



*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 Infrastructure* in an Annual Environmental Management Review (AEMR).

All monitoring specified under EPL 2262 was completed in the 2012/2013 annual reporting period, which covered the period between 6 December 2012 and 5 December 2013.

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)

<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>Date Published</i></b>	<b><i>Minimum Value</i></b>	<b><i>Mean Value</i></b>	<b><i>Maximum Value</i></b>
Conductivity	(dS/m)	Annual	1	04/10/13	11/11/13	19/11/13	0.04	0.15	0.5
Exchangeable Calcium	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	280	552.6	1220
Exchangeable Magnesium	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	47.4	225.6	823.77
Exchangeable Potassium	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	109.5	159.5	211.14
Exchangeable Sodium	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	27.6	179.2	381.8
Exchangeable Sodium Percentage	Percent	Annual	1	04/10/13	11/11/13	19/11/13	4.6	14.45	30.9
Extractable Phosphorus	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	13	67.5	182
Nitrate	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	1	1.8	5
Nitrogen (total)	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	131	314.9	568
pH	pH	Annual	1	04/10/13	11/11/13	19/11/13	6.3	7.29	8.6
Phosphorus (total)	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	54	185.3	294
Phosphorus Buffer Index	(L/kg)	Annual	1	04/10/13	11/11/13	19/11/13	18	49.8	95
Total Organic Carbon	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	3150	5605	10600

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>Date Published</i>	<i>Minimum Value</i>	<i>Maximum Value</i>	<i>Mean Value</i>
Conductivity	(dS/m)	Annual	1	04/10/13	11/11/13	19/11/13	0.11	0.71	1.51
Exchangeable Calcium	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	720	1263.6	1730
Exchangeable Magnesium	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	628.15	1087.91	1385.1
Exchangeable Potassium	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	144.67	243.2	332.35
Exchangeable Sodium	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	499.1	1703.61	2714
Exchangeable Sodium Percentage	Percent	Annual	1	04/10/13	11/11/13	19/11/13	17.8	29.38	45.4
Extractable Phosphorus	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	20	32.1	49
Nitrate	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	1	1.4	3
Nitrogen (total)	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	306	657.5	1920
pH	pH	Annual	1	04/10/13	11/11/13	19/11/13	6.7	8.59	9.5
Phosphorus (total)	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	99	178.3	281
Phosphorus Buffer Index	(L/kg)	Annual	1	04/10/13	11/11/13	19/11/13	46	67.3	82
Total Organic Carbon	(mg/kg)	Annual	1	04/10/13	11/11/13	19/11/13	5360	9569	24300

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.

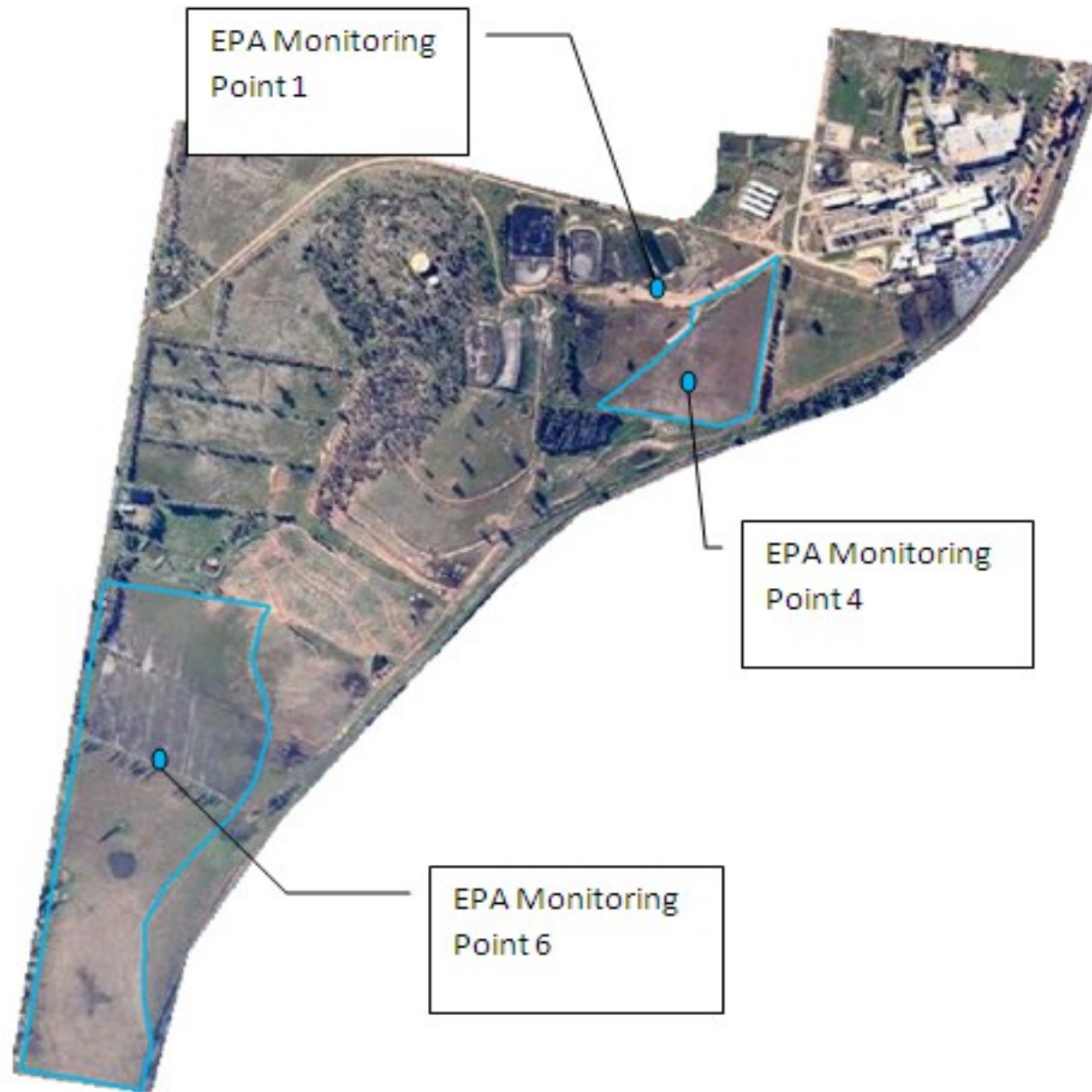
**Table 3: Summary of results for waste water applied to irrigation areas (monitoring point 1) under Environmental Protection Licence 2262 (monthly sample – required only when irrigating)**

<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>Date Published</i>	<i>Value</i>	<i>Exceedance (Yes/no)</i>
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	December	19/12/13	19/12/13	2	No
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	January	11/01/13	17/01/13	94	No
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	February	27/02/13	4/03/13	21	No
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	March	22/03/13	25/03/13	17	No
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	April	17/04/13	18/04/13	6	No
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	May	N/A	N/A	N/A	N/A
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	June	N/A	N/A	N/A	N/A
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	July	N/A	N/A	N/A	N/A
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	August	N/A	N/A	N/A	N/A
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	September	N/A	N/A	N/A	N/A
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	October	N/A	N/A	N/A	N/A
Biochemical Oxygen Demand	(mg/L)	Monthly	1	200	November	18/11/13	19/11/13	6	N/A

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 points 1, 4 and 6 are shown in the Figure 1 below.



EPA Monitoring Point 1

EPA Monitoring Point 4

EPA Monitoring Point 6

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>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.*