/2017	4.6	RZR - AMM SE	131	47	13	-
	04/12/2017	5.3	DAP Boron/ Potash and Slugbait	396	46	3	1
	<b>Area weighted total</b>		<b>79</b>	<b>47</b>	<b>51</b>	<b>12</b>	<b>1</b>
R3	16/08/2017	2.1	RZR - AMM SE	157	56	15	-
	24/11/2017	3.4	Merriburn Grazed Maintenance+N	960	47	31	260
	21/02/2018	3.3	UREA BULK	111	51	-	-
	<b>Area weighted total</b>		<b>123</b>	<b>24</b>	<b>38</b>	<b>243</b>	<b>5</b>
R4	05/09/2017	4.8	AMMO 36 BULK	130	46	12	-
	24/11/2017	4.7	Merriburn Grazed Maintenance+N	909	44	29	246
	12/02/2018	5	UREA BULK	110	51	-	-
	<b>Area weighted total</b>		<b>127</b>	<b>21</b>	<b>37</b>	<b>215</b>	<b>5</b>
R5	19/10/2017	2.6	TZT - AGL SUP	166	-	9	47
	19/10/2017	4.7	TZT - AGL SUP	338	-	19	95
	17/11/2017	4.7	GERMINATION MIX	719	37	63	115
	12/02/2018	5	UREA BULK	121	56	-	-
	<b>Area weighted total</b>		<b>86</b>	<b>63</b>	<b>28</b>	<b>77</b>	<b>209</b>
R6	05/09/2017	4.2	AMMO 36 BULK	138	49	13	-



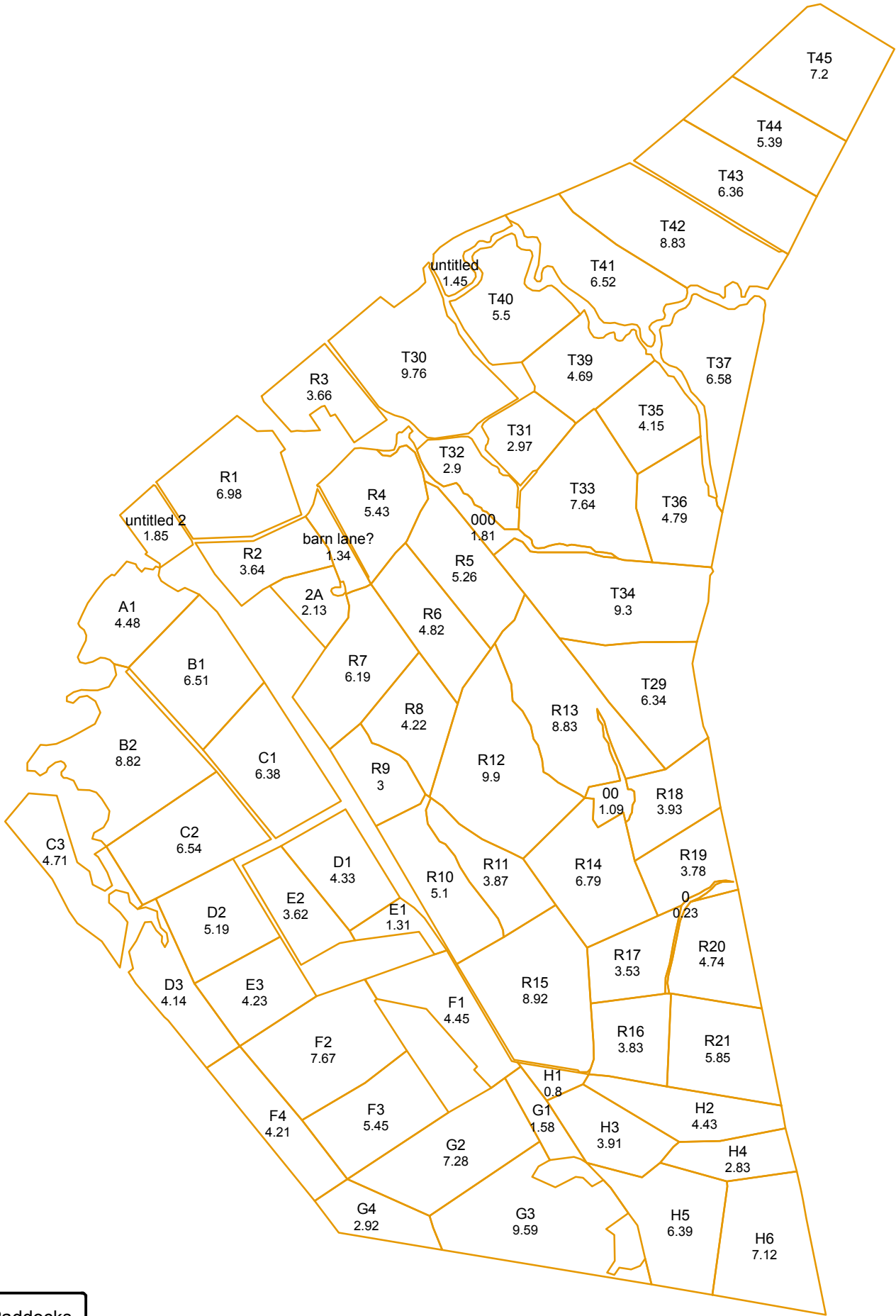
	12/02/2018	4.6		UREA BULK	110	51	-	-	-	-	-	-	-
	<b>Area weighted total</b>					<b>92</b>	-	-	<b>12</b>	-	-	-	-
R7	05/09/2017	4.2		AMMO 36 BULK	133	48	-	-	13	-	-	-	-
	12/02/2018	4.3		UREA BULK	110	51	-	-	-	-	-	-	-
	<b>Area weighted total</b>					<b>68</b>	-	-	<b>9</b>	-	-	-	-
R8	05/09/2017	3.6		AMMO 36 BULK	135	48	-	-	13	-	-	-	-
	24/11/2017	3.6		Merriburn Grazed Maintenance+N	964	47	26	-	31	261	6	-	-
	12/02/2018	4		UREA BULK	115	53	-	-	-	-	-	-	-
	<b>Area weighted total</b>					<b>131</b>	<b>22</b>	-	<b>37</b>	<b>222</b>	<b>5</b>	-	-
R9	05/09/2017	2.3		AMMO 36 BULK	139	50	-	-	13	-	-	-	-
	08/12/2017	2.4		Post Cust - Grazed mix	1128	38	29	69	35	272	5	-	-
	12/02/2018	2.7		UREA BULK	118	54	-	-	-	-	-	-	-
	<b>Area weighted total</b>					<b>116</b>	<b>23</b>	<b>56</b>	<b>39</b>	<b>219</b>	<b>4</b>	-	-
T29	05/09/2017	4.7		AMMO 36 BULK	140	50	-	-	13	-	-	-	-
	12/02/2018	5.9		UREA BULK	119	55	-	-	-	-	-	-	-
	<b>Area weighted total</b>					<b>88</b>	-	-	<b>10</b>	-	-	-	-
T30	16/08/2017	4.5		RZR - AMM SE	145	52	-	-	14	-	-	-	-
	24/11/2017	4.6		Merriburn Grazed Maintenance+N	919	45	24	-	30	249	6	-	-
	06/12/2017	3.9		DAP Boron/ Potash and Slugbait	413	48	54	58	3	-	1	-	-
	<b>Area weighted total</b>					<b>64</b>	<b>33</b>	<b>23</b>	<b>22</b>	<b>118</b>	<b>3</b>	-	-
T31	19/10/2017	2.8		TZT - AGL SUP	311	-	14	-	17	87	-	-	-
	17/11/2017	2.9		GERMINATION MIX	689	36	49	31	60	110	-	-	-
	29/01/2018	2.8		UREA BULK	110	50	-	-	-	-	-	-	-
	<b>Area weighted total</b>					<b>83</b>	<b>62</b>	<b>30</b>	<b>76</b>	<b>191</b>	-	-	-
T32	19/10/2017	2.6		TZT - AGL SUP	322	-	14	-	18	90	-	-	-
	17/11/2017	2.6		GERMINATION MIX	730	38	52	32	64	117	-	-	-

	29/01/2018	2.4	UREA BULK	112	52	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>77</b>	<b>59</b>	<b>28</b>	<b>72</b>	<b>183</b>			
T33	19/10/2017	7.3	TZT - AGL SUP	163	-	7	-	9	46	-	-	-
	17/11/2017	7.4	GERMINATION MIX	704	37	51	31	62	112	-	-	-
	29/01/2018	7.2	UREA BULK	109	50	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>82</b>	<b>56</b>	<b>30</b>	<b>68</b>	<b>152</b>			
T34	19/10/2017	8	TZT - AGL SUP	160	-	7	-	9	45	-	-	-
	17/11/2017	7.8	GERMINATION MIX	684	35	49	30	60	109	-	-	-
	14/03/2018	8.2	UREA	106	49	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>73</b>	<b>48</b>	<b>26</b>	<b>58</b>	<b>130</b>			
T35	19/10/2017	3.9	TZT - AGL SUP	317	-	14	-	17	89	-	-	-
	17/11/2017	4	GERMINATION MIX	683	35	49	30	60	109	-	-	-
	29/01/2018	3.7	UREA BULK	110	51	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>79</b>	<b>60</b>	<b>29</b>	<b>74</b>	<b>188</b>			
T36	05/09/2017	4.7	AMMO 36 BULK	146	52	-	-	14	-	-	-	-
	12/02/2018	4.7	UREA BULK	119	55	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>105</b>	-	-	<b>14</b>	-	-	-	-
T37	05/09/2017	6.1	AMMO 36 BULK	145	52	-	-	14	-	-	-	-
	24/11/2017	6.2	Merriburn Grazed Maintenance+N	1007	49	27	-	33	272	6	-	-
	<b>Area weighted total</b>				<b>94</b>	<b>25</b>	-	<b>43</b>	<b>255</b>	<b>6</b>		
T39	19/10/2017	4.1	TZT - AGL SUP	335	-	15	-	18	94	-	-	-
	17/11/2017	4	GERMINATION MIX	693	36	50	31	61	111	-	-	-
	29/01/2018	3.8	UREA BULK	111	51	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>71</b>	<b>55</b>	<b>26</b>	<b>67</b>	<b>174</b>			
T40	19/10/2017	5.3	TZT - AGL SUP	321	-	14	-	18	90	-	-	-
	17/11/2017	5	GERMINATION MIX	704	37	51	31	62	112	-	-	-
	29/01/2018	5	UREA BULK	110	51	-	-	-	-	-	-	-
	<b>Area weighted total</b>				<b>80</b>	<b>60</b>	<b>28</b>	<b>73</b>	<b>190</b>			

T41	16/08/2017	5.8	RZR - AMM SE	138	49	-	-	13	-	-
	06/12/2017	5.8	DAP Boron/ Potash and Slugbait	400	46	52	-	3	-	1
	<b>Area weighted total</b>				<b>85</b>	<b>46</b>	<b>50</b>	<b>14</b>	<b>-</b>	<b>1</b>
T42	16/08/2017	8.5	RZR - AMM SE	136	49	-	-	13	-	-
	17/11/2017	8.3	UREA BULK	110	50	-	-	-	-	-
	08/12/2017	8.2	Post Cust - Grazed mix	1088	37	28	67	34	262	5
	12/02/2018	8.5	UREA BULK	111	51	-	-	-	-	-
	<b>Area weighted total</b>				<b>178</b>	<b>26</b>	<b>62</b>	<b>44</b>	<b>245</b>	<b>4</b>
T43	16/08/2017	6.1	RZR - AMM SE	134	48	-	-	13	-	-
	17/11/2017	6.3	UREA BULK	111	51	-	-	-	-	-
	08/12/2017	6.2	Post Cust - Grazed mix	1019	34	26	62	32	245	4
	21/02/2018	6.2	UREA BULK	111	51	-	-	-	-	-
	<b>Area weighted total</b>				<b>179</b>	<b>25</b>	<b>60</b>	<b>43</b>	<b>238</b>	<b>4</b>
T44	16/08/2017	4.9	RZR - AMM SE	127	45	-	-	12	-	-
	17/11/2017	5.2	UREA BULK	99	46	-	-	-	-	-
	08/12/2017	5.2	Post Cust - Grazed mix	1039	35	27	64	33	250	4
	21/02/2018	5.1	UREA BULK	97	45	-	-	-	-	-
	<b>Area weighted total</b>				<b>161</b>	<b>26</b>	<b>61</b>	<b>42</b>	<b>240</b>	<b>4</b>
T45	16/08/2017	6.9	RZR - AMM SE	131	47	-	-	12	-	-
	17/11/2017	6.8	UREA BULK	110	50	-	-	-	-	-
	08/12/2017	6.5	Post Cust - Grazed mix	1048	35	27	64	33	252	4
	21/02/2018	6.9	UREA BULK	108	50	-	-	-	-	-
	<b>Area weighted total</b>				<b>171</b>	<b>24</b>	<b>58</b>	<b>41</b>	<b>227</b>	<b>4</b>
untitled	16/08/2017	1	RZR - AMM SE	155	55	-	-	15	-	-

	06/12/2017	0.9	DAP Boron/ Potash and Slugbait	400	46	52	56	3	-	1
	<b>Area weighted total</b>				<b>67</b>	<b>33</b>	<b>35</b>	<b>12</b>	<b>-</b>	<b>1</b>
untitled 2	24/11/2017	1.6	Merriburn Grazed Maintenance+N	999	49	26	-	32	270	6
	<b>Area weighted total</b>				<b>41</b>	<b>22</b>	<b>-</b>	<b>27</b>	<b>227</b>	<b>5</b>
<b>Weighted average rate based on applied areas and rates for selected areas</b>										
					<b>103</b>	<b>25</b>	<b>25</b>	<b>33</b>	<b>125</b>	<b>3</b>

Note: Total and average rates assume product applications cover effective area of paddock(s) selected.  
This is dependent on positional accuracy of paddock boundaries

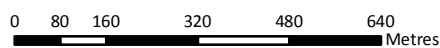


Paddocks

### My Ravensdown Smart Maps

www.myravensdown.co.nz  
 Note: Areas are in hectares  
 Copyright Ravensdown Ltd

## Merriburn



## Pasture cover map

QTKC Runoff 2



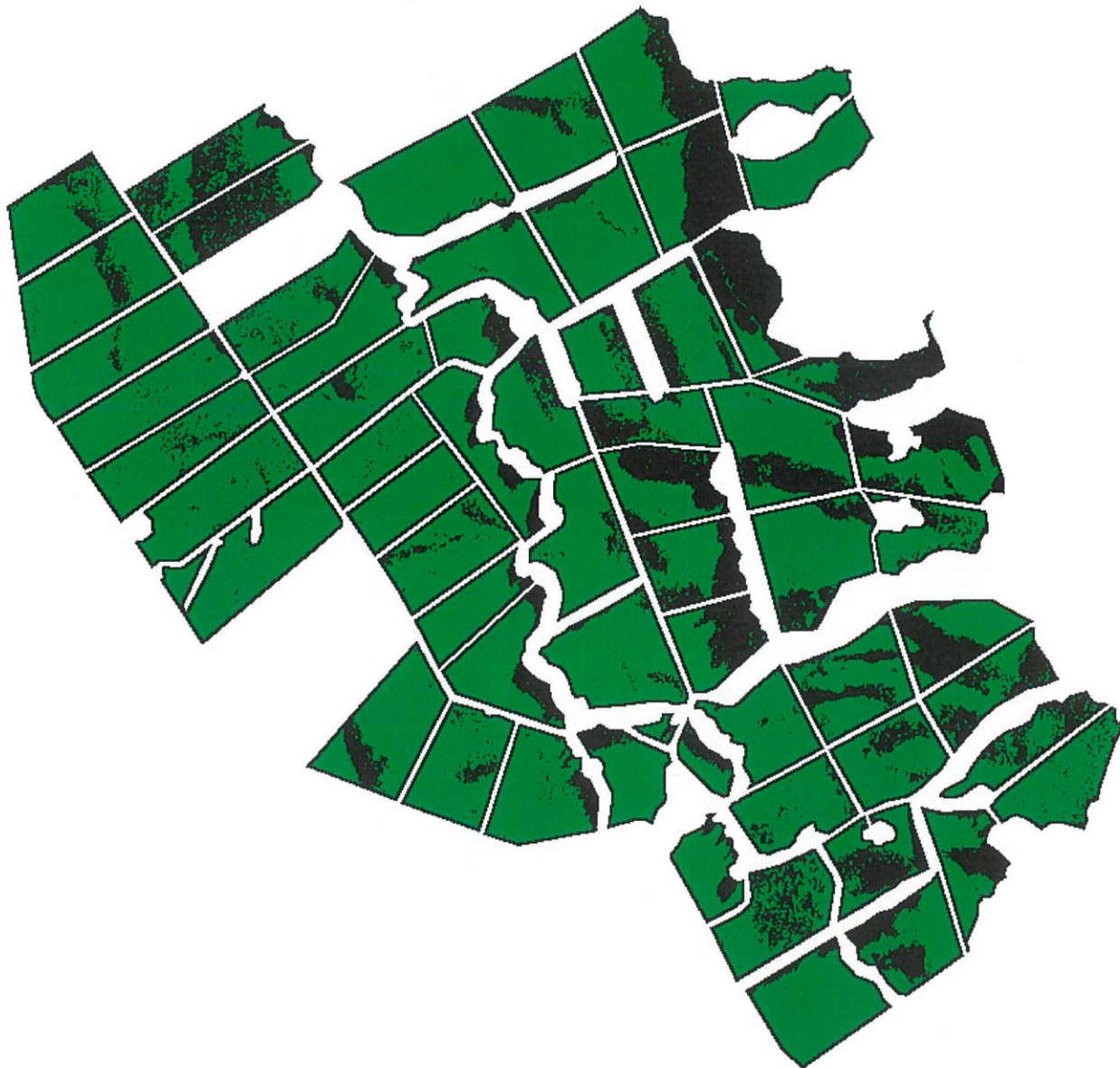
No  
Pasture





Abundant  
Pasture

# SPACE™

## Shadow & Cloud map



-  - Area excluded from calculation\*
-  - Area measured

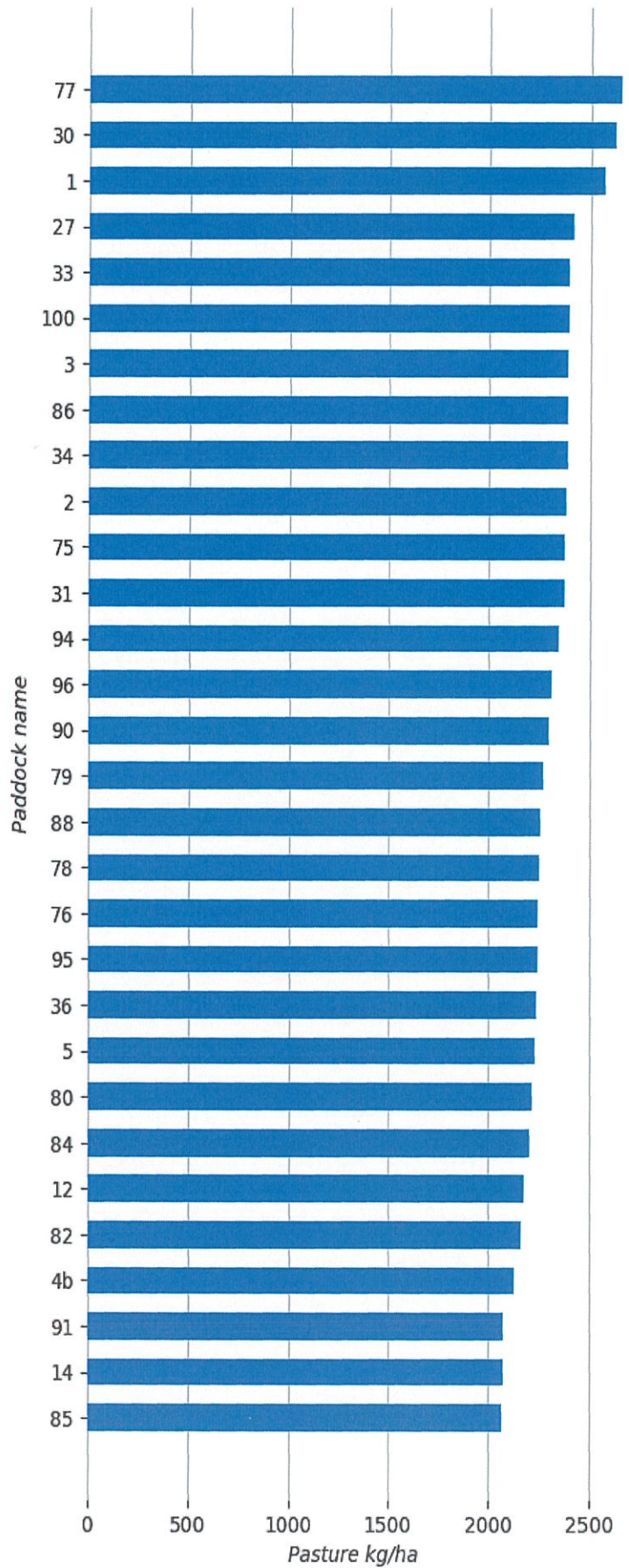
This map shows the areas affected by suspected cloud or shadow. Use this map alongside your pasture cover map to interpret your paddock cover readings.

\*Suspected Cloud / Shadow



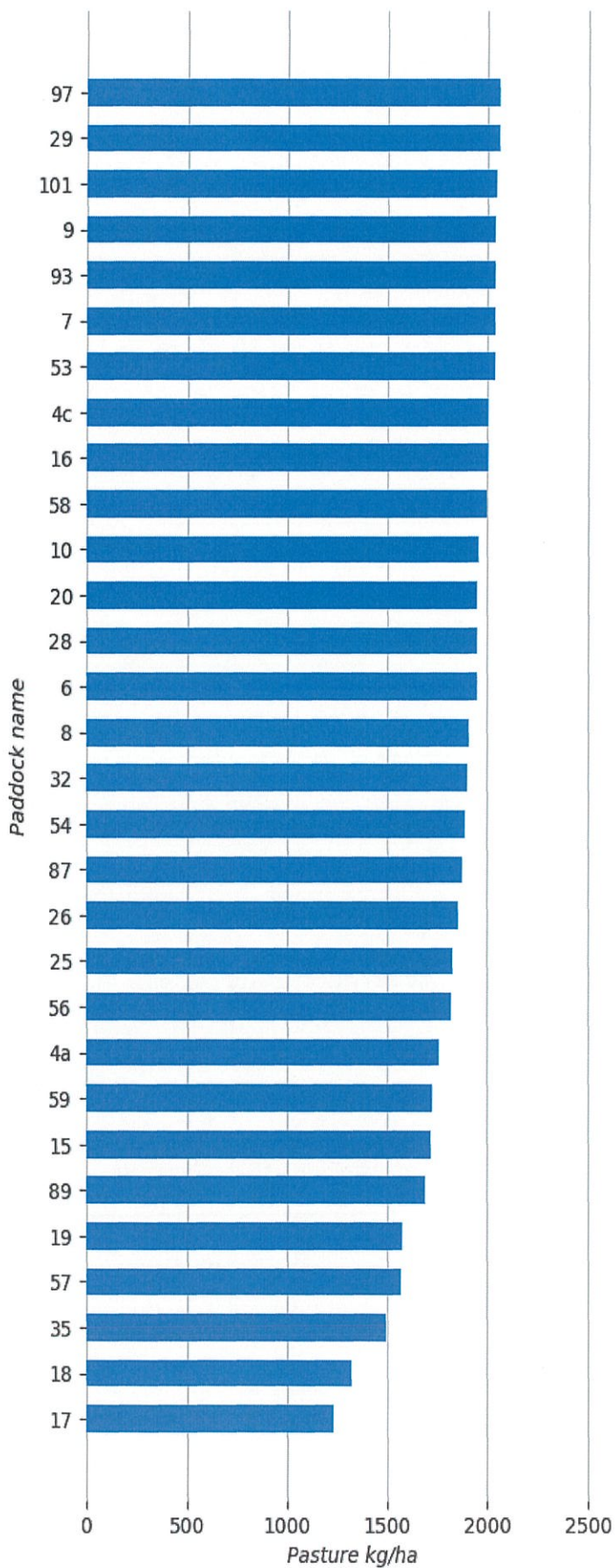
# Average: 2078

77	2650 kg/ha
30	2625 kg/ha
1	2575 kg/ha
27	2425 kg/ha
33	2400 kg/ha
100	2400 kg/ha
3	2400 kg/ha
86	2400 kg/ha
34	2375 kg/ha
2	2375 kg/ha
75	2375 kg/ha
31	2375 kg/ha
94	2350 kg/ha
96	2325 kg/ha
90	2300 kg/ha
79	2275 kg/ha
88	2250 kg/ha
78	2250 kg/ha
76	2250 kg/ha
95	2250 kg/ha
36	2250 kg/ha
5	2225 kg/ha
80	2225 kg/ha
84	2200 kg/ha
12	2175 kg/ha
82	2175 kg/ha
4b	2125 kg/ha
91	2075 kg/ha
14	2075 kg/ha
85	2075 kg/ha





97	2050 kg/ha
29	2050 kg/ha
101	2050 kg/ha
9	2050 kg/ha
93	2050 kg/ha
7	2050 kg/ha
53	2050 kg/ha
4c	2000 kg/ha
16	2000 kg/ha
58	2000 kg/ha
10	1950 kg/ha
20	1950 kg/ha
28	1950 kg/ha
6	1950 kg/ha
8	1900 kg/ha
32	1900 kg/ha
54	1900 kg/ha
87	1875 kg/ha
26	1850 kg/ha
25	1825 kg/ha
56	1825 kg/ha
4a	1750 kg/ha
59	1725 kg/ha
15	1725 kg/ha
89	1700 kg/ha
19	1575 kg/ha
57	1575 kg/ha
35	1500 kg/ha
18	1325 kg/ha
17	1225 kg/ha

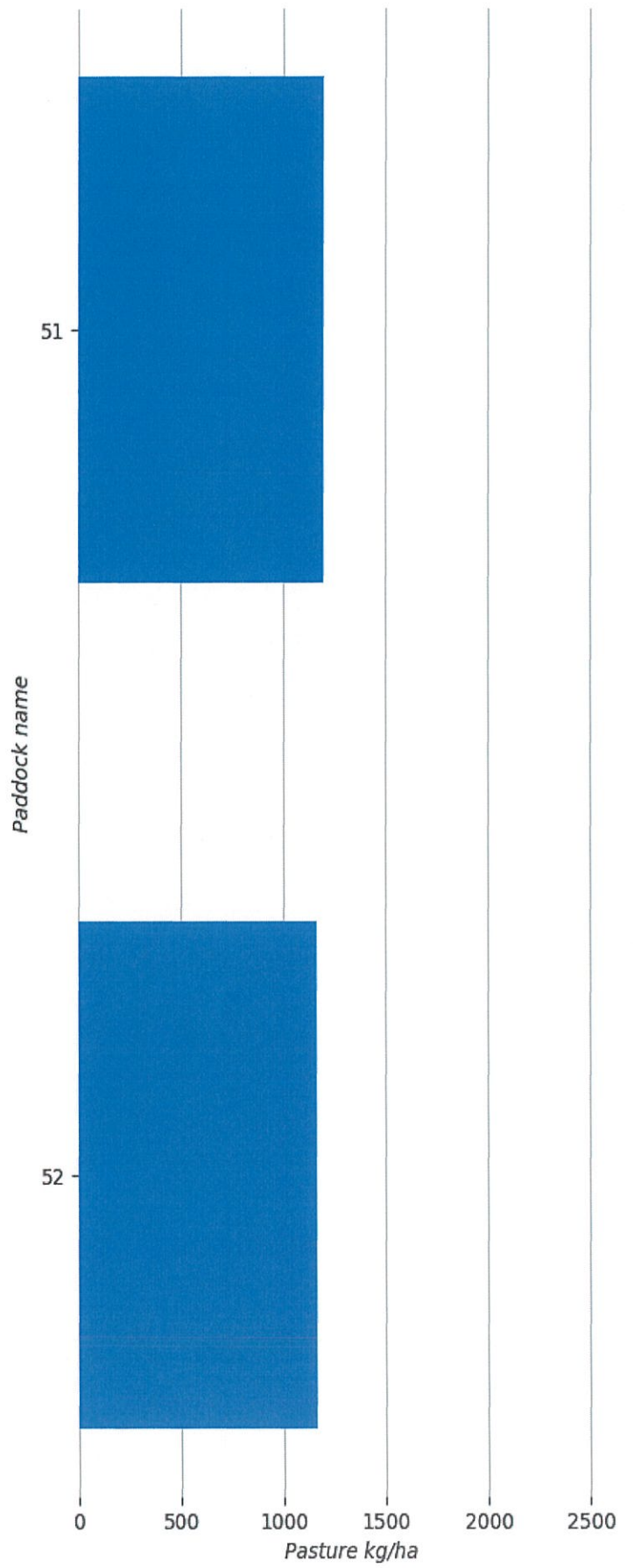


51

1200 kg/ha

52

1175 kg/ha

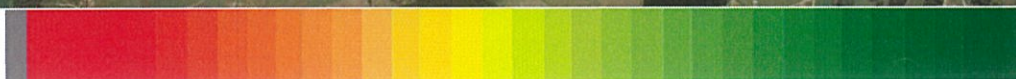


## Pasture cover map

## QTKC Runoff 1



No  
Pasture





Abundant  
Pasture

# SPACE™

## Shadow & Cloud map



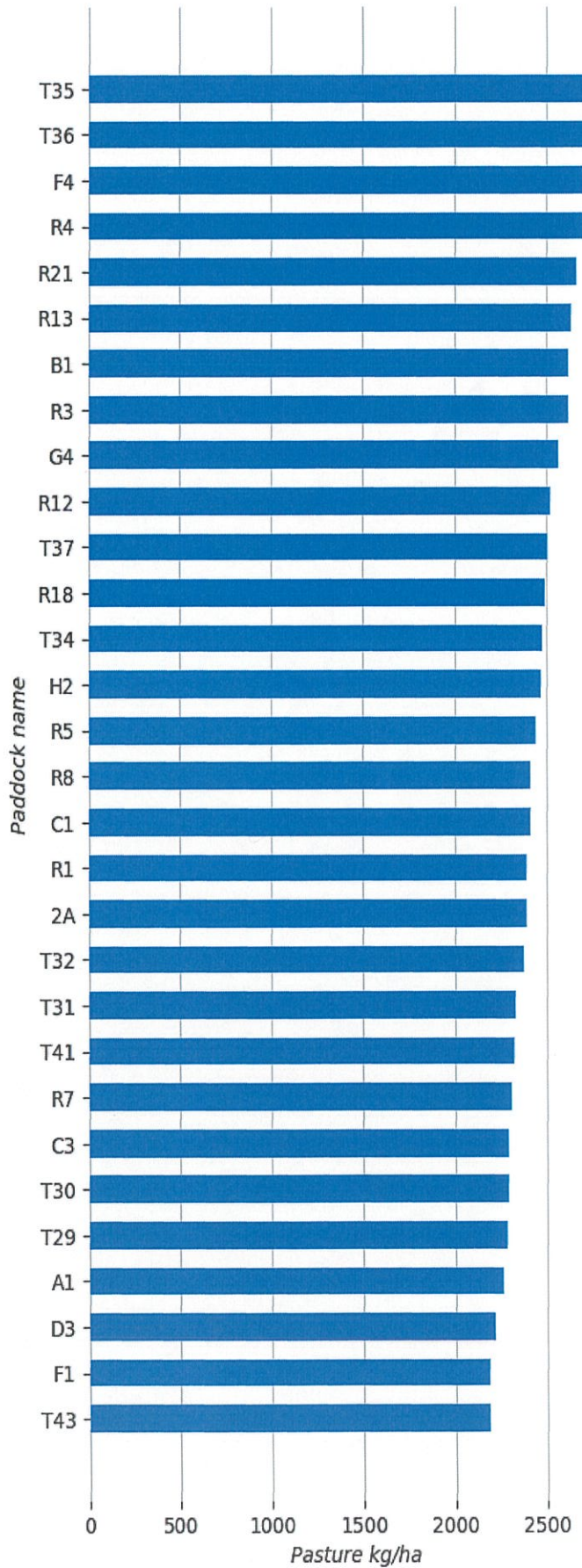
-  - Area excluded from calculation\*
-  - Area measured

This map shows the areas affected by suspected cloud or shadow. Use this map alongside your pasture cover map to interpret your paddock cover readings.

\*Suspected Cloud / Shadow

T35	2900 kg/ha
T36	2825 kg/ha
F4	2750 kg/ha
R4	2725 kg/ha
R21	2675 kg/ha
R13	2625 kg/ha
B1	2625 kg/ha
R3	2625 kg/ha
G4	2575 kg/ha
R12	2525 kg/ha
T37	2500 kg/ha
R18	2500 kg/ha
T34	2475 kg/ha
H2	2475 kg/ha
R5	2450 kg/ha
R8	2425 kg/ha
C1	2425 kg/ha
R1	2400 kg/ha
2A	2400 kg/ha
T32	2375 kg/ha
T31	2325 kg/ha
T41	2325 kg/ha
R7	2300 kg/ha
C3	2300 kg/ha
T30	2300 kg/ha
T29	2275 kg/ha
A1	2275 kg/ha
D3	2225 kg/ha
F1	2200 kg/ha
T43	2200 kg/ha

**Average: 2257**



T40	2175 kg/ha
T45	2175 kg/ha
H5	2175 kg/ha
T39	2150 kg/ha
R2	2125 kg/ha
T33	2075 kg/ha
H4	2050 kg/ha
T44	2025 kg/ha
H6	2025 kg/ha
D1	2000 kg/ha
B2	2000 kg/ha
F2	1975 kg/ha
T42	1950 kg/ha
F3	1925 kg/ha
R6	1875 kg/ha
H3	1875 kg/ha
G3	1850 kg/ha
C2	1825 kg/ha
D2	1675 kg/ha
E2	1675 kg/ha
G2	1625 kg/ha
E3	EXCLUDED*

