



*Teys Australia Wagga Wagga*  
Dampier Street  
Wagga Wagga  
NSW 2650

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

### *Environmental Monitoring Data Summary*

### *Environmental Protection Licence number 2262*

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

Teys Australia Wagga is the holder of Environmental Protection Licence (EPL) 2262. 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 2262 are submitted to the *EPA* each year in a formal annual return, and interpreted, and submitted to the *NSW Department of Planning and Environment* in an Annual Environmental Management Review (AEMR).

All monitoring specified under EPL 2262 was completed in the 2017/2018 annual reporting period, which covered the period between 6 December 2017 and 5 December 2018.

Nil instances of non – compliance with any of the conditions in EPL 2262 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 2262 can be obtained on the EPA website from the following URL using the search function for licence number “2262”:

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

**EPA Monitoring Point 4:** Summary of results for soil monitoring on CFA High irrigation paddock (EPA Monitoring Point 4)

<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>
Conductivity	(dS/m)	Annual	1	19/10/17	21/12/17	0.094	0.41	0.189
Exchangeable Calcium	(mg/kg)	Annual	1	19/10/17	21/12/17	446	1990	883.27
Exchangeable Magnesium	(mg/kg)	Annual	1	19/10/17	21/12/17	108.135	329.27	222.455
Exchangeable Potassium	(mg/kg)	Annual	1	19/10/17	21/12/17	172.04	379.27	270.145
Exchangeable Sodium	(mg/kg)	Annual	1	19/10/17	21/12/17	59.8	356.50	161.418
Exchangeable Sodium Percentage	Percent	Annual	1	19/10/17	21/12/17	3.9	19	9.063
Extractable Phosphorus	(mg/kg)	Annual	1	19/10/17	21/12/17	44	410	188
Nitrate	(mg/kg)	Annual	1	19/10/17	21/12/17	9	130	30.727
Nitrogen (total)	(mg/kg)	Annual	1	19/10/17	21/12/17	301	2860	771.273
pH	pH	Annual	1	19/10/17	21/12/17	6.3	7.5	6.9
Phosphorus (total)	(mg/kg)	Annual	1	19/10/17	21/12/17	101	1020	409
Phosphorus Sorption Capacity	(mg/kg)	Annual	1	19/10/17	21/12/17	109	388	221
Total Organic Carbon	(mg/kg)	Annual	1	19/10/17	21/12/17	1400	24000	6181.82

The monitoring data in the table above has been taken from monitoring point 4 in EPL 2262. The monitoring point has been established to monitor the soil on which treated wastewater is applied. The monitoring point is located within in the 'CFA High' irrigation area.

**EPA Monitoring Point 6:** Summary of results for soil monitoring on CFA Low irrigation paddock (EPA Monitoring point 6).

<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>
Conductivity	(dS/m)	Annual	1	19/10/17	21/12/17	0.139	1.25	0.4719
Exchangeable Calcium	(mg/kg)	Annual	1	19/10/17	21/12/17	616	2640	1512.8
Exchangeable Magnesium	(mg/kg)	Annual	1	19/10/17	21/12/17	307.395	1895.4	1066.28
Exchangeable Potassium	(mg/kg)	Annual	1	19/10/17	21/12/17	179.86	406.64	274.873
Exchangeable Sodium	(mg/kg)	Annual	1	19/10/17	21/12/17	204.7	4784	1739.03
Exchangeable Sodium Percentage	Percent	Annual	1	19/10/17	21/12/17	11	46	24.5
Extractable Phosphorus	(mg/kg)	Annual	1	19/10/17	21/12/17	23	284	136.2
Nitrate	(mg/kg)	Annual	1	19/10/17	21/12/17	1	106	30
Nitrogen (total)	(mg/kg)	Annual	1	19/10/17	21/12/17	334	2780	1098.4
pH	pH	Annual	1	19/10/17	21/12/17	5.8	9.40	7.5
Phosphorus (total)	(mg/kg)	Annual	1	19/10/17	21/12/17	192	731	456.9
Phosphorus Sorption Capacity	(mg/kg)	Annual	1	19/10/17	21/12/17	225	481	328.2
Total Organic Carbon	(mg/kg)	Annual	1	19/10/17	21/12/17	4600	24000	9690

The monitoring data in the table above has been taken from monitoring point 6 in EPL 2262. The monitoring point has been established to monitor the soil on which treated wastewater is applied. The monitoring point is located within in the 'CFA Low' irrigation area.

**Table 3: Summary of results for waste water applied to irrigation areas (monitoring point 1) under Environmental Protection Licence 2262 (monthly sample – required only when irrigating)**

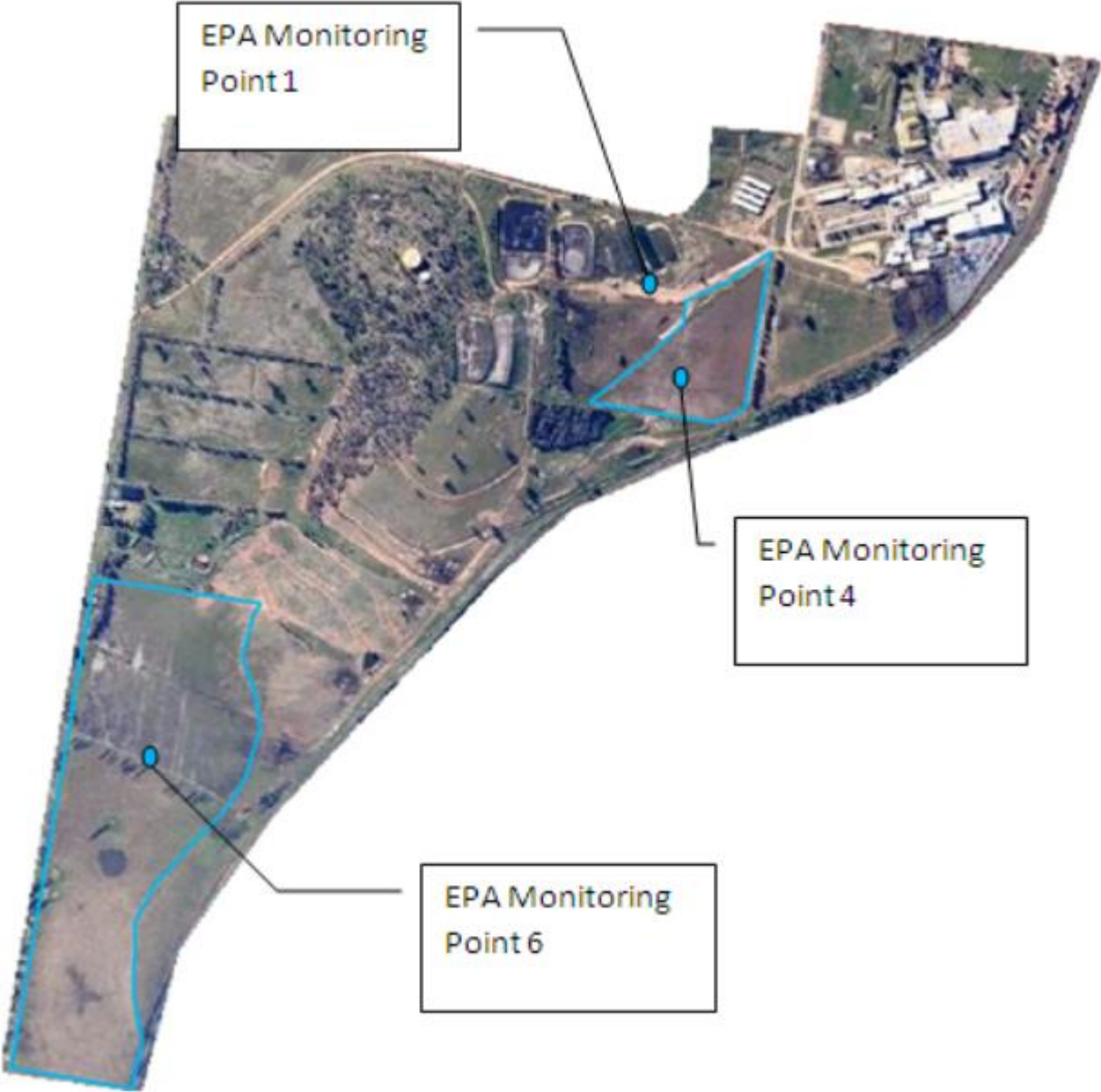
<i>Pollutant</i>	<i>Unit of measure</i>	<i>Monitoring frequency required by Licence</i>	<i>No. of times measured during month</i>	<i>100 percentile limit</i>	<i>Date of Sampling</i>	<i>Date data obtained</i>	<i>Value (mg/L)</i>	<i>Exceedance (Yes/no)</i>
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	December	6 <sup>th</sup> Dec 2018	14	No
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	January	4 <sup>th</sup> Jan 2018	12	No
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	February	21 <sup>st</sup> Mar 2018	12	No
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	March	21 <sup>st</sup> Mar 2018	12	No
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	April	20 <sup>th</sup> Apr 2018	3	No
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	May	N/A	N/A	N/A
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	June			
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	July			
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	August			
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	September			
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	October			
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	November			

The monitoring data in the table above has been taken from monitoring point 1 from EPL 2262. The monitoring point has been established to monitor effluent quality at the discharge from the wastewater treatment system, to the effluent utilisation area on the Teys site. The monitoring point is located at the equalisation pond, downstream of the biological nutrient removal (BNR) system.

The 100 percentile limit refers to a maximum concentration, which BOD concentrations must be below, in order for the water to be irrigated on site.

Locations of monitoring the Figure 1 below.

points 1, 4 and 6 are shown in



**Units of measure – Abbreviations outlined in full**

**mg/L** = Concentration in milligrams per litre, which is equivalent unit of measure to parts per million (ppm)

**dS/m** = Decisiemens per metre, a measure of electrical conductivity, which gives an indication of the concentration of dissolved ions

**mg/kg** = Milligrams per kilogram, a measure of concentration of different parameters within a soil sample

**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 Wagga Wagga*

*EPL number 2262*

*Pollutant:*

**Table 4: Correction log**

<i>Sample date and time</i>	<i>Data Point</i>	<i>Sample Value</i>	<i>Original data</i>	<i>Corrected data</i>	<i>Date corrected</i>	<i>Date originally published</i>	<i>Reason</i>
19/10/17	CFA High Exchangeable Magnesium	Mean value	9.064	222.455	20/3/2018	6/2/2018	Incorrect
19/10/17	CFA High Extractable Phosphorus	Maximum value	1800	410	20/3/2018	6/2/2018	Incorrect
19/10/17	CFA High Extractable Phosphorus	Mean value	335.273	188	20/3/2018	6/2/2018	Incorrect
19/10/17	CFA High Phosphorus (total)	Maximum value	5269	1020	20/3/2018	6/2/2018	Incorrect
19/10/17	CFA High Phosphorus (total)	Mean value	839.909	409	20/3/2018	6/2/2018	Incorrect