



*Teys Australia Jindalee*  
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## **Teys Australia Southern Property Pty Ltd (Teys Australia Jindalee)**

### *Monitoring Data Summary*

### *Environmental Protection Licence 3584*

#### ***Executive Summary***

Teys Australia Jindalee is the holder of Environmental Protection Licence (EPL) 3584. This Licence is administered by the *NSW Environmental Protection Authority (EPA)*, and includes conditions relevant to the site's operation, including environmental monitoring, as is outlined in this report. All environmental monitoring results required under EPL 3584 are submitted to the *EPA* each year in a formal annual return, and interpreted, and submitted in an Annual Environmental Management Review (AEMR).

All monitoring specified under EPL 3584 was completed in the 2015/2016 annual reporting period, which covered the period between 25 February 2015 and 24 February 2016. Monitoring has commenced for the 2015/2016 reporting period.

Nil instances of non – compliance with any of the conditions in EPL 3584 occurred during the reporting period.

Further information is available by contacting the Teys Corporate Environmental team on (07) 3287 2188.

A full copy of EPL 3584 can be obtained on the EPA website from the following URL using the search function for licence number “3584”:

<http://www.environment.nsw.gov.au/prpoeoapp/>

**EPA Monitoring point 1:** Summary of results for soil monitoring in South Irrigation paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>No of times measured during year</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Minimum Value</i>	<i>Maximum Value</i>	<i>Mean Value</i>	<i>Date Published</i>
Available Phosphorus	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Conductivity	(dS/m)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Calcium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Magnesium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Potassium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Sodium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrate	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrogen (total)	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
pH	pH	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Phosphorus Sorption Capacity	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Total Organic Carbon	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA

The monitoring data in the table above is taken from monitoring point 1 in EPL 3584. During this period no manure or effluent was applied, therefore no testing is required. The monitoring point has been established to monitor the soil on which captured runoff water is applied. The monitoring point is located within in the South irrigation paddock. **The monitoring point consists of surface soil (0-30cm), sub surface soil (30-60cm) and sub soil (60 – 90cm) samples.**

**EPA Monitoring Point 2:** Summary of results for soil monitoring in West Irrigation paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>No of times measured during year</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Minimum Value</i>	<i>Maximum Value</i>	<i>Mean Value</i>	<i>Date Published</i>
Available Phosphorus	(mg/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	6	100	38.67	28.03.18
Cation Exchange Capacity	(cl/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	7.9	14.1	11.2	28.03.18
Conductivity	(dS/m)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	0.16	0.35	0.27	28.03.18
Exchangeable Calcium	(cl/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	0.1	2.4	1.03	28.03.18
Exchangeable Magnesium	(cl/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	5.5	10	7.23	28.03.18
Exchangeable Potassium	(cl/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	0.26	2.8	1.33	28.03.18
Exchangeable Sodium	(cl/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	0.96	2.3	1.52	28.03.18
Nitrate	(mg/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	4	19	10.67	28.03.18
Nitrogen (total)	(mg/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	500	1500	866.67	28.03.18
pH	pH	Annual X 3 Sub Samples	1	31.01.18	13.02.18	7.5	9.2	8.47	28.03.18
Phosphorus Sorption Capacity	(mg/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	40	59	51.33	28.03.18
Total Organic Carbon	(mg/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	2000	14000	6000	28.03.18

The monitoring data in the table above is taken from monitoring point 2 in EPL 3584. The monitoring point has been established to monitor the soil on which captured runoff water is applied. The monitoring point is located within in the West irrigation paddock. [The monitoring point consists of surface soil \(0-30cm\), sub surface soil \(30-60cm\) and sub soil \(60 – 90cm\) samples.](#)

**EPA Monitoring Point 3: Summary of results for soil monitoring in North/West Shed paddock**

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>No of times measured during year</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Minimum Value</i>	<i>Maximum Value</i>	<i>Mean Value</i>	<i>Date Published</i>
Available Phosphorus	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Conductivity	(dS/m)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Calcium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Magnesium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Potassium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Sodium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrate	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrogen (total)	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
pH	pH	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Phosphorus Sorption Capacity	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Total Organic Carbon	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA

The monitoring data in the table above is taken from monitoring point 3 in EPL 3584. During this period no manure or effluent was applied, therefore no testing is required. The monitoring point has been established to monitor the soil on which captured runoff water is applied. The monitoring point is located within in the North/West shed paddock. **The monitoring point consists of surface soil (0-30cm), sub surface soil (30-60cm) and sub soil (60 – 90cm) samples.**

**EPA Monitoring Point 11:** Summary of results for soil monitoring in Old East Irrigation paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>No of times measured during year</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Minimum Value</i>	<i>Maximum Value</i>	<i>Mean Value</i>	<i>Date Published</i>
Available Phosphorus	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Conductivity	(dS/m)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Calcium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Magnesium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Potassium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Sodium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrate	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrogen (total)	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
pH	pH	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Phosphorus Sorption Capacity	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Total Organic Carbon	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA

The monitoring data in the table above is taken from monitoring point 11 in EPL 3584. During this period no manure or effluent was applied, therefore no testing is required. The monitoring point has been established to monitor the soil on which captured runoff water is applied. The monitoring point is located within in the Old East irrigation paddock. **The monitoring point consists of surface soil (0-30cm), sub surface soil (30-60cm) and sub soil (60 – 90cm) samples.**

**EPA Monitoring Point 12:** Summary of results for soil monitoring in Front paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>No of times measured during year</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Minimum Value</i>	<i>Maximum Value</i>	<i>Mean Value</i>	<i>Date Published</i>
Available Phosphorus	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Conductivity	(dS/m)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Calcium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Magnesium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Potassium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Sodium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrate	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrogen (total)	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
pH	pH	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Phosphorus Sorption Capacity	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Total Organic Carbon	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA

The monitoring data in the table above is taken from monitoring point 12 in EPL 3584. During this period no manure or effluent was applied, therefore no testing is required. The monitoring point has been established to monitor the soil on which captured runoff water is applied. The monitoring point is located within in the Front paddock. [The monitoring point consists of surface soil \(0-30cm\), sub surface soil \(30-60cm\) and sub soil \(60 – 90cm\) samples.](#)

**EPA Monitoring point 13:** Summary of results for soil monitoring in PBO paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>No of times measured during year</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Minimum Value</i>	<i>Maximum Value</i>	<i>Mean Value</i>	<i>Date Published</i>
Available Phosphorus	(mg/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	5	10	6.67	28.03.18
Cation Exchange Capacity	(cl/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	20.3	47	35.27	28.03.18
Conductivity	(dS/m)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	0.08	0.75	0.4	28.03.18
Exchangeable Calcium	(cl/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	7.1	20	15.03	28.03.18
Exchangeable Magnesium	(cl/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	11	19	15.33	28.03.18
Exchangeable Potassium	(cl/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	0.27	0.62	0.41	28.03.18
Exchangeable Sodium	(cl/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	1.5	7.8	4.4	28.03.18
Nitrate	(mg/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	1	3	2	28.03.18
Nitrogen (total)	(mg/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	500	800	600	28.03.18
pH	pH	Annual X 3 Sub Samples	1	31.01.18	13.02.18	7.5	9.3	8.7	28.03.18
Phosphorus Sorption Capacity	(mg/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	85	130	108.33	28.03.18
Total Organic Carbon	(mg/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	2000	10000	5300	28.03.18

The monitoring data in the table above is taken from monitoring point 13 in EPL 3584. The monitoring point has been established to monitor the soil on which captured runoff water is applied. The monitoring point is located within in the PBO paddock. [The monitoring point consists of surface soil \(0-30cm\), sub surface soil \(30-60cm\) and sub soil \(60 – 90cm\) samples.](#)

**EPA Monitoring Point 14:** Summary of results for soil monitoring in South East paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>No of times measured during year</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Minimum Value</i>	<i>Maximum Value</i>	<i>Mean Value</i>	<i>Date Published</i>
Available Phosphorus	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Conductivity	(dS/m)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Calcium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Magnesium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Potassium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Sodium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrate	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrogen (total)	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
pH	pH	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Phosphorus Sorption Capacity	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Total Organic Carbon	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA

The monitoring data in the table above is taken from monitoring point 14 in EPL 3584. During this period no manure or effluent was applied, therefore no testing is required. The monitoring point has been established to monitor the soil on which captured runoff water is applied. The monitoring point is located within in the South East paddock. [The monitoring point consists of surface soil \(0-30cm\), sub surface soil \(30-60cm\) and sub soil \(60 – 90cm\) samples.](#)



**EPA monitoring Point 15:** Summary of results for soil monitoring in East Lot paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>No of times measured during year</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Minimum Value</i>	<i>Maximum Value</i>	<i>Mean Value</i>	<i>Date Published</i>
Available Phosphorus	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Conductivity	(dS/m)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Calcium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Magnesium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Potassium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Sodium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrate	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrogen (total)	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
pH	pH	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Phosphorus Sorption Capacity	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Total Organic Carbon	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA

The monitoring data in the table above is taken from monitoring point 15 in EPL 3584. During this period no manure or effluent was applied, therefore no testing is required. The monitoring point has been established to monitor the soil on which captured runoff water is applied. The monitoring point is located within in the East Lot paddock. [The monitoring point consists of surface soil \(0-30cm\), sub surface soil \(30-60cm\) and sub soil \(60 – 90cm\) samples.](#)

**EPA Monitoring Point 16:** Summary of results for soil monitoring in North Lot paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>No of times measured during year</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Minimum Value</i>	<i>Maximum Value</i>	<i>Mean Value</i>	<i>Date Published</i>
Available Phosphorus	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Conductivity	(dS/m)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Calcium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Magnesium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Potassium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Sodium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrate	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrogen (total)	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
pH	pH	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Phosphorus Sorption Capacity	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Total Organic Carbon	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA

The monitoring data in the table above is taken from monitoring point 16 in EPL 3584. During this period no manure or effluent was applied, therefore no testing is required. The monitoring point has been established to monitor the soil on which captured runoff water is applied. The monitoring point has been established to monitor the soil on which captured runoff water is applied. The monitoring point is located within in the North Lot paddock. [The monitoring point consists of surface soil \(0-30cm\), sub surface soil \(30-60cm\) and sub soil \(60 – 90cm\) samples.](#)

**EPA Monitoring Point 17:** Summary of results for soil monitoring in North Stock paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>No of times measured during year</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Minimum Value</i>	<i>Maximum Value</i>	<i>Mean Value</i>	<i>Date Published</i>
Available Phosphorus	(mg/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	31	650	242.67	28.03.18
Cation Exchange Capacity	(cl/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	7.3	20.3	12.37	28.03.18
Conductivity	(dS/m)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	0.2	1.17	0.55	28.03.18
Exchangeable Calcium	(cl/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	0.6	9.7	3.83	28.03.18
Exchangeable Magnesium	(cl/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	4.2	6.5	5.3	28.03.18
Exchangeable Potassium	(cl/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	0.41	4	1.71	28.03.18
Exchangeable Sodium	(cl/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	1.1	2	1.47	28.03.18
Nitrate	(mg/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	18	270	110.67	28.03.18
Nitrogen (total)	(mg/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	600	3800	1800	28.03.18
pH	pH	Annual X 3 Sub Samples	1	31.01.18	13.02.18	7	8	7.5	28.03.18
Phosphorus Sorption Capacity	(mg/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	53	180	96.33	28.03.18
Total Organic Carbon	(mg/kg)	Annual X 3 Sub Samples	1	31.01.18	13.02.18	3000	27000	11300	28.03.18

The monitoring data in the table above is taken from monitoring point 17 in EPL 3584. The monitoring point has been established to monitor the soil on which captured runoff water is applied. The monitoring point is located within in the North Stock paddock. [The monitoring point consists of surface soil \(0-30cm\), sub surface soil \(30-60cm\) and sub soil \(60 – 90cm\) samples.](#)

**EPA Monitoring Point 18:** Summary of results for soil monitoring in Reid's Offsite Irrigation

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>No of times measured during year</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Minimum Value</i>	<i>Maximum Value</i>	<i>Mean Value</i>	<i>Date Published</i>
Available Phosphorus	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Cation Exchange Capacity	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Conductivity	(dS/m)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Calcium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Magnesium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Potassium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Exchangeable Sodium	(cl/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrate	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Nitrogen (total)	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
pH	pH	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Phosphorus Sorption Capacity	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA
Total Organic Carbon	(mg/kg)	Annual X 3 Sub Samples	0	NA	NA	NA	NA	NA	NA

The monitoring data in the table above is taken from monitoring point 18 in EPL 3584. During this period no manure or effluent was applied, therefore no testing is required. The monitoring point has been established to monitor the soil on which captured runoff water is applied. The monitoring point is located within in the Reid's Offsite Irrigation. **The monitoring point consists of surface soil (0-30cm), sub surface soil (30-60cm) and sub soil (60 – 90cm) samples.**

**EPA Monitoring point 4:** Summary of results for groundwater bore P1 (*bore was dry at time of sample collection therefore no sample was obtained*).

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>No of times measured during year</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Minimum Value</i>	<i>Maximum Value</i>	<i>Mean Value</i>	<i>Date Published</i>
Nitrogen (Ammonia)	(mg/L)	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18
Conductivity	(µS/cm)	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18
Nitrate	(mg/L)	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18
pH	pH	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18
Orthophosphate	(mg/L)	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18
Standing Water level	(m)	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18

**EPA Monitoring point 5:** Summary of results for groundwater bore P2 (*bore was dry at time of sample collection therefore no sample was obtained*).

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>No of times measured during year</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Minimum Value</i>	<i>Maximum Value</i>	<i>Mean Value</i>	<i>Date Published</i>
Nitrogen (Ammonia)	(mg/L)	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18
Conductivity	(µS/cm)	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18
Nitrate	(mg/L)	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18
pH	pH	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18
Orthophosphate	(mg/L)	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18
Standing Water level	(m)	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18

**EPA Monitoring point 6:** Summary of results for groundwater bore P3 (*bore was dry at time of sample collection therefore no sample was obtained*).

<b>Pollutant</b>	<b>Units of measure</b>	<b>Monitoring frequency required by licence</b>	<b>No of times measured during year</b>	<b>Date of Sampling</b>	<b>Date data obtained</b>	<b>Minimum Value</b>	<b>Maximum Value</b>	<b>Mean Value</b>	<b>Date Published</b>
Nitrogen (Ammonia)	(mg/L)	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18
Conductivity	(µS/cm)	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18
Nitrate	(mg/L)	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18
pH	pH	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18
Orthophosphate	(mg/L)	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18
Standing Water level	(m)	6 Monthly	0	01.02.18	NA	NA	NA	NA	28.03.18

**EPA Monitoring point 7:** Summary of results for groundwater bore P4 (*bore was dry at time of sample collection therefore only one sample was obtained*).

<b>Pollutant</b>	<b>Units of measure</b>	<b>Monitoring frequency required by licence</b>	<b>No of times measured during year</b>	<b>Date of Sampling</b>	<b>Date data obtained</b>	<b>Minimum Value</b>	<b>Maximum Value</b>	<b>Mean Value</b>	<b>Date Published</b>
Nitrogen (Ammonia)	(mg/L)	6 Monthly	1	01.02.18	21.02.18	46	46	46	28.03.18
Conductivity	(µS/cm)	6 Monthly	1	01.02.18	21.02.18	1840	1840	1840	28.03.18
Nitrate	(mg/L)	6 Monthly	1	01.02.18	21.02.18	46.4	46.4	46.4	28.03.18
pH	pH	6 Monthly	1	01.02.18	21.02.18	8.2	8.2	8.2	28.03.18
Orthophosphate	(mg/L)	6 Monthly	1	01.02.18	21.02.18	0.11	0.11	0.11	28.03.18
Standing Water level	(m)	6 Monthly	1	01.02.18	21.02.18	1.1	1.1	1.1	28.03.18

Ground water monitoring for EPA monitoring points 4, 5, 6 and 7 is completed to assess for any impacts to groundwater from irrigation and manure application processes on site. Along with the soil monitoring data, it is used to confirm that there are no cumulative impacts being caused by site processes.

Surface water monitoring for EPA monitoring points 8, 9 and 10 is completed to assess the quality of the water used for irrigation on site. Along with the soil monitoring data, it is used to confirm that there are no cumulative impacts being caused by site processes.

***EPA Monitoring point 8:*** Summary of results for Holding Pond 1

<b><i>Pollutant</i></b>	<b><i>Units of measure</i></b>	<b><i>Monitoring frequency required by licence</i></b>	<b><i>No of times measured during year</i></b>	<b><i>Date of Sampling</i></b>	<b><i>Date data obtained</i></b>	<b><i>Result (units)</i></b>	<b><i>Date Published</i></b>
Ammonia	(mg/L)	Annual	1	13.02.18	23.02.17	4.2	28.03.18
Conductivity	(µS/cm)	Annual	1	13.02.18	23.02.17	5670	28.03.18
Nitrogen (total)	(mg/L)	Annual	1	13.02.18	23.02.17	72	28.03.18
pH	pH	Annual	1	13.02.18	23.02.17	8.5	28.03.18
Phosphorus (total)	(mg/L)	Annual	1	13.02.18	23.02.17	18.8	28.03.18

**EPA Monitoring point 9:** Summary of results for Holding Pond 2

<i><b>Pollutant</b></i>	<i><b>Units of measure</b></i>	<i><b>Monitoring frequency required by licence</b></i>	<i><b>No of times measured during year</b></i>	<i><b>Date of Sampling</b></i>	<i><b>Date data obtained</b></i>	<i><b>Result (units)</b></i>	<i><b>Date Published</b></i>
Ammonia	(mg/L)	Annual	1	13.02.18	23.02.17	21.1	28.03.18
Conductivity	( $\mu$ S/cm)	Annual	1	13.02.18	23.02.17	7720	28.03.18
Nitrogen (total)	(mg/L)	Annual	1	13.02.18	23.02.17	126	28.03.18
pH	pH	Annual	1	13.02.18	23.02.17	8.3	28.03.18
Phosphorus (total)	(mg/L)	Annual	1	13.02.18	23.02.17	51	28.03.18



**EPA Monitoring point 10:** Summary of results for Tail water (*pond was dry at time of sample collection therefore no sample was obtained*).

<i><b>Pollutant</b></i>	<i><b>Units of measure</b></i>	<i><b>Monitoring frequency required by licence</b></i>	<i><b>No of times measured during year</b></i>	<i><b>Date of Sampling</b></i>	<i><b>Date data obtained</b></i>	<i><b>Result (units)</b></i>	<i><b>Date Published</b></i>
Ammonia	(mg/L)	Annual	1	13.02.18	23.02.17	2.0	28.03.18
Conductivity	( $\mu$ S/cm)	Annual	1	13.02.18	23.02.17	18900	28.03.18
Nitrogen (total)	(mg/L)	Annual	1	13.02.18	23.02.17	276	28.03.18
pH	pH	Annual	1	13.02.18	23.02.17	8.6	28.03.18
Phosphorus (total)	(mg/L)	Annual	1	13.02.18	23.02.17	65.1	28.03.18

**EPA Monitoring point 1:** Summary of manure and effluent applied to South Irrigation Paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>Date of Sampling</i>	<i>Value</i>
Manure applied	(minimum Tonnes)	Annual	NA	NA
Manure applied	(maximum Tonnes)	Annual	NA	NA
Manure applied	(average Tonnes)	Annual	NA	NA
Number of days manure applied	Days	Annual	NA	NA
Effluent applied	(minimum ML)	Annual	NA	NA
Effluent applied	(maximum ML)	Annual	NA	NA
Effluent applied	(average ML)	Annual	NA	NA
Number of days effluent applied	Days	Annual	NA	NA

Monitoring of the volumes and number of days of manure and effluent applied to different paddocks on site, is completed to track the volume of nutrients applied to the land to ensure that activities are completed in compliance with the nutrient and water balance prepared for the site. This is the case for all paddocks on site.

**EPA Monitoring Point 2:** Summary of manure and effluent applied to West Irrigation Paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>Date of Sampling</i>	<i>Value</i>
Manure applied	(minimum Tonnes)	Annual	NA	NA
Manure applied	(maximum Tonnes)	Annual	NA	NA
Manure applied	(average Tonnes)	Annual	NA	NA
Number of days manure applied	Days	Annual	NA	NA
Effluent applied	(minimum ML)	Annual	NA	322.56
Effluent applied	(maximum ML)	Annual	NA	368.64
Effluent applied	(average ML)	Annual	NA	345.6
Number of days effluent applied	Days	Annual	NA	2

**EPA Monitoring point 3:** Summary of manure and effluent applied to North/West Shed Paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>Date of Sampling</i>	<i>Value</i>
Manure applied	(minimum Tonnes)	Annual	NA	NA
Manure applied	(maximum Tonnes)	Annual	NA	NA
Manure applied	(average Tonnes)	Annual	NA	NA
Number of days manure applied	Days	Annual	NA	NA
Effluent applied	(minimum ML)	Annual	NA	NA
Effluent applied	(maximum ML)	Annual	NA	NA
Effluent applied	(average ML)	Annual	NA	NA
Number of days effluent applied	Days	Annual	NA	NA

***EPA Monitoring point 11:*** Summary of manure and effluent applied to Old East Irrigation Paddock

<b><i>Pollutant</i></b>	<b><i>Units of measure</i></b>	<b><i>Monitoring frequency required by licence</i></b>	<b><i>Date of Sampling</i></b>	<b><i>Value</i></b>
Manure applied	(minimum Tonnes)	Annual	NA	NA
Manure applied	(maximum Tonnes)	Annual	NA	NA
Manure applied	(average Tonnes)	Annual	NA	NA
Number of days manure applied	Days	Annual	NA	NA
Effluent applied	(minimum ML)	Annual	NA	NA
Effluent applied	(maximum ML)	Annual	NA	NA
Effluent applied	(average ML)	Annual	NA	NA
Number of days effluent applied	Days	Annual	NA	NA

**EPA Monitoring point 12:** Summary of manure and effluent applied to Front Paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>Date of Sampling</i>	<i>Value</i>
Manure applied	(minimum Tonnes)	Annual	NA	NA
Manure applied	(maximum Tonnes)	Annual	NA	NA
Manure applied	(average Tonnes)	Annual	NA	NA
Number of days manure applied	Days	Annual	NA	NA
Effluent applied	(minimum ML)	Annual	NA	NA
Effluent applied	(maximum ML)	Annual	NA	NA
Effluent applied	(average ML)	Annual	NA	NA
Number of days effluent applied	Days	Annual	NA	NA

**EPA Monitoring point 13:** Summary of manure and effluent applied to PBO Paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>Date of Sampling</i>	<i>Value</i>
Manure applied	(minimum Tonnes)	Annual	NA	NA
Manure applied	(maximum Tonnes)	Annual	NA	NA
Manure applied	(average Tonnes)	Annual	NA	NA
Number of days manure applied	Days	Annual	NA	NA
Effluent applied	(minimum ML)	Annual	NA	46.08
Effluent applied	(maximum ML)	Annual	NA	691.2
Effluent applied	(average ML)	Annual	NA	368.64
Number of days effluent applied	Days	Annual	NA	4

**EPA Monitoring point 14:** Summary of manure and effluent applied to South East Paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>Date of Sampling</i>	<i>Value</i>
Manure applied	(minimum Tonnes)	Annual	NA	NA
Manure applied	(maximum Tonnes)	Annual	NA	NA
Manure applied	(average Tonnes)	Annual	NA	NA
Number of days manure applied	Days	Annual	NA	NA
Effluent applied	(minimum ML)	Annual	NA	NA
Effluent applied	(maximum ML)	Annual	NA	NA
Effluent applied	(average ML)	Annual	NA	NA
Number of days effluent applied	Days	Annual	NA	NA



**EPA Monitoring Point 15:** Summary of manure and effluent applied to East Lot Paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>Date of Sampling</i>	<i>Value</i>
Manure applied	(minimum Tonnes)	Annual	NA	NA
Manure applied	(maximum Tonnes)	Annual	NA	NA
Manure applied	(average Tonnes)	Annual	NA	NA
Number of days manure applied	Days	Annual	NA	NA
Effluent applied	(minimum ML)	Annual	NA	NA
Effluent applied	(maximum ML)	Annual	NA	NA
Effluent applied	(average ML)	Annual	NA	NA
Number of days effluent applied	Days	Annual	NA	NA

**EPA Monitoring Point 16:** Summary of manure and effluent applied to North Lot Paddock

<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>Date of Sampling</i>	<i>Value</i>
Manure applied	(minimum Tonnes)	Annual	NA	NA
Manure applied	(maximum Tonnes)	Annual	NA	NA
Manure applied	(average Tonnes)	Annual	NA	NA
Number of days manure applied	Days	Annual	NA	NA
Effluent applied	(minimum ML)	Annual	NA	NA
Effluent applied	(maximum ML)	Annual	NA	NA
Effluent applied	(average ML)	Annual	NA	NA
Number of days effluent applied	Days	Annual	NA	NA

**EPA Monitoring point 17:** Summary of manure and effluent applied to North Stock Paddock

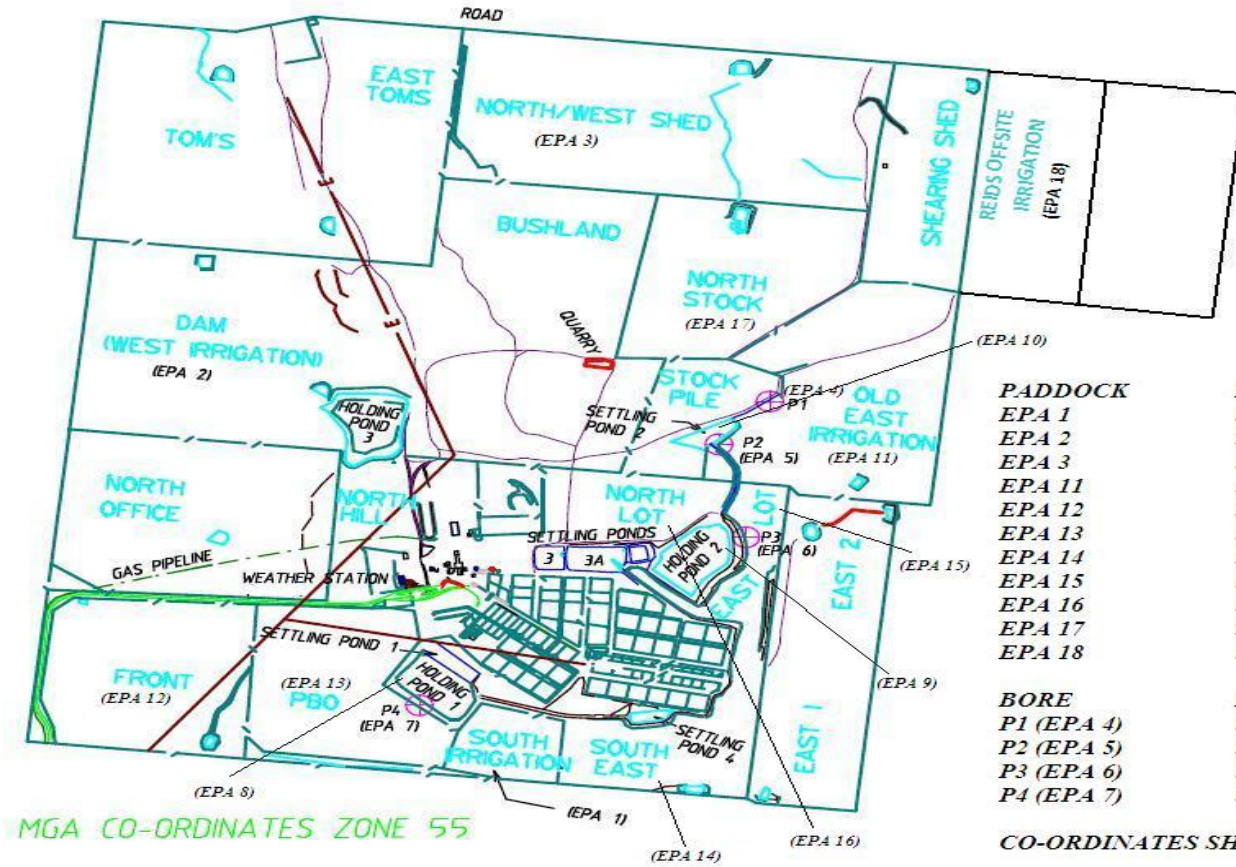
<i>Pollutant</i>	<i>Units of measure</i>	<i>Monitoring frequency required by licence</i>	<i>Date of Sampling</i>	<i>Value</i>
Manure applied	(minimum Tonnes)	Annual	NA	405.6
Manure applied	(maximum Tonnes)	Annual	NA	405.6
Manure applied	(average Tonnes)	Annual	NA	405.6
Number of days manure applied	Days	Annual	NA	5
Effluent applied	(minimum ML)	Annual	NA	NA
Effluent applied	(maximum ML)	Annual	NA	NA
Effluent applied	(average ML)	Annual	NA	NA
Number of days effluent applied	Days	Annual	NA	NA

**EPA Monitoring point 18:** Summary of manure and effluent applied to Reid's Offsite Irrigation

<i><b>Pollutant</b></i>	<i><b>Units of measure</b></i>	<i><b>Monitoring frequency required by licence</b></i>	<i><b>Date of Sampling</b></i>	<i><b>Value</b></i>
Manure applied	(minimum Tonnes)	Annual	NA	NA
Manure applied	(maximum Tonnes)	Annual	NA	NA
Manure applied	(average Tonnes)	Annual	NA	NA
Number of days manure applied	Days	Annual	NA	NA
Effluent applied	(minimum ML)	Annual	NA	NA
Effluent applied	(maximum ML)	Annual	NA	NA
Effluent applied	(average ML)	Annual	NA	NA
Number of days effluent applied	Days	Annual	NA	NA

Locations of all monitoring points are shown in the *Figure 1* below.

**PLAN OF JINDALEE FEEDLOT  
SPRINGDALE NSW**  
REDUCTION RATIO 1:20000



PADDOCK	EASTING	NORTHING
EPA 1	571 250	6 186 550
EPA 2	570 550	6 187 900
EPA 3	571 400	6 188 800
EPA 11	572 100	6 187 650
EPA 12	570 150	6 186 900
EPA 13	570 700	6 186 800
EPA 14	571 700	6 186 450
EPA 15	571 900	6 187 150
EPA 16	571 600	6 187 450
EPA 17	572 000	6 195 050
EPA 18	572 900	6 188 450
<b>BORE</b>	<b>EASTING</b>	<b>NORTHING</b>
P1 (EPA 4)	571 937	6 187 619
P2 (EPA 5)	571 778	6 187 463
P3 (EPA 6)	571 836	6 187 100
P4 (EPA 7)	570 834	6 186 509

CO-ORDINATES SHOWN ARE APPROXIMATE ONLY

**Correction Log**

This section is included to correct any incorrect data which may have been published in good faith.

*Teys Australia Southern Property Pty Ltd T/A Teys Australia Jindalee*

*EPL number 3584*

*Pollutant:*

**Table 4: Correction log**

<i>Sample date and time</i>	<i>Original data</i>	<i>Corrected data</i>	<i>Date corrected</i>	<i>Date originally published</i>	<i>Reason</i>

*Note: No corrections required to date.*

## Modification Log

This section is included to detail any changes to the template due to changes to the licence

*Teys Australia Southern Property Pty Ltd T/A Teys Australia Jindalee  
EPL number 3584*

**Table 5: Modification Log**

<i>Date of Modification</i>	<i>Modification Made</i>	<i>Modification Made By</i>	<i>Modification Approved By</i>
27 November 2012	Update Monitoring Table to include Point 18 "Reids Offsite Irrigation" for soil monitoring and effluent and manure application	Wendy Denning	Charles Hollingworth
27 November 2012	Update figure 1 "Plan of Jindalee Feedlot" to include Monitoring Point 18 "Reids Offsite Irrigation"	Wendy Denning	Charles Hollingworth
15 March 2013	Update Monitoring Tables 1, 2, 3, 11, 12, 13, 14, 15, 16, 17 & 18 to include 2 sub samples as frequency, and include the minimum, maximum and mean value to reflect license 3584	Wendy Denning	Shane Bullock
15 March 2013	Update Frequency Monitoring Tables 1, 2, 3, 11, 12, 13, 14, 15, 16, 17 & 18 from 'annual' to 'annual X 2 sub samples'	Wendy Denning	Shane Bullock
15 March 2013	Added to the comment below Monitoring Tables 1, 2, 3, 11, 12, 13, 14, 15, 16, 17 & 18 'The monitoring point consists of top soil and sub soil.'	Wendy Denning	Shane Bullock
29 June 2016	Added the comment below Monitoring Tables 1, 2, 3, 11, 12, 13, 14, 15, 16, 17 & 18 'During this period no manure or effluent was applied, therefore no testing is required'	Jayne Newcombe	Shane Bullock

29 June 2016	Added the comment above Monitoring Tables 4, 5, 6, 7, 8 & 10 ( <i>bore was dry at time of sample collection therefore no sample was obtained</i> ).	Jayne Newcombe	Shane Bullock
29 June 2016	Added the comment below Monitoring Table 1, page 18 'During this period no manure or effluent was applied to any paddock, therefore no testing is required.'	Jayne Newcombe	Shane Bullock
29 June 2016	Amended the comment below Monitoring Table Tables 1, 2, 3, 11, 12, 13, 14, 15, 16, 17 & 18 from 'has been taken' to 'is taken'.	Jayne Newcombe	Shane Bullock
07 March 2017	Amended table for EPA points 8, 9 & 10 to reflect one result.	Jayne Newcombe	Shane Bullock
07 March 2017	Amended table for EPA points 1, 2, 3, 11, 12, 13, 14, 15, 16, 17 & 18.	Jayne Newcombe	Shane Bullock
26 February 2018	Added the comment below Monitoring Table 16, page 10 'During this period no manure or effluent was applied, therefore no testing is required'	Jayne Newcombe	Shane Bullock
26 February 2018	Removed the comment below Monitoring Table 17, page 11 'During this period no manure or effluent was applied, therefore no testing is required'	Jayne Newcombe	Shane Bullock