



Annual System Performance Report

Cootamundra Sewerage Treatment System

Environmental Protection Licence No. 1603

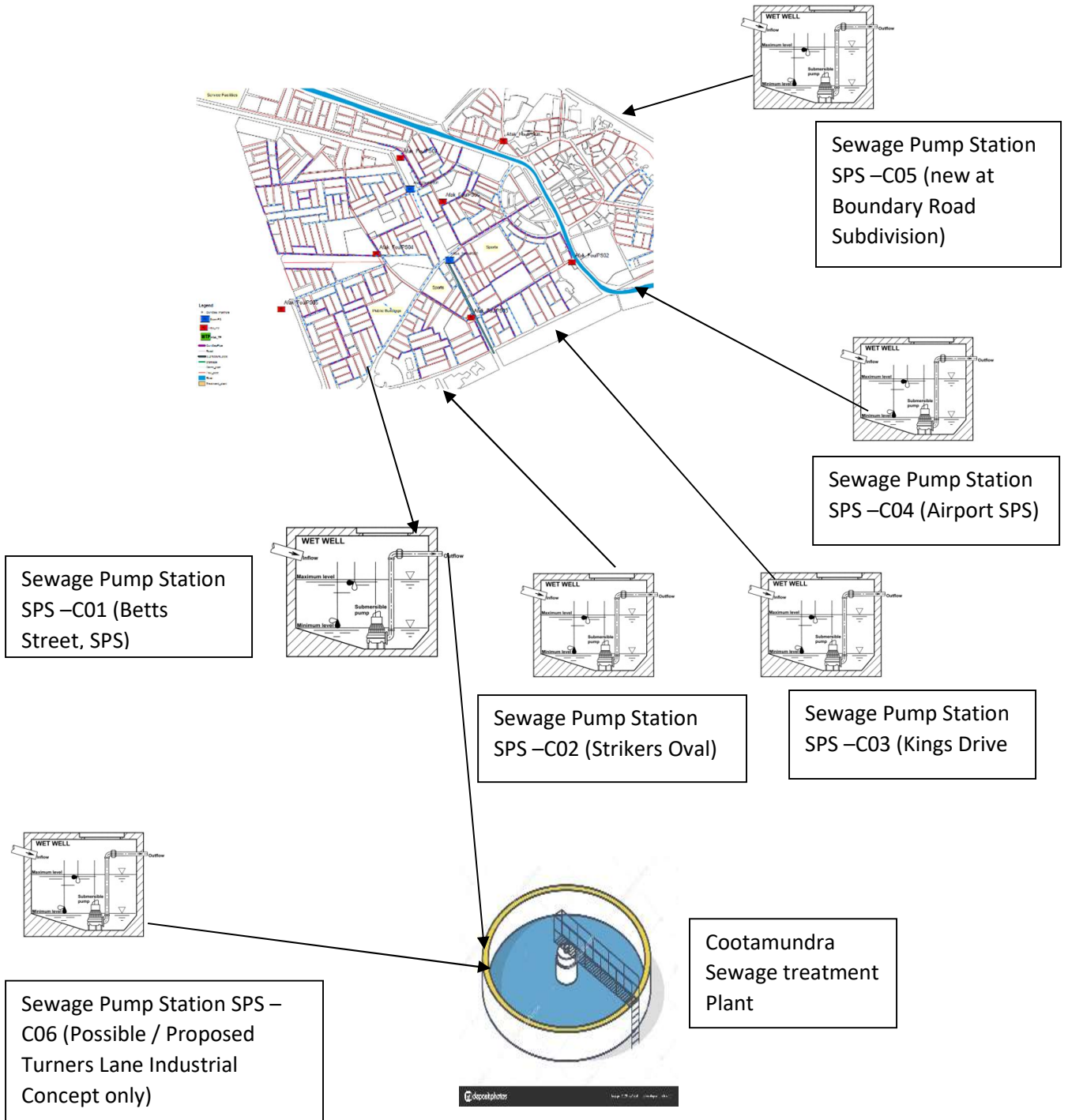
May 2023

Table of Contents

1.0	Cootamundra Sewerage System	3
2.0	Sewage Treatment Process.....	4
3.0	Plant Performance	5
3.1	Customer Complaints.....	5
3.2	Concentration Monitoring	5
3.3	Volume Monitoring.....	5
3.4	Bio Solids	6
4.0	Treatment Plant inflows.....	6
4.1	Catchment Rainfall.....	6
4.2	Plant Overflows.....	7
	Location of Monitoring Points	8
	Appendix 1 – Concentration Monitoring	10

1.0 Cootamundra Sewerage System

The sewerage system at Cootamundra consists of four minor sewage pumping stations, a large sewer reticulation network consisting of pipe diameters DN150 to DN450, and a major sewage pumping station at Betts Street which is pumping the entire sewage to the existing sewage treatment plant. Figure 1 shows the system layout.



2.0 Sewage Treatment Process

Cootamundra sewage treatment plant is an activated sludge sewage treatment plant consisting of unit processes, inlet screens, aeration system with three surface aerators with return activated sludge and waste activated sludge facilities, a final clarifier from there the water is stored in Maturation Ponds.

Treated effluent is stored in an 80 ML capacity storage pond storage from there treated effluent is pumped for Municipal and golf course irrigation.



Figure 1- STP Layout

Cootamundra
Effluent Pipeline

Cootamundra
Effluent Pumping
Station

Cootamundra
STP

3.0 Plant Performance

This information contained below is for License No. 1603 from 1 May 2022 to 30 April 2023.

3.1 Customer Complaints

During the reporting period the following complaints were recorded.

Table 1- Customer Complaints

Date		Description	System	Comments
	Air			No complaints received during this reporting period
	Water			No complaints received during this reporting period
	Noise			No complaints received during this reporting period
	Waste			No complaints received during this reporting period
05/12/22	Other	Effluent water usage	Effluent water irrigation at Bradman Oval during the day	Jammed valve corrected immediately

3.2 Concentration Monitoring

Concentration monitoring was done at the designated monitoring point and the summary of Concentration Monitoring is given in Appendix 1.

3.3 Volume Monitoring

The following volumes were monitored and recorded at monitoring points in KI per year during the reporting period.

Table 2- Volume Monitoring Summary

Point No.	Description	2022/23
1	Spill way from 80 Meg dam to Muttama Creek	889789
2	Outlet weir Maturation Pond No. 2	980486
3	Mitchell Park	101705
4	Albert Park Reserve	282079
5	Jubilee Park	84259
6	Clarke Oval Reserve	107722
7	Fisher Park	4078
8	Bradman Oval	119020
9	Cameron Square Park	9706
10	Nicholson Park	11658
11	Country Club Oval	158090
12	80 Megalitre storage pond outlet	90697
13	EA Southee Public School	3785
14	Cootamundra High School	3189
15	Cootamundra Public School	18070

3.4 Bio Solids

During the reporting period biosolids were not disposed off site and stored in the sludge lagoon.

4.0 Treatment Plant inflows

Cootamundra Sewage Treatment Plant receives the inflow from a major sewage pumping station known as Betts Street SPS, SPS-C01. This pumping station is fitted with two submersible pumps (duty + standby) which are two speed pumps. It runs on low speed during dry weather flow condition and designed to move to high speed during high inflow during wet weather conditions.

Low flow pumping rates is 100 L/s and the plant inlet works has the capacity to take the entire flow during dry weather conditions. However, the wet weather overflow will occur during highspeed operation / pumping and during this diluted sewage is overflowing from the inlet works will be directed to the maturation pond.

4.1 Catchment Rainfall

Rainfall recorded in the catchment area is provided below. The data was taken from Bureau of Meteorology web site for rainfall recorded at Cootamundra Sewer Treatment Plant during May 2022 to April 2023.

Table 3- Monthly Rainfall Data

Month	May 22	Jun 22	Jul 22	Aug 22	Sep 22	Oct 22	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	Total
Rainfall	108	71	43.5	140.5	45.5	131	86	17	21	26	61	107.5	858

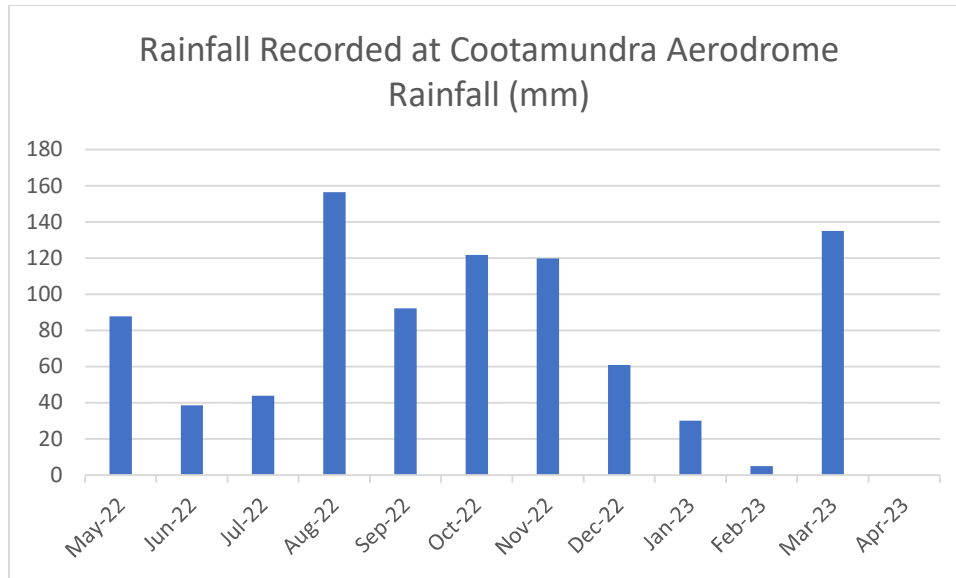


Figure 2-Monthly Rainfall

4.2 Plant Overflows

No dry weather overflow occurred at the plant during the reporting period. However, on the following days the wet weather overflows occurred at Cootamundra STP.

The estimated quantify based on the pump run and related information is used to estimate the wet weather overflows.

Table 4 - Plant Wet weather overflows

Date	Rainfall	Wet weather Overflow (kL)
12/05/22	20	8029
13/05/22	39	1998
01/08/22	30	1157
02/08/22	62	4860
09/09/22	31	4286
30/09/22	13	2494
10/04/23	41	581

Location of Monitoring Points



Figure 3- Monitoring Points

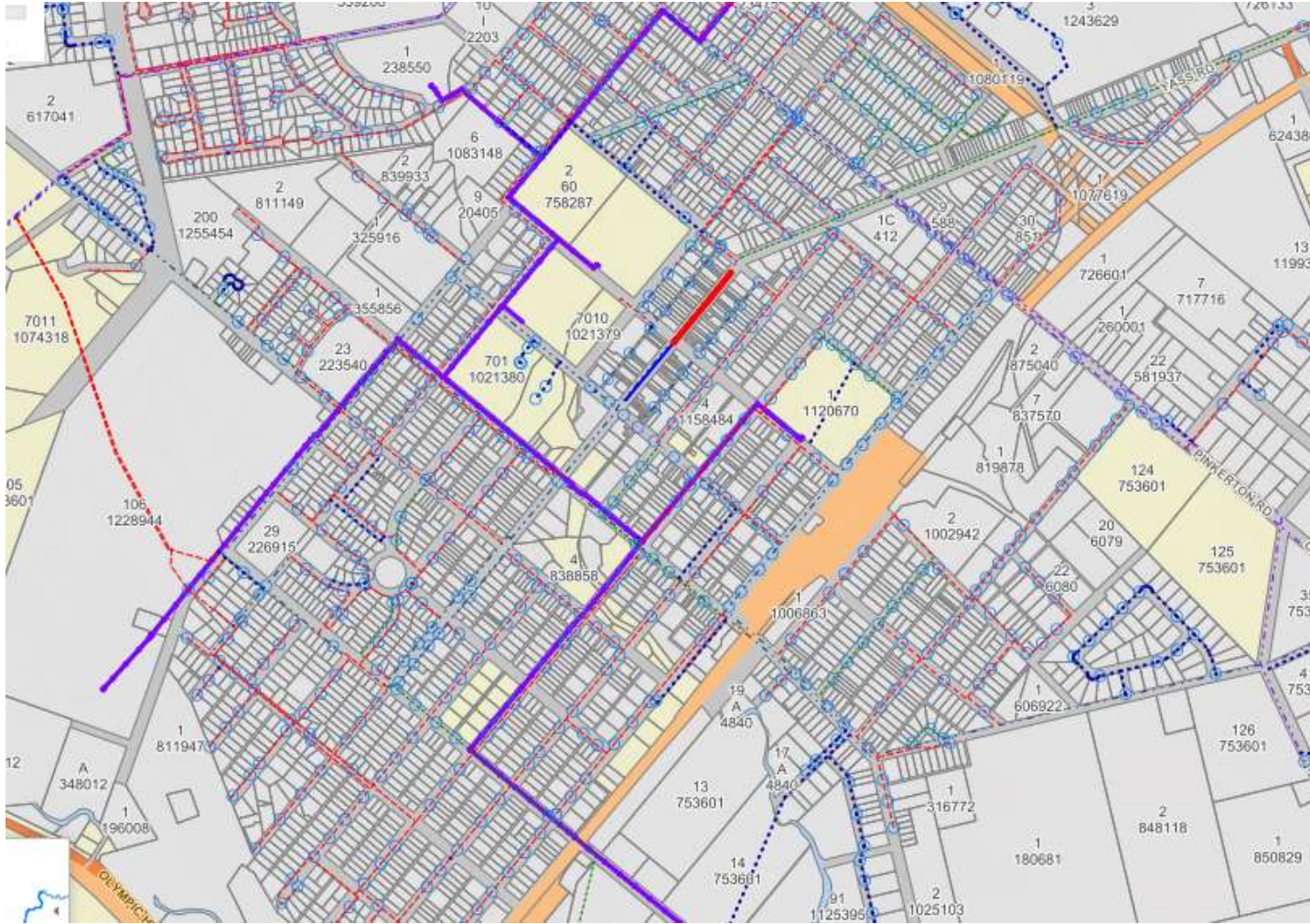


Figure 4 - Parks and Garden Irrigation Wastewater with Sewage Effluent

Appendix 1 – Concentration Monitoring

80 ML Dam Muttuma Creek

Point No	Parameter	Unit	LOR	100 percentile concentration limit	Required tests	Undertaken tests	min	mean	max
1	BOD	mg/L	2	30	4	4	2	3	4
1	Faecal Coliforms	cfu/100mL	1	200	4	4	1	23.5	46
1	Nitrogen (total)	mg/L	2	20	4	4	0.1	0.2	0.3
1	Oil & Grease	mg/L	1	10	4	4	1	3	5
1	pH	pH	0.1	5.5-9.5	4	4	7.1	7.95	8.8
1	Phosphorus (total)	mg/L	0.01	1	4	4	0.01	0.25	0.49
1	Total suspended solids	mg/L	2	40	4	4	2	3.5	5

Mitchell Park – Irrigation

Point No	Parameter	Unit	LOR	Required tests	Undertaken tests	min	mean	max
3	Available Phosphorus	mg/kg	0.1	1	1			
3	Conductivity	dS/m	0.01	1	1	312	312	312
3	Exchangeable Calcium	cmol/kg	1	1	1	7	7	7
3	Exchangeable Magnesium	cmol/kg	1	1	1	4	4	4
3	Exchangeable Potassium	cmol/kg	1	1	1	1	1	1
3	Exchangeable Sodium	cmol/kg	0.1	1	1	0.7	0.7	0.7
3	Nitrate	mg/kg	0.1	1	1	0.4	0.4	0.4
3	Nitrogen (Total)	mg/kg	20	1	1	5	5	5
3	Organic matter	w/w%	0.5	1	1	7.6	7.6	7.6
3	pH	pH	0.1	1	1	7.2	7.2	7.2
3	Phosphorus (total)	mg/Kg	2	1	1	1.73	1.73	1.73

Albert Park

Point No	Parameter	Unit	LOR	Required tests	Undertaken tests	min	mean	max
4	Available Phosphorus	mg/kg	0.1	1	1			
4	Conductivity	dS/m	0.01	1	1	257	257	257
4	Exchangeable Calcium	cmol/kg	1	1	1	6	6	6
4	Exchangeable Magnesium	cmol/kg	1	1	1	4	4	4
4	Exchangeable Potassium	cmol/kg	1	1	1	2	2	2
4	Exchangeable Sodium	cmol/kg	0.1	1	1	0.2	0.2	0.2
4	Nitrate	mg/kg	0.1	1	1	1.8	1.8	1.8
4	Nitrogen (Total)	mg/kg	20	1	1	2	2	2
4	Organic matter	w/w%	0.5	1	1	6.2	6.2	6.2
4	pH	pH	0.1	1	1	7.4	7.4	7.4
4	Phosphorus (total)	mg/Kg	2	1	1	1.14	1.14	1.14

Jubilee Park Irrigation

Point No	Parameter	Unit	LOR	Required tests	Undertaken tests	min	mean	max
5	Available Phosphorus	mg/kg	0.1	1	1			
5	Conductivity	dS/m	0.01	1	1	750	750	750
5	Exchangeable Calcium	cmol/kg	1	1	1	8	8	8
5	Exchangeable Magnesium	cmol/kg	1	1	1	5	5	5
5	Exchangeable Potassium	cmol/kg	1	1	1	1	1	1
5	Exchangeable Sodium	cmol/kg	0.1	1	1	0.3	0.3	0.3
5	Nitrate	mg/kg	0.1	1	1	29	29	29
5	Nitrogen (Total)	mg/kg	20	1	1	31	31	31
5	Organic matter	w/w%	0.5	1	1	1.1	1.1	1.1
5	pH	pH	0.1	1	1	7.3	7.3	7.3
5	Phosphorus (total)	mg/Kg	2	1	1	6.72	6.72	6.72

Clarke Oval

Point No	Parameter	Unit	LOR	Required tests	Undertaken tests	min	mean	max
6	Available Phosphorus	mg/kg	0.1	1	1			
6	Conductivity	dS/m	0.01	1	1	440	440	440
6	Exchangeable Calcium	cmol/kg	1	1	1	9	9	9
6	Exchangeable Magnesium	cmol/kg	1	1	1	6	6	6
6	Exchangeable Potassium	cmol/kg	1	1	1	2	2	2
6	Exchangeable Sodium	cmol/kg	0.1	1	1	0.6	0.6	0.6
6	Nitrate	mg/kg	0.1	1	1	<1	<1	<1
6	Nitrogen (Total)	mg/kg	20	1	1	5	5	5
6	Organic matter	w/w%	0.5	1	1	5.8	5.8	5.8
6	pH	pH	0.1	1	1	7.3	7.3	7.3
6	Phosphorus (total)	mg/Kg	2	1	1	0.57	0.57	0.57

Fisher Park

Point No	Parameter	Unit	LOR	Required tests	Undertaken tests	min	mean	max
7	Available Phosphorus	mg/kg	0.1	1	1			
7	Conductivity	dS/m	0.01	1	1	207	207	207
7	Exchangeable Calcium	cmol/kg	1	1	1	8	8	8
7	Exchangeable Magnesium	cmol/kg	1	1	1	5	5	5
7	Exchangeable Potassium	cmol/kg	1	1	1	1	1	1
7	Exchangeable Sodium	cmol/kg	0.1	1	1	0.3	0.3	0.3
7	Nitrate	mg/kg	0.1	1	1	<1	<1	<1
7	Nitrogen (Total)	mg/kg	20	1	1	6	6	6
7	Organic matter	w/w%	0.5	1	1	1.1	1.1	1.1
7	pH	pH	0.1	1	1	7.5	7.5	7.5
7	Phosphorus (total)	mg/Kg	2	1	1	2.61	2.61	2.61

Bradman Oval

Point No	Parameter	Unit	LOR	Required tests	Undertaken tests	min	mean	max
8	Available Phosphorus	mg/kg	0.1	1	1			
8	Conductivity	dS/m	0.01	1	1	232	232	232
8	Exchangeable Calcium	cmol/kg	1	1	1	6	6	6
8	Exchangeable Magnesium	cmol/kg	1	1	1	4	4	4
8	Exchangeable Potassium	cmol/kg	1	1	1	<1	<2	<3
8	Exchangeable Sodium	cmol/kg	0.1	1	1	0.8	1.8	2.8
8	Nitrate	mg/kg	0.1	1	1	0.7	0.7	0.7
8	Nitrogen (Total)	mg/kg	20	1	1	7	7	7
8	Organic matter	w/w%	0.5	1	1	3.1	3.1	3.1
8	pH	pH	0.1	1	1	8.4	8.4	8.4
8	Phosphorus (total)	mg/Kg	2	1	1	0.62	0.62	0.62

Cameron Square

Point No	Parameter	Unit	LOR	Required tests	Undertaken tests	min	mean	max
9	Available Phosphorus	mg/kg	0.1	1	1			
9	Conductivity	dS/m	0.01	1	1	248	248	248
9	Exchangeable Calcium	cmol/kg	1	1	1	6	6	6
9	Exchangeable Magnesium	cmol/kg	1	1	1	2	2	2
9	Exchangeable Potassium	cmol/kg	1	1	1	2	2	2
9	Exchangeable Sodium	cmol/kg	0.1	1	1	0.5	0.5	0.5
9	Nitrate	mg/kg	0.1	1	1	<1	<1	<1
9	Nitrogen (Total)	mg/kg	20	1	1	5	5	5
9	Organic matter	w/w%	0.5	1	1	6.2	6.2	6.2
9	pH	pH	0.1	1	1	7.5	7.5	7.5
9	Phosphorus (total)	mg/Kg	2	1	1	0.52	0.52	0.52

Nicholson Park

Point No	Parameter	Unit	LOR	Required tests	Undertaken tests	min	mean	max
10	Available Phosphorus	mg/kg	0.1	1	1			
10	Conductivity	dS/m	0.01	1	1	0.08	0.08	0.08
10	Exchangeable Calcium	cmol/kg	1	1	1	10	10	10
10	Exchangeable Magnesium	cmol/kg	1	1	1	6	6	6
10	Exchangeable Potassium	cmol/kg	1	1	1	1	1	1
10	Exchangeable Sodium	cmol/kg	0.1	1	1	5	5	5
10	Nitrate	mg/kg	0.1	1	1	1.9	1.9	1.9
10	Nitrogen (Total)	mg/kg	20	1	1			
10	Organic matter	w/w%	0.5	1	1	4.8	4.8	4.8
10	pH	pH	0.1	1	1	7.4	7.4	7.4
10	Phosphorus (total)	mg/Kg	2	1	1			

Country Club

11	Available Phosphorus	mg/kg	0.1	1	1			
11	Conductivity	dS/m	0.01	1	1	0.2	8060	8060
11	Exchangeable Calcium	cmol/kg	1	1	1	8	8	8
11	Exchangeable Magnesium	cmol/kg	1	1	1	8	8	8
11	Exchangeable Potassium	cmol/kg	1	1	1	1	1	1
11	Exchangeable Sodium	cmol/kg	0.1	1	1	0.4	0.4	0.4
11	Nitrate	mg/kg	0.1	1	1	<1	<2	<3
11	Nitrogen (Total)	mg/kg	20	1	1	5	5	5
11	Organic matter	w/w%	0.5	1	1	7.3	7.3	7.3
11	pH	pH	0.1	1	1	6.9	6.9	6.9
11	Phosphorus (total)	mg/Kg	2	1	1	0.4	0.4	0.4

80 ML Storage Reuse

Point No	Parameter	Unit	LOR	Required tests	Undertaken tests	min	mean	max
12	BOD	mg/L	2	4	4	3	6.5	10
12	Faecal Coliforms	cfu/100mL	1	4	4	1	70.5	140
12	Nitrogen (total)	mg/L	2	4	4	0.1	0.35	0.6
12	Oil & Grease	mg/L	1	4	4	1	2.5	4
12	pH	pH	0.1	4	4	7.9	8.35	8.8
12	Phosphorus (total)	mg/L	0.01	4	4	0.01	0.515	1.02
12	Total suspended solids	mg/L	2	4	4	5	15.5	26

Cootamundra High School

Point No	Parameter	Unit	LOR	Required tests	Undertaken tests	min	mean	max
13	Available Phosphorus	mg/kg	0.1	1	1			
13	Conductivity	dS/m	0.01	1	1	1	946	946
13	Exchangeable Calcium	cmol/kg	1	1	1			
13	Exchangeable Magnesium	cmol/kg	1	1	1			
13	Exchangeable Potassium	cmol/kg	1	1	1			
13	Exchangeable Sodium	cmol/kg	0.1	1	1			
13	Nitrate	mg/kg	0.1	1	1	1	<0.1	<0.1
13	Nitrogen (Total)	mg/kg	20	1	1	1	24	24
13	Organic matter	w/w%	0.5	1	1			
13	pH	pH	0.1	1	1	1	7	7
13	Phosphorus (total)	mg/Kg	2	1	1	1	15.8	15.8

Cootamundra Public School

Point No	Parameter	Unit	LOR	Required tests	Undertaken tests	min	mean	max
15	Available Phosphorus	mg/kg	0.1	1	1			
15	Conductivity	dS/m	0.01	1	1	1	1840	1840
15	Exchangeable Calcium	cmol/kg	1	1	1			
15	Exchangeable Magnesium	cmol/kg	1	1	1			
15	Exchangeable Potassium	cmol/kg	1	1	1			
15	Exchangeable Sodium	cmol/kg	0.1	1	1			
15	Nitrate	mg/kg	0.1	1	1	1	10.6	10.6
15	Nitrogen (Total)	mg/kg	20	1	1	1	11	11
15	Organic matter	w/w%	0.5	1	1			
15	pH	pH	0.1	1	1	1	8.4	8.4
15	Phosphorus (total)	mg/Kg	2	1	1	1	2	2

