



# Kyneton WRP

## Discharge Risk Assessment - Water Quality Data Report

Coliban Region Water Corporation

17 March 2022

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# 1. Introduction

## 1.1 Purpose of this report

The purpose of this report is to present water quality data for use in the Kyneton WRP discharge risk assessment and the Snipes Creek discharge risk assessment.

## 1.2 Scope and limitations

*This report: has been prepared by GHD for Coliban Region Water Corporation and may only be used and relied on by Coliban Region Water Corporation for the purpose agreed between GHD and Coliban Region Water Corporation as set out in section 1.1 of this report.*

*GHD otherwise disclaims responsibility to any person other than Coliban Region Water Corporation arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.*

*The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.*

*The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.*

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*GHD has prepared this report on the basis of information provided by Coliban Region Water Corporation and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.*

## 1.3 Assumptions

Data provided to GHD is accurate and quality assured and fit for purpose to undertake a discharge risk assessment.

## **2. Data Overview**

### **2.1 Data Count**

An overview and count of all the available water quality data for the project is presented in Table 1 for the Campaspe River, in Table 2 for Snipes Creek and Post Office Creek and in Table 3 for the Kyneton WRP.

**Table 1 Data Count - Campaspe River**

Parameter Group	Parameter	Site Unit	Ashbourne	CU3-750m US	CU1 - 250m US	CU2 - 50m US	CD3 - 50m DS	CD4 - 500m DS	CD4a - 850m DS	CD5 - 1.2km DS	CD6 - 2km DS	CD6a- 2.5km DS	CD7 - 2.9km DS	CD7a- 3km DS	CD8 - 4.1km DS	CD8a- 11.5km DS	Redesdale	Total
General Phys / Chemical	BOD	mg/L	0	16	103	180	168	80	77	103	38	17	50	75	40	55	0	1002
	BOD (filtered)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	COD	mg/L	0	0	83	113	105	80	0	76	38	0	50	0	40	0	0	0
	Colour	Pt/Co units	248	0	0	0	0	0	0	0	0	0	0	0	0	0	0	82
	Dissolved Oxygen	mg/L	272	34	68	130	117	65	55	73	36	30	49	53	33	54	369	1438
	Dissolved Oxygen (percent)	%	0	0	0	0	0	0	0	13	0	0	0	0	0	11	12	12
	Electrical Conductivity	µS/cm	273	34	71	111	101	68	32	90	38	30	51	31	35	47	388	1400
	Oil & Grease	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PFOA	µg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PFOS	µg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	pH	pH Units	273	46	102	191	177	80	99	129	52	43	63	97	40	90	386	1868
	Suspended Solids	mg/L	248	46	103	191	177	80	99	117	52	43	63	97	40	76	347	1779
	Temperature	°C	276	34	68	108	97	65	32	86	36	30	49	31	33	46	386	1377
	Total Dissolved Solids	mg/L	0	16	76	139	132	56	77	80	24	17	32	75	30	55	0	809
	Total Organic Carbon	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transmissivity	%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Turbidity	NTU	273	0	0	26	24	0	27	14	0	0	0	26	0	39	386	815	
Nutrients	Nitrogen - Ammonia as N	mg/L	0	45	100	188	175	79	98	128	52	42	62	96	39	88	13	1205
	Nitrogen - Nitrate as N	mg/L	0	34	81	121	112	79	32	87	52	30	62	31	39	32	0	792
	Nitrogen - Nitrite as N	mg/L	0	0	61	64	63	60	0	61	26	0	37	0	34	0	0	406
	Nitrogen - NOx	mg/L	245	0	0	0	0	0	0	0	0	0	0	0	0	0	367	612
	Nitrogen - Total	mg/L	0	46	100	187	175	79	98	130	52	43	62	96	40	89	15	1212
	Nitrogen - Total Kjeldahl	mg/L	248	0	57	62	61	56	1	55	24	0	32	1	30	0	367	994
	Phosphorus - Phosphate as P	mg/L	248	34	81	122	113	79	32	102	52	30	62	31	39	47	378	1450
	Phosphorus - Total	mg/L	248	46	103	190	176	80	98	130	52	43	63	96	40	90	382	1837

Parameter Group	Parameter	Site → Unit	Ashbourne	CU3-750m US	CU1 - 250m US	CU2 - 50m US	CD3 - 50m DS	CD4 - 500m DS	CD4a - 850m DS	CD5 - 1.2km DS	CD6 - 2km DS	CD6a- 2.5km DS	CD7 - 2.9km DS	CD7a- 3km DS	CD8 - 4.1km DS	CD8a- 11.5km DS	Redesdale	Total		
Metals	Aluminium	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	1	4		
	Aluminium (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Antimony	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3	
	Antimony (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Arsenic	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	81	84	
	Arsenic (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Barium	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3	
	Barium (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Beryllium	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3	
	Beryllium (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Boron	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3	
	Boron (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cadmium	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	81	84	
	Cadmium (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Chromium	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	81	84	
	Chromium (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Cobalt	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3	
	Copper	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	81	84	
	Copper (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Iron	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	1	4	
	Iron (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Lead	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	81	84	
	Lead (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Manganese	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	1	4	
Manganese (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mercury	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	81	84		
Mercury (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Molybdenum	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	1	4		
Molybdenum (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Parameter Group	Parameter	Site → Unit	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale	Total	
	Nickel	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	81	84	
	Nickel (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Selenium	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	1	4
	Selenium (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Silver	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3
	Silver (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Strontium	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3
	Strontium (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Thallium	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3
	Thallium (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Tin	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3
	Tin (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Titanium	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3
	Titanium (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Vanadium	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	0	3
	Vanadium (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Zinc	mg/L	0	0	0	1	1	0	1	0	0	0	0	0	0	0	0	81	84
	Zinc (Soluble)	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Microbiology	Ascaris Ova	ova/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	E. Coli	orgs/100 mL	0	46	103	191	178	80	100	117	52	43	63	98	40	77	0	1188	
	Helminth Ova	ova/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Taenia Ova	ova/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Thermotolerant Coliforms	orgs/100 mL	0	14	0	16	12	0	12	0	0	13	0	12	0	14	0	93	
	Total Coliforms	orgs/100 mL	0	0	0	3	3	0	3	7	0	0	0	3	0	8	0	27	
Cations / Salts	Alkalinity	mg CaCO3 / L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Calcium	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Chloride	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Magnesium	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Parameter Group	Parameter	Site → Unit	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale	Total
	SAR	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sodium	mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total		2852	491	1360	2357	2190	1166	996	1598	676	454	850	949	592	918	4531	21980

**Table 2 Data Count – Snipes Creek and Post Office Creek**

Parameter Group	Parameter	Site → Unit	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbowe r Rd	Post Office Ck	Total
General Phys / Chemical	BOD	mg/L	57	11	4	0	72
	BOD (filtered)	mg/L	0	0	0	0	0
	COD	mg/L	2	3	0	0	5
	Colour	Pt/Co units	0	0	0	0	0
	Dissolved Oxygen	mg/L	35	3	9	0	47
	Dissolved Oxygen (percent)	%	0	0	13	13	26
	Electrical Conductivity	µS/cm	12	4	27	15	58
	Oil & Grease	mg/L	0	0	0	0	0
	PFOA	µg/L	0	0	0	0	0
	PFOS	µg/L	0	0	0	0	0
	pH	pH Units	77	17	31	15	140
	Suspended Solids	mg/L	68	17	4	0	89
	Temperature	°C	2	3	16	13	34
	Total Dissolved Solids	mg/L	61	16	0	0	77
	Total Organic Carbon	mg/L	0	0	0	0	0
Transmissivity	%	0	0	0	0	0	
Turbidity	NTU	47	7	26	14	94	
Nutrients	Nitrogen - Ammonia as N	mg/L	66	17	18	15	116
	Nitrogen - Nitrate as N	mg/L	2	3	0	0	5
	Nitrogen - Nitrite as N	mg/L	2	3	0	0	5
	Nitrogen - NOx	mg/L	0	0	0	0	0
	Nitrogen - Total	mg/L	74	14	28	15	131
	Nitrogen - Total Kjeldahl	mg/L	3	3	0	0	6

Parameter Group	Parameter	Site → Unit	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbowe r Rd	Post Office Ck	Total
	Phosphorus - Phosphate as P	mg/L	2	3	17	15	37
	Phosphorus - Total	mg/L	75	16	27	15	133
Metals	Aluminium	mg/L	0	0	0	0	0
	Aluminium (Soluble)	mg/L	0	0	0	0	0
	Antimony	mg/L	0	0	0	0	0
	Antimony (Soluble)	mg/L	0	0	0	0	0
	Arsenic	mg/L	0	0	0	0	0
	Arsenic (Soluble)	mg/L	0	0	0	0	0
	Barium	mg/L	0	0	0	0	0
	Barium (Soluble)	mg/L	0	0	0	0	0
	Beryllium	mg/L	0	0	0	0	0
	Beryllium (Soluble)	mg/L	0	0	0	0	0
	Boron	mg/L	0	0	0	0	0
	Boron (Soluble)	mg/L	0	0	0	0	0
	Cadmium	mg/L	0	0	0	0	0
	Cadmium (Soluble)	mg/L	0	0	0	0	0
	Chromium	mg/L	0	0	0	0	0
	Chromium (Soluble)	mg/L	0	0	0	0	0
	Cobalt	mg/L	0	0	0	0	0
	Copper	mg/L	0	0	0	0	0
	Copper (Soluble)	mg/L	0	0	0	0	0
	Iron	mg/L	0	0	0	0	0
	Iron (Soluble)	mg/L	0	0	0	0	0
	Lead	mg/L	0	0	0	0	0
	Lead (Soluble)	mg/L	0	0	0	0	0
	Manganese	mg/L	0	0	0	0	0
Manganese (Soluble)	mg/L	0	0	0	0	0	
Mercury	mg/L	0	0	0	0	0	
Mercury (Soluble)	mg/L	0	0	0	0	0	
Molybdenum	mg/L	0	0	0	0	0	
Molybdenum (Soluble)	mg/L	0	0	0	0	0	
Nickel	mg/L	0	0	0	0	0	
Nickel (Soluble)	mg/L	0	0	0	0	0	



Parameter Group	Parameter	Site → Unit	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbowe r Rd	Post Office Ck	Total
	Selenium	mg/L	0	0	0	0	0
	Selenium (Soluble)	mg/L	0	0	0	0	0
	Silver	mg/L	0	0	0	0	0
	Silver (Soluble)	mg/L	0	0	0	0	0
	Strontium	mg/L	0	0	0	0	0
	Strontium (Soluble)	mg/L	0	0	0	0	0
	Thallium	mg/L	0	0	0	0	0
	Thallium (Soluble)	mg/L	0	0	0	0	0
	Tin	mg/L	0	0	0	0	0
	Tin (Soluble)	mg/L	0	0	0	0	0
	Titanium	mg/L	0	0	0	0	0
	Titanium (Soluble)	mg/L	0	0	0	0	0
	Vanadium	mg/L	0	0	0	0	0
	Vanadium (Soluble)	mg/L	0	0	0	0	0
	Zinc	mg/L	0	0	0	0	0
	Zinc (Soluble)	mg/L	0	0	0	0	0
Microbiology	Ascaris Ova	ova/L	0	0	0	0	0
	E. Coli	orgs/100 mL	69	18	4	0	91
	Helminth Ova	ova/L	0	0	0	0	0
	Taenia Ova	ova/L	0	0	0	0	0
	Thermotolerant Coliforms	orgs/100 mL	0	0	0	0	0
	Total Coliforms	orgs/100 mL	2	0	8	8	18
Cations / Salts	Alkalinity	mg CaCO3 / L	0	0	0	0	0
	Calcium	mg/L	0	0	0	0	0
	Chloride	mg/L	0	0	0	0	0
	Magnesium	mg/L	0	0	0	0	0
	SAR	mg/L	0	0	0	0	0
	Sodium	mg/L	0	0	0	0	0
			656	158	232	138	1184

**Table 3 Data Count – Kyneton WRP**

Parameter Group	Parameter	Site → Unit	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon	Total
General Phys / Chemical	BOD	mg/L	374	0	1047	80	327	1828
	BOD (filtered)	mg/L	0	0	1	37	0	38
	COD	mg/L	374	0	996	4	45	1419
	Colour	Pt/Co units	0	0	2	0	0	2
	Dissolved Oxygen	mg/L	0	0	15	0	0	15
	Dissolved Oxygen (percent)	%	0	0	0	0	0	0
	Electrical Conductivity	µS/cm	0	0	56	4	0	60
	Oil & Grease	mg/L	148	0	0	0	0	148
	PFOA	µg/L	12	0	10	0	1	23
	PFOS	µg/L	12	0	10	0	1	23
	pH	pH Units	373	0	1001	78	305	1757
	Suspended Solids	mg/L	375	0	1047	79	325	1826
	Temperature	°C	0	0	15	0	0	15
	Total Dissolved Solids	mg/L	337	0	984	73	325	1719
	Total Organic Carbon	mg/L	0	0	1	0	0	1
Transmissivity	%	0	0	1	0	0	1	
Turbidity	NTU	0	0	0	0	0	0	
Nutrients	Nitrogen - Ammonia as N	mg/L	375	0	1052	21	158	1606
	Nitrogen - Nitrate as N	mg/L	28	0	996	4	45	1073
	Nitrogen - Nitrite as N	mg/L	0	0	642	4	0	646
	Nitrogen - NOx	mg/L	0	0	0	0	1	1
	Nitrogen - Total	mg/L	104	0	1008	74	325	1511
	Nitrogen - Total Kjeldahl	mg/L	168	0	706	6	1	881
	Phosphorus - Phosphate as P	mg/L	206	0	1001	0	45	1252
	Phosphorus - Total	mg/L	375	0	1004	78	325	1782
Metals	Aluminium	mg/L	0	0	2	0	1	3
	Aluminium (Soluble)	mg/L	0	0	1	0	0	1
	Antimony	mg/L	0	0	2	0	1	3
	Antimony (Soluble)	mg/L	0	0	1	0	0	1

Parameter Group	Parameter	Site → Unit	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon	Total
	Arsenic	mg/L	0	0	2	0	1	3
	Arsenic (Soluble)	mg/L	0	0	1	0	0	1
	Barium	mg/L	0	0	2	0	1	3
	Barium (Soluble)	mg/L	0	0	1	0	0	1
	Beryllium	mg/L	0	0	2	0	1	3
	Beryllium (Soluble)	mg/L	0	0	1	0	0	1
	Boron	mg/L	0	0	2	0	1	3
	Boron (Soluble)	mg/L	0	0	1	0	0	1
	Cadmium	mg/L	0	0	2	0	1	3
	Cadmium (Soluble)	mg/L	0	0	1	0	0	1
	Chromium	mg/L	0	0	2	0	1	3
	Chromium (Soluble)	mg/L	0	0	1	0	0	1
	Cobalt	mg/L	0	0	2	0	1	3
	Copper	mg/L	0	0	9	0	12	21
	Copper (Soluble)	mg/L	0	0	8	0	11	19
	Iron	mg/L	0	0	3	0	1	4
	Iron (Soluble)	mg/L	0	0	1	0	0	1
	Lead	mg/L	0	0	2	0	1	3
	Lead (Soluble)	mg/L	0	0	1	0	0	1
	Manganese	mg/L	0	0	2	0	1	3
	Manganese (Soluble)	mg/L	0	0	1	0	0	1
	Mercury	mg/L	0	0	2	0	1	3
	Mercury (Soluble)	mg/L	0	0	1	0	0	1
	Molybdenum	mg/L	0	0	2	0	1	3
	Molybdenum (Soluble)	mg/L	0	0	1	0	0	1
	Nickel	mg/L	0	0	2	0	1	3
	Nickel (Soluble)	mg/L	0	0	1	0	0	1
	Selenium	mg/L	0	0	2	0	1	3
	Selenium (Soluble)	mg/L	0	0	1	0	0	1
	Silver	mg/L	0	0	2	0	1	3
	Silver (Soluble)	mg/L	0	0	1	0	0	1
	Strontium	mg/L	0	0	2	0	1	3
	Strontium (Soluble)	mg/L	0	0	1	0	0	1

Parameter Group	Parameter	Site → Unit	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon	Total
	Thallium	mg/L	0	0	2	0	1	3
	Thallium (Soluble)	mg/L	0	0	1	0	0	1
	Tin	mg/L	0	0	2	0	1	3
	Tin (Soluble)	mg/L	0	0	1	0	0	1
	Titanium	mg/L	0	0	2	0	1	3
	Titanium (Soluble)	mg/L	0	0	1	0	0	1
	Vanadium	mg/L	0	0	2	0	1	3
	Vanadium (Soluble)	mg/L	0	0	1	0	0	1
	Zinc	mg/L	0	0	2	0	1	3
	Zinc (Soluble)	mg/L	0	0	1	0	0	1
Microbiology	Ascaris Ova	ova/L	39	4	38	0	2	83
	E. Coli	orgs/100mL	10	0	1061	86	327	1484
	Helminth Ova	ova/L	39	4	38	0	2	83
	Taenia Ova	ova/L	39	4	38	0	2	83
	Thermotolerant Coliforms	orgs/100mL	0	0	0	0	0	0
	Total Coliforms	orgs/100mL	0	0	603	0	0	603
Cations / Salts	Alkalinity	mg CaCO3 / L	165	0	67	0	0	232
	Calcium	mg/L	0	0	12	3	1	16
	Chloride	mg/L	0	0	12	3	1	16
	Magnesium	mg/L	0	0	12	3	1	16
	SAR	mg/L	0	0	10	15	1	26
	Sodium	mg/L	0	0	12	3	1	16
			3553	12	13584	655	2613	20417

# 3. General Physico-Chemical Data

## 3.1 BOD

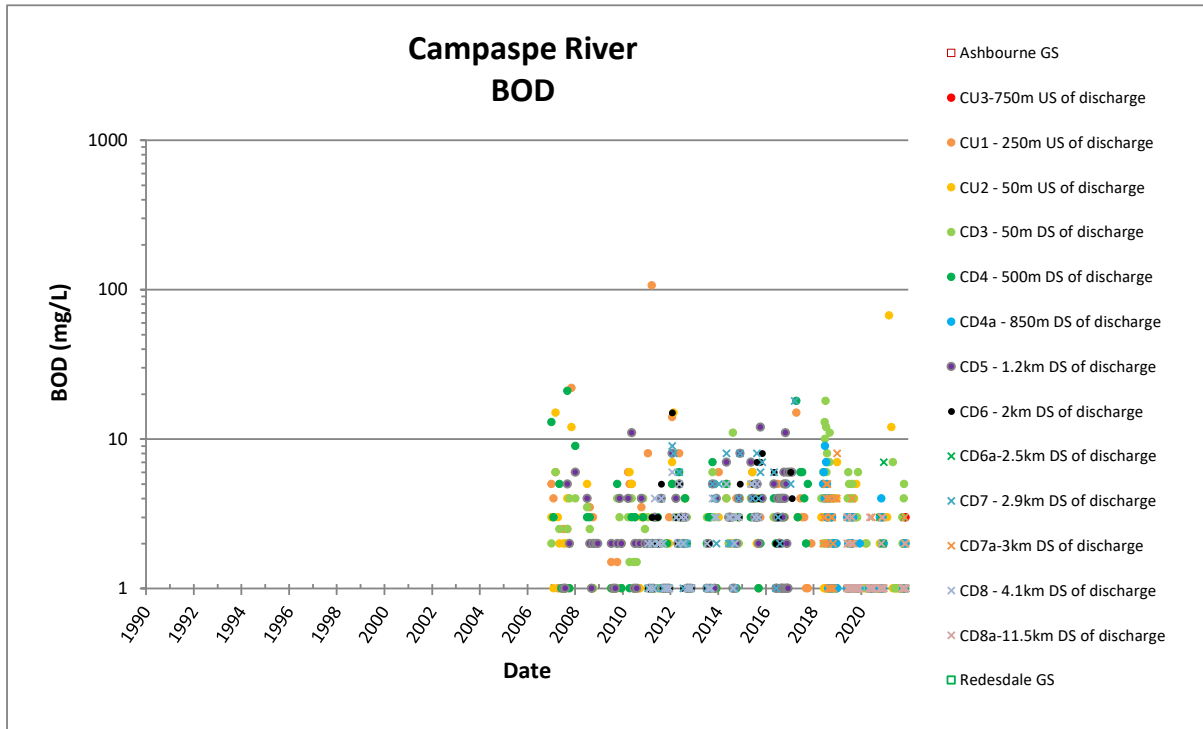


Figure 1 BOD data – Campaspe River

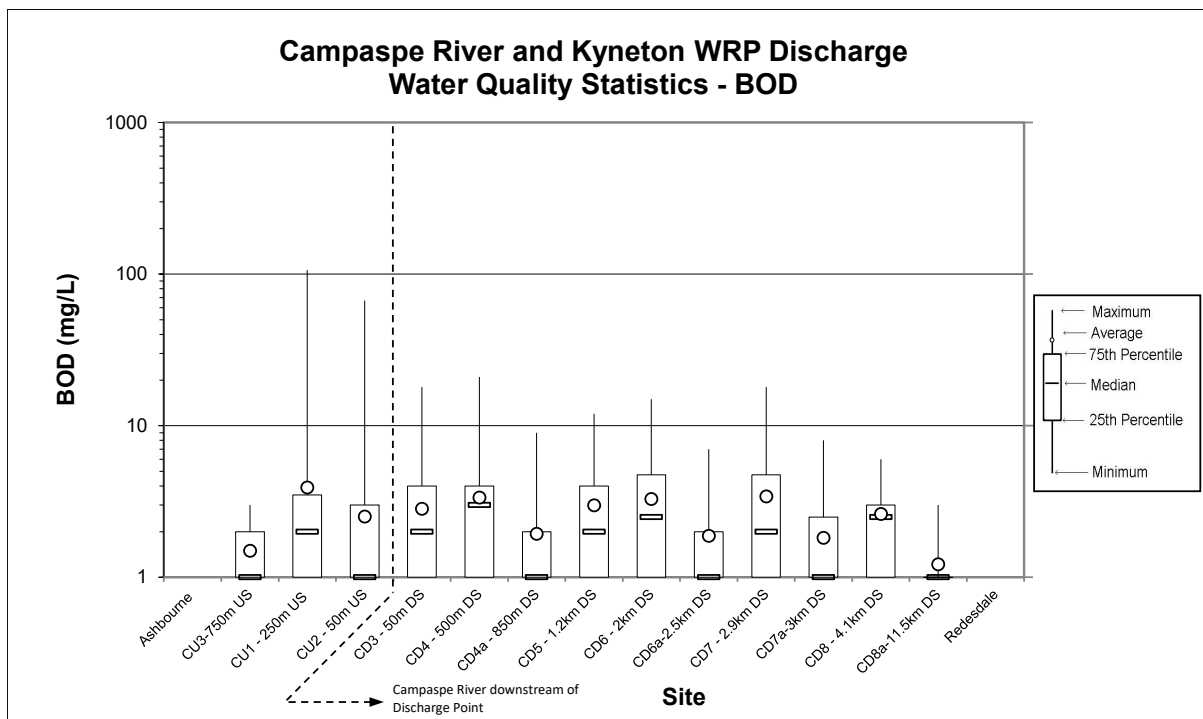


Figure 2 BOD statistics – Campaspe River

Table 4 BOD statistics – Campaspe River

	Ashbourne	CU3-750m US	CU1 - 250m US	CU2 - 50m US	CD3 - 50m DS	CD4 - 500m DS	CD4a - 850m DS	CD5 - 1.2km DS	CD6 - 2km DS	CD6a-2.5km DS	CD7 - 2.9km DS	CD7a-3km DS	CD8 - 4.1km DS	CD8a-11.5km DS	Redesdale
Maximum		3	107	67	18	21	9	12	15	7	18	8	6	3	
90th percentile		3	5	4	5	5	3	6	6	3	8	4	5	2	
75th percentile		2	4	3	4	4	2	4	5	2	5	3	3	1	
Median		1	2	1	2	3	1	2	3	1	2	1	3	1	
25th percentile		1	1	1	1	1	1	1	1	1	1	1	1	1	
10th percentile		1	1	1	1	1	1	1	1	1	1	1	1	1	
Minimum		1	1	1	1	1	1	0	1	1	1	1	1	1	
Average		1.5	3.9	2.5	2.8	3.4	1.9	3.0	3.3	1.9	3.4	1.8	2.6	1.2	
Number	0	16	103	180	168	80	77	103	38	17	50	75	40	55	0

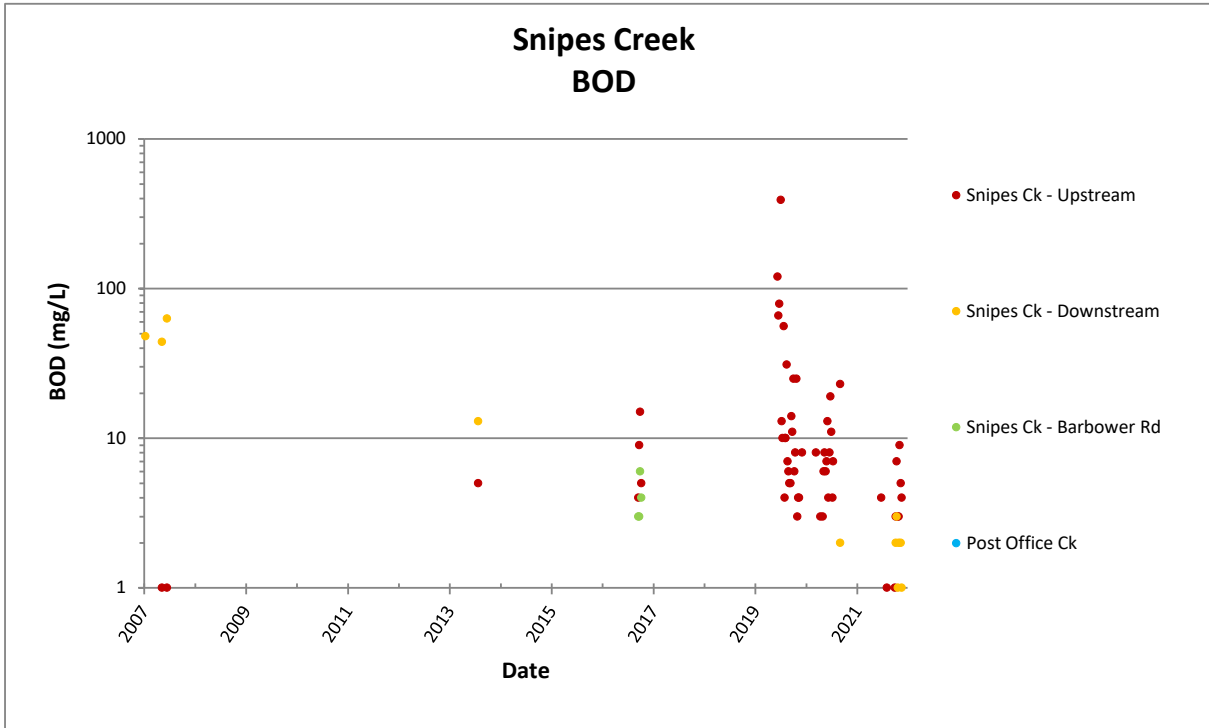


Figure 3 BOD data – Snipes Creek and Post Office Creek

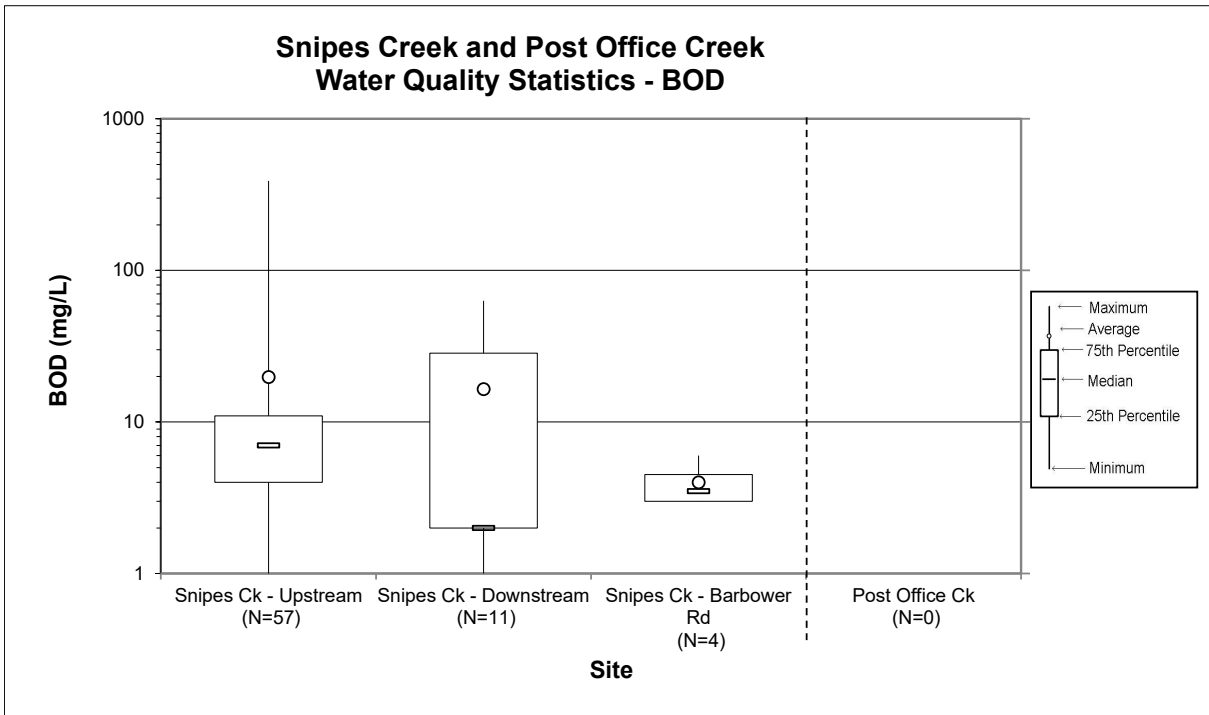
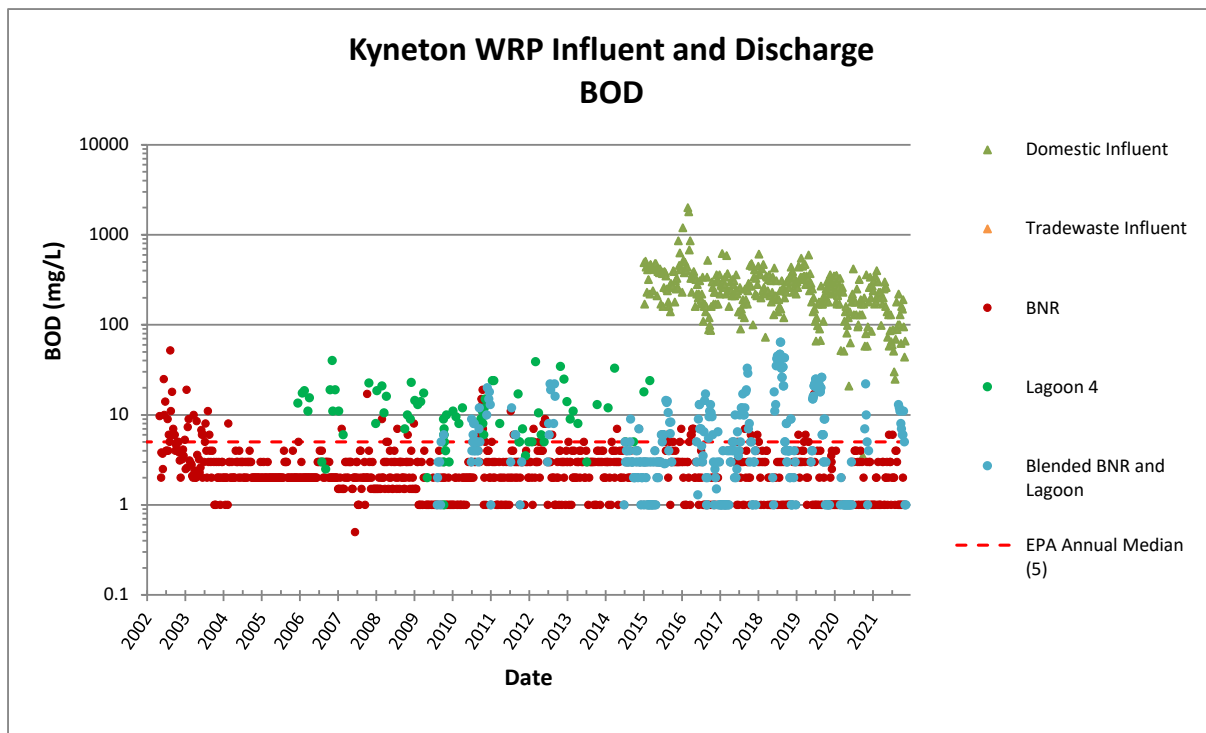


Figure 4 BOD statistics – Snipes Creek and Post Office Creek

**Table 5** BOD statistics -- Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	390	63	6	
90th percentile	27	48	5	
75th percentile	11	29	5	
Median	7	2	4	
25th percentile	4	2	3	
10th percentile	3	1	3	
Minimum	1	1	3	
Average	20	16	4	
Number	57	11	4	0



**Figure 5** BOD data – Kyneton WRP



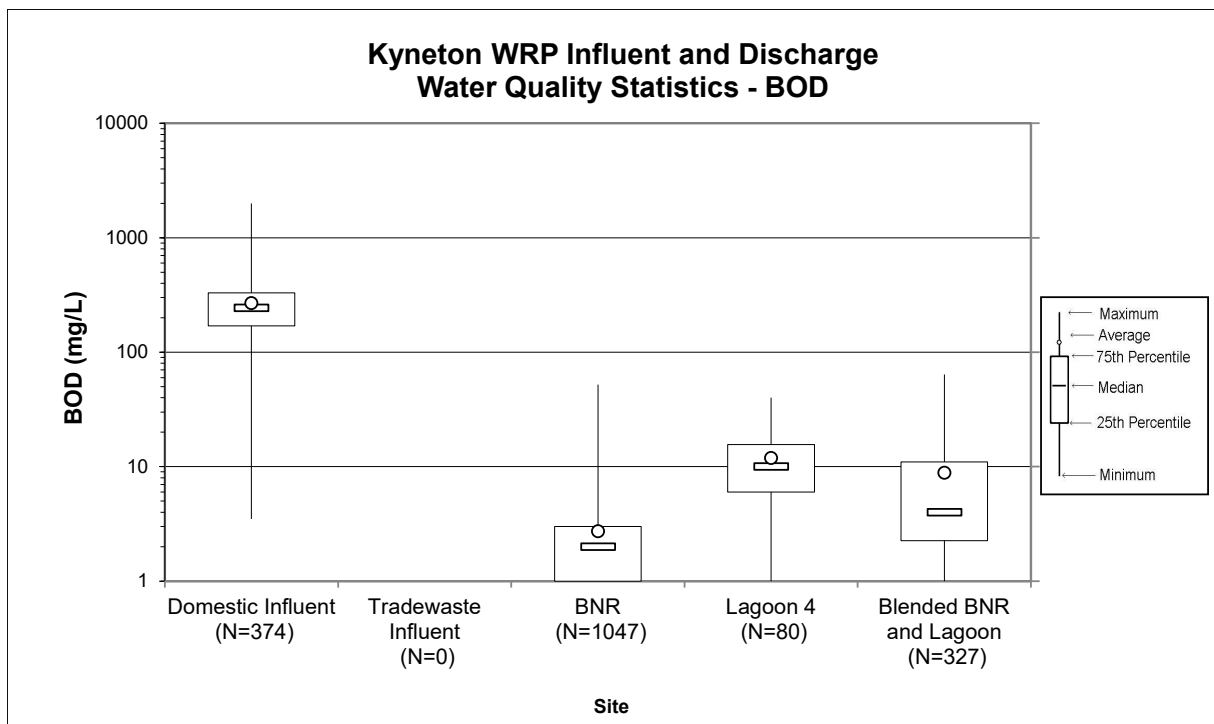


Figure 6 BOD statistics – Kyneton WRP

Table 6 BOD statistics – Kyneton WRP

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	2000		52	40	64
90th percentile	420		5	23	22
75th percentile	330		3	16	11
Median	243		2	10	4
25th percentile	170		1	6	2
10th percentile	99		1	4	1
Minimum	4		0	1	1
Average	269		3	12	9
Number	374	0	1047	80	327

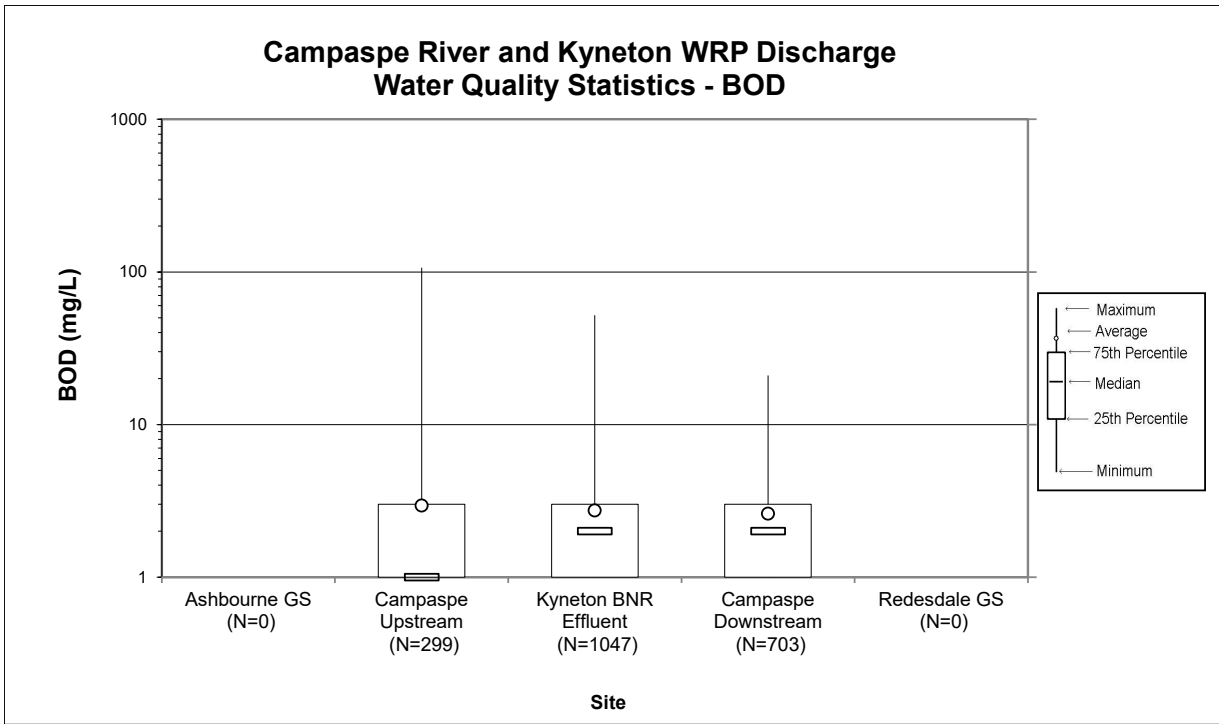


Figure 7 BOD statistics – Campaspe River and Kyneton WRP

Table 7 BOD statistics – Campaspe River and Kyneton WRP

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum		107	52	21	
90th percentile		5	5	5	
75th percentile		3	3	3	
Median		1	2	2	
25th percentile		1	1	1	
10th percentile		1	1	1	
Minimum		1	0	0	
Average		3	3	3	
Number	0	299	1047	703	0

### 3.2 BOD (filtered)

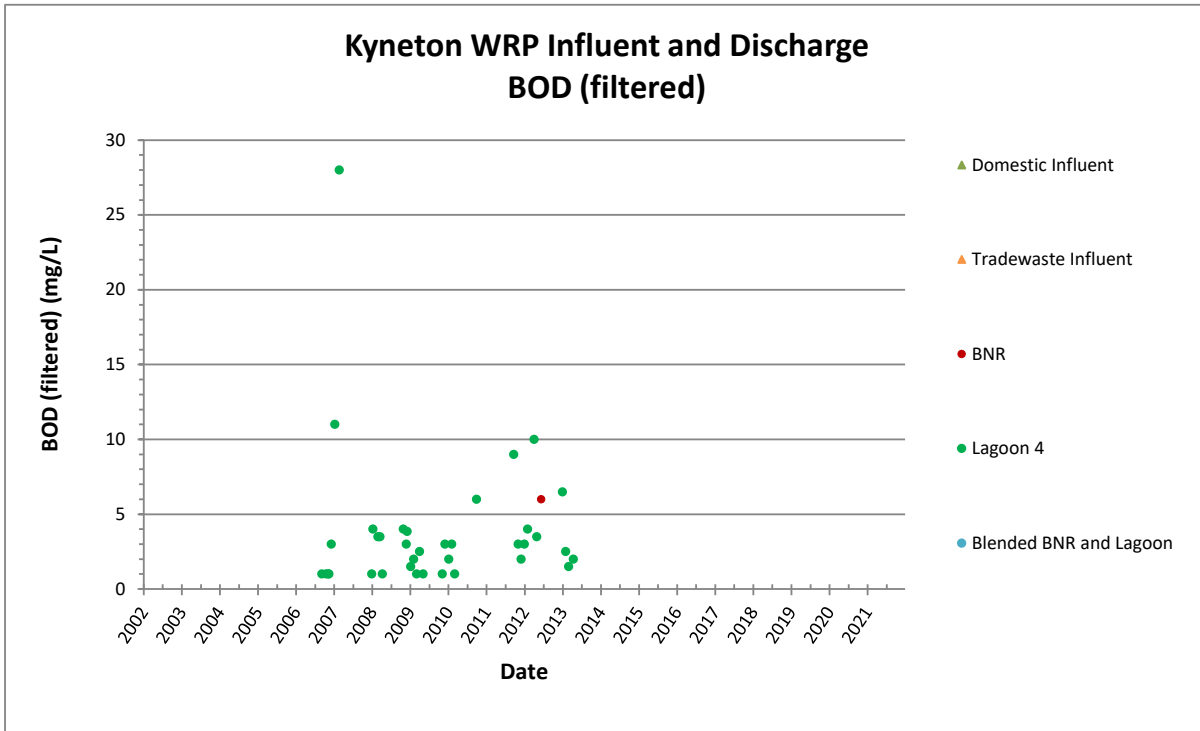


Figure 8 BOD (filtered) data – Kyneton WRP

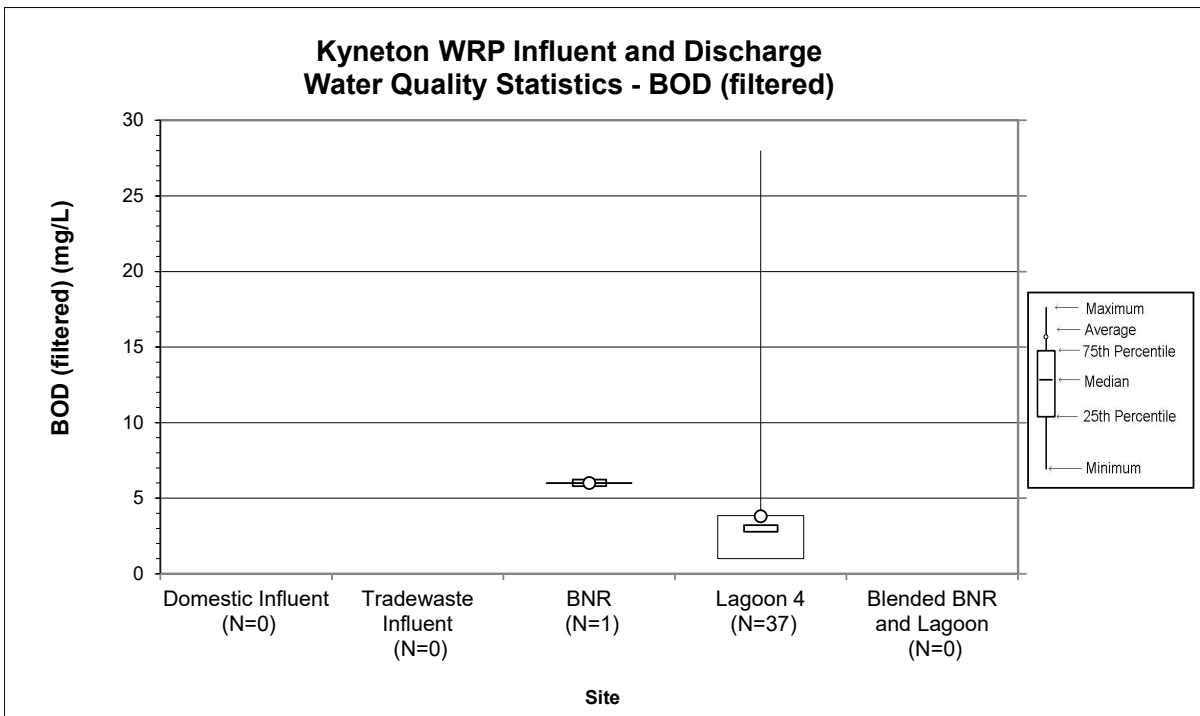


Figure 9 BOD statistics – Kyneton WRP

**Table 8**      **BOD statistics – Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum			6	28	
90th percentile			6	8	
75th percentile			6	4	
Median			6	3	
25th percentile			6	1	
10th percentile			6	1	
Minimum			6	1	
Average			6.0	3.8	
Number	0	0	1	37	0

### 3.3 COD

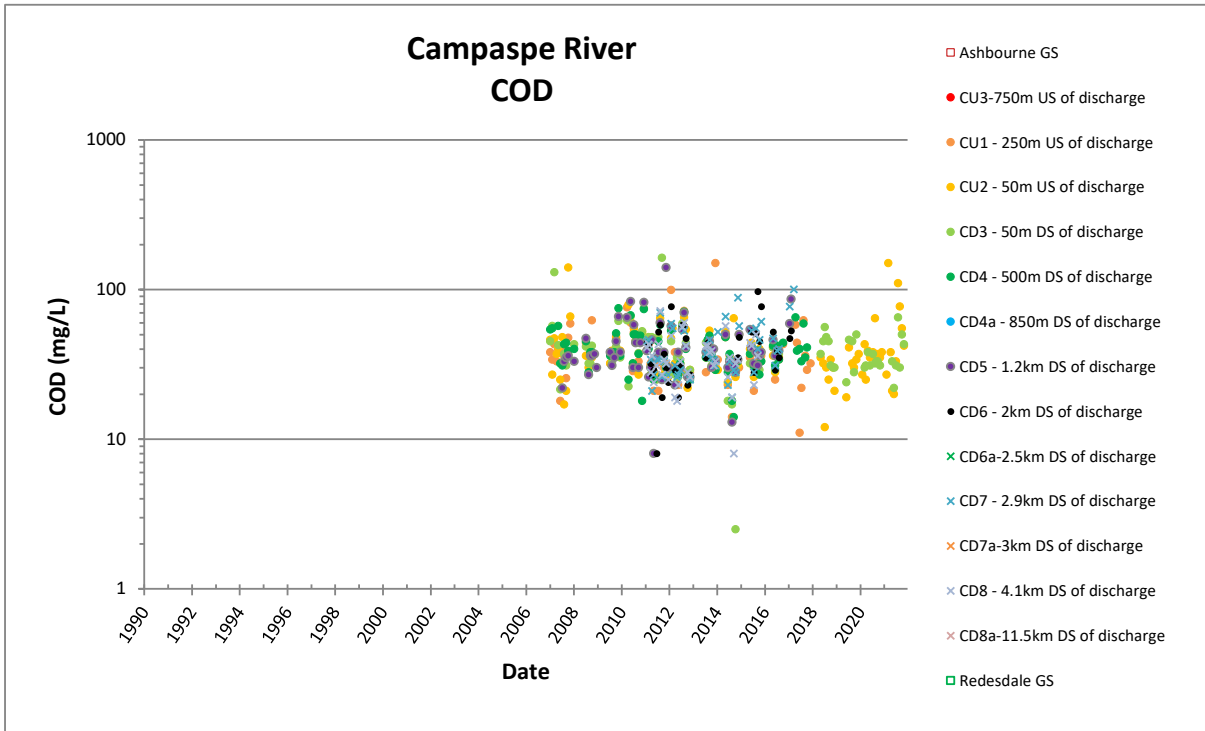


Figure 10 COD data – Campaspe River

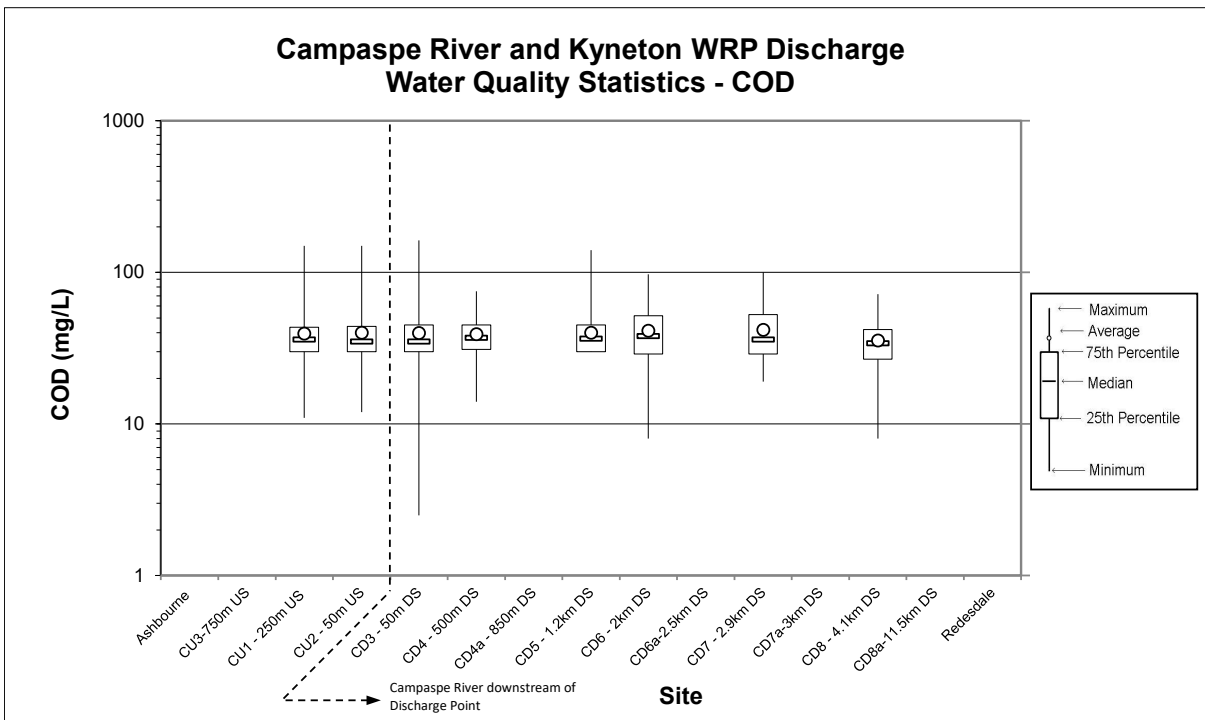
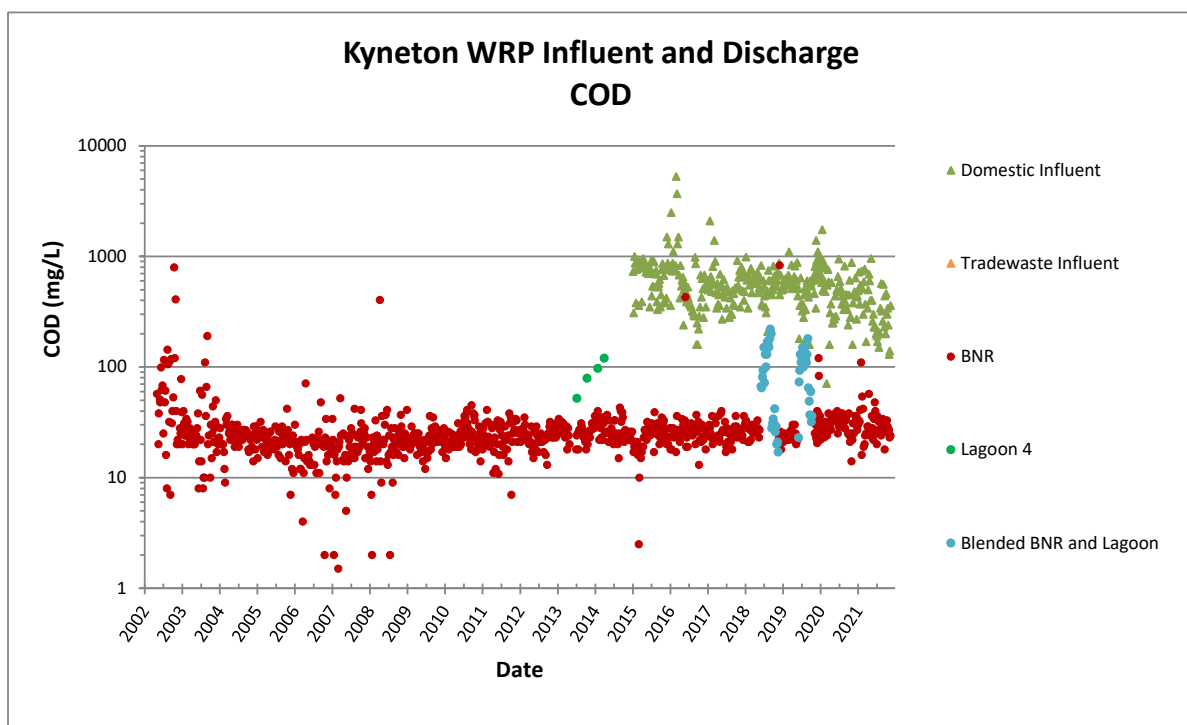


Figure 11 COD statistics – Campaspe River

**Table 9 COD statistics – Campaspe River**

	Ashbourne	CU3 - 750m US	CU1 - 250m US	CU2 - 50m US	CD3 - 50m DS	CD4 - 500m DS	CD4a - 850m DS	CD5 - 1.2km DS	CD6 - 2km DS	CD6a - 2.5km DS	CD7 - 2.9km DS	CD7a - 3km DS	CD8 - 4.1km DS	CD8a - 11.5km DS	Redesdale
Maximum			150	150	163	75		140	97		100		72		
90th percentile			60	60	57	56		60	58		62		51		
75th percentile			44	44	45	45		45	52		53		42		
Median			36	35	35	37		37	38		36		34		
25th percentile			30	30	30	31		30	29		29		27		
10th percentile			23	25	27	26		26	24		26		23		
Minimum			11	12	3	14		0	8		19		8		
Average			40	40	40	39		40	41		42		36		
Number	0	0	83	113	105	80	0	76	38	0	50	0	40	0	0



**Figure 12 COD data – Kyneton WRP**

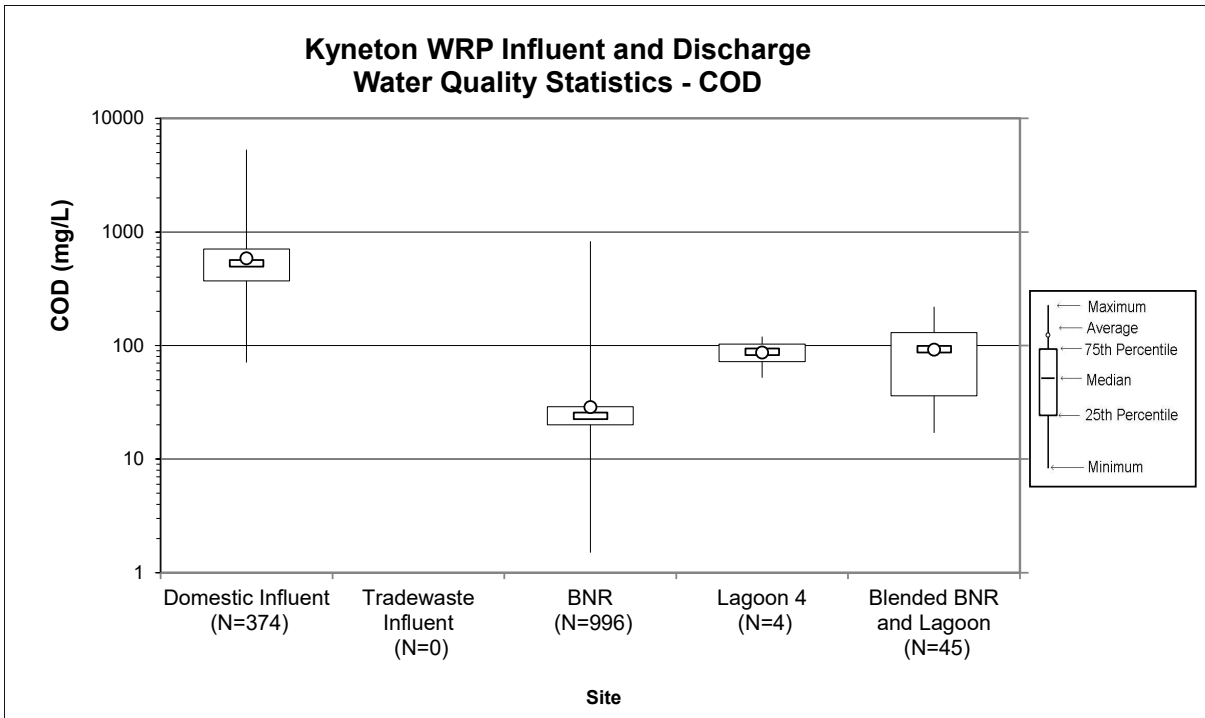


Figure 13 COD statistics – Kyneton WRP

Table 10 BOD statistics – Kyneton WRP

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	5300		830	120	220
90th percentile	870		35	113	166
75th percentile	708		29	103	130
Median	530		24	88	93
25th percentile	370		20	72	36
10th percentile	280		17	60	27
Minimum	71		2	52	17
Average	589		29	87	92
Number	374	0	996	4	45

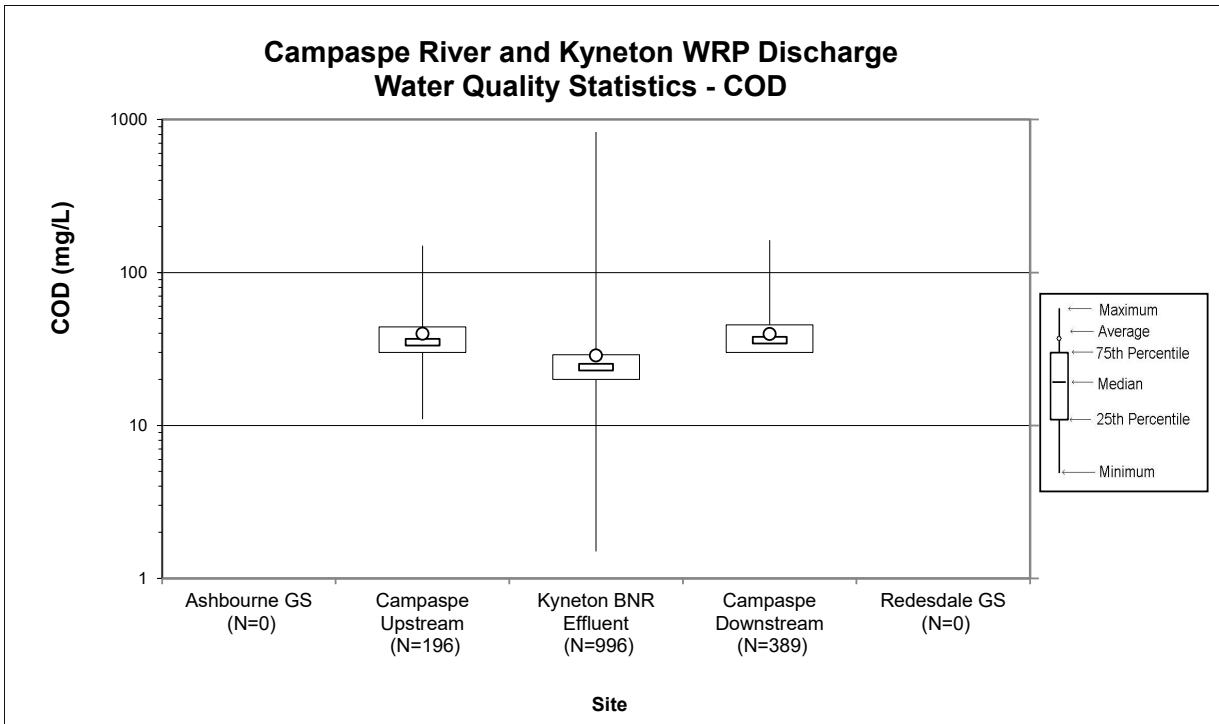


Figure 14 COD statistics – Campaspe River and Kyneton WRP

Table 11 COD statistics – Campaspe River and Kyneton WRP

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum		150	830	163	
90th percentile		60	35	58	
75th percentile		44	29	46	
Median		35	24	36	
25th percentile		30	20	30	
10th percentile		25	17	26	
Minimum		11	2	0	
Average		40	29	40	
Number	0	196	996	389	0



### 3.4 Colour

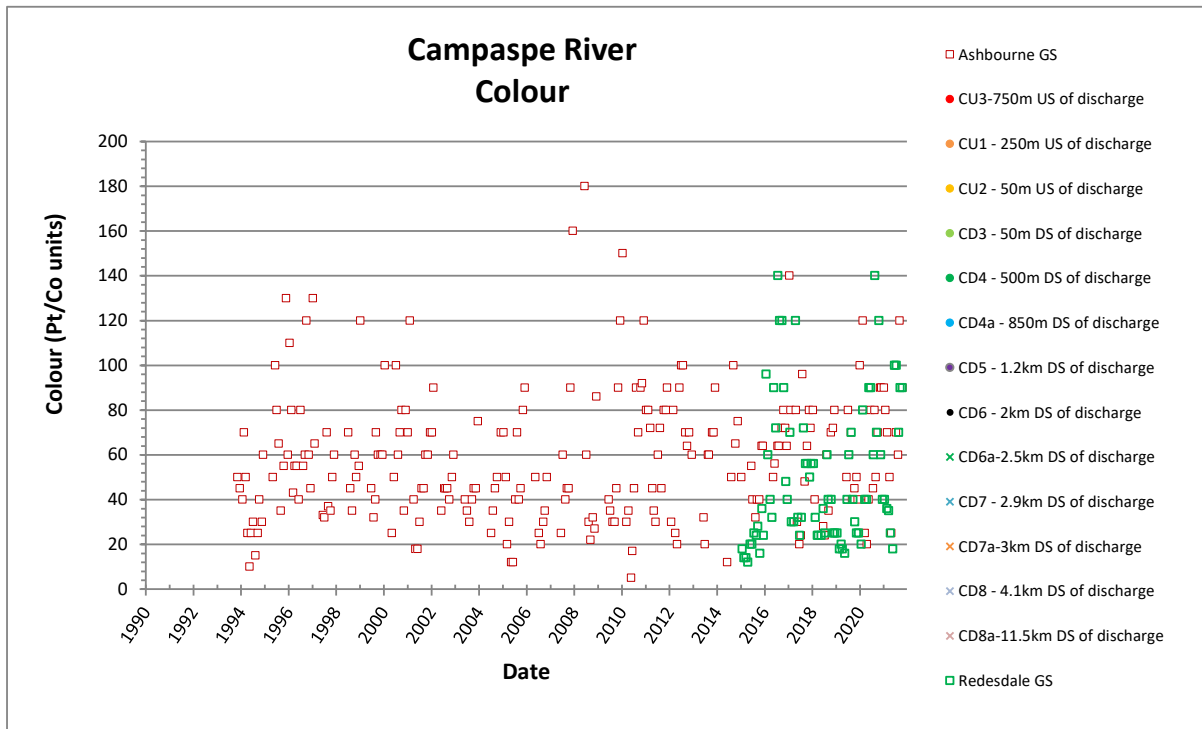


Figure 15 Colour data – Campaspe River

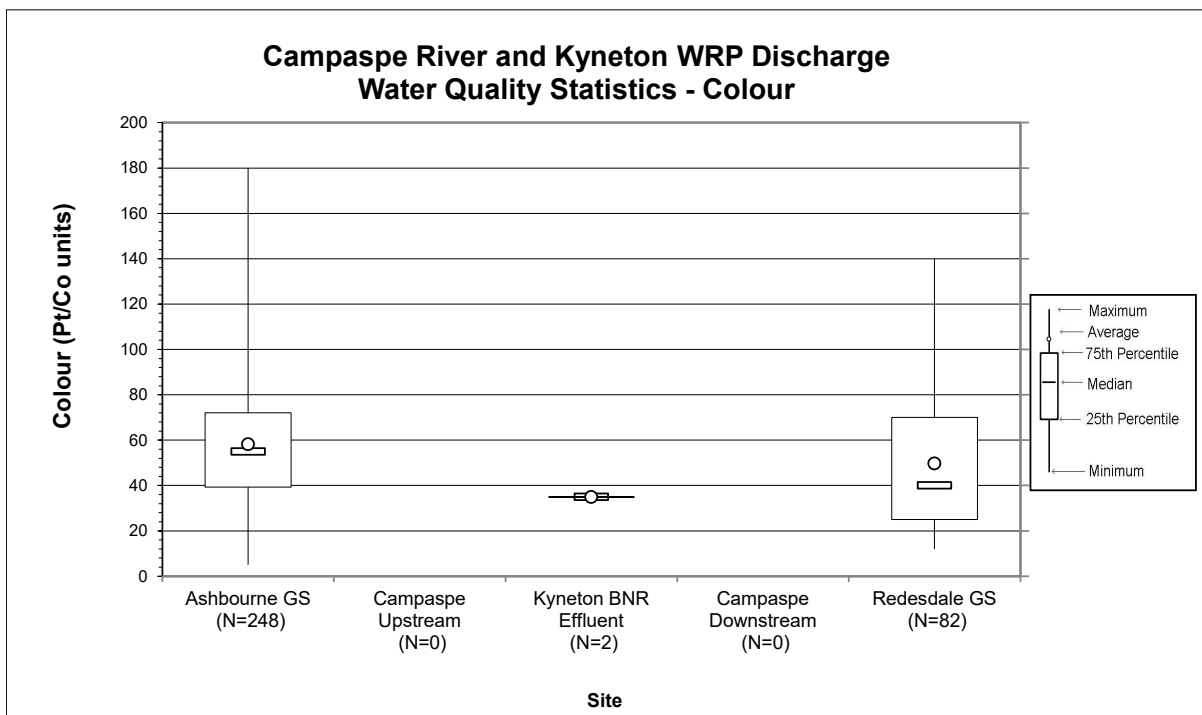


Figure 16 Colour statistics – Campaspe River

**Table 12**      **Colour statistics – Campaspe River and Kyneton WRP**

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum	180		35		140
90th percentile	90		35		95
75th percentile	72		35		70
Median	55		35		40
25th percentile	39		35		25
10th percentile	25		35		18
Minimum	5		35		12
Average	58		35		50
Number	248	0	2	0	82

### 3.5 Dissolved Oxygen (mg/L)

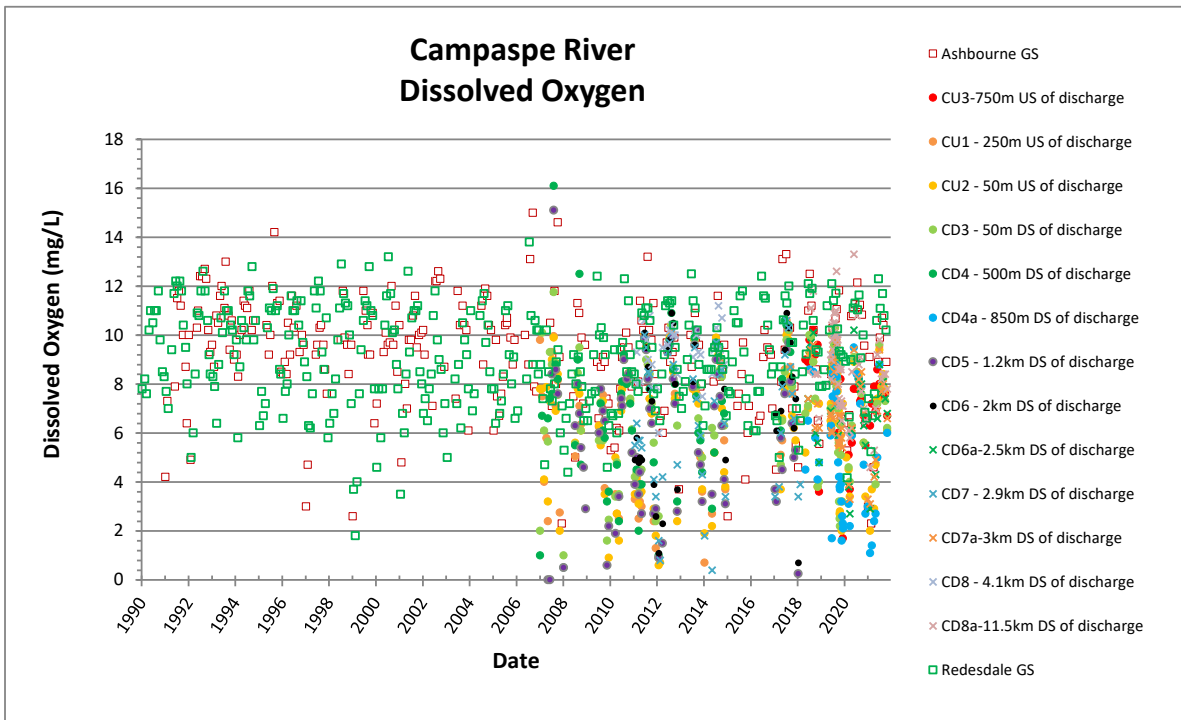


Figure 17 Dissolved oxygen (mg/L) data – Campaspe River

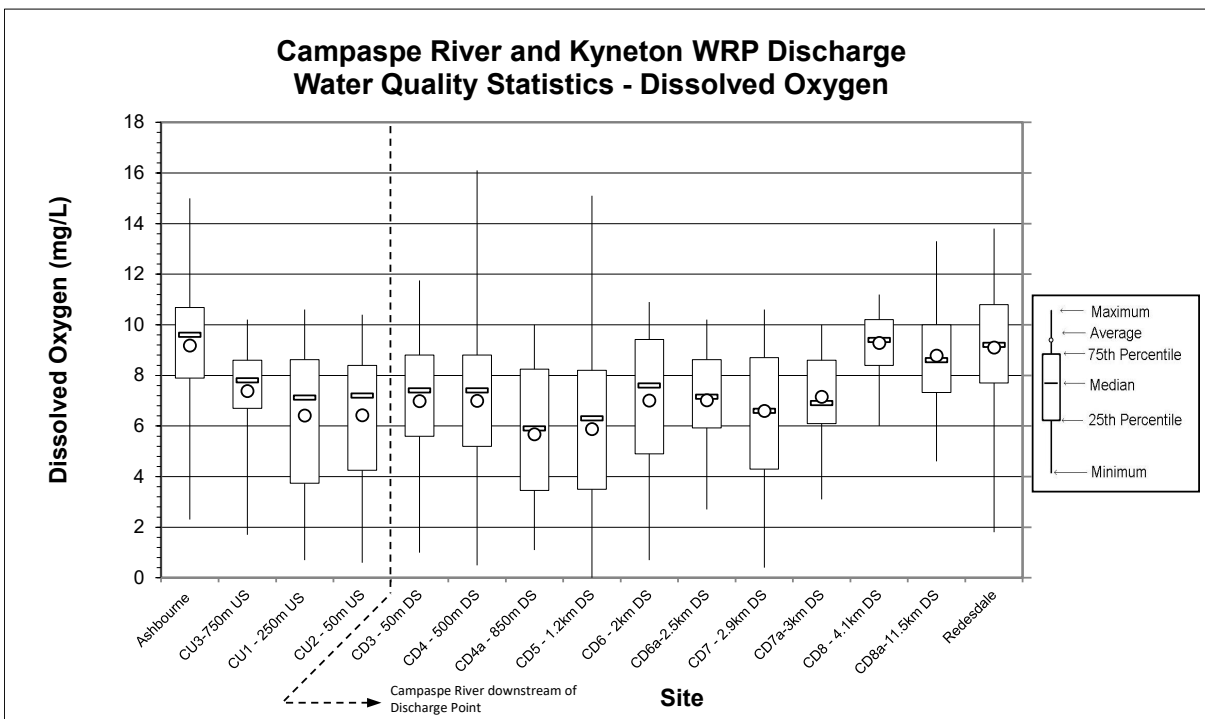
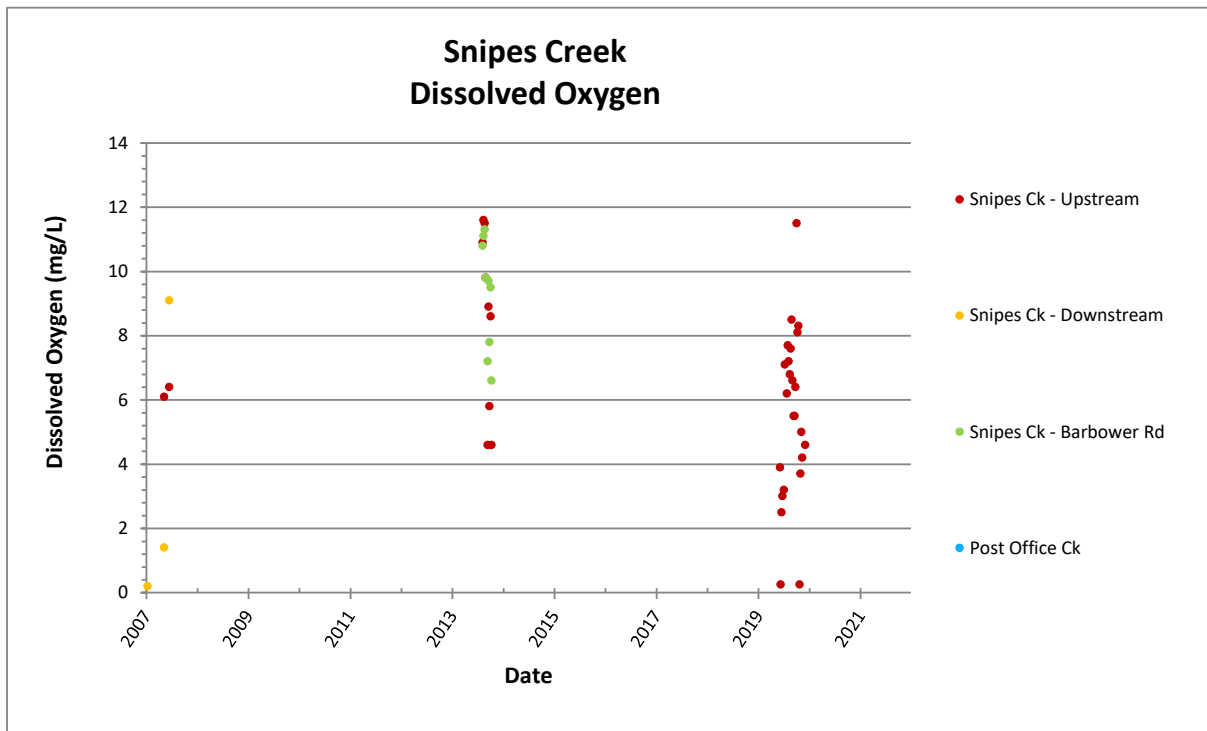


Figure 18 Dissolved oxygen (mg/L) statistics – Campaspe River

**Table 13 Dissolved oxygen (mg/L) statistics – Campaspe River**

	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale
Maximum	15.0	10.2	10.6	10.4	11.8	16.1	10.0	15.1	10.9	10.2	10.6	10.0	11.2	13.3	13.8
90th percentile	11.8	9.3	9.8	9.3	9.7	9.9	8.8	9.4	10.2	9.5	9.7	9.4	10.7	11.0	11.7
75th percentile	10.7	8.6	8.6	8.4	8.8	8.8	8.3	8.2	9.4	8.6	8.7	8.6	10.2	10.0	10.8
Median	9.6	7.8	7.1	7.2	7.4	7.4	5.9	6.3	7.6	7.2	6.6	6.9	9.4	8.6	9.2
25th percentile	7.9	6.7	3.7	4.3	5.6	5.2	3.5	3.5	4.9	5.9	4.3	6.1	8.4	7.3	7.7
10th percentile	6.2	5.2	2.6	2.7	3.7	3.2	2.2	2.0	3.2	4.3	3.4	5.0	7.9	6.5	6.5
Minimum	2.3	1.7	0.7	0.6	1.0	0.5	1.1	0.0	0.7	2.7	0.4	3.1	6.0	4.6	1.8
Average	9.2	7.4	6.4	6.4	7.0	7.0	5.7	5.9	7.0	7.0	6.6	7.2	9.3	8.8	9.1
Number	272	34	68	130	117	65	55	73	36	30	49	53	33	54	369



**Figure 19 Dissolved oxygen (mg/L) data – Snipes Creek and Post Office Creek**

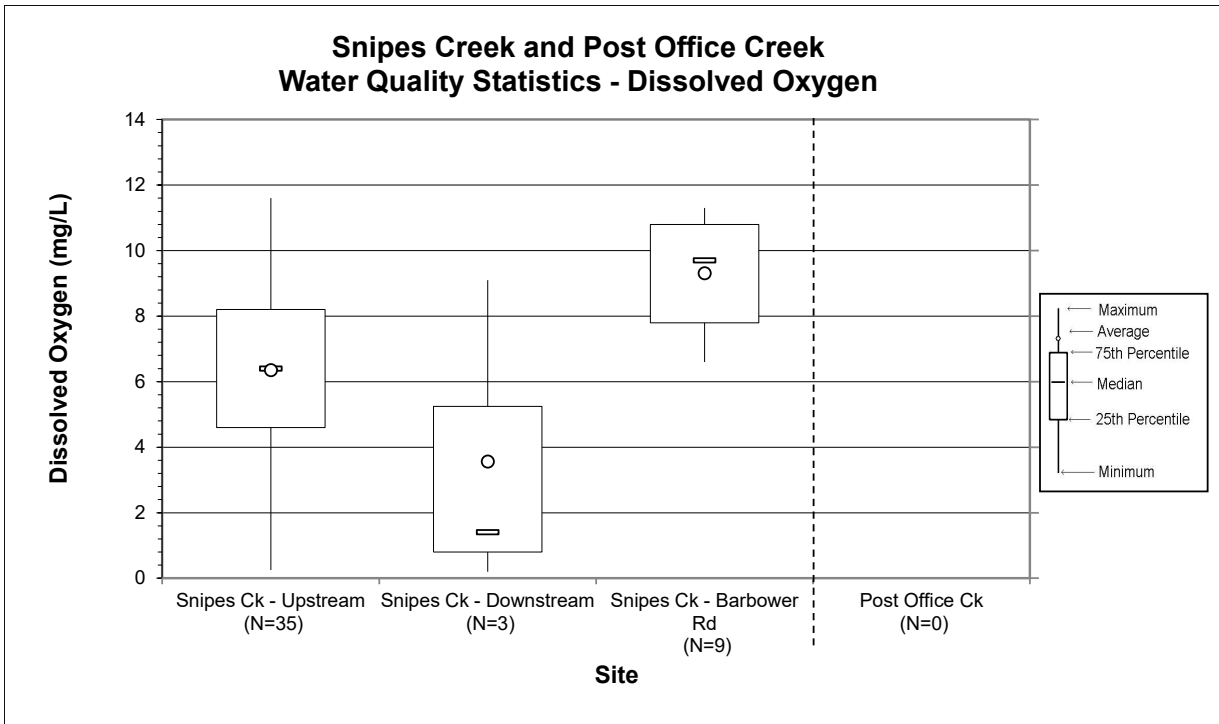


Figure 20 Dissolved oxygen (mg/L) statistics – Snipes Creek and Post Office Creek

Table 14 Dissolved oxygen (mg/L) statistics – – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	11.6	9.1	11.3	
90th percentile	10.5	7.6	11.1	
75th percentile	8.2	5.3	10.8	
Median	6.4	1.4	9.7	
25th percentile	4.6	0.8	7.8	
10th percentile	3.1	0.4	7.1	
Minimum	0.3	0.2	6.6	
Average	6.4	3.6	9.3	
Number	35	3	9	0

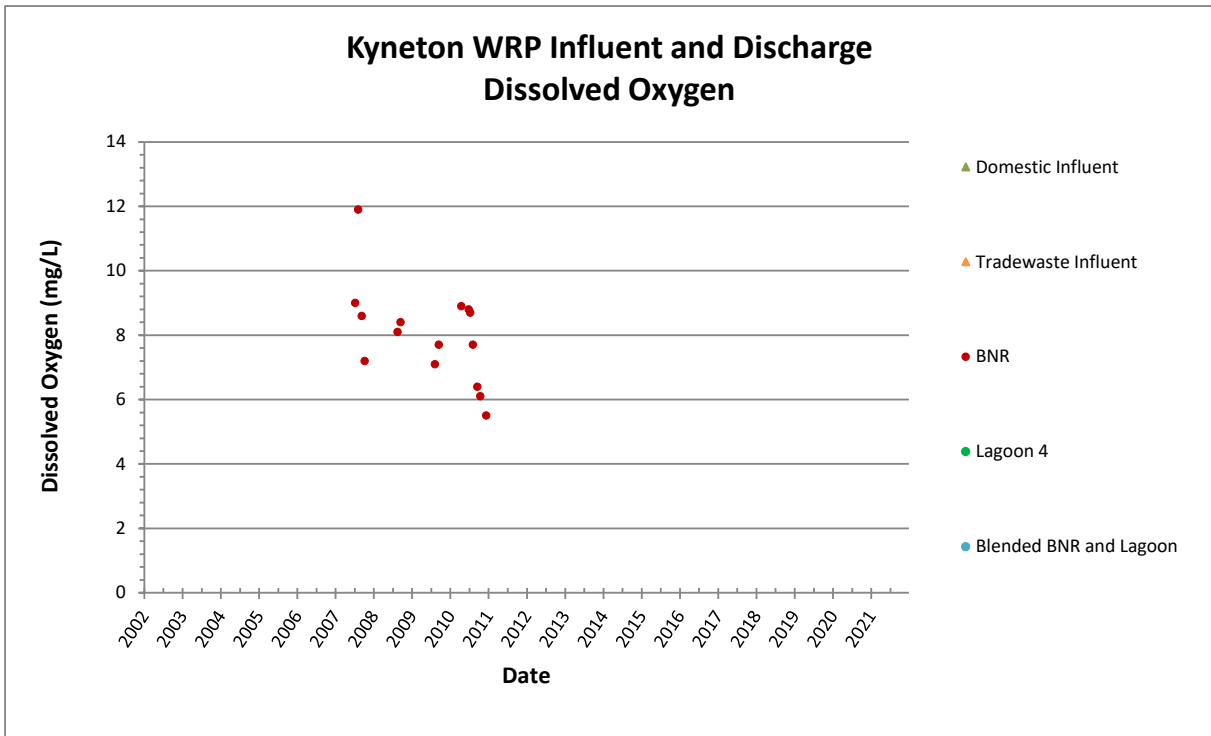


Figure 21 Dissolved oxygen (mg/L) data – Kyneton WRP

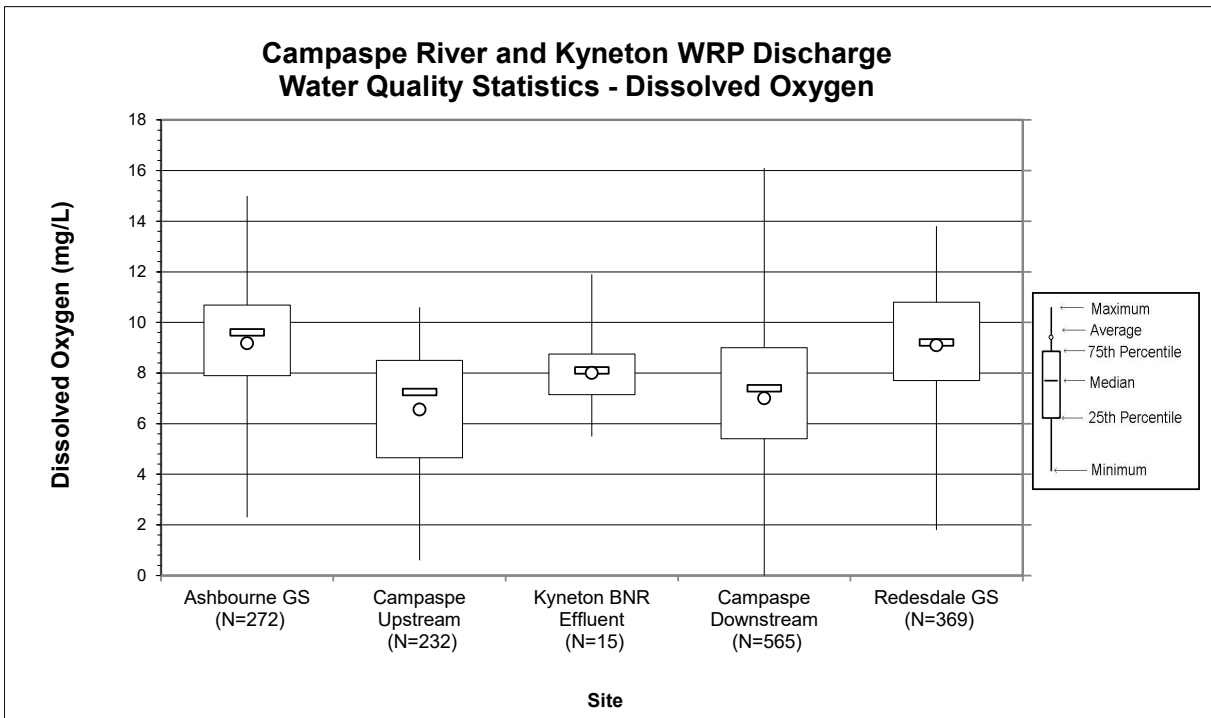


Figure 22 Dissolved oxygen (mg/L) data – Campaspe River and Kyneton WRP

**Table 15** *Dissolved oxygen statistics – Campaspe River and Kyneton WRP*

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum	15.0	10.6	11.9	16.1	13.8
90th percentile	11.8	9.5	9.0	9.9	11.7
75th percentile	10.7	8.5	8.8	9.0	10.8
Median	9.6	7.3	8.1	7.4	9.2
25th percentile	7.9	4.7	7.2	5.4	7.7
10th percentile	6.2	2.7	6.2	3.2	6.5
Minimum	2.3	0.6	5.5	0.0	1.8
Average	9.2	6.6	8.0	7.0	9.1
Number	272	232	15	565	369

### 3.6 Dissolved Oxygen (%)

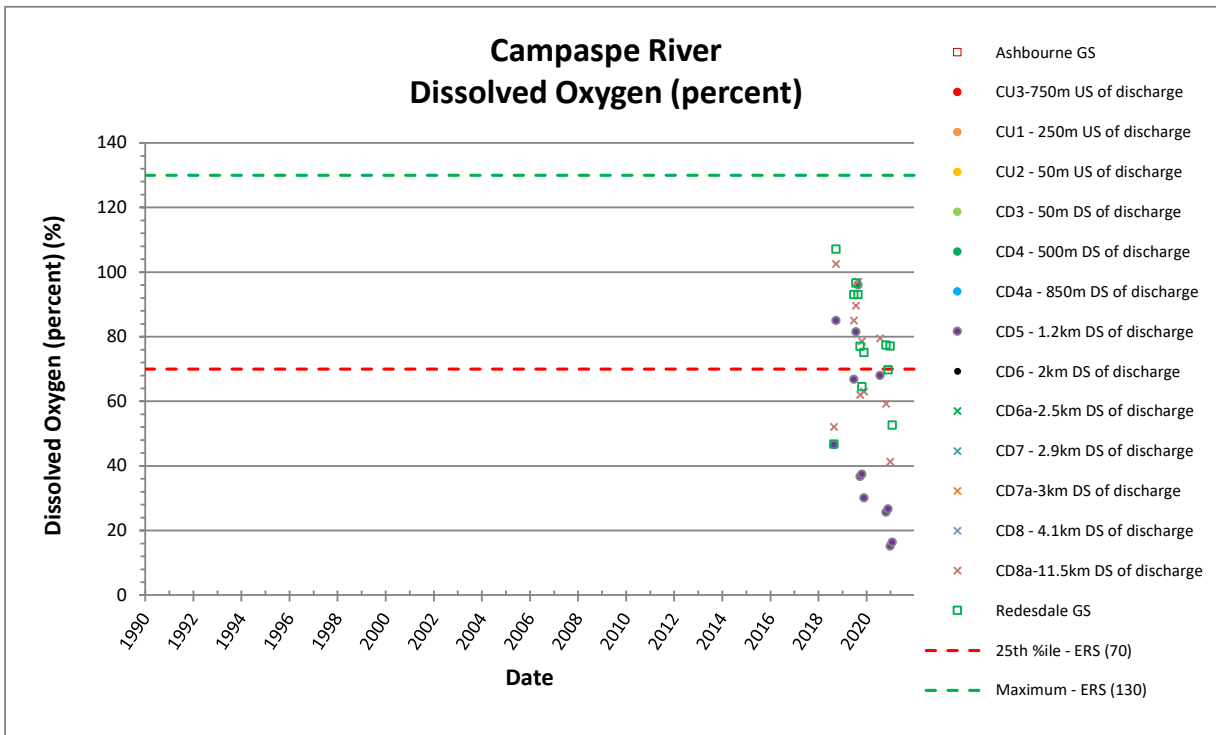


Figure 23 Dissolved oxygen (%) data – Campaspe River

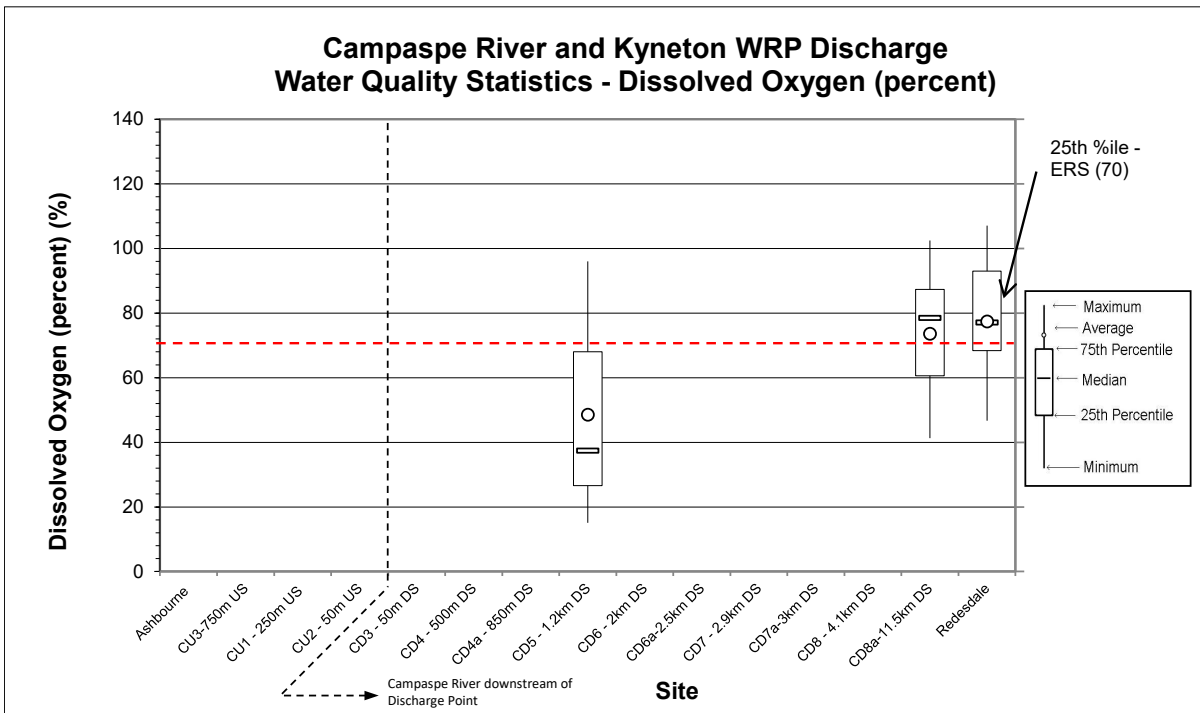
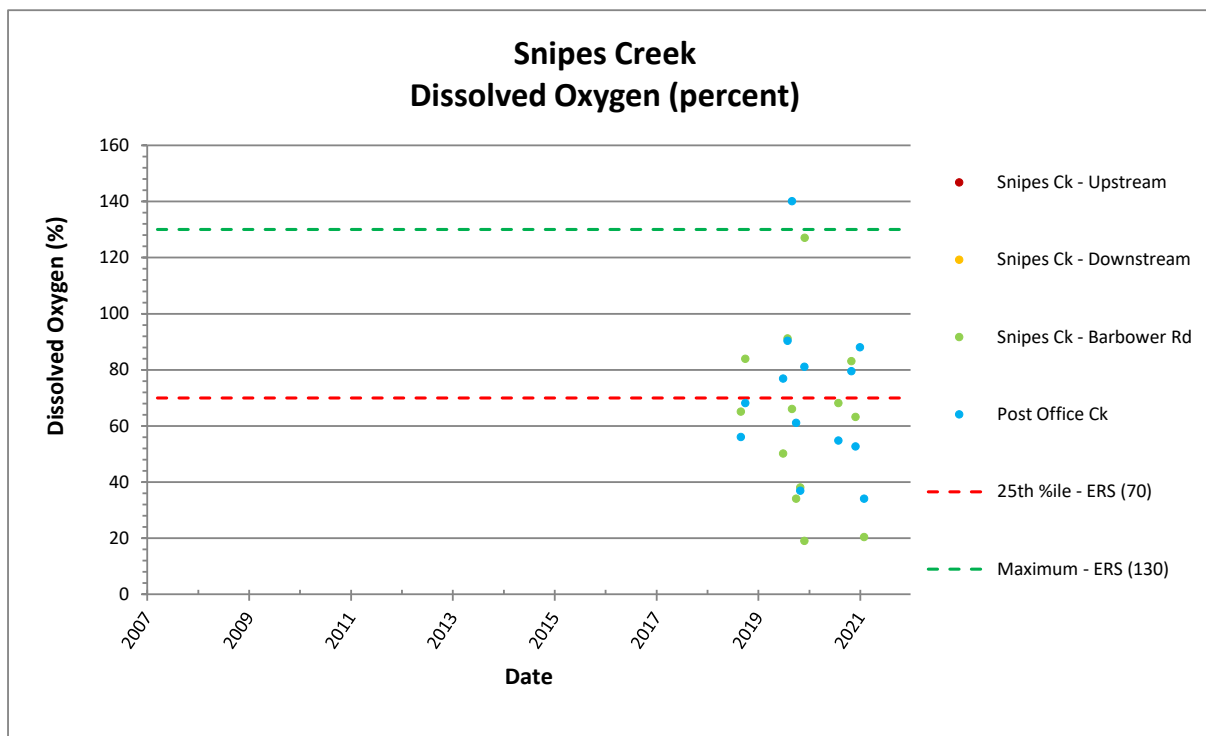


Figure 24 Dissolved oxygen (%) statistics – Campaspe River



**Table 16** Dissolved oxygen(%) statistics – Campaspe River

	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale
Maximum								96.0						102.5	107.1
90th percentile								84.3						97.0	96.2
75th percentile								68.0						87.3	93.0
Median								37.4						78.5	77.1
25th percentile								26.6						60.6	68.4
10th percentile								18.2						52.0	53.8
Minimum								15.1						41.3	46.7
Average								48.6						73.6	77.5
Number	0	0	0	0	0	0	0	13	0	0	0	0	0	11	12



**Figure 25** Dissolved oxygen (%) data – Snipes Creek and Post Office Creek

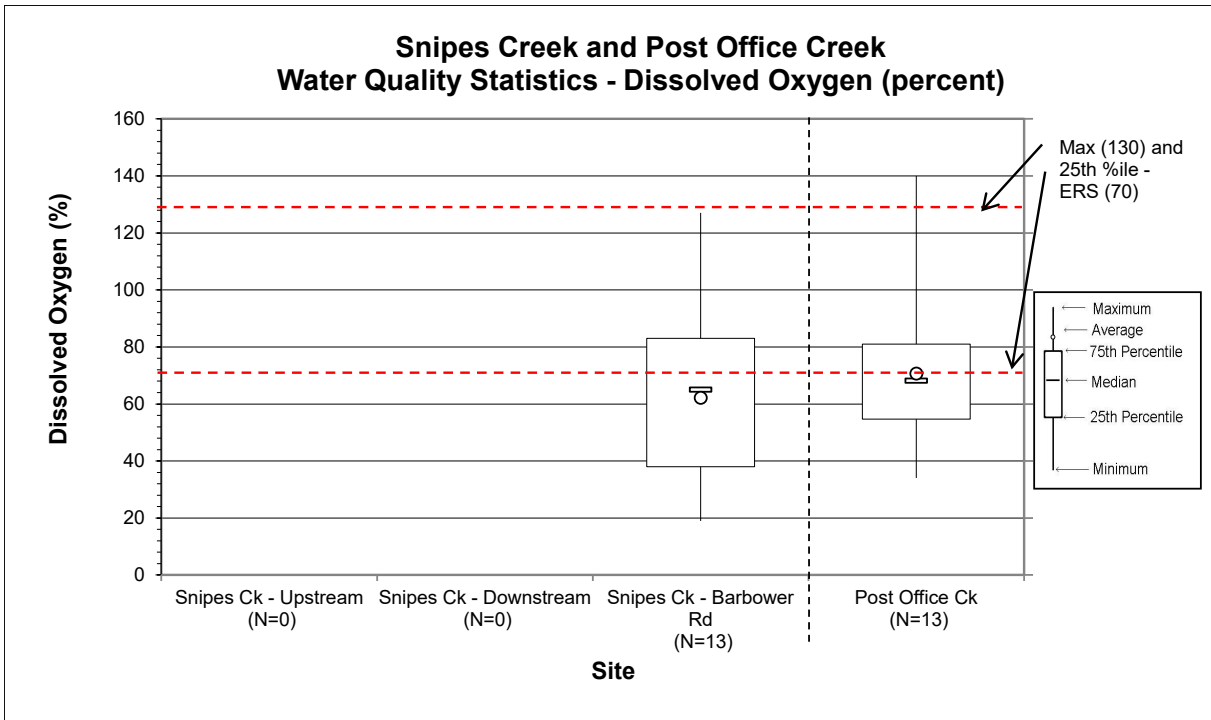


Figure 26 Dissolved oxygen (%) statistics – Snipes Creek and Post Office Creek

Table 17 Dissolved oxygen (%) statistics – – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum			127.0	140.0
90th percentile			89.7	89.8
75th percentile			83.0	81.0
Median			65.0	68.1
25th percentile			38.0	54.7
10th percentile			23.1	40.0
Minimum			19.0	34.0
Average			62.2	70.7
Number	0	0	13	13

### 3.7 Electrical Conductivity

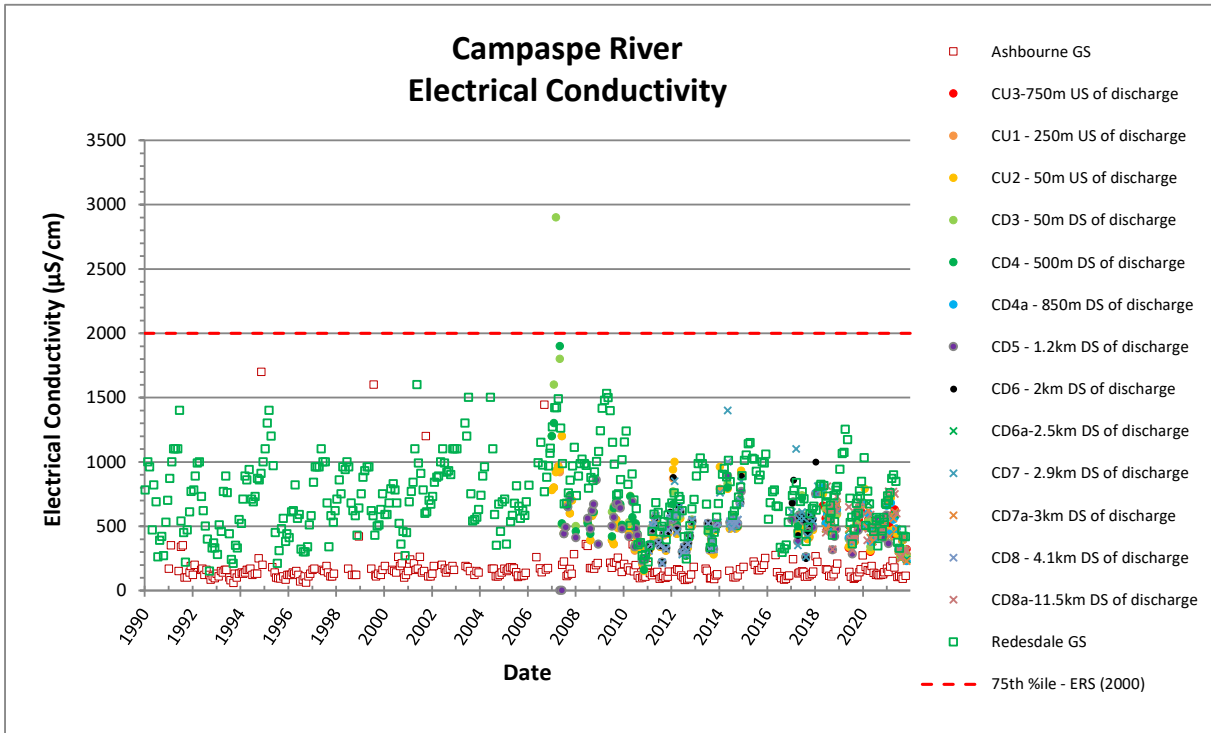


Figure 27 Electrical conductivity data – Campaspe River

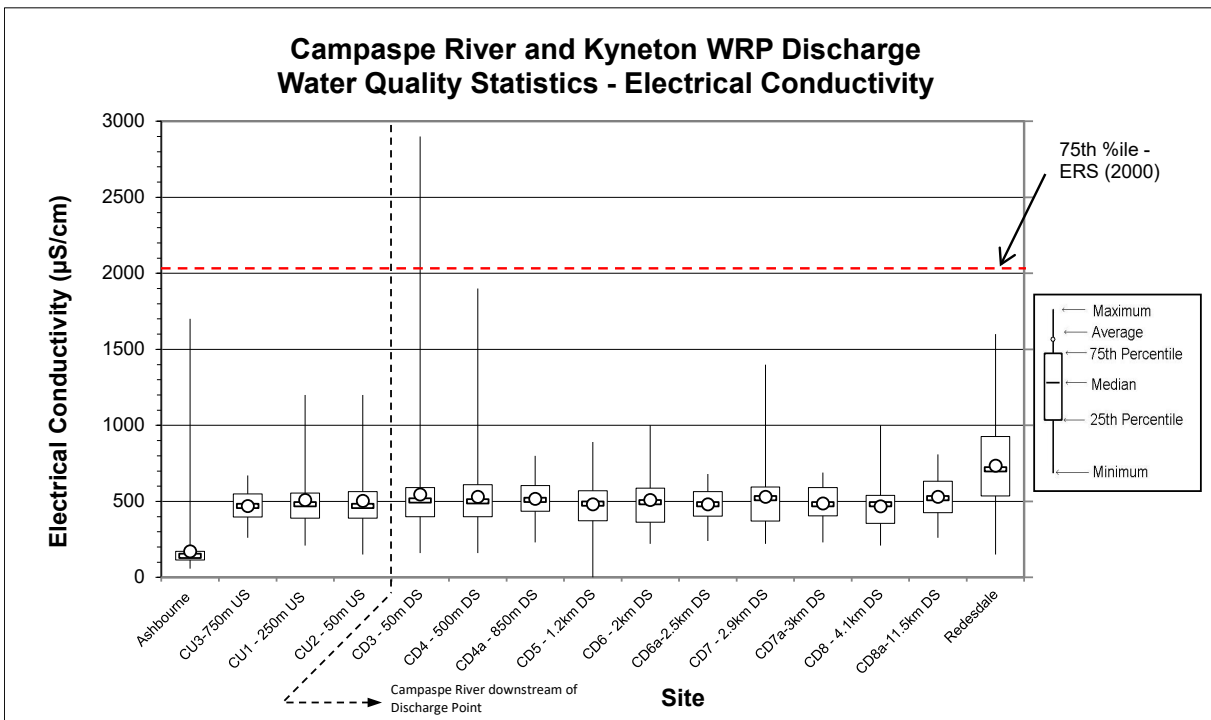
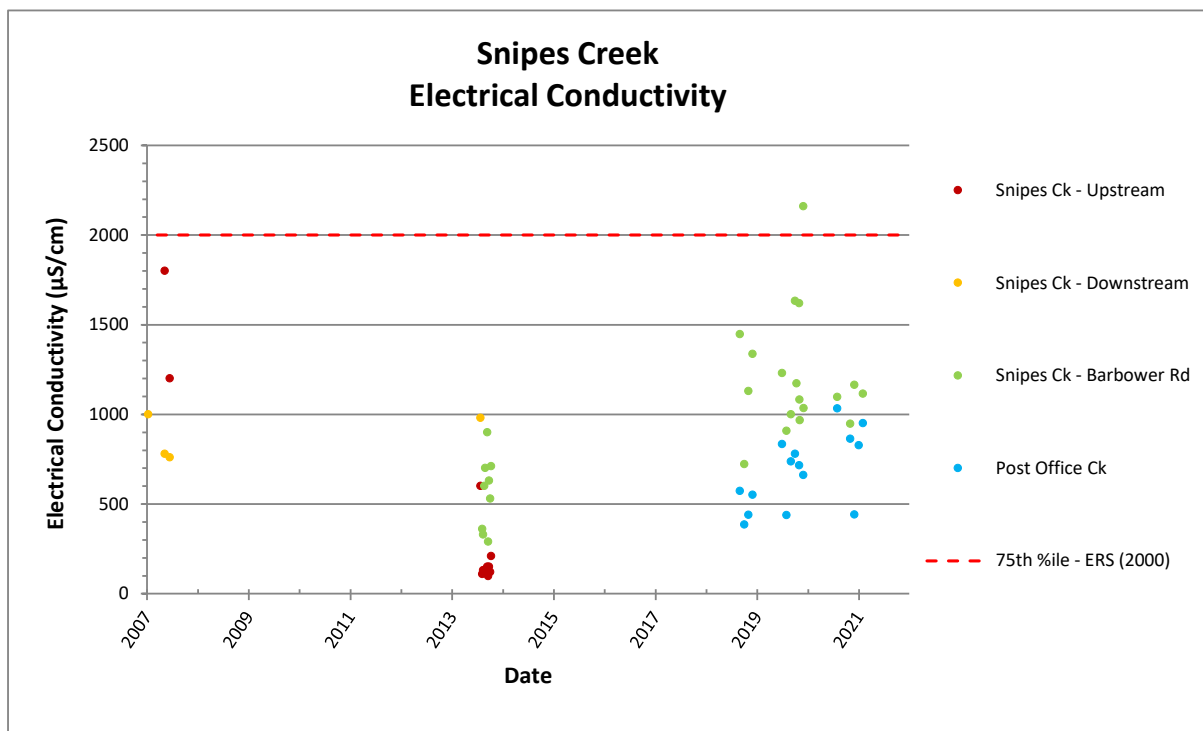


Figure 28 Electrical conductivity statistics – Campaspe River

**Table 18 Electrical conductivity statistics – Campaspe River**

	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale
Maximum	1700	670	1200	1200	2900	1900	800	890	1000	680	1400	690	1000	810	1600
90th percentile	217	624	790	780	710	713	669	671	741	642	760	630	592	734	1100
75th percentile	172	550	555	565	590	610	605	570	588	565	595	590	540	634	926
Median	141	470	480	470	505	500	510	485	495	480	520	480	480	520	710
25th percentile	115	398	390	390	400	400	435	373	363	403	370	405	355	426	535
10th percentile	100	313	310	310	320	314	380	315	310	310	320	310	314	321	373
Minimum	58	260	210	150	160	160	230	0	220	240	220	230	210	260	150
Average	171	470	510	503	546	530	518	481	509	481	531	487	468	531	736
Number	273	34	71	111	101	68	32	90	38	30	51	31	35	47	388



**Figure 29 Electrical conductivity data – Snipes Creek and Post Office Creek**

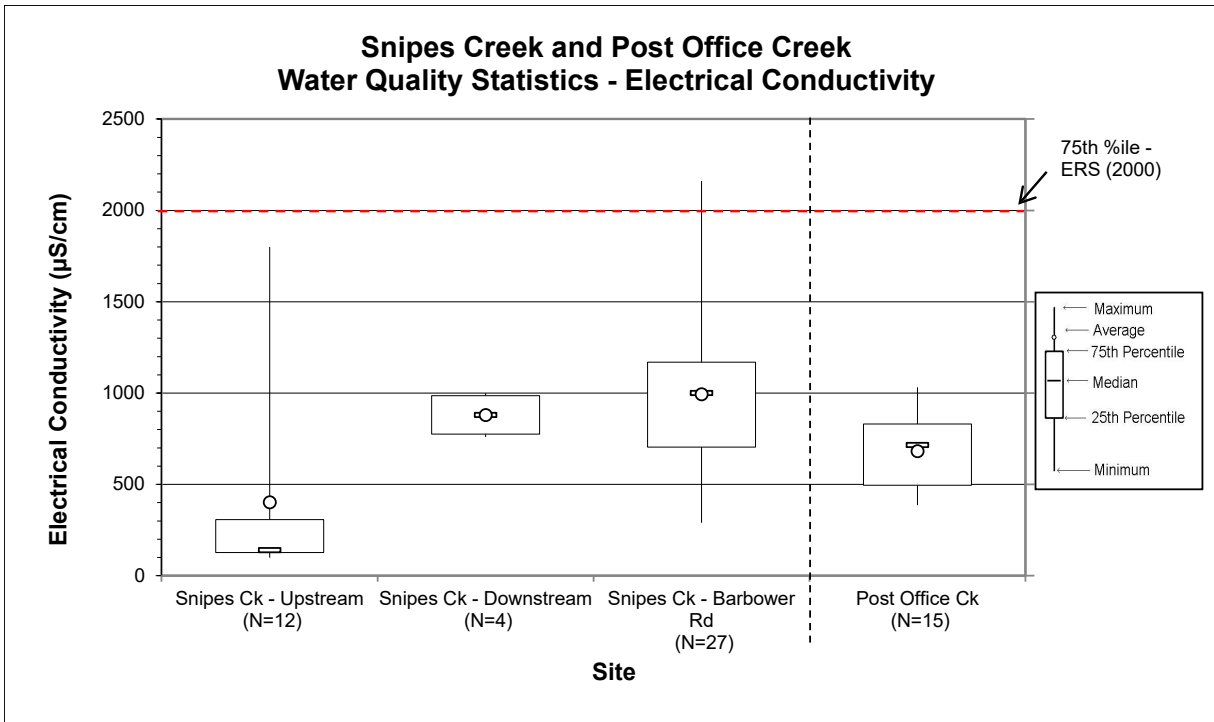


Figure 30 Electrical conductivity statistics – Snipes Creek and Post Office Creek

Table 19 Electrical conductivity statistics – – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	1800	1000	2160	1032
90th percentile	1140	994	1516	916
75th percentile	308	985	1169	831
Median	140	880	1001	715
25th percentile	128	775	705	496
10th percentile	111	766	462	439
Minimum	98	760	290	386
Average	402	880	993	682
Number	12	4	27	15

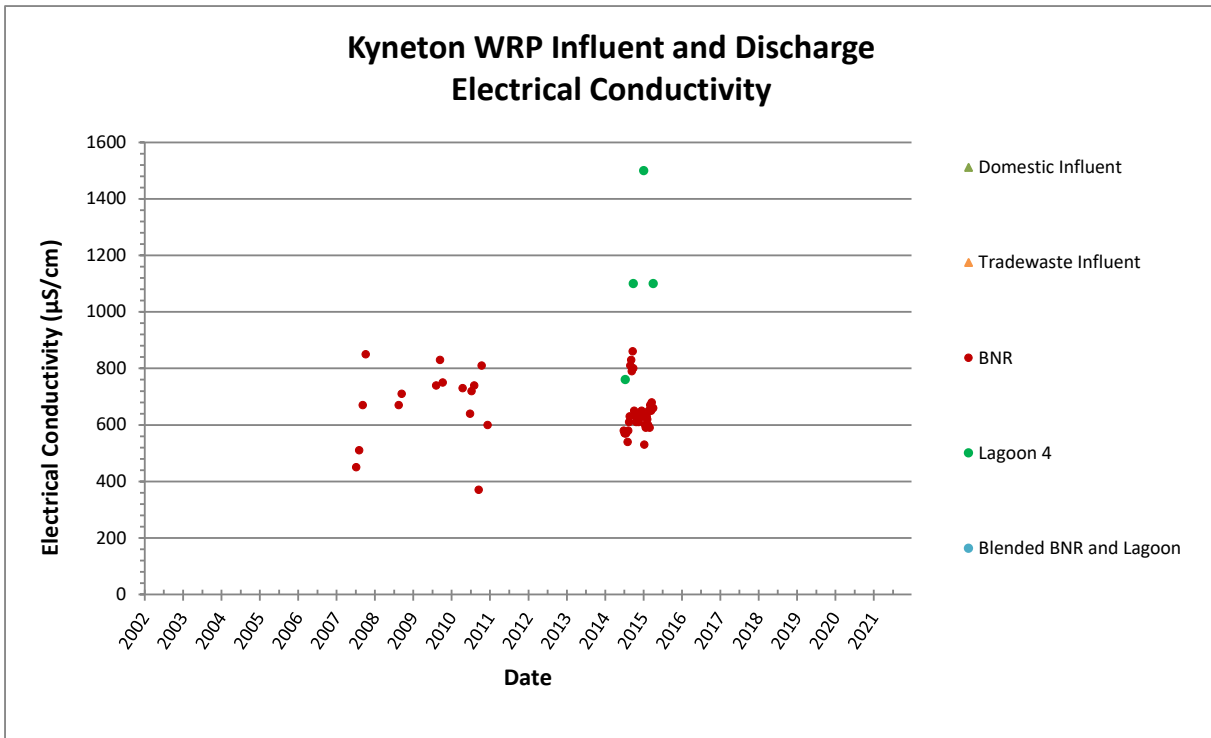


Figure 31 Electrical conductivity data – Kyneton WRP

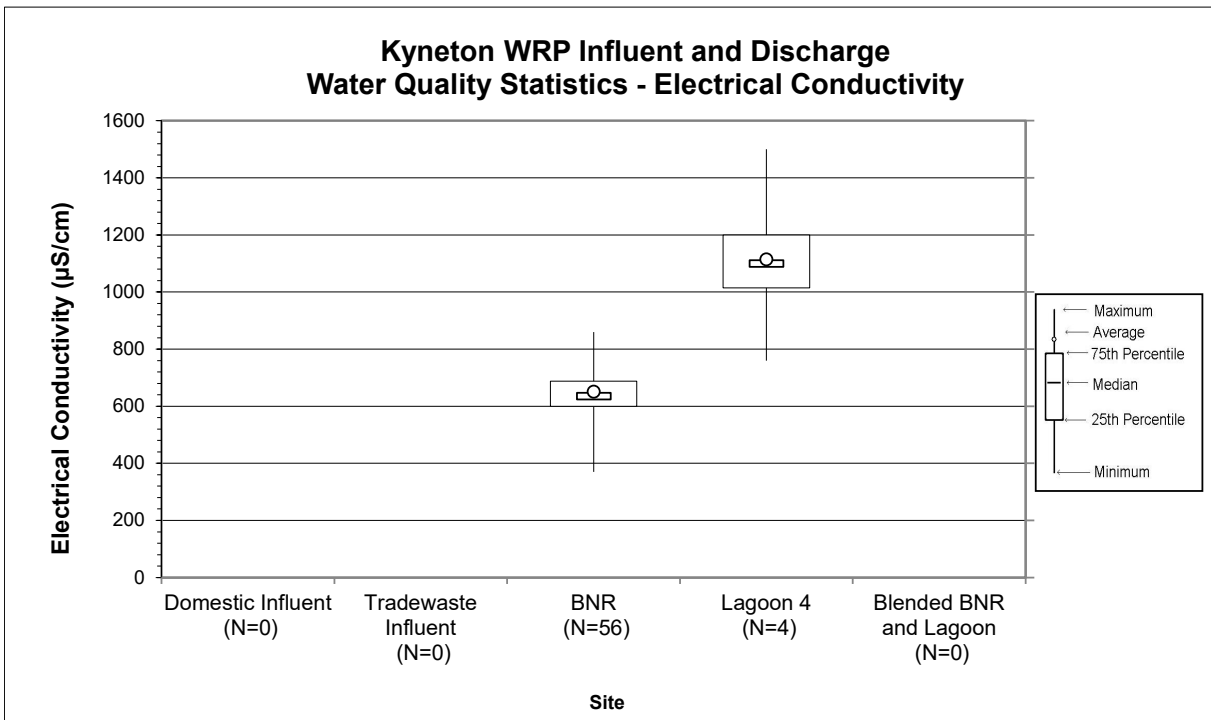
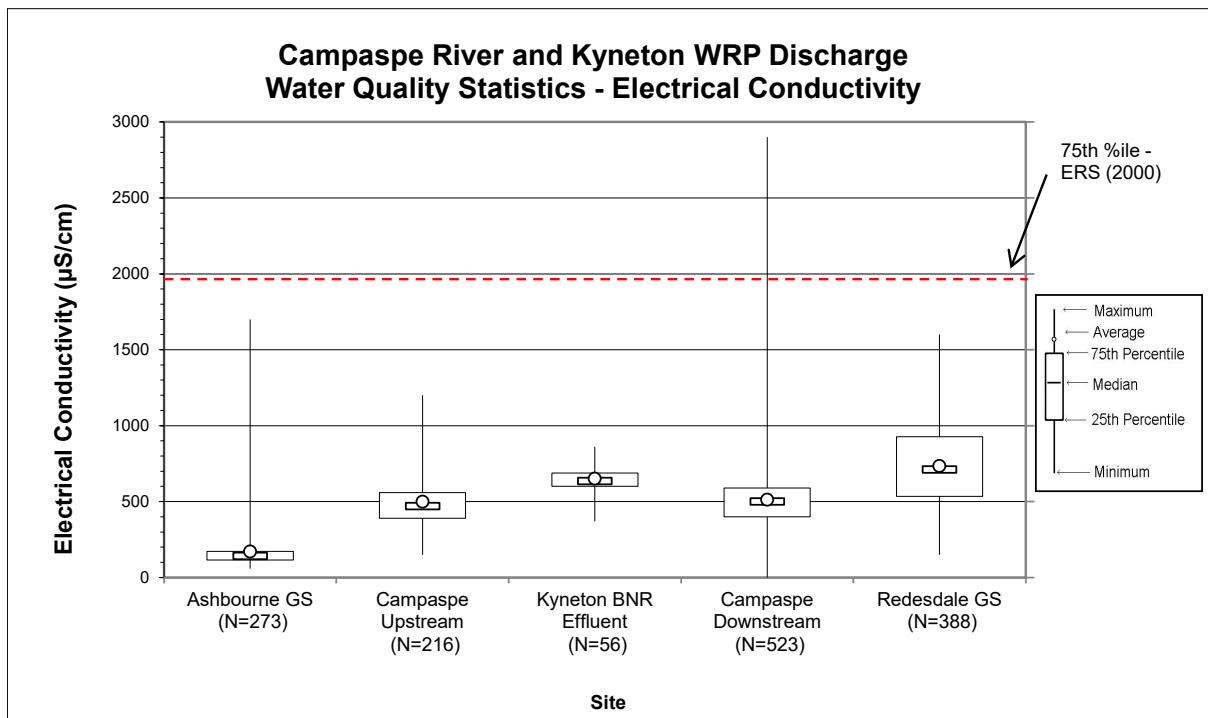


Figure 32 Electrical conductivity statistics – Kyneton WRP

**Table 20 Electrical conductivity statistics – Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum			860	1500	
90th percentile			805	1380	
75th percentile			688	1200	
Median			635	1100	
25th percentile			600	1015	
10th percentile			570	862	
Minimum			370	760	
Average			652	1115	
Number	0	0	56	4	0



**Figure 33 Electrical conductivity statistics – Campaspe River and Kyneton WRP**

**Table 21 Electrical conductivity statistics – Campaspe River and Kyneton WRP**

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum	1700	1200	860	2900	1600
90th percentile	217	765	805	688	1100
75th percentile	172	560	688	590	926
Median	141	470	635	500	710
25th percentile	115	390	600	400	535
10th percentile	100	310	570	318	373
Minimum	58	150	370	0	150
Average	171	500	652	513	736
Number	273	216	56	523	388

### 3.8 Oil & Grease

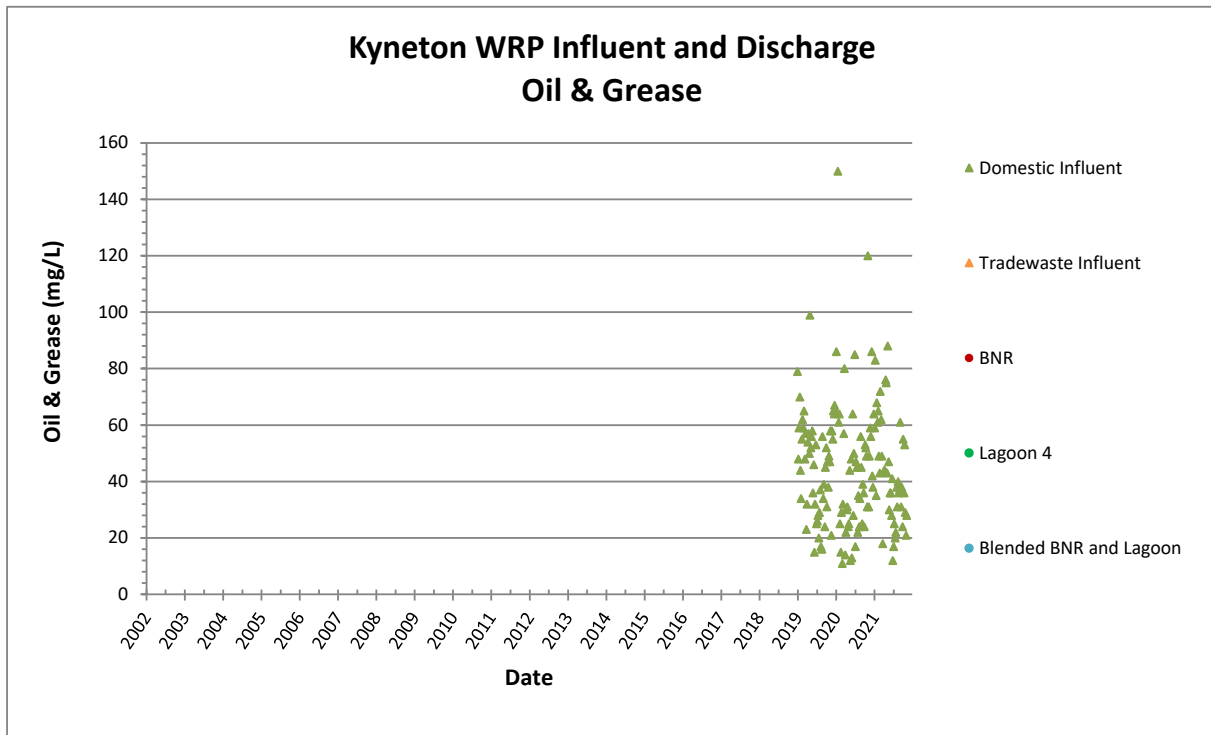


Figure 34 Oil and grease data – Kyneton WRP

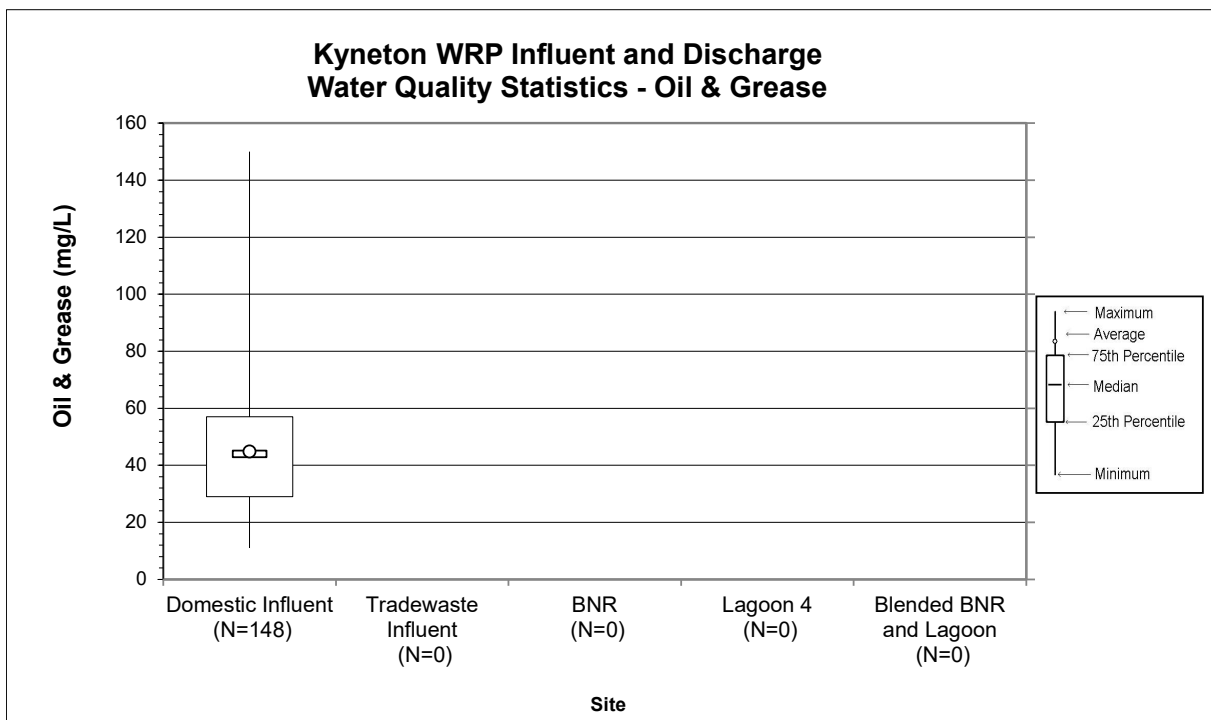


Figure 35 Oil and grease statistics – Kyneton WRP



**Table 22**      *Oil and grease – Kyneton WRP*

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	150				
90th percentile	67				
75th percentile	57				
Median	44				
25th percentile	29				
10th percentile	21				
Minimum	11				
Average	45				
Number	148	0	0	0	0

### 3.9 PFOA

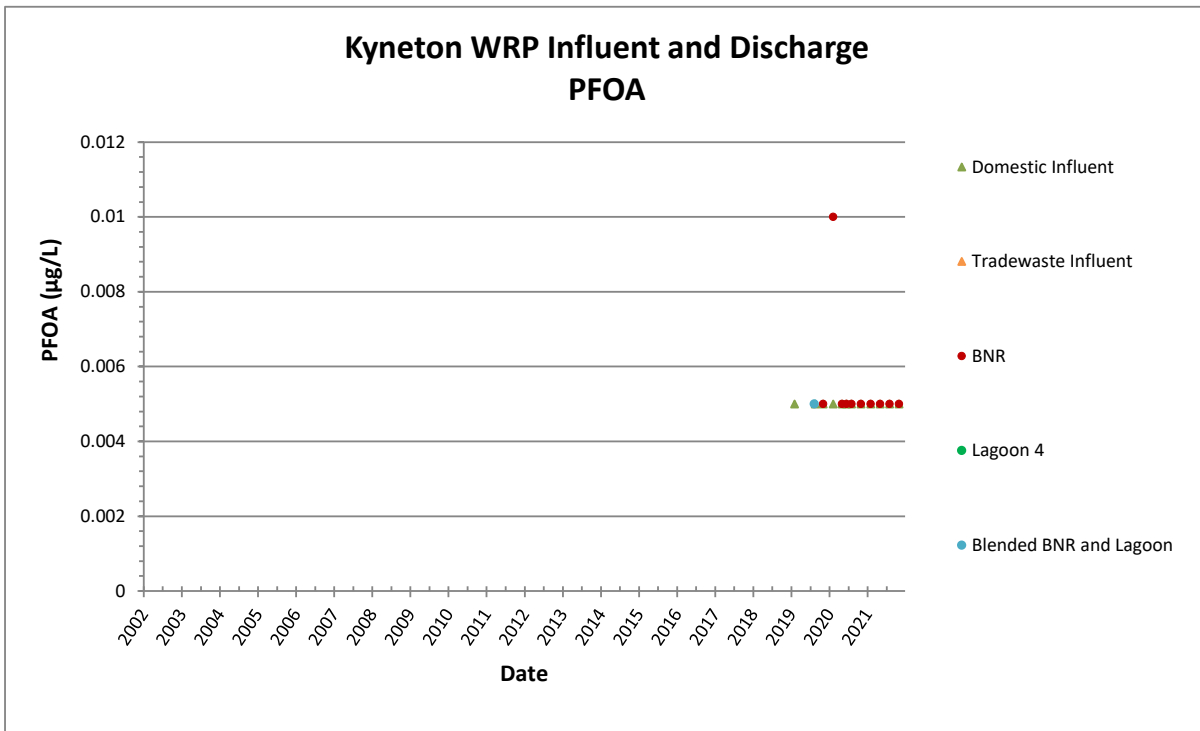


Figure 36 PFOA data – Kyneton WRP

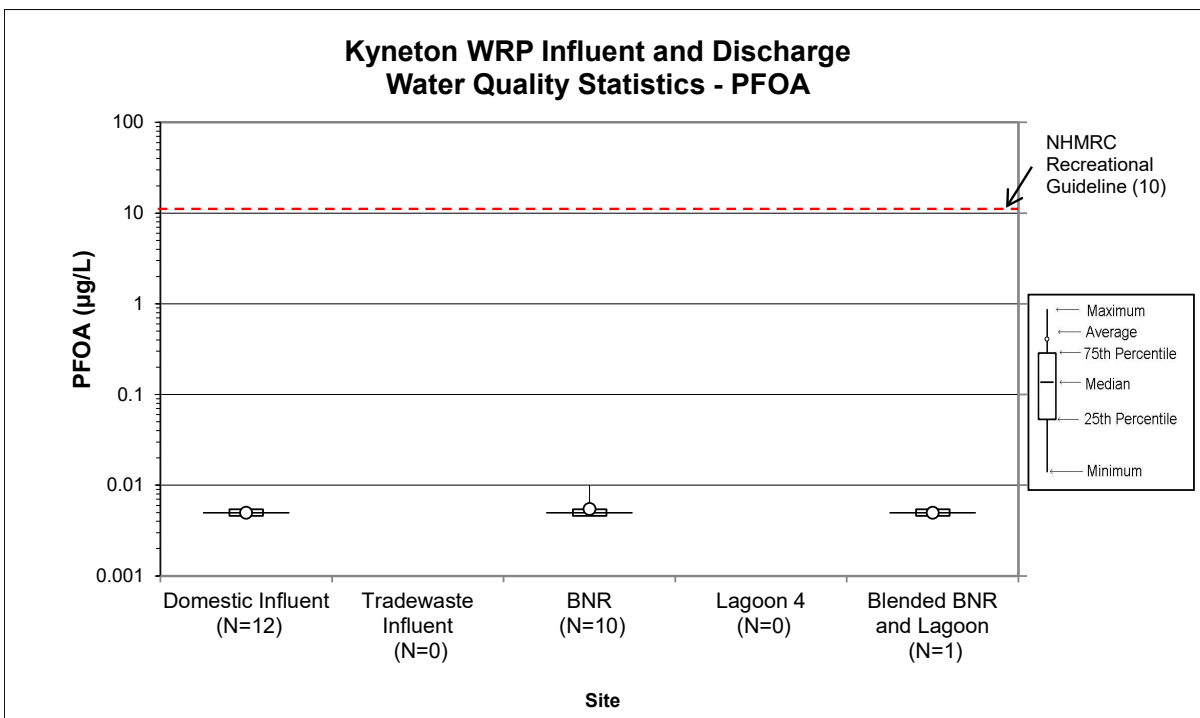


Figure 37 PFOA statistics – Kyneton WRP

**Table 23 PFOA statistics– Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	0.005		0.010		0.005
90th percentile	0.005		0.006		0.005
75th percentile	0.005		0.005		0.005
Median	0.005		0.005		0.005
25th percentile	0.005		0.005		0.005
10th percentile	0.005		0.005		0.005
Minimum	0.005		0.005		0.005
Average	0.005		0.006		0.005
Number	12	0	10	0	1

### 3.10 PFOS

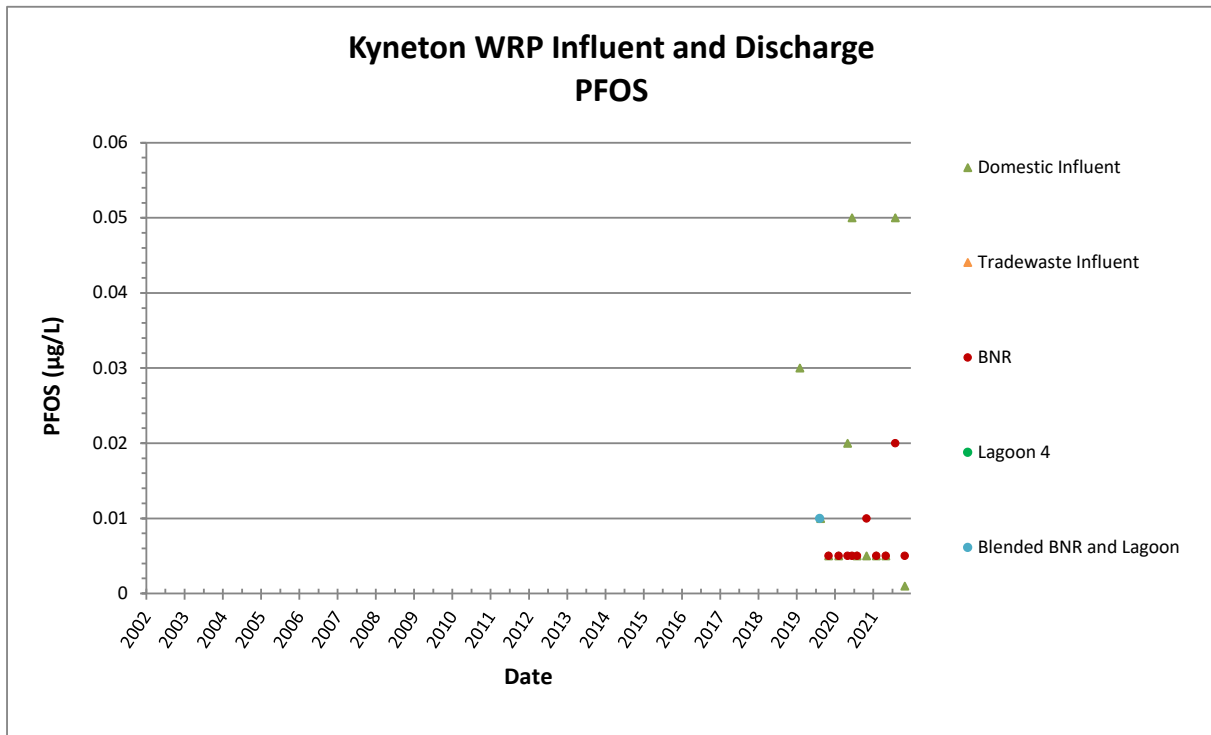


Figure 38 PFOS data – Kyneton WRP

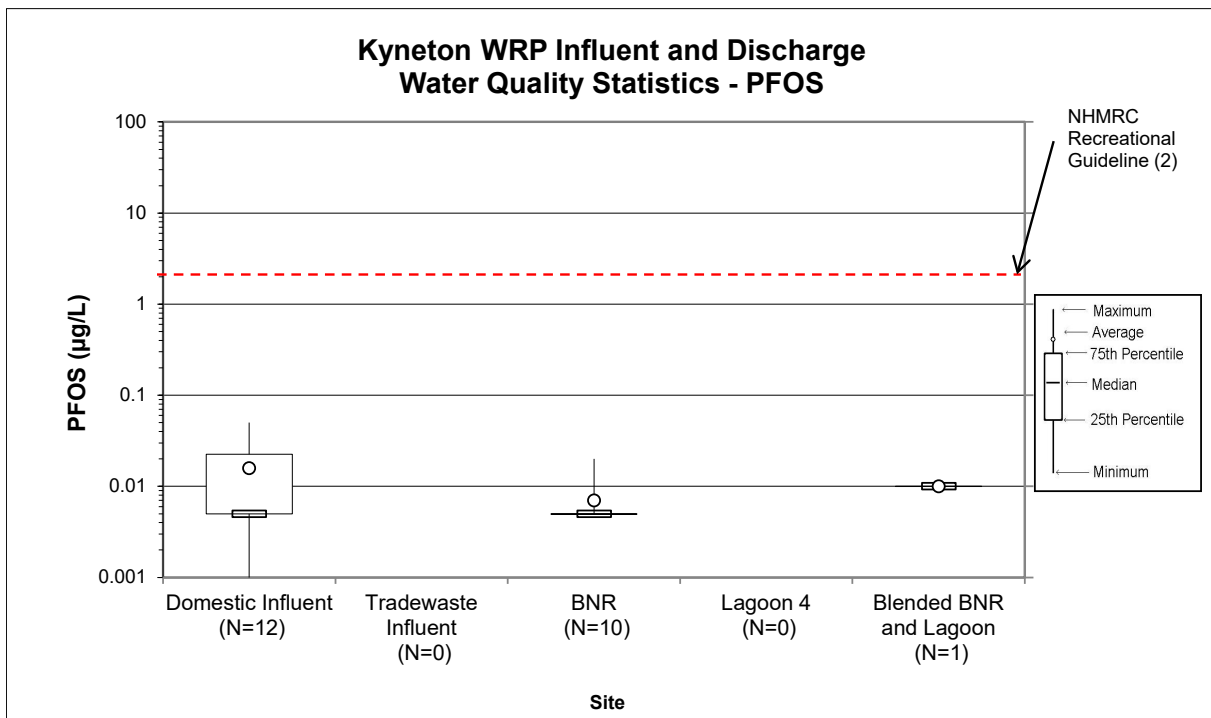


Figure 39 PFOS statistics – Kyneton WRP

**Table 24 PFOS statistics– Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	0.050	#NUM!	0.020	#NUM!	0.010
90th percentile	0.048	#NUM!	0.011	#NUM!	0.010
75th percentile	0.023	#NUM!	0.005	#NUM!	0.010
Median	0.005	#NUM!	0.005	#NUM!	0.010
25th percentile	0.005	#NUM!	0.005	#NUM!	0.010
10th percentile	0.005	#NUM!	0.005	#NUM!	0.010
Minimum	0.001	#NUM!	0.005	#NUM!	0.010
Average	0.016	#DIV/0!	0.007	#DIV/0!	0.010
Number	12	0	10	0	1

# 3.11 pH

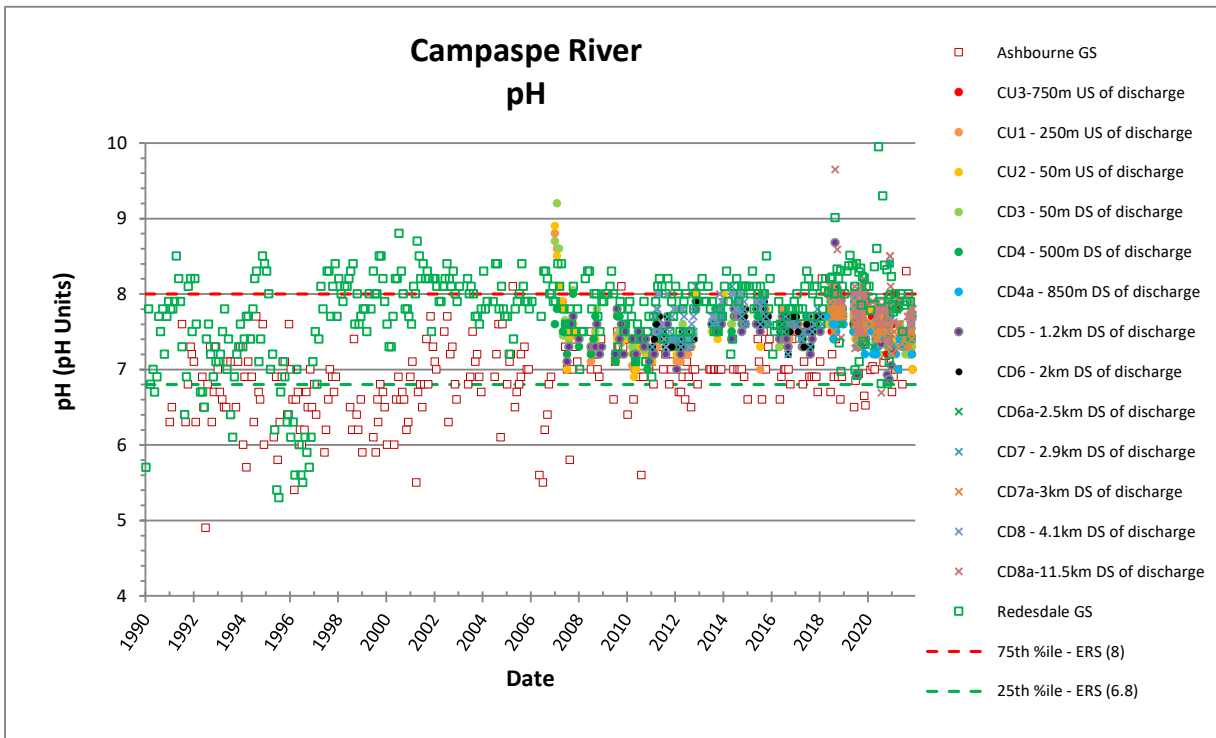


Figure 40 pH data – Campaspe River

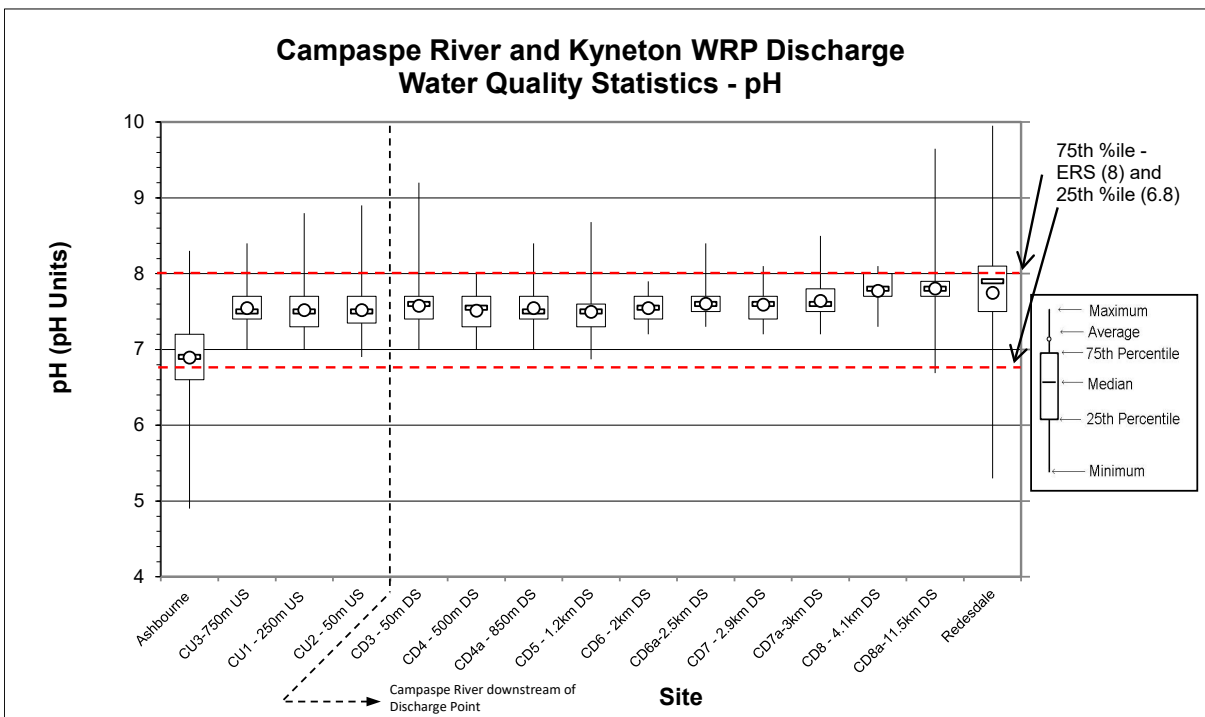
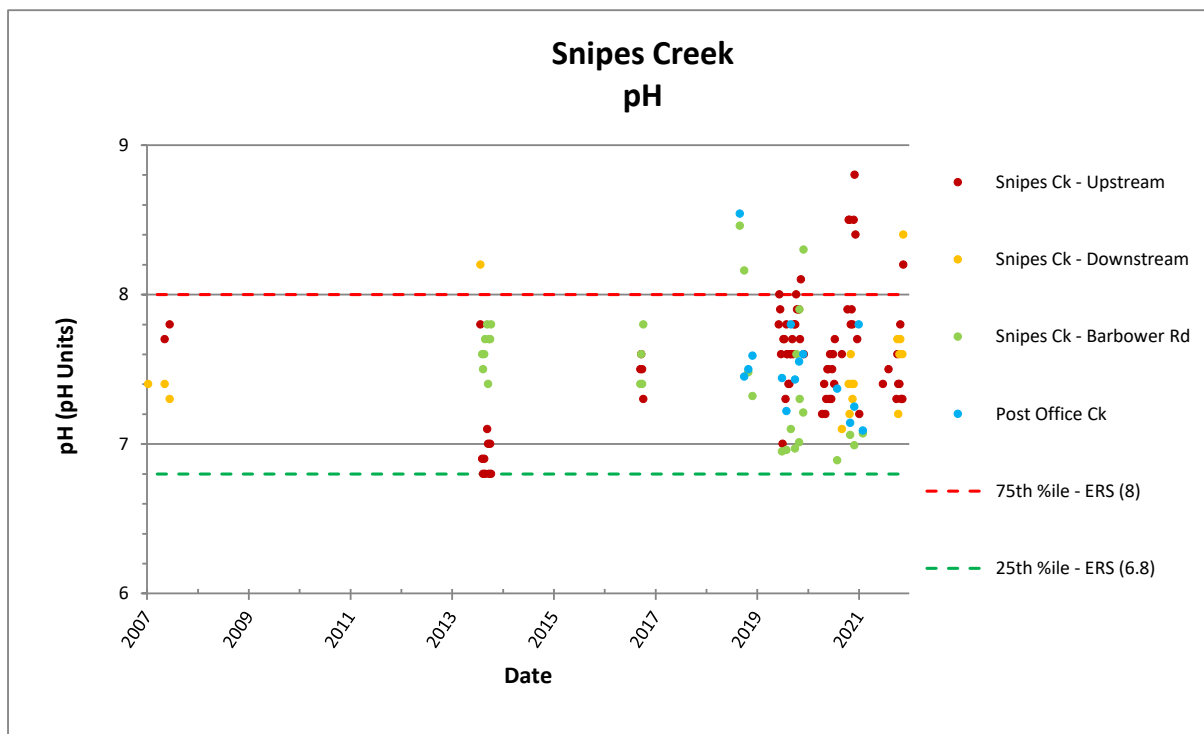


Figure 41 pH statistics – Campaspe River

**Table 25** pH statistics – Campaspe River

	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale
Maximum	8.3	8.4	8.8	8.9	9.2	8.0	8.4	8.7	7.9	8.4	8.1	8.5	8.1	9.7	10.0
90th percentile	7.5	8.0	7.8	7.8	7.8	7.8	7.8	7.7	7.7	7.8	7.9	7.8	8.0	8.0	8.3
75th percentile	7.2	7.7	7.7	7.7	7.7	7.7	7.7	7.6	7.7	7.7	7.7	7.8	8.0	7.9	8.1
Median	6.9	7.5	7.5	7.5	7.6	7.6	7.5	7.5	7.6	7.6	7.6	7.6	7.8	7.8	7.9
25th percentile	6.6	7.4	7.3	7.4	7.4	7.3	7.4	7.3	7.4	7.5	7.4	7.5	7.7	7.7	7.5
10th percentile	6.3	7.3	7.2	7.2	7.3	7.3	7.3	7.2	7.3	7.4	7.3	7.4	7.5	7.5	7.0
Minimum	4.9	7.0	7.0	6.9	7.0	7.0	7.0	6.9	7.2	7.3	7.2	7.2	7.3	6.7	5.3
Average	6.9	7.5	7.5	7.5	7.6	7.5	7.5	7.5	7.5	7.6	7.6	7.6	7.8	7.8	7.7
Number	273	46	102	191	177	80	99	129	52	43	63	97	40	90	386



**Figure 42** pH data – Snipes Creek and Post Office Creek

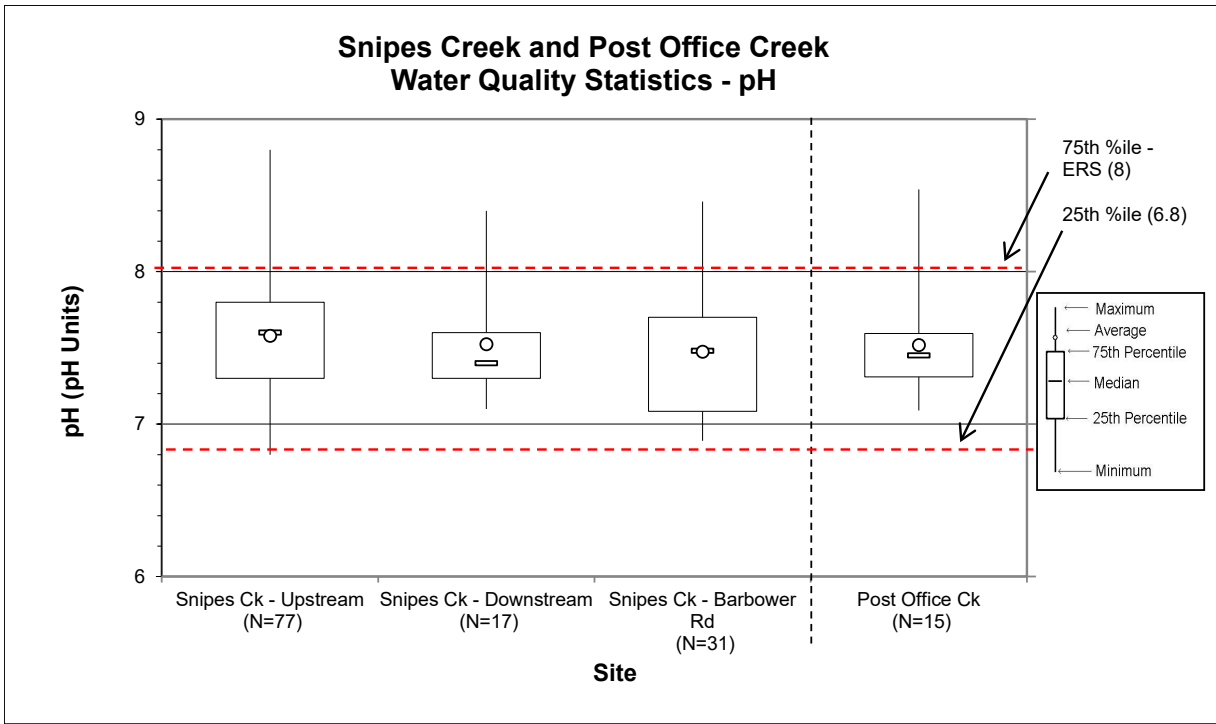


Figure 43 pH statistics – Snipes Creek and Post Office Creek

Table 26 pH statistics – – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	8.8	8.4	8.5	8.5
90th percentile	8.0	7.9	7.9	7.8
75th percentile	7.8	7.6	7.7	7.6
Median	7.6	7.4	7.5	7.5
25th percentile	7.3	7.3	7.1	7.3
10th percentile	7.0	7.2	7.0	7.2
Minimum	6.8	7.1	6.9	7.1
Average	7.6	7.5	7.5	7.5
Number	77	17	31	15



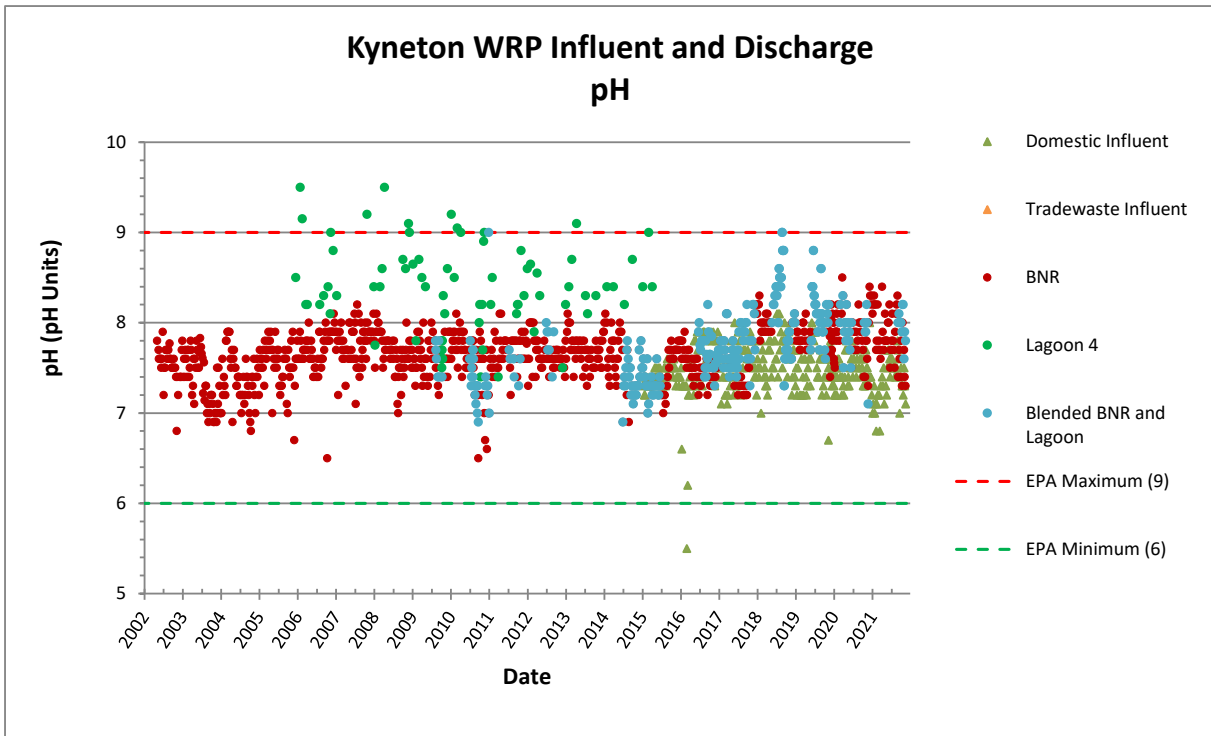


Figure 44 pH data – Kyneton WRP

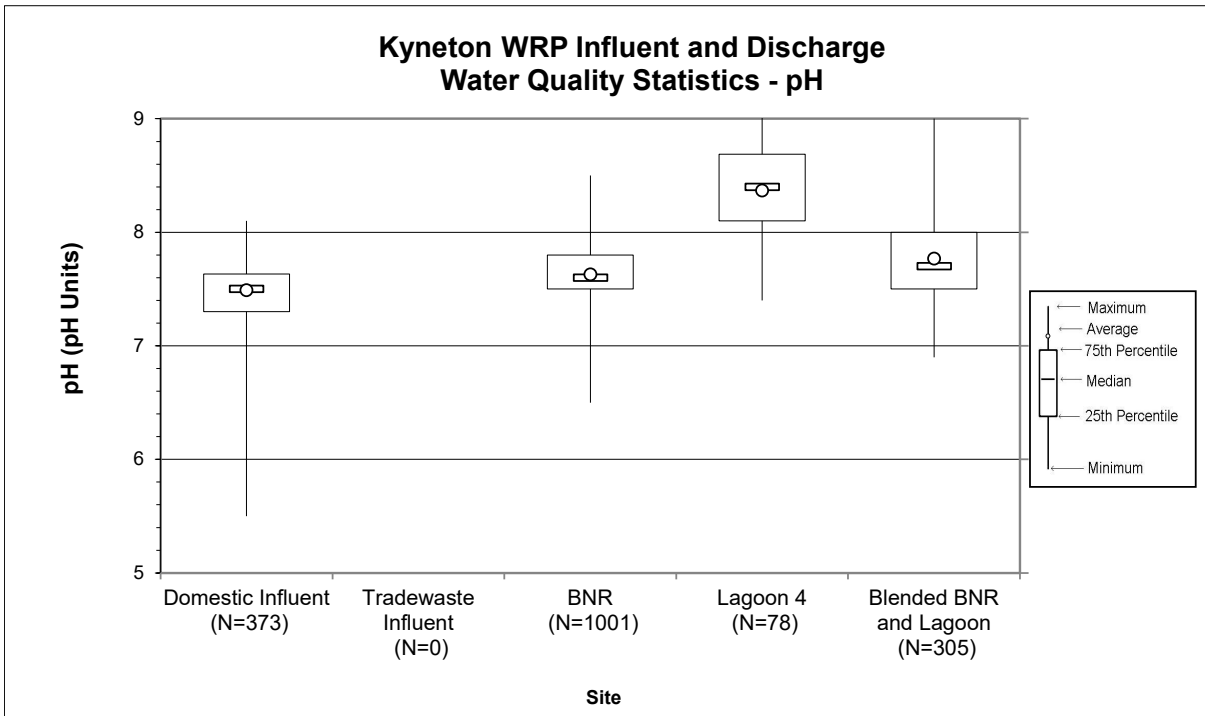
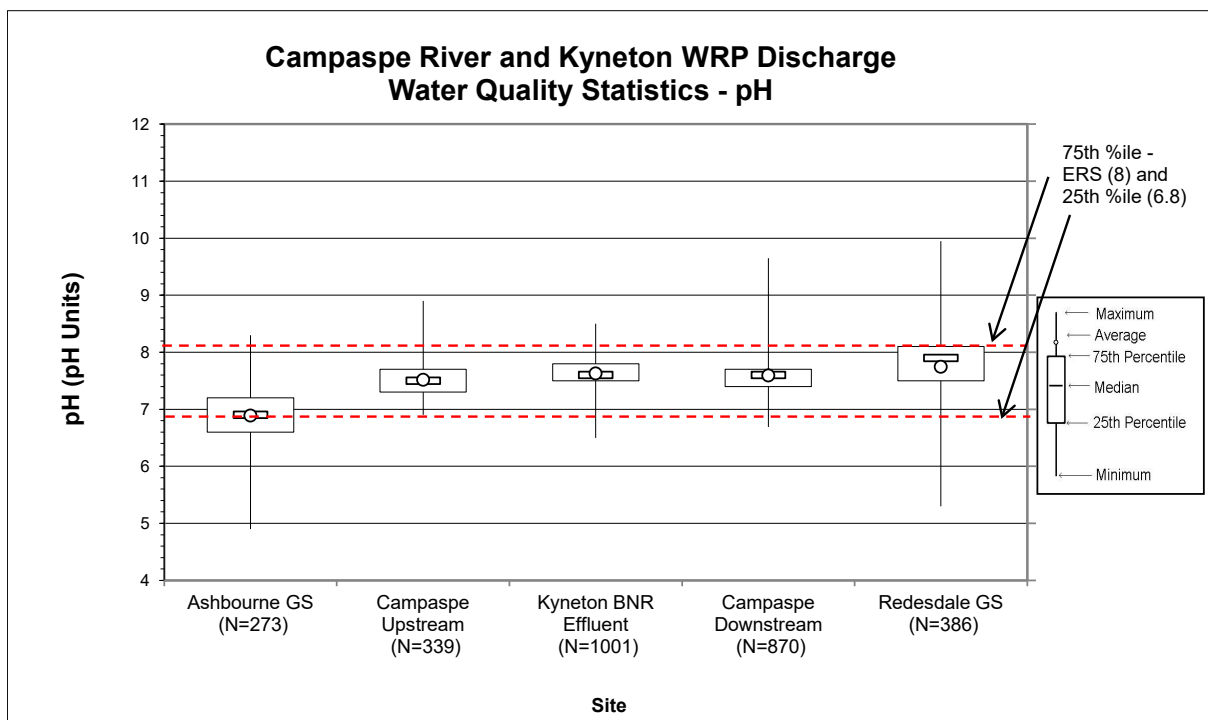


Figure 45 pH statistics – Kyneton WRP

**Table 27** pH statistics – Kyneton WRP

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	8.1		8.5	9.5	9.0
90th percentile	7.8		8.0	9.0	8.3
75th percentile	7.6		7.8	8.7	8.0
Median	7.5		7.6	8.4	7.7
25th percentile	7.3		7.5	8.1	7.5
10th percentile	7.2		7.3	7.6	7.3
Minimum	5.5		6.5	7.4	6.9
Average	7.5		7.6	8.4	7.8
Number	373	0	1001	78	305



**Figure 46** pH statistics – Campaspe River and Kyneton WRP

**Table 28** pH statistics – Campaspe River and Kyneton WRP

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum	8.3	8.9	8.5	9.7	10.0
90th percentile	7.5	7.8	8.0	7.9	8.3
75th percentile	7.2	7.7	7.8	7.7	8.1
Median	6.9	7.5	7.6	7.6	7.9
25th percentile	6.6	7.3	7.5	7.4	7.5
10th percentile	6.3	7.2	7.3	7.3	7.0
Minimum	4.9	6.9	6.5	6.7	5.3
Average	6.9	7.5	7.6	7.6	7.7
Number	273	339	1001	870	386

### 3.12 Suspended Solids

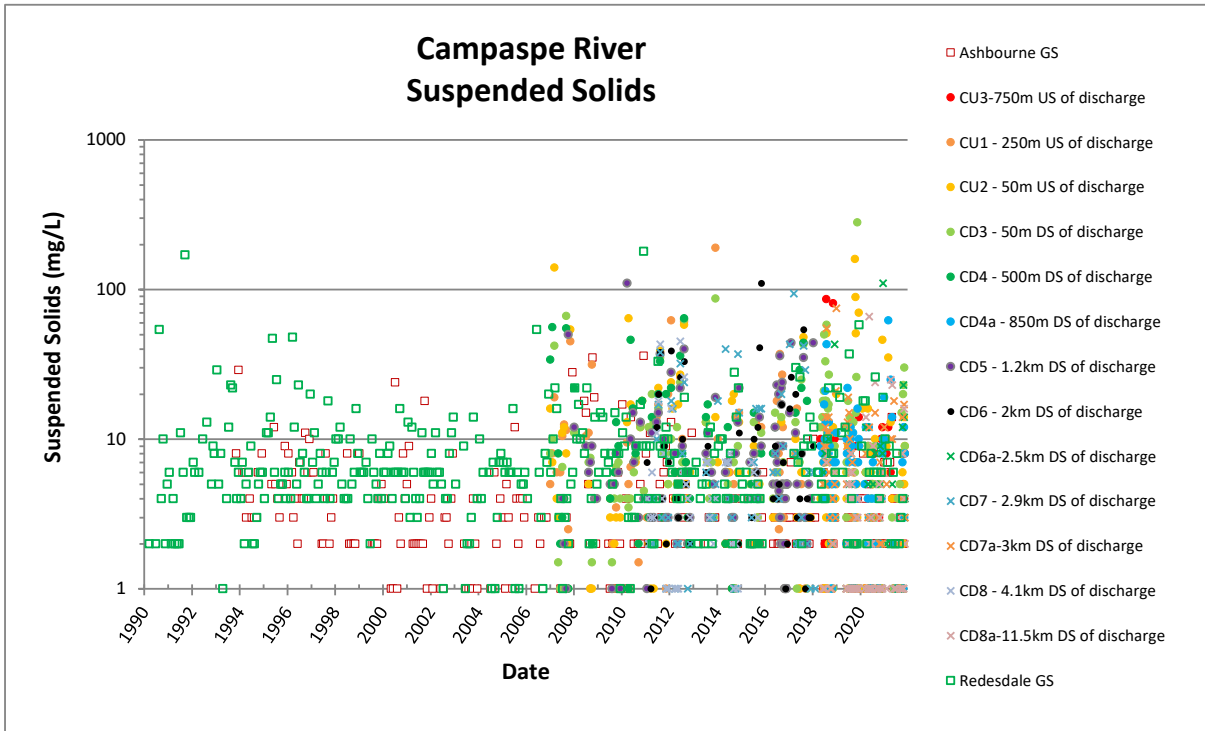


Figure 47 Suspended solids data – Campaspe River

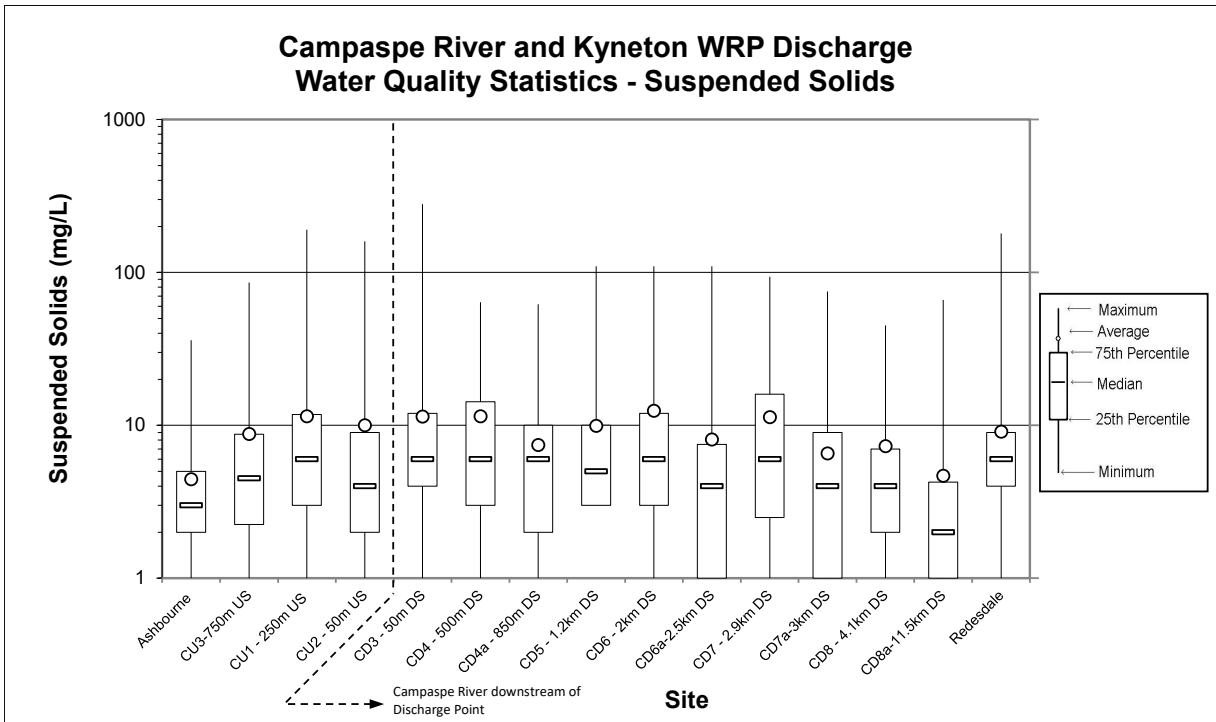
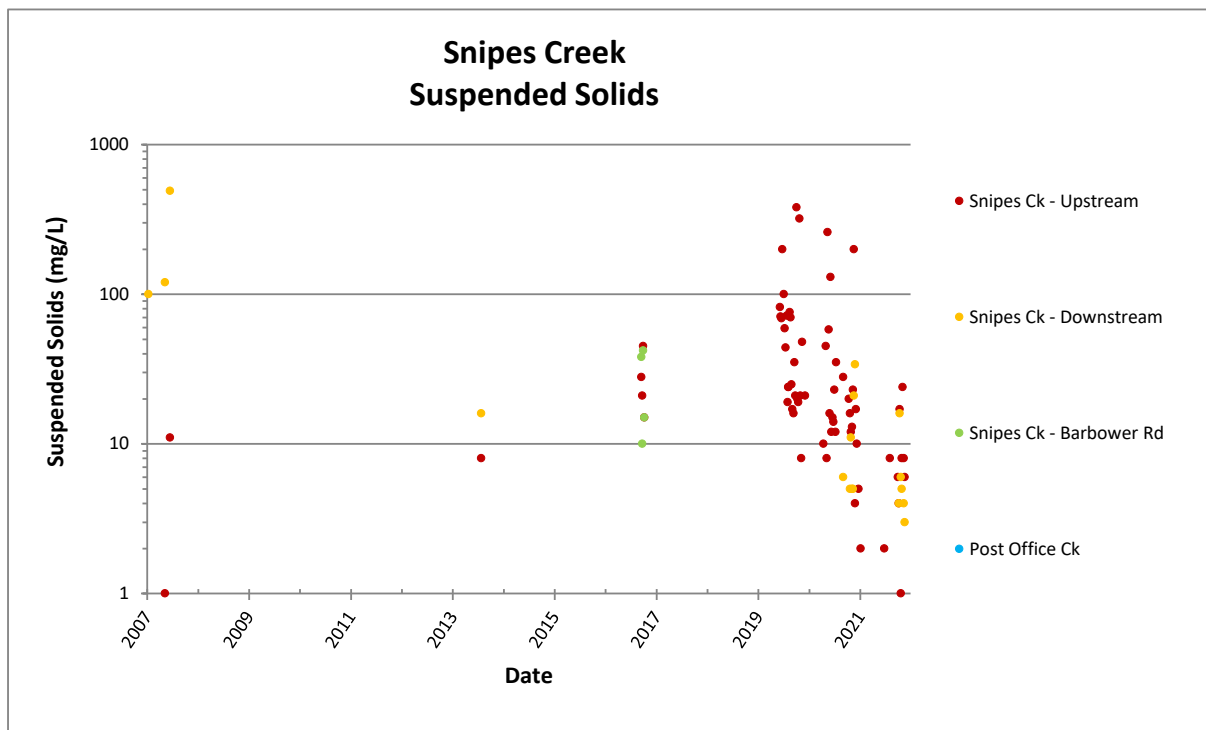


Figure 48 Suspended solids statistics – Campaspe River

**Table 29** *Suspended solids statistics – Campaspe River*

	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale
Maximum	36	86	190	160	280	64	62	110	110	110	94	75	45	66	180
90th percentile	8	12	20	18	20	29	13	22	32	12	31	14	16	8	16
75th percentile	5	9	12	9	12	14	10	10	12	8	16	9	7	4	9
Median	3	5	6	4	6	6	6	5	6	4	6	4	4	2	6
25th percentile	2	2	3	2	4	3	2	3	3	1	3	1	2	1	4
10th percentile	2	1	3	1	1	2	1	2	2	1	1	1	1	1	2
Minimum	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1
Average	4	9	11	10	11	11	7	10	12	8	11	7	7	5	9
Number	248	46	103	191	177	80	99	117	52	43	63	97	40	76	347



**Figure 49** *Suspended solids data – Snipes Creek and Post Office Creek*

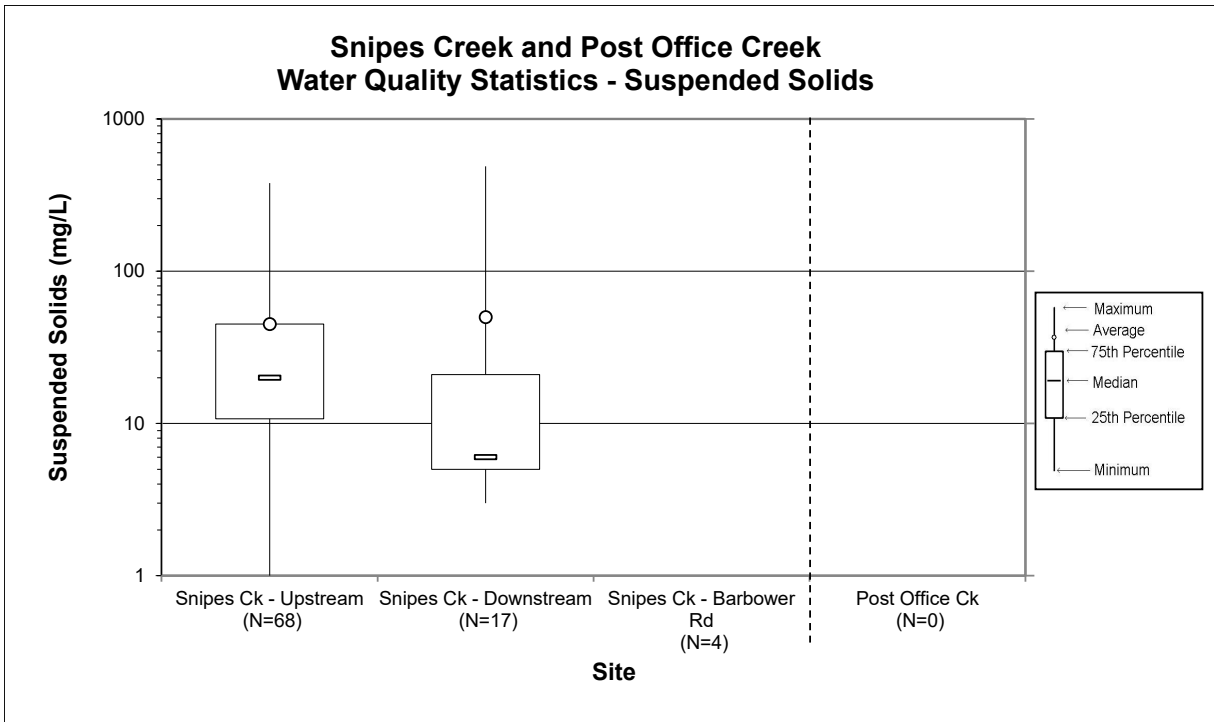


Figure 50 Suspended solids statistics – Snipes Creek and Post Office Creek

Table 30 Suspended solids statistics – – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	380	490	42	
90th percentile	87	108	41	
75th percentile	45	21	39	
Median	20	6	27	
25th percentile	11	5	14	
10th percentile	6	4	12	
Minimum	1	3	10	
Average	45	50	26	
Number	68	17	4	0

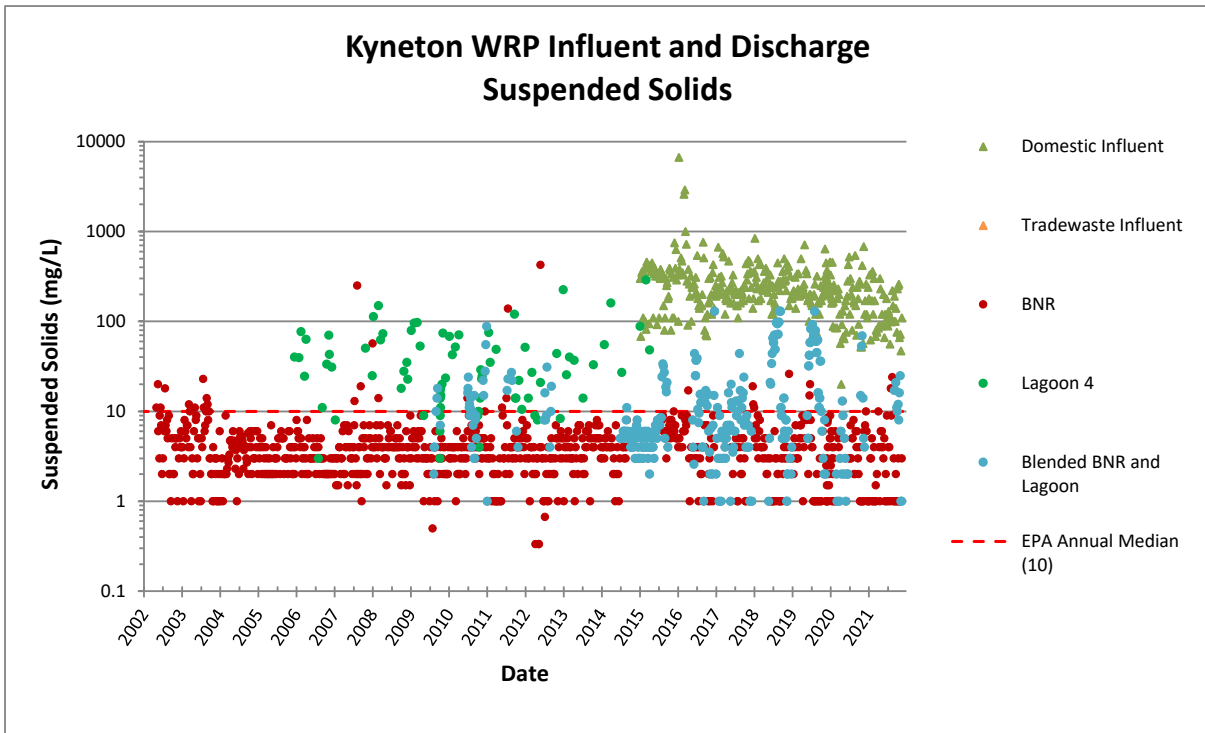


Figure 51 Suspended solids data – Kyneton WRP

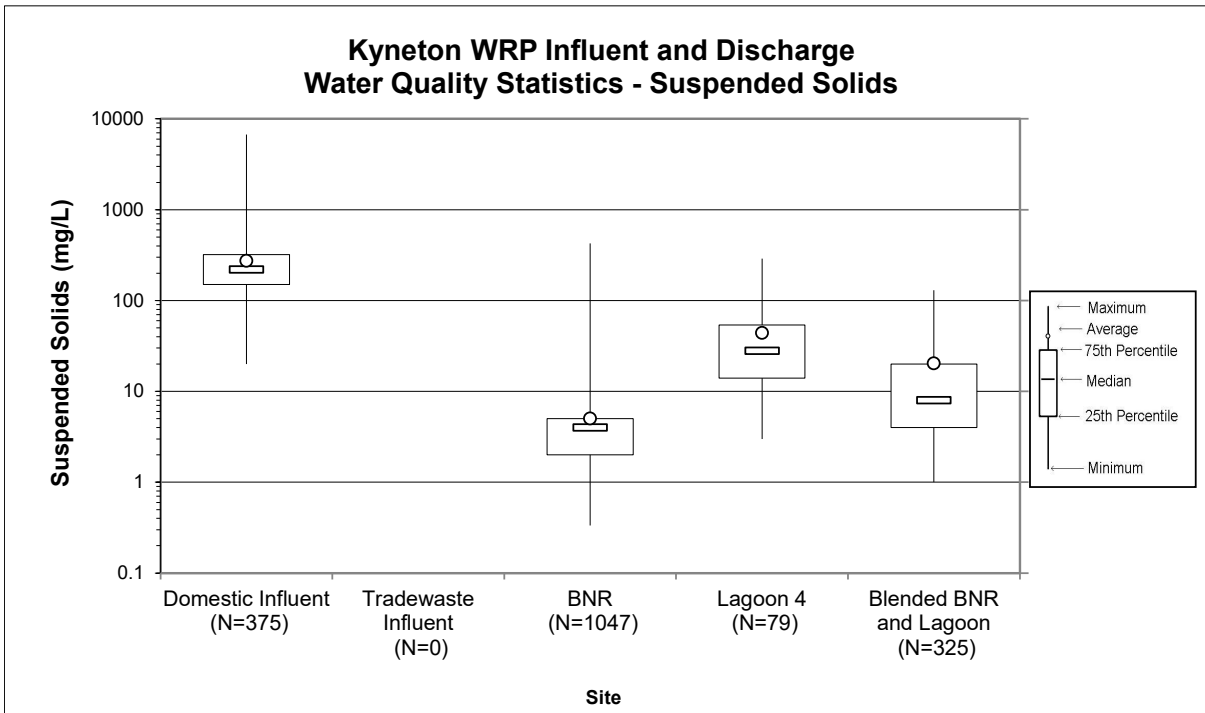
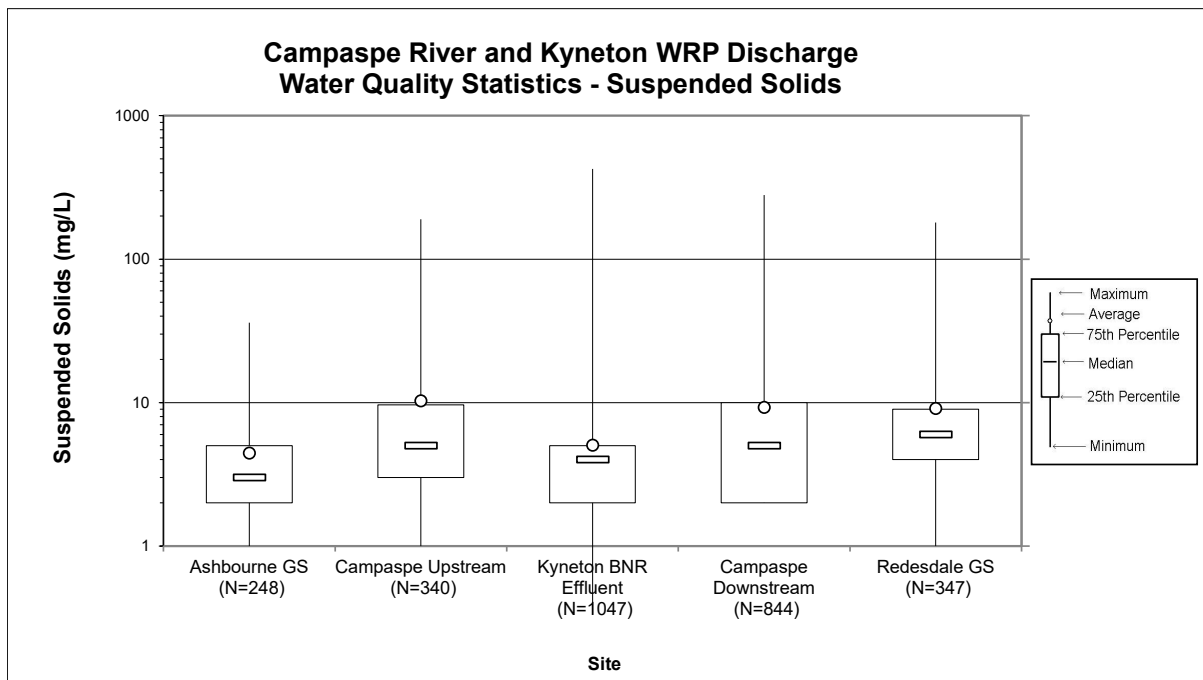


Figure 52 Suspended solids statistics – Kyneton WRP

**Table 31** *Suspended solids statistics – Kyneton WRP*

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	6700		426	290	130
90th percentile	430		7	90	65
75th percentile	320		5	54	20
Median	220		4	28	8
25th percentile	150		2	14	4
10th percentile	91		1	9	2
Minimum	20		0	3	1
Average	275		5	44	20
Number	375	0	1047	79	325



**Figure 53** *Suspended solids statistics – Campaspe River and Kyneton WRP*

**Table 32** *Suspended solids statistics – Campaspe River and Kyneton WRP*

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum	36	190	426	280	180
90th percentile	8	18	7	20	16
75th percentile	5	10	5	10	9
Median	3	5	4	5	6
25th percentile	2	3	2	2	4
10th percentile	2	1	1	1	2
Minimum	1	1	0	0	1
Average	4	10	5	9	9
Number	248	340	1047	844	347

### 3.13 Temperature

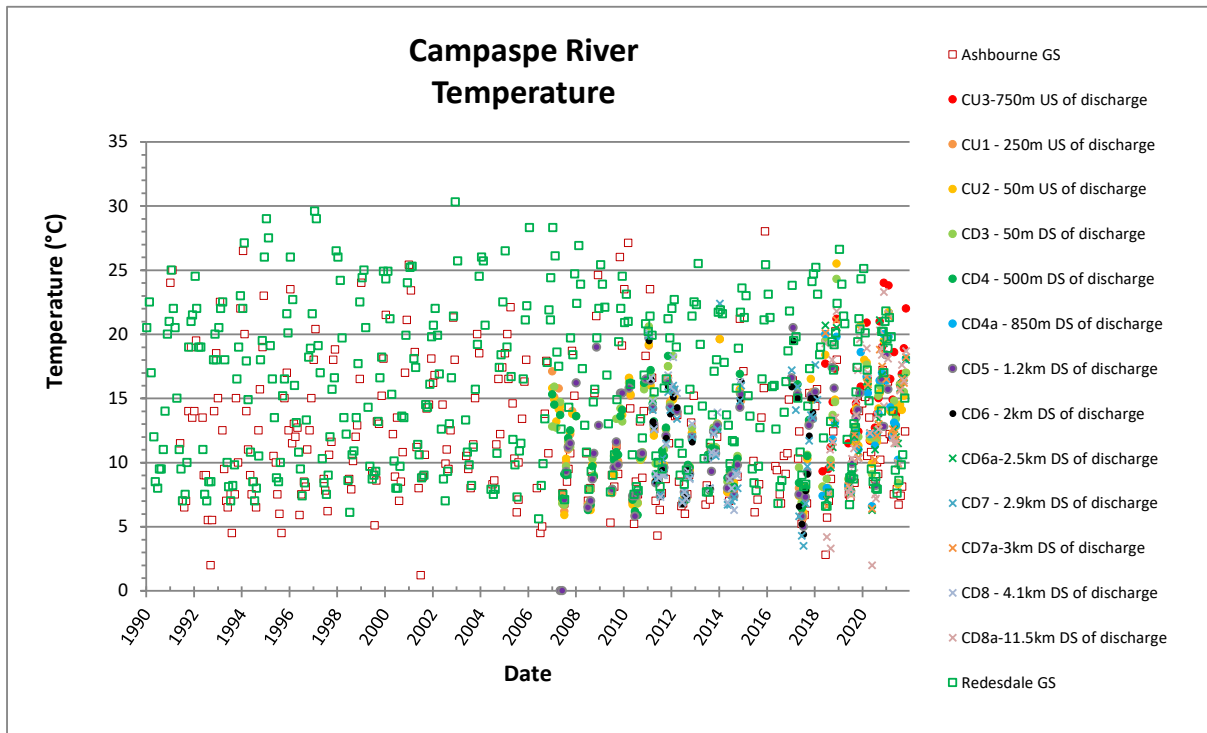


Figure 54 Temperature data – Campaspe River

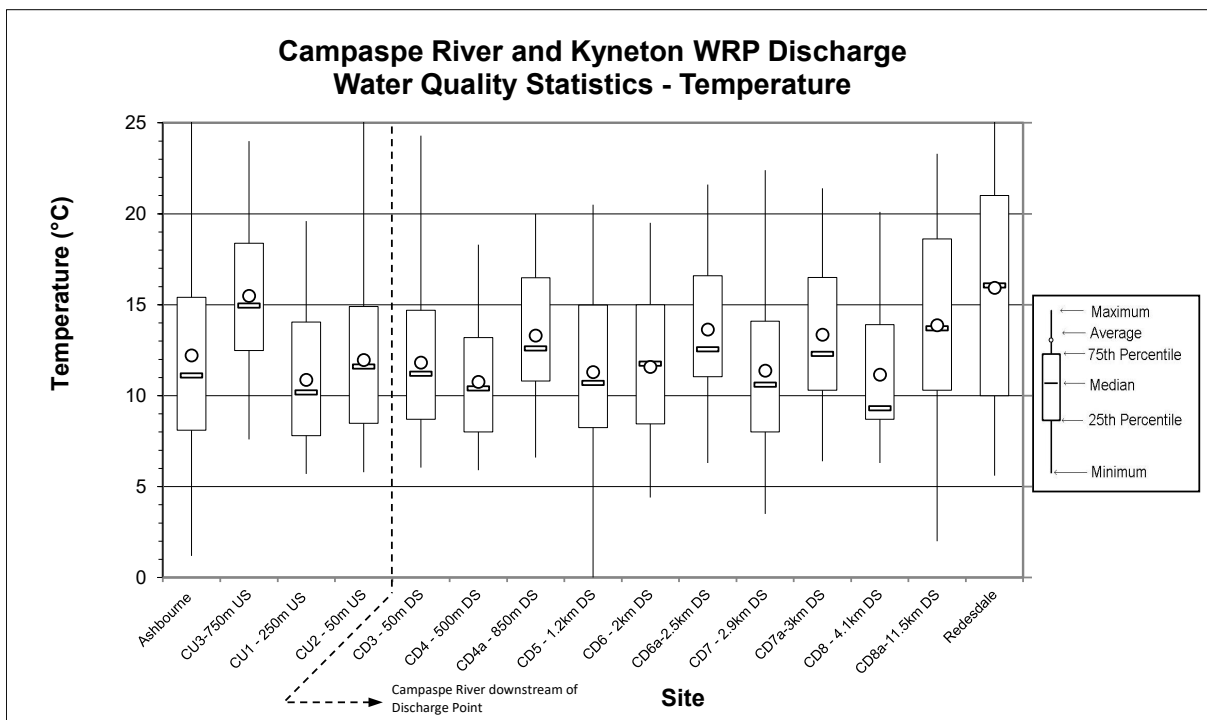
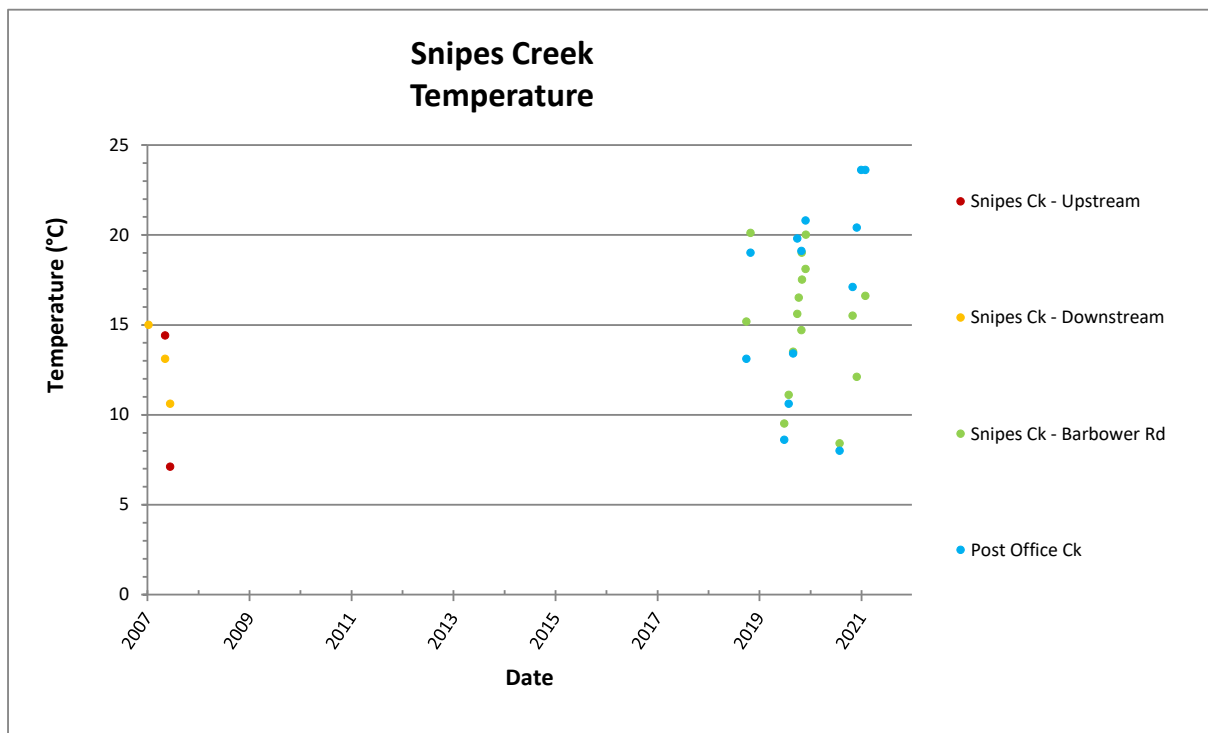


Figure 55 Temperature statistics – Campaspe River



**Table 33** Temperature statistics – Campaspe River

	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale
Maximum	28.0	24.0	19.6	25.5	24.3	18.3	20.0	20.5	19.5	21.6	22.4	21.4	20.1	23.3	30.3
90th percentile	19.3	21.1	15.7	16.7	16.3	15.9	19.7	16.3	16.1	20.5	16.1	18.8	16.5	20.0	24.3
75th percentile	15.4	18.4	14.1	14.9	14.7	13.2	16.5	15.0	15.0	16.6	14.1	16.5	13.9	18.6	21.0
Median	11.1	15.0	10.2	11.6	11.2	10.4	12.6	10.7	11.8	12.6	10.6	12.3	9.3	13.7	16.1
25th percentile	8.1	12.5	7.8	8.5	8.7	8.0	10.8	8.3	8.5	11.1	8.0	10.3	8.7	10.3	10.0
10th percentile	6.7	10.0	6.9	7.2	7.5	6.9	7.8	7.2	7.1	7.6	6.8	7.5	7.2	7.5	8.1
Minimum	1.2	7.6	5.7	5.8	6.1	5.9	6.6	0.0	4.4	6.3	3.5	6.4	6.3	2.0	5.6
Average	12.2	15.5	10.9	12.0	11.8	10.8	13.3	11.3	11.6	13.6	11.4	13.4	11.2	13.9	15.9
Number	276	34	68	108	97	65	32	86	36	30	49	31	33	46	386



**Figure 56** Temperature data – Snipes Creek and Post Office Creek

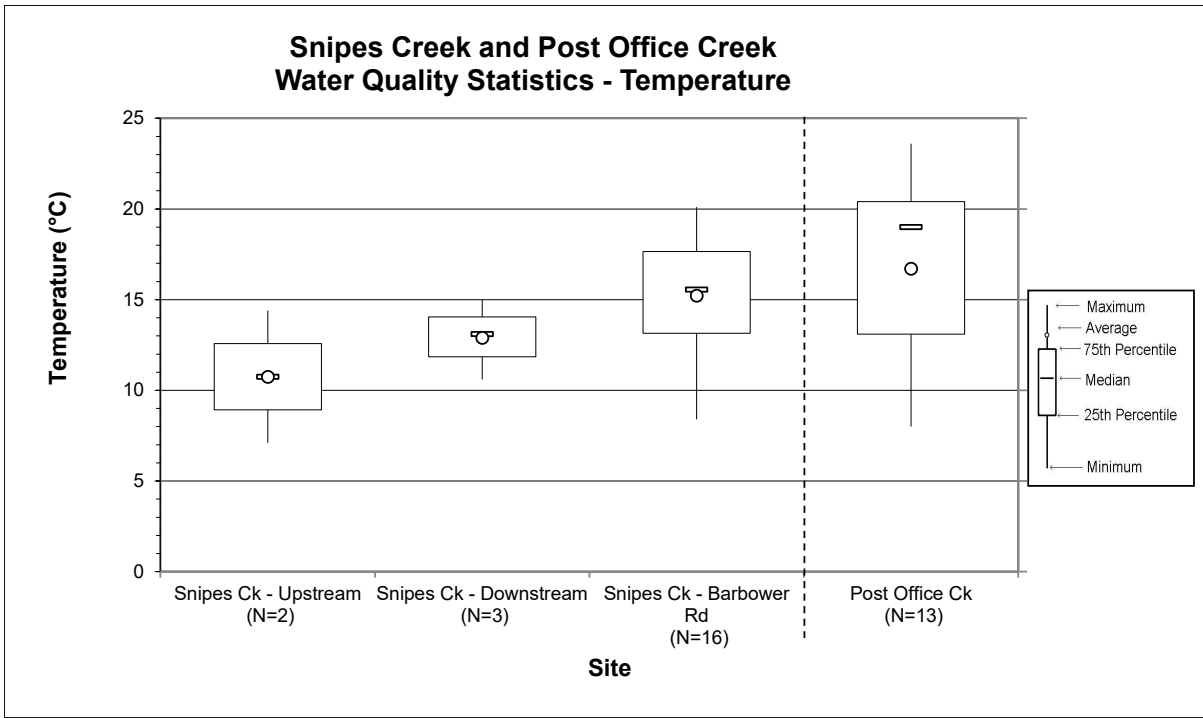


Figure 57 Temperature statistics – Snipes Creek and Post Office Creek

Table 34 Temperature statistics – – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	14.4	15.0	20.1	23.6
90th percentile	13.7	14.6	19.5	23.0
75th percentile	12.6	14.1	17.7	20.4
Median	10.8	13.1	15.6	19.0
25th percentile	8.9	11.9	13.2	13.1
10th percentile	7.8	11.1	10.3	9.0
Minimum	7.1	10.6	8.4	8.0
Average	10.8	12.9	15.2	16.7
Number	2	3	16	13

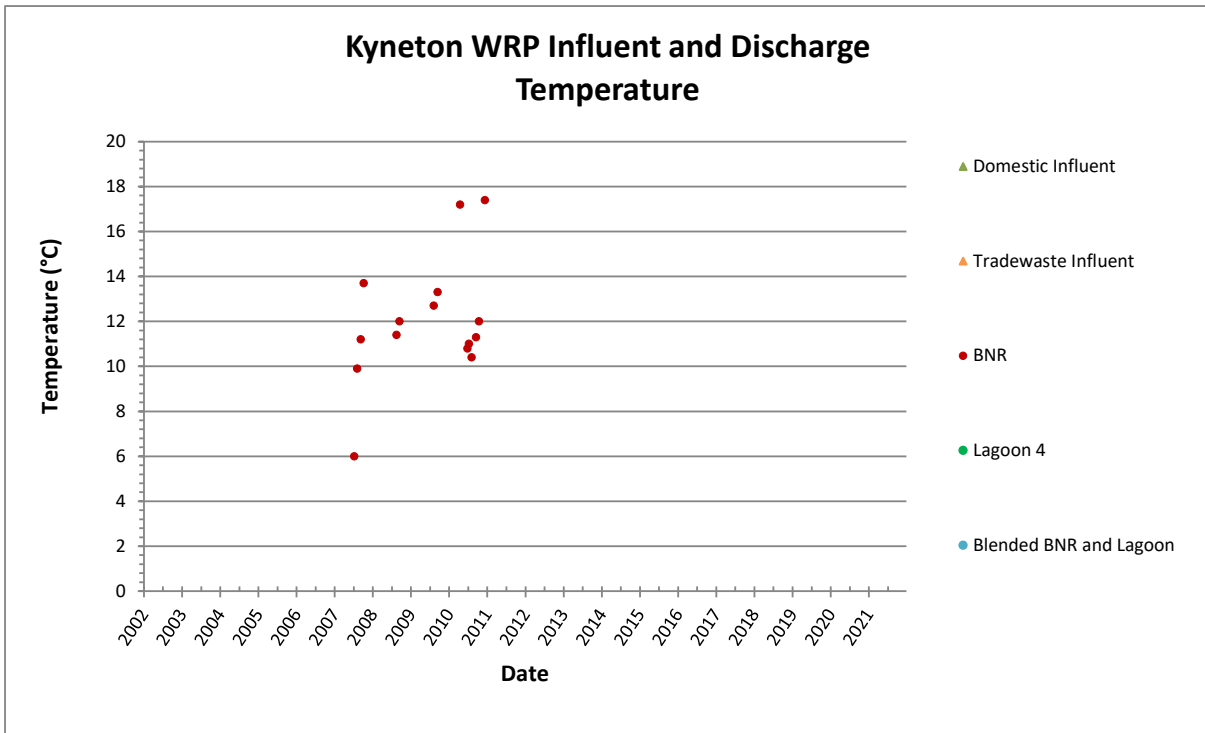


Figure 58 Temperature data – Kyneton WRP

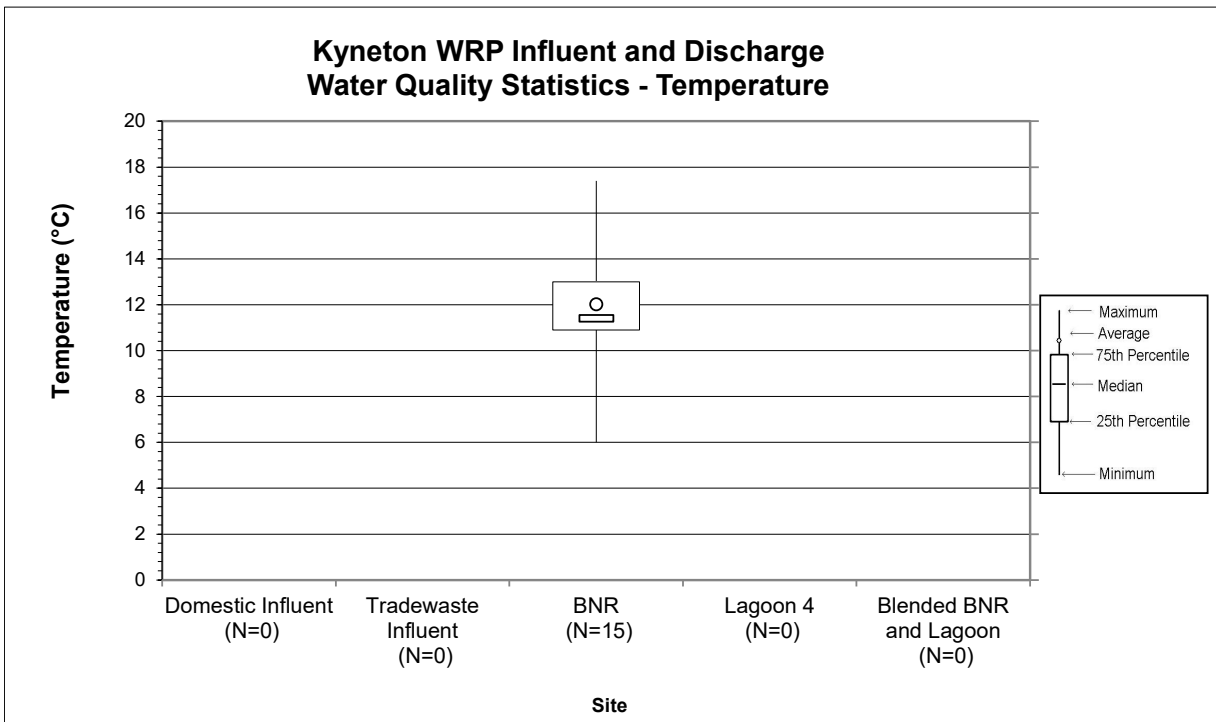


Figure 59 Temperature statistics – Kyneton WRP

Table 35 Temperature statistics – Kyneton WRP

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum			17.4		
90th percentile			15.8		

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
75th percentile			13.0		
Median			11.4		
25th percentile			10.9		
10th percentile			10.1		
Minimum			6.0		
Average			12.0		
Number	0	0	15	0	0

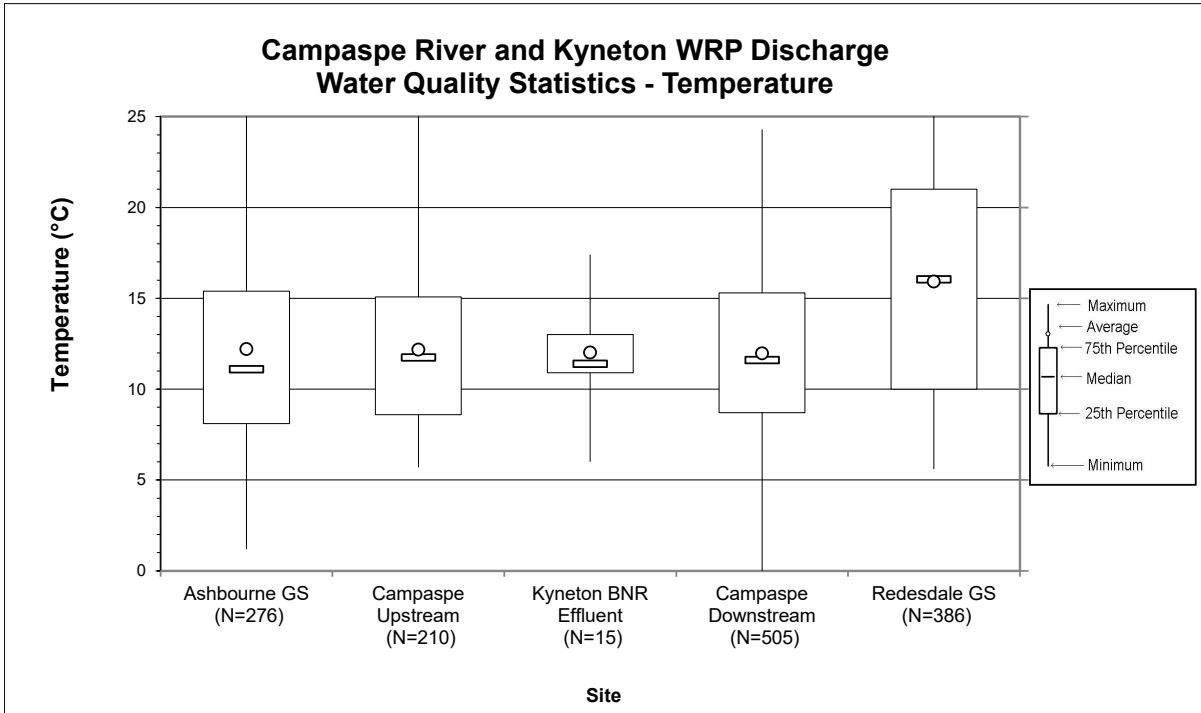


Figure 60 Temperature statistics – Campaspe River and Kyneton WRP

Table 36 Temperature statistics – Campaspe River and Kyneton WRP

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum	28.0	25.5	17.4	24.3	30.3
90th percentile	19.3	17.5	15.8	17.5	24.3
75th percentile	15.4	15.1	13.0	15.3	21.0
Median	11.1	11.8	11.4	11.6	16.1
25th percentile	8.1	8.6	10.9	8.7	10.0
10th percentile	6.7	7.1	10.1	7.2	8.1
Minimum	1.2	5.7	6.0	0.0	5.6
Average	12.2	12.2	12.0	12.0	15.9
Number	276	210	15	505	386

### 3.14 Total Dissolved Solids

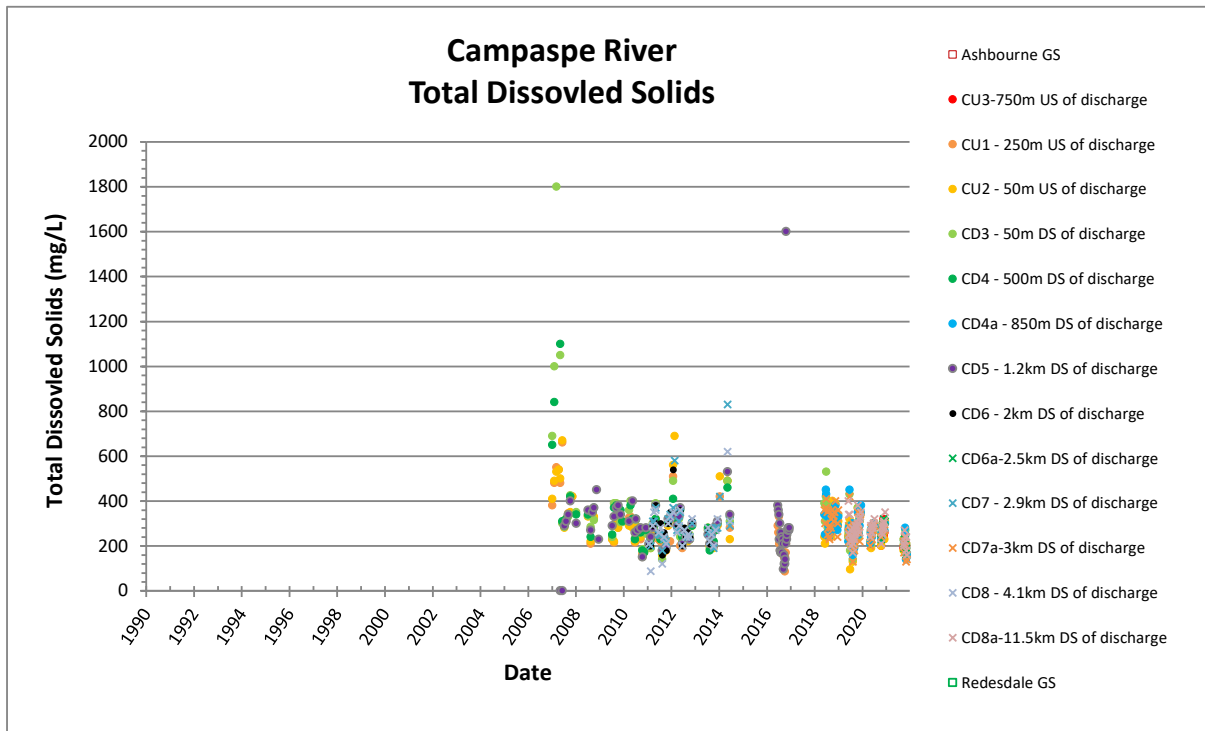


Figure 61 Total dissolved solids data – Campaspe River

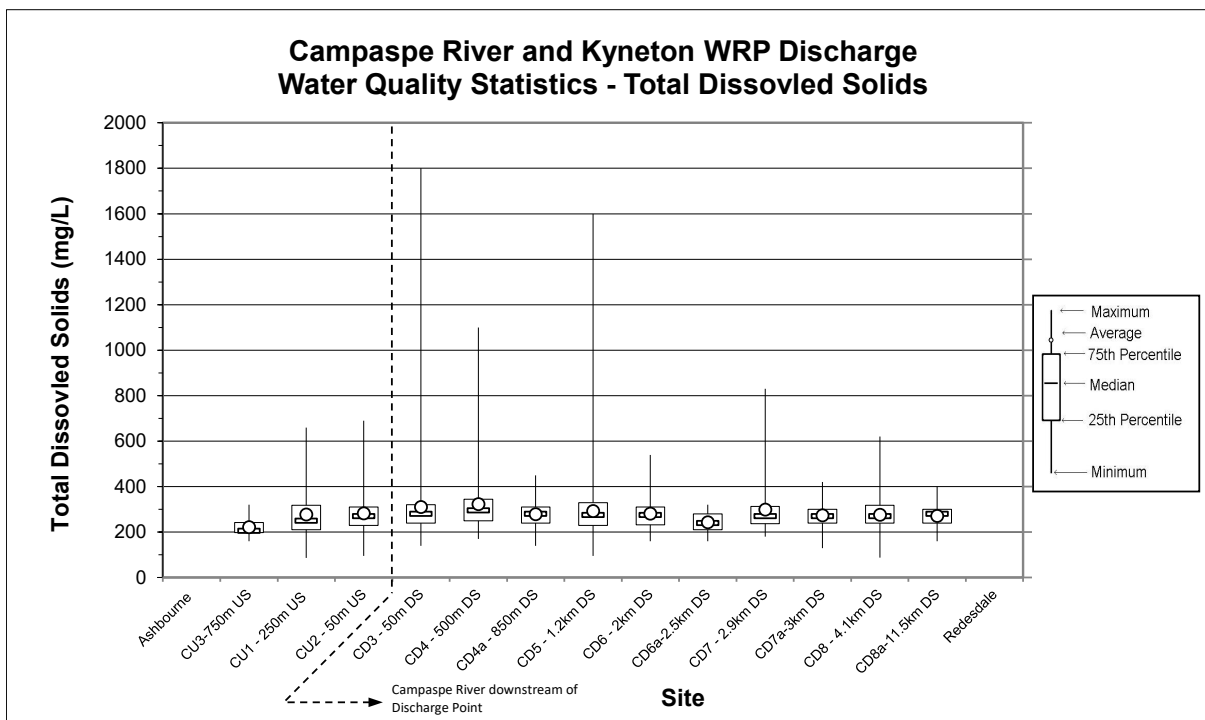
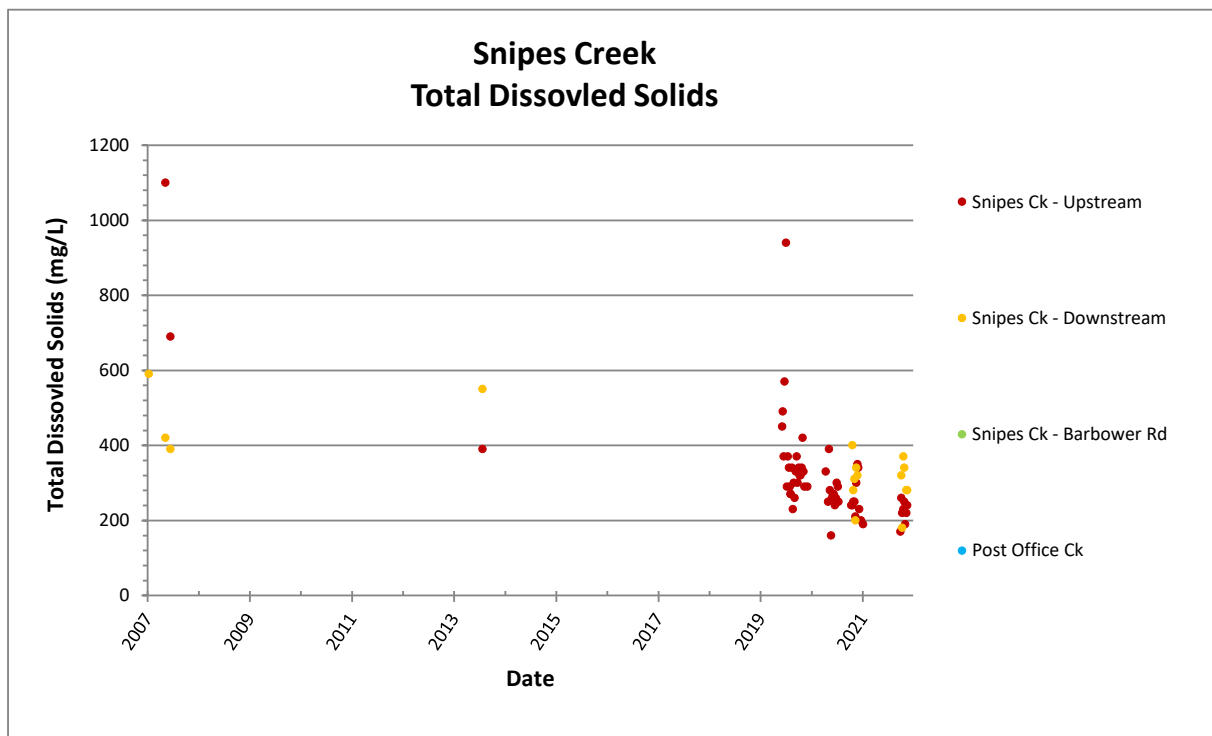


Figure 62 Total dissolved solids statistics – Campaspe River

**Table 37** Total dissolved solids statistics – Campaspe River

	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale
Maximum		320	660	690	1800	1100	450	1600	540	320	830	420	620	400	
90th percentile		270	420	372	390	395	340	371	360	304	370	356	351	336	
75th percentile		243	318	310	320	345	310	330	310	280	313	300	318	300	
Median		205	250	270	280	295	280	275	275	240	270	270	270	280	
25th percentile		198	210	230	240	250	240	230	233	210	238	240	240	240	
10th percentile		180	175	198	210	225	216	179	200	178	201	204	200	210	
Minimum		160	86	95	140	170	140	96	160	160	180	130	88	160	
Average		222	277	282	310	323	279	292	281	243	300	273	276	271	
Number	0	16	76	139	132	56	77	80	24	17	32	75	30	55	0



**Figure 63** Total dissolved solids data – Snipes Creek and Post Office Creek

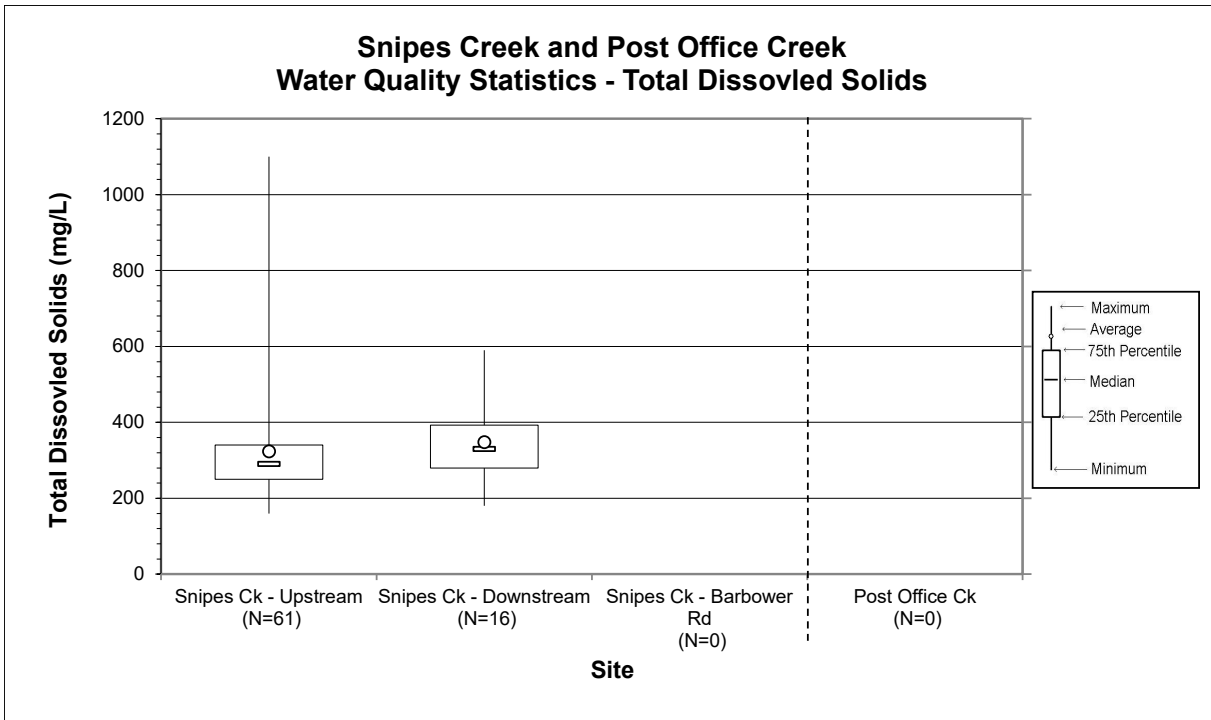


Figure 64 Total dissolved solids statistics – Snipes Creek and Post Office Creek

Table 38 Total dissolved solids statistics – – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	1100	590		
90th percentile	420	485		
75th percentile	340	393		
Median	290	330		
25th percentile	250	280		
10th percentile	220	240		
Minimum	160	180		
Average	324	348		
Number	61	16	0	0

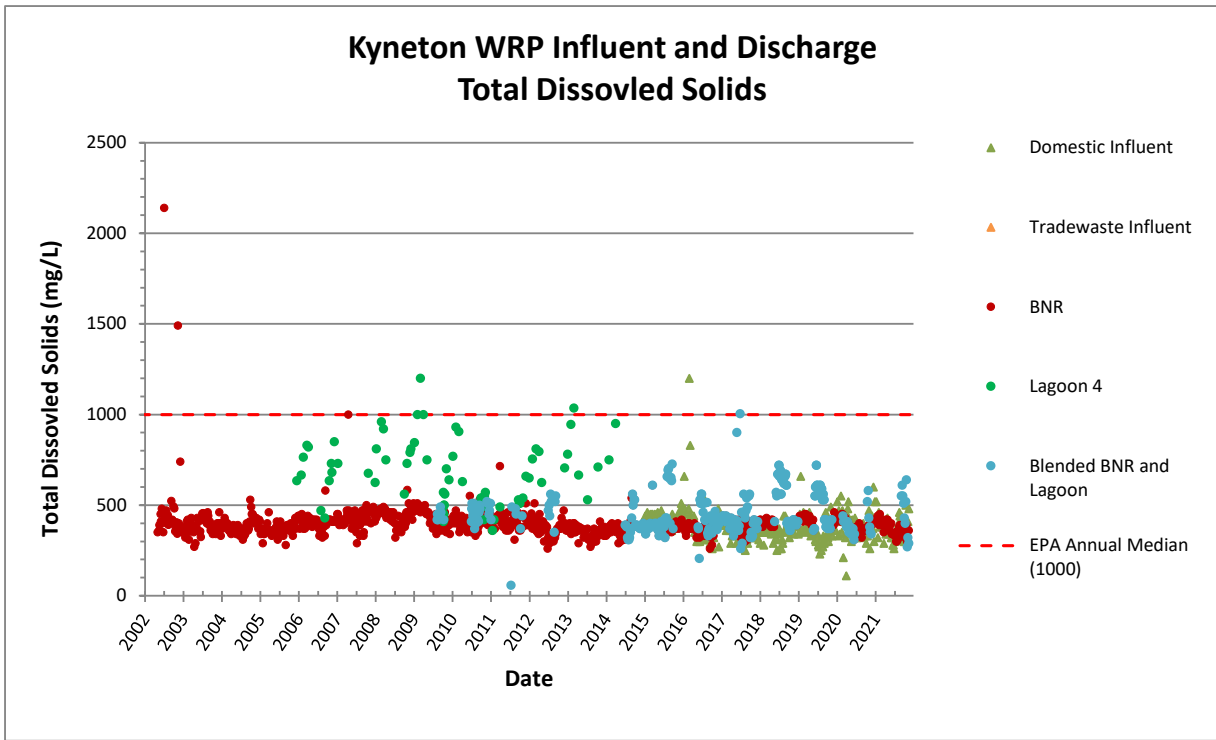


Figure 65 Total dissolved solids data – Kyneton WRP

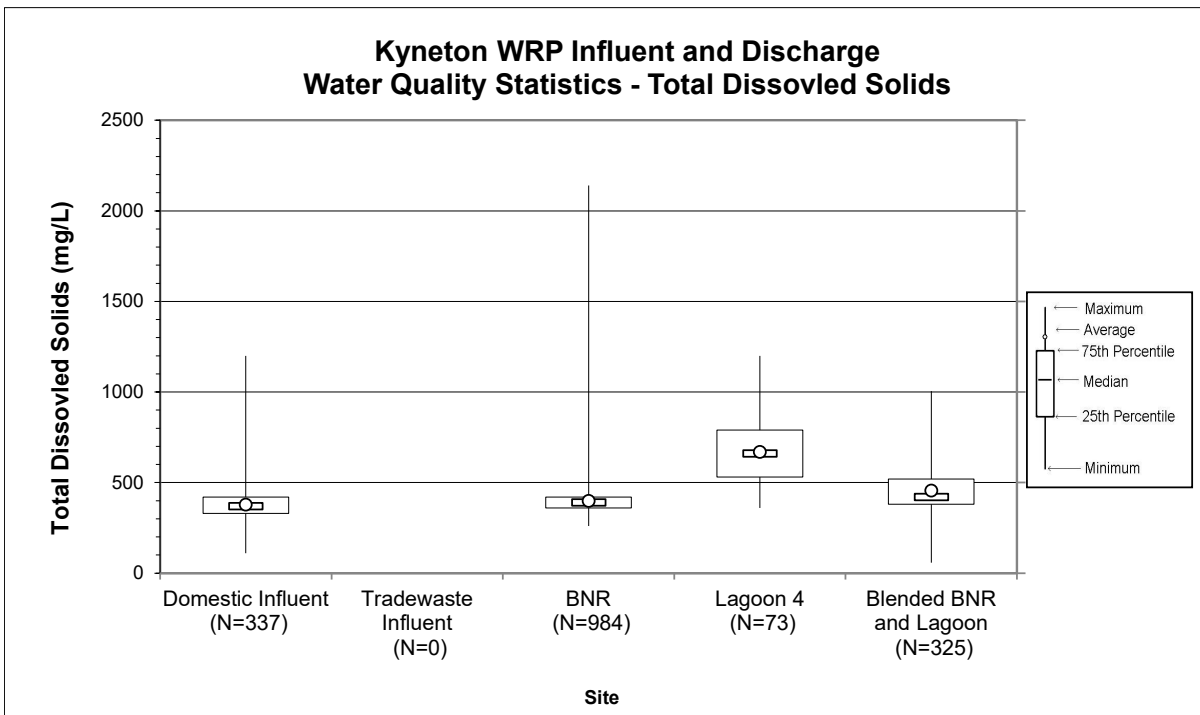
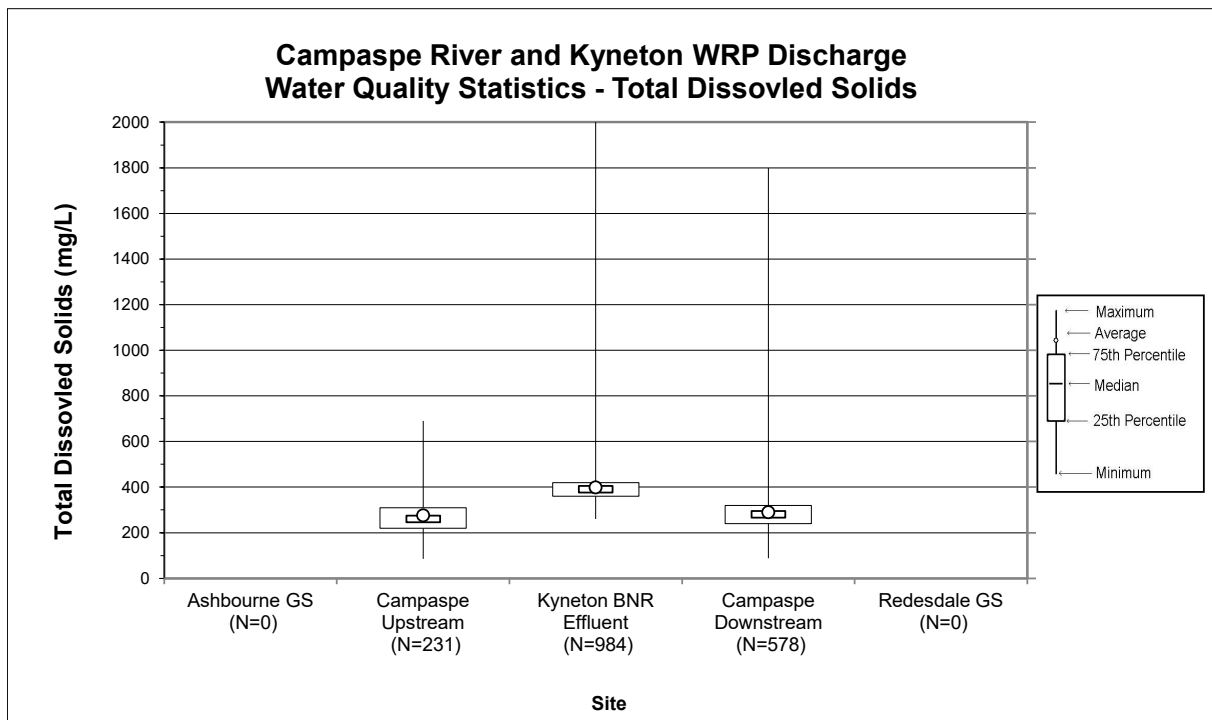


Figure 66 Total dissolved solids statistics – Kyneton WRP



**Table 39** Total dissolved solids statistics – Kyneton WRP

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	1200		2140	1200	1005
90th percentile	460		450	928	610
75th percentile	420		420	790	520
Median	370		390	660	420
25th percentile	330		360	530	380
10th percentile	300		340	450	350
Minimum	110		260	360	58
Average	378		399	670	456
Number	337	0	984	73	325



**Figure 67** Total dissolved solids statistics – Campaspe River and Kyneton WRP

**Table 40** Total dissolved solids statistics – Campaspe River and Kyneton WRP

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum		690	2140	1800	
90th percentile		380	450	370	
75th percentile		310	420	320	
Median		260	390	280	
25th percentile		220	360	240	
10th percentile		190	340	200	
Minimum		86	260	88	
Average		276	399	291	
Number	0	231	984	578	0

### 3.15 Total Organic Carbon

Table 41 Total organic carbon data

Date	BNR
	mg/L
12/6/2012	13

### 3.16 Transmissivity

Table 42 Transmissivity data

Date	BNR
	%
23/02/2012	66

### 3.17 Turbidity

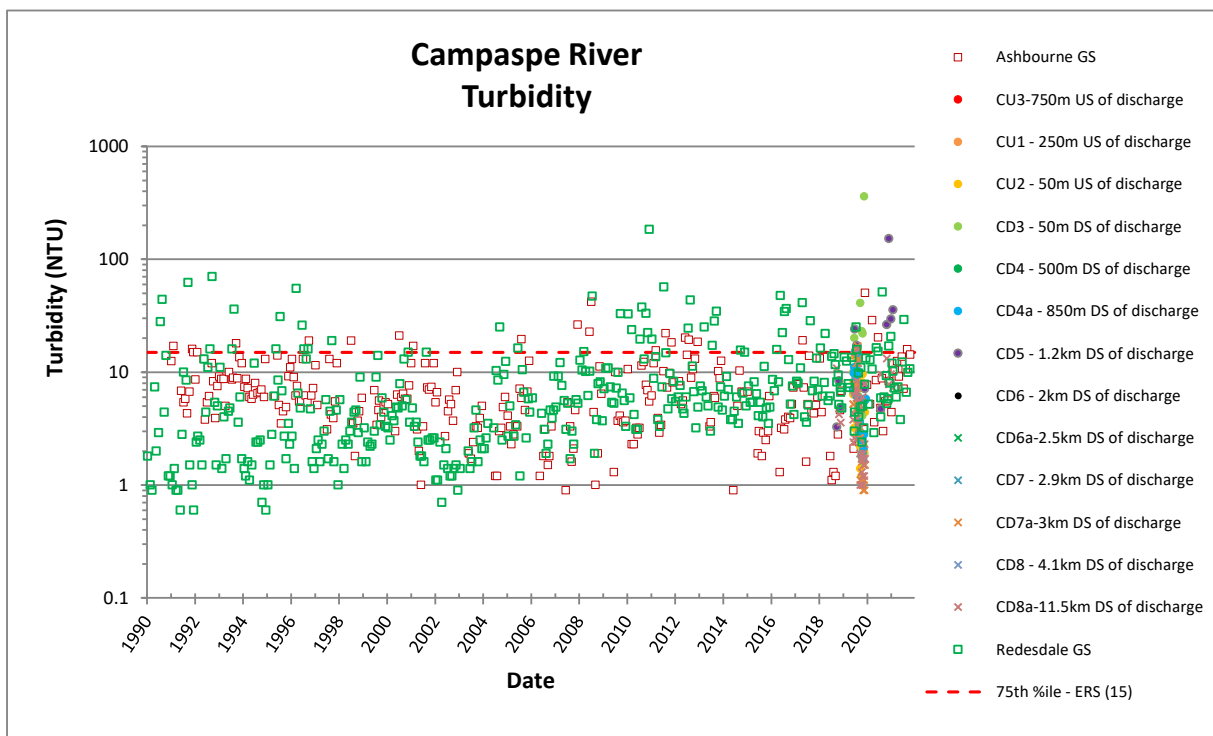


Figure 68 Turbidity data – Campaspe River

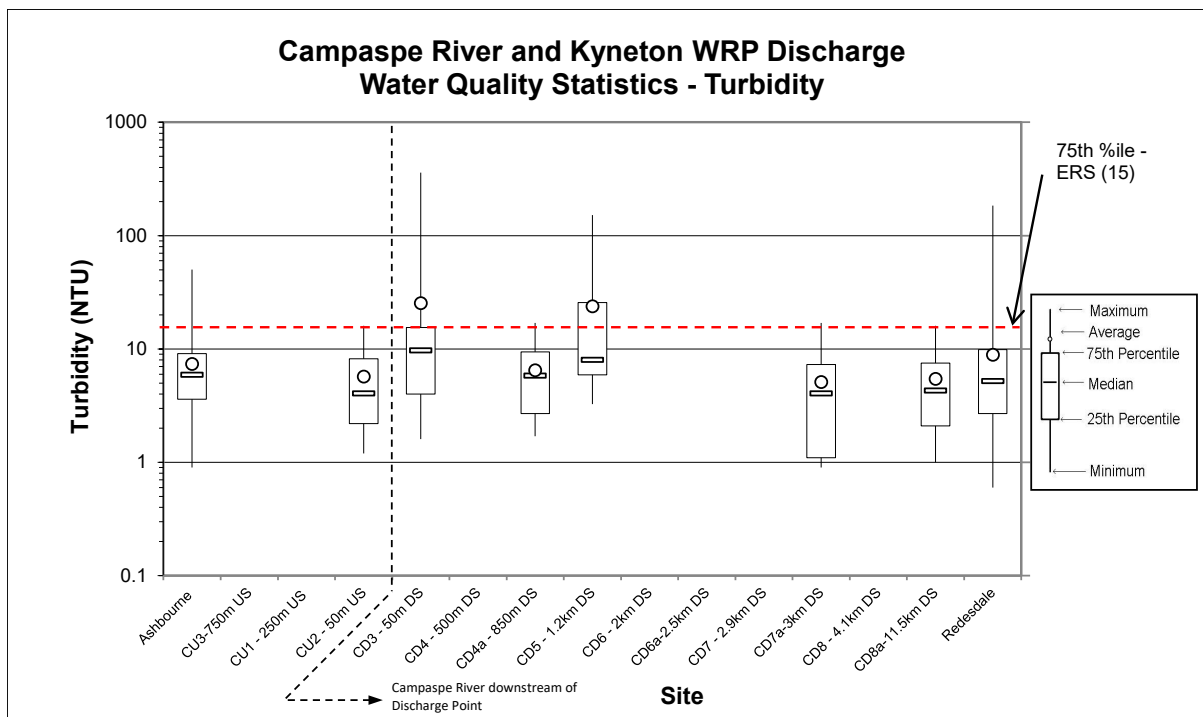


Figure 69 Turbidity statistics – Campaspe River

Table 43 Turbidity statistics – Campaspe River

	Ashbourne	CU3-750m US	CU1 - 250m US	CU2 - 50m US	CD3 - 50m DS	CD4 - 500m DS	CD4a - 850m DS	CD5 - 1.2km DS	CD6 - 2km DS	CD6a-2.5km DS	CD7 - 2.9km DS	CD7a-3km DS	CD8 - 4.1km DS	CD8a-11.5km DS	Redesdale
Maximum	50.2			16.0	360.0		17.0	152.0				17.0		16.0	184.0
90th percentile	13.9			11.5	22.7		12.2	33.7				12.5		11.0	16.7
75th percentile	9.1			8.2	15.5		9.5	25.7				7.3		7.5	9.9
Median	5.9			4.1	9.7		5.8	8.0				4.1		4.3	5.2
25th percentile	3.6			2.2	4.0		2.7	5.9				1.1		2.1	2.7
10th percentile	2.3			1.9	2.3		1.9	4.8				1.0		1.3	1.5
Minimum	0.9			1.2	1.6		1.7	3.3				0.9		1.0	0.6
Average	7.4			5.7	25.4		6.5	23.8				5.1		5.4	8.9
Number	273	0	0	26	24	0	27	14	0	0	0	26	0	39	386

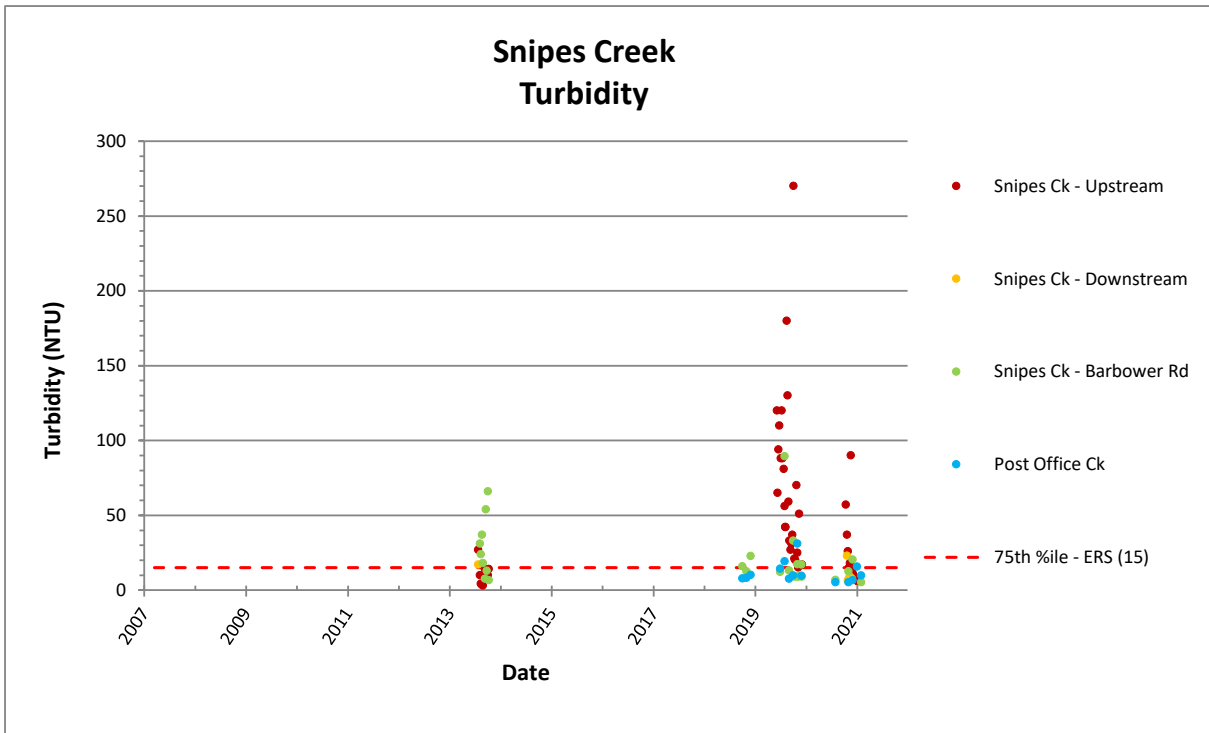


Figure 70 Turbidity data – Snipes Creek and Post Office Creek

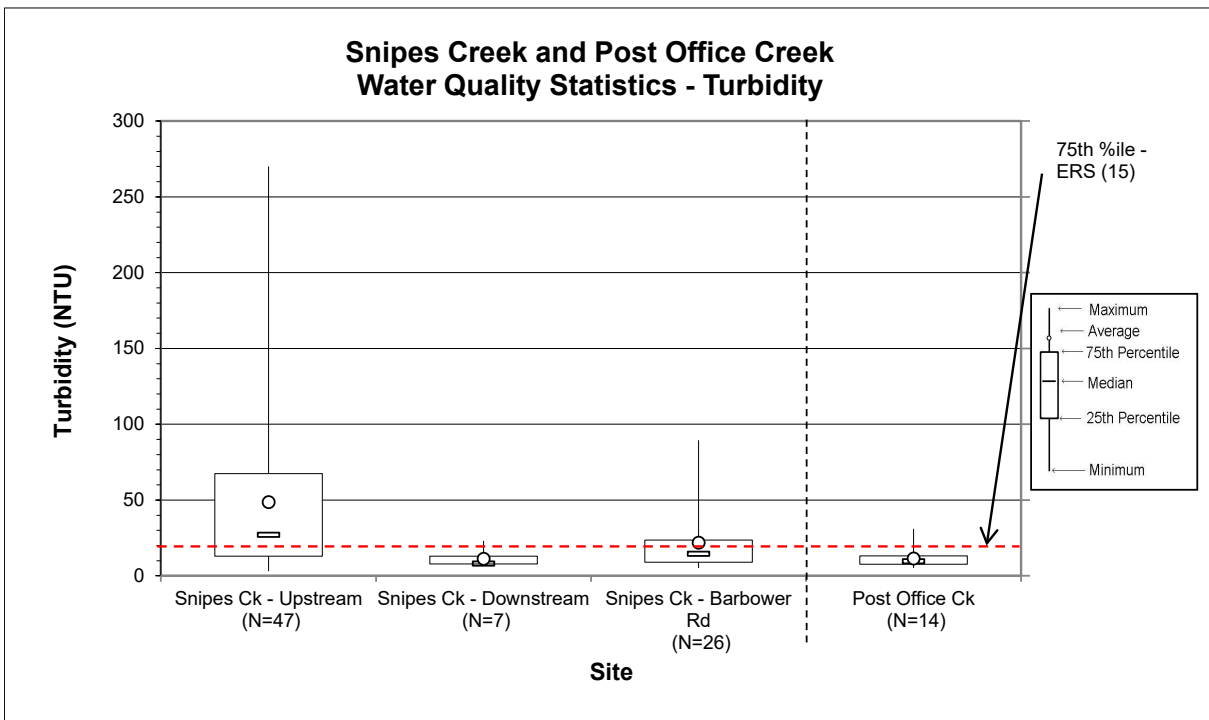
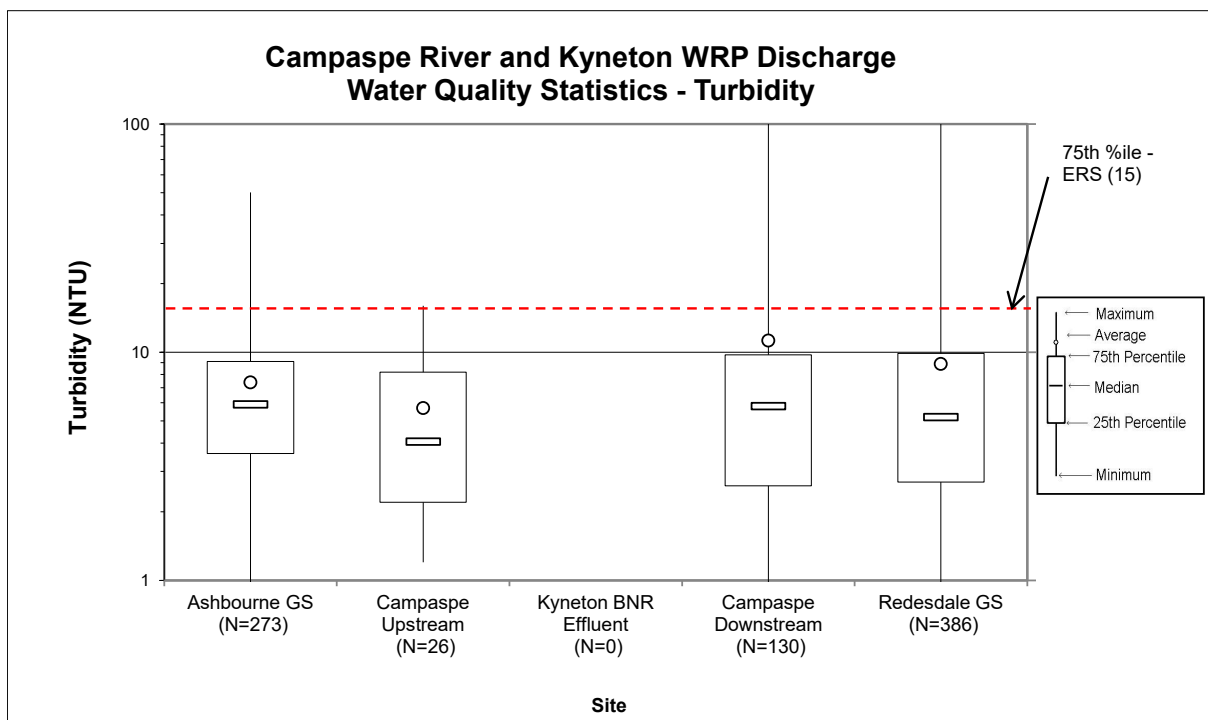


Figure 71 Turbidity statistics – Snipes Creek and Post Office Creek

**Table 44** Turbidity statistics – – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	270.0	23.0	89.5	31.1
90th percentile	114.0	19.4	45.5	18.2
75th percentile	67.5	13.0	23.7	13.2
Median	27.0	8.0	14.5	9.6
25th percentile	13.0	7.8	9.0	7.6
10th percentile	8.4	7.1	7.1	5.7
Minimum	3.1	6.4	5.2	5.1
Average	48.7	11.3	22.0	11.4
Number	47	7	26	14



**Figure 72** Turbidity statistics – Campaspe River and Kyneton WRP

**Table 45** Turbidity statistics – Campaspe River and Kyneton WRP

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum	50.2	16.0		360.0	184.0
90th percentile	13.9	11.5		17.0	16.7
75th percentile	9.1	8.2		9.7	9.9
Median	5.9	4.1		5.8	5.2
25th percentile	3.6	2.2		2.6	2.7
10th percentile	2.3	1.9		1.5	1.5
Minimum	0.9	1.2		0.9	0.6
Average	7.4	5.7		11.3	8.9
Number	273	26	0	130	386

# 4. Nutrients

## 4.1 Nitrogen - Ammonia as N

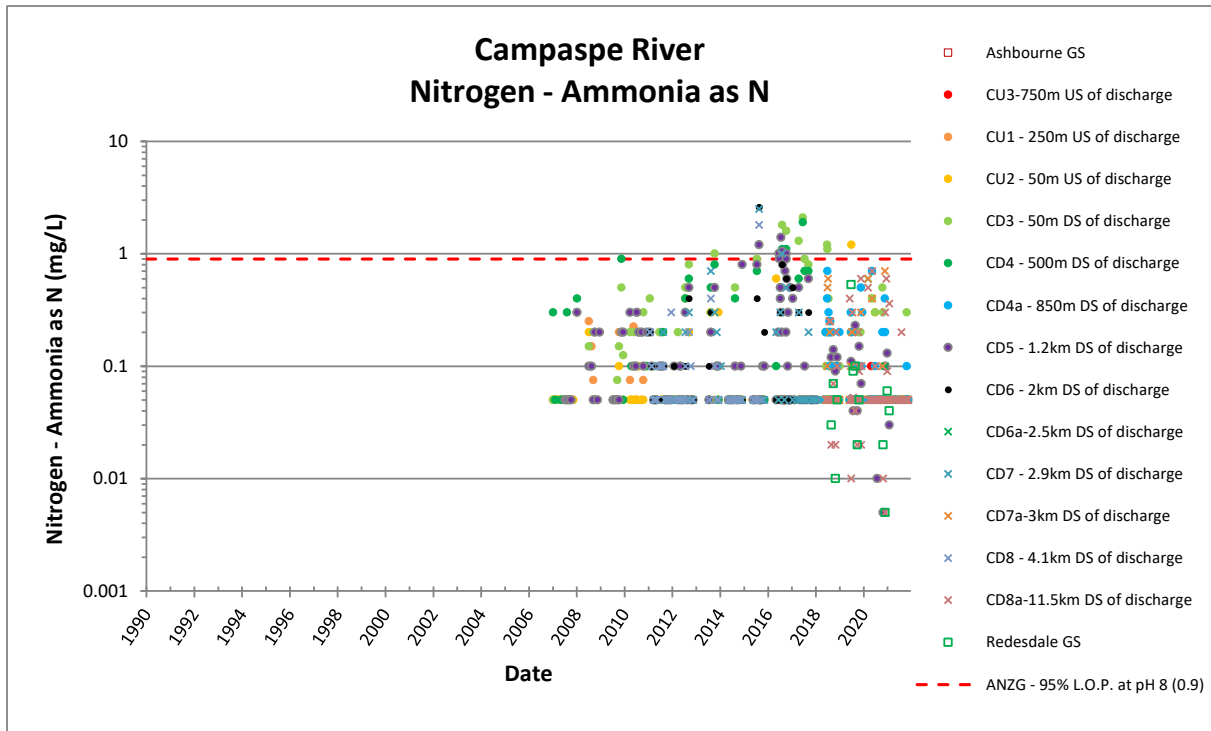


Figure 73 Nitrogen – ammonia as N data – Campaspe River

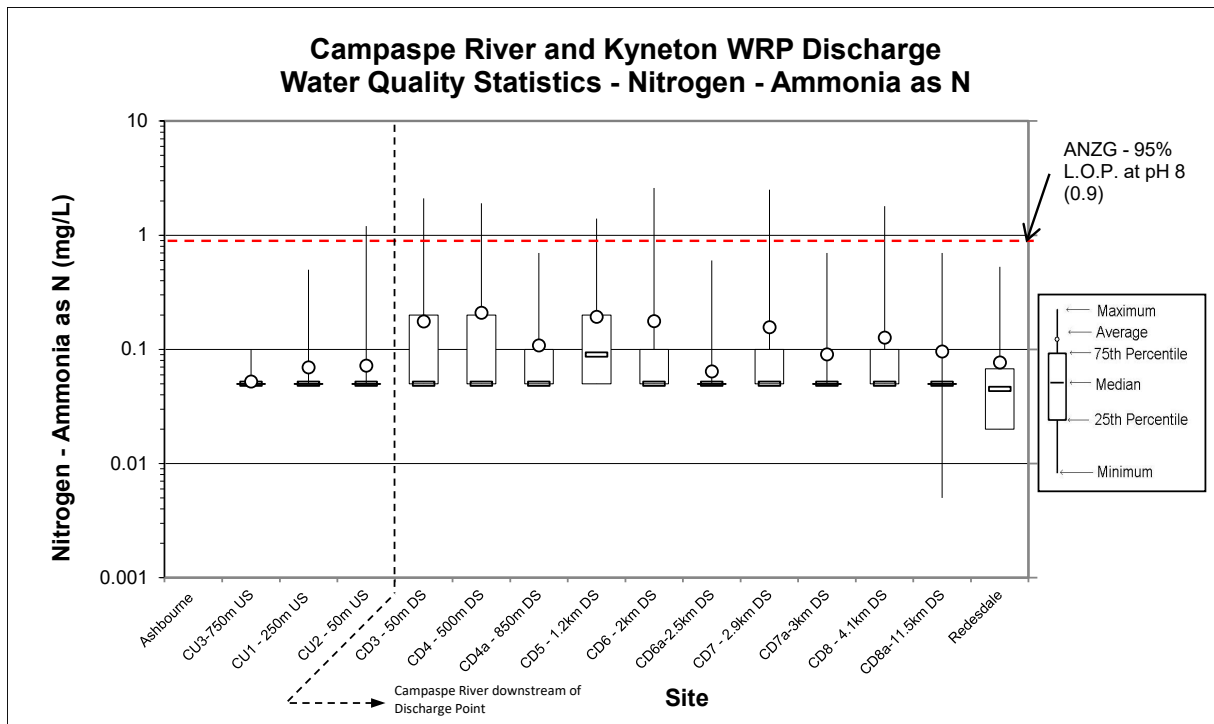


Figure 74 Nitrogen – ammonia as N statistics – Campaspe River

Table 46 Nitrogen – ammonia as N statistics – Campaspe River

	Ashbourne	CU3-750m US	CU1 - 250m US	CU2 - 50m US	CD3 - 50m DS	CD4 - 500m DS	CD4a - 850m DS	CD5 - 1.2km DS	CD6 - 2km DS	CD6a-2.5km DS	CD7 - 2.9km DS	CD7a-3km DS	CD8 - 4.1km DS	CD8a-11.5km DS	Redesdale
Maximum		0.100	0.500	1.200	2.100	1.900	0.700	1.400	2.600	0.600	2.500	0.700	1.800	0.700	0.530
90th percentile		0.050	0.100	0.100	0.400	0.620	0.215	0.530	0.390	0.050	0.300	0.200	0.200	0.215	0.098
75th percentile		0.050	0.050	0.050	0.200	0.200	0.100	0.200	0.100	0.050	0.100	0.050	0.100	0.050	0.070
Median		0.050	0.050	0.050	0.050	0.050	0.050	0.100	0.050	0.050	0.050	0.050	0.050	0.050	0.050
25th percentile		0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.020
10th percentile		0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.012
Minimum		0.050	0.050	0.050	0.050	0.050	0.050	0.005	0.050	0.050	0.050	0.050	0.050	0.005	0.005
Average		0.052	0.070	0.072	0.176	0.209	0.108	0.198	0.177	0.064	0.156	0.091	0.127	0.096	0.083
Number	0	45	100	188	175	79	98	128	52	42	62	96	39	88	13

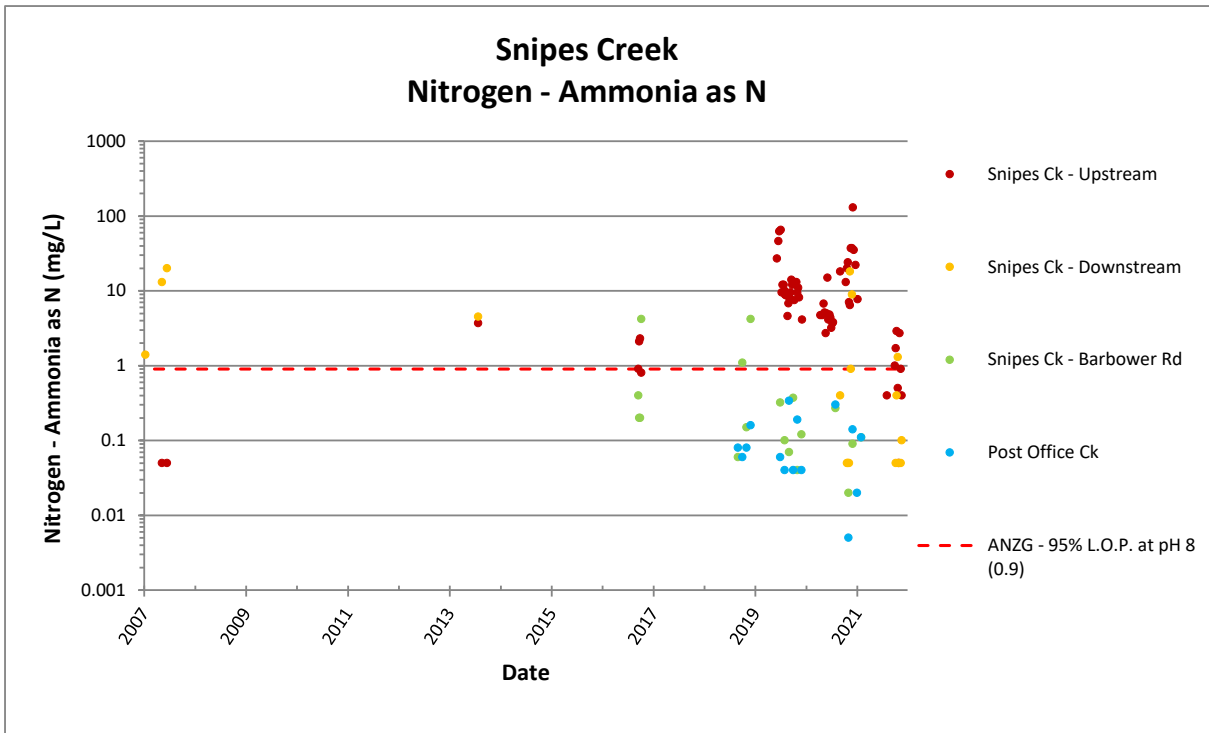


Figure 75 Nitrogen – ammonia as N data – Snipes Creek and Post Office Creek

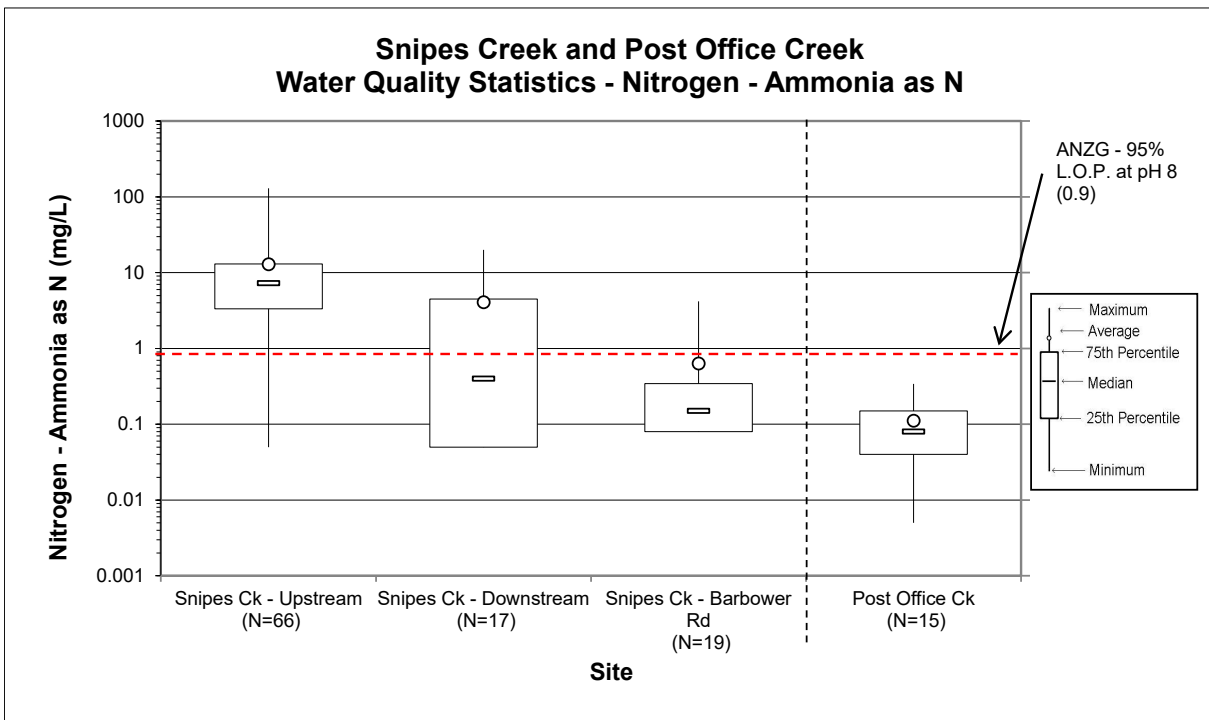
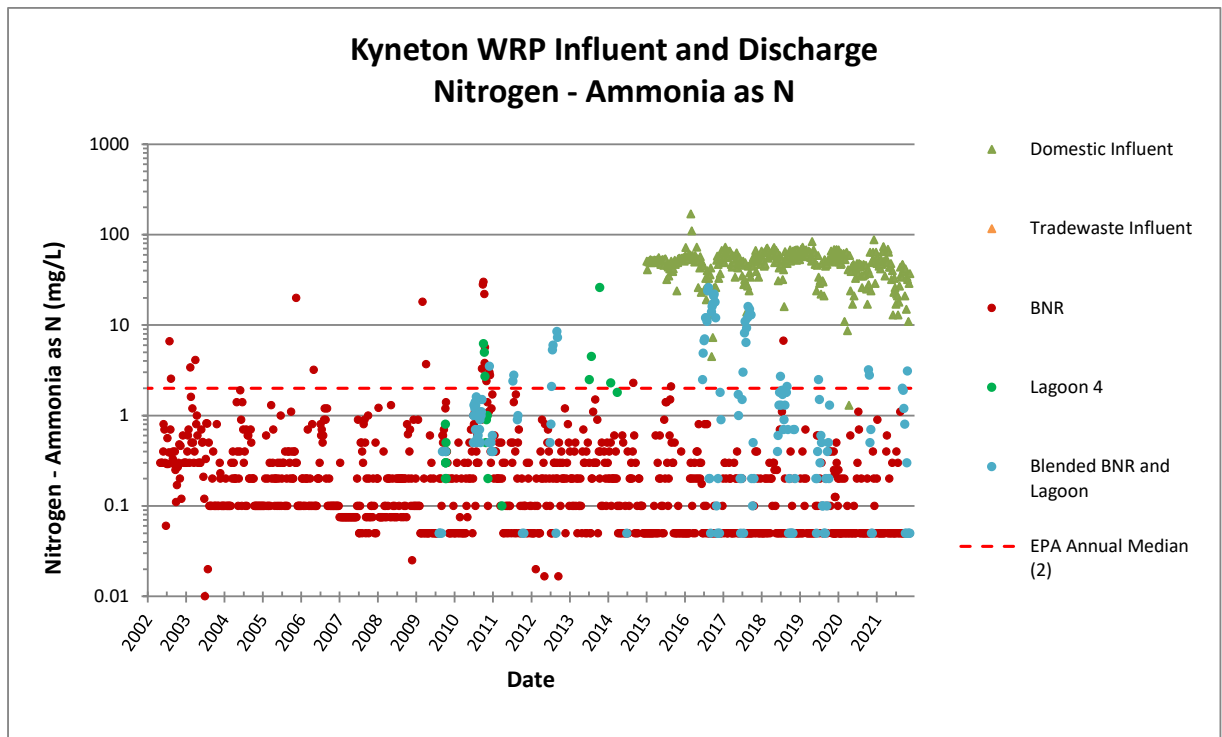


Figure 76 Nitrogen – ammonia as N statistics – Snipes Creek and Post Office Creek



**Table 47 Nitrogen – ammonia as N statistics – – Snipes Creek and Post Office Creek**

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	130	20	4.2	0.340
90th percentile	31	15	2.023	0.256
75th percentile	13.0	4.5	0.358	0.150
Median	7.250	0.400	0.175	0.080
25th percentile	3.325	0.050	0.093	0.040
10th percentile	0.850	0.050	0.054	0.028
Minimum	0.050	0.050	0.020	0.005
Average	12.869	4.071	0.667	0.111
Number	66	17	18	15



**Figure 77 Nitrogen – ammonia as N data – Kyneton WRP**

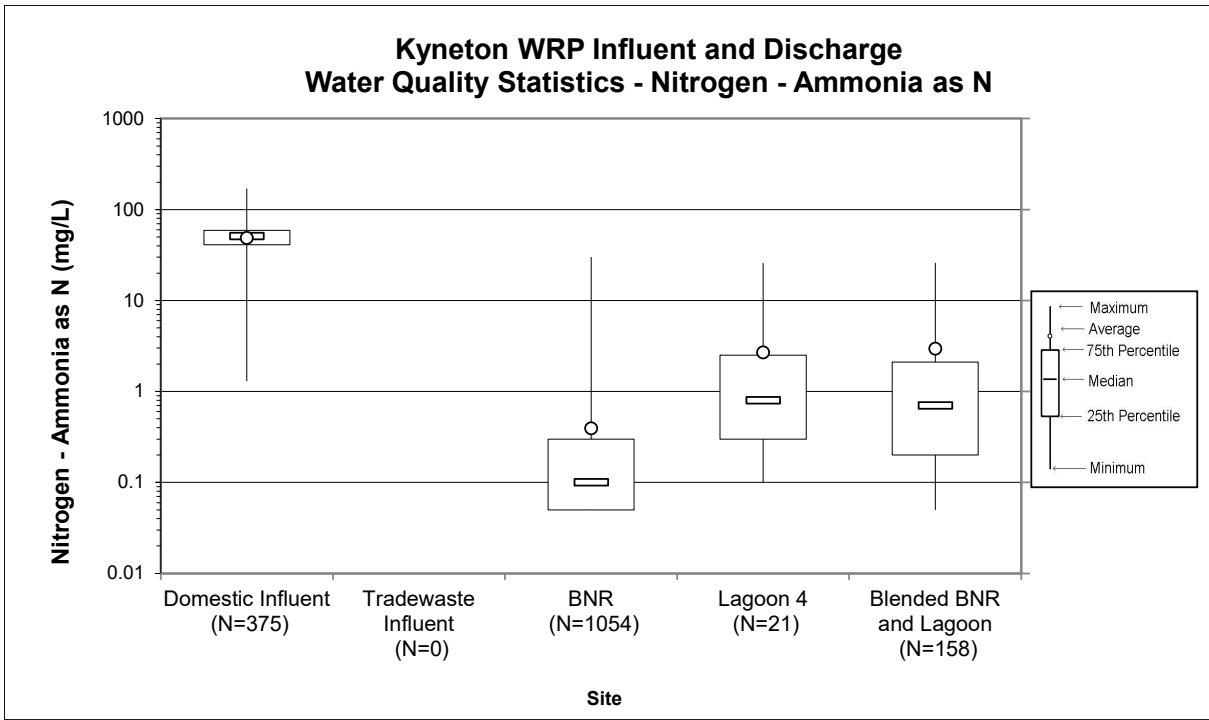


Figure 78 Nitrogen – ammonia as N statistics – Kyneton WRP

Table 48 Nitrogen – ammonia as N statistics – Kyneton WRP

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	170		30	26	26
90th percentile	66		0.69	5.00	12.00
75th percentile	59		0.30	2.50	2.10
Median	51		0.10	0.80	0.70
25th percentile	41		0.05	0.30	0.20
10th percentile	26		0.05	0.20	0.05
Minimum	1.30		0.01	0.10	0.05
Average	48.95		0.40	2.70	2.96
Number	375	0	1052	21	158

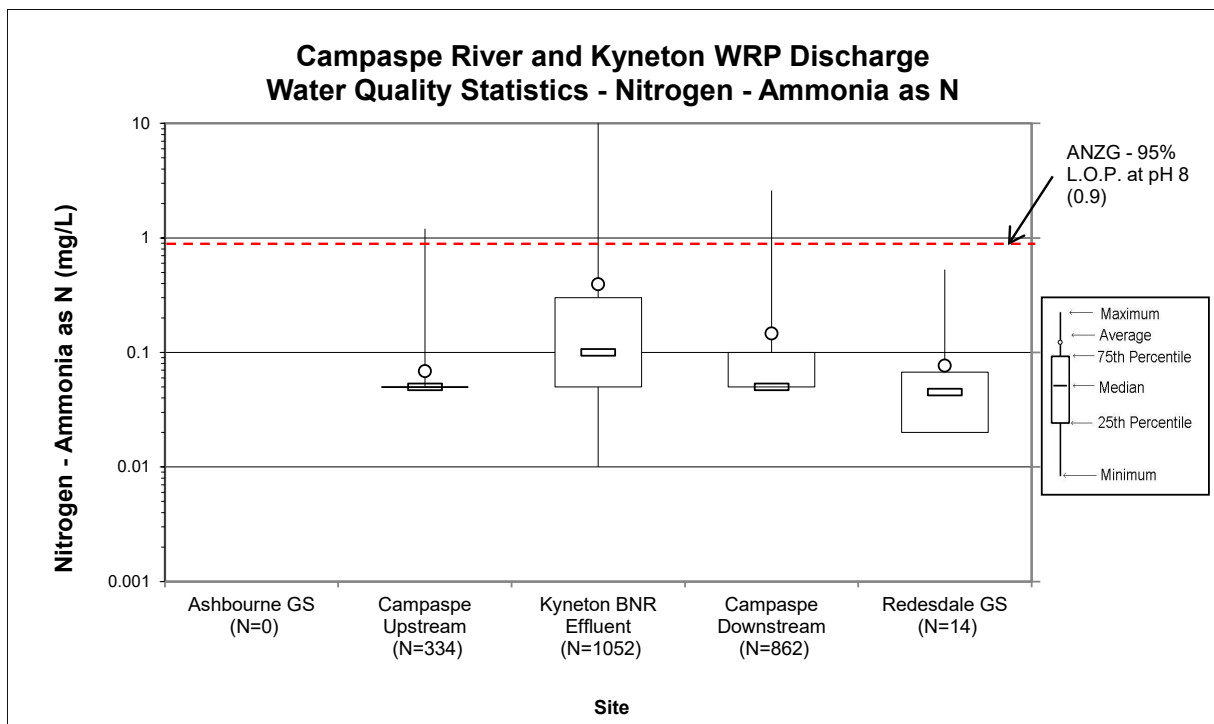


Figure 79 Nitrogen – ammonia as N statistics – Campaspe River and Kyneton WRP

Table 49 Nitrogen – ammonia as N statistics – Campaspe River and Kyneton WRP

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum		1.20	30.00	2.60	0.53
90th percentile		0.10	0.69	0.30	0.10
75th percentile		0.05	0.30	0.10	0.07
Median		0.05	0.10	0.05	0.05
25th percentile		0.05	0.05	0.05	0.02
10th percentile		0.05	0.05	0.05	0.01
Minimum		0.05	0.01	0.01	0.01
Average		0.069	0.396	0.148	0.083
Number	0	333	1052	859	13

## 4.2 Nitrogen - Nitrate as N

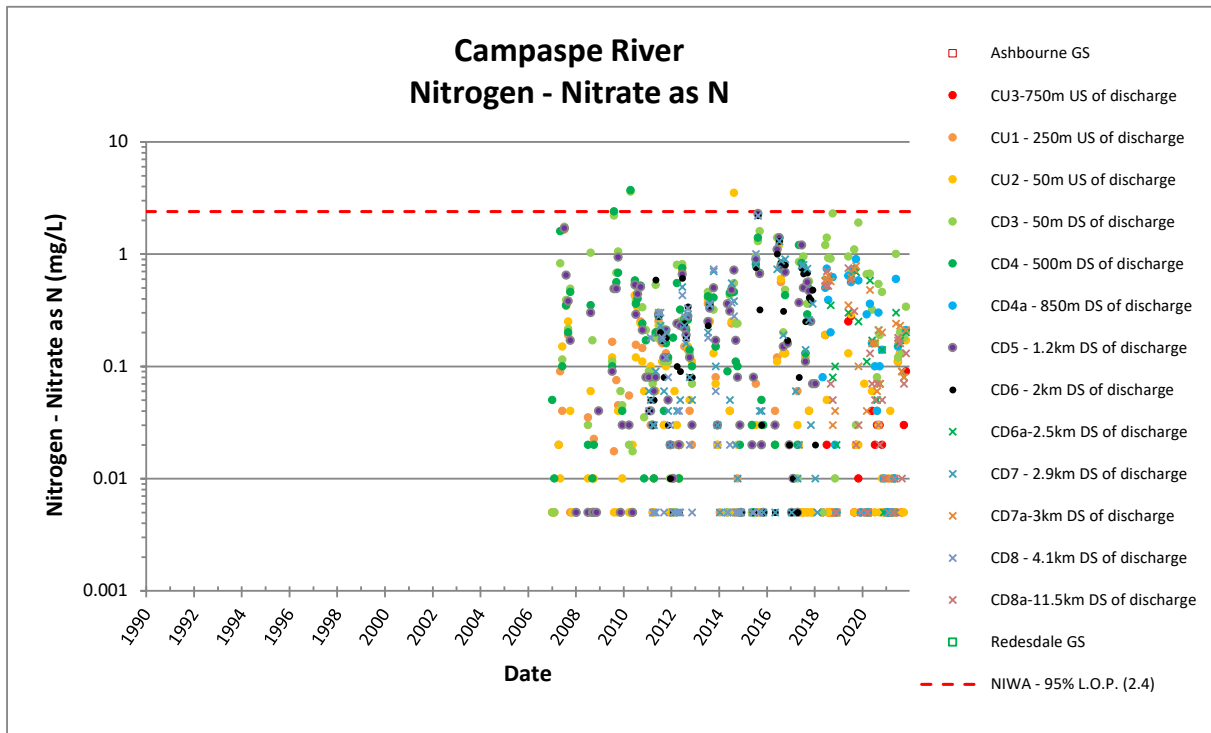


Figure 80 Nitrogen – nitrate as N data – Campaspe River

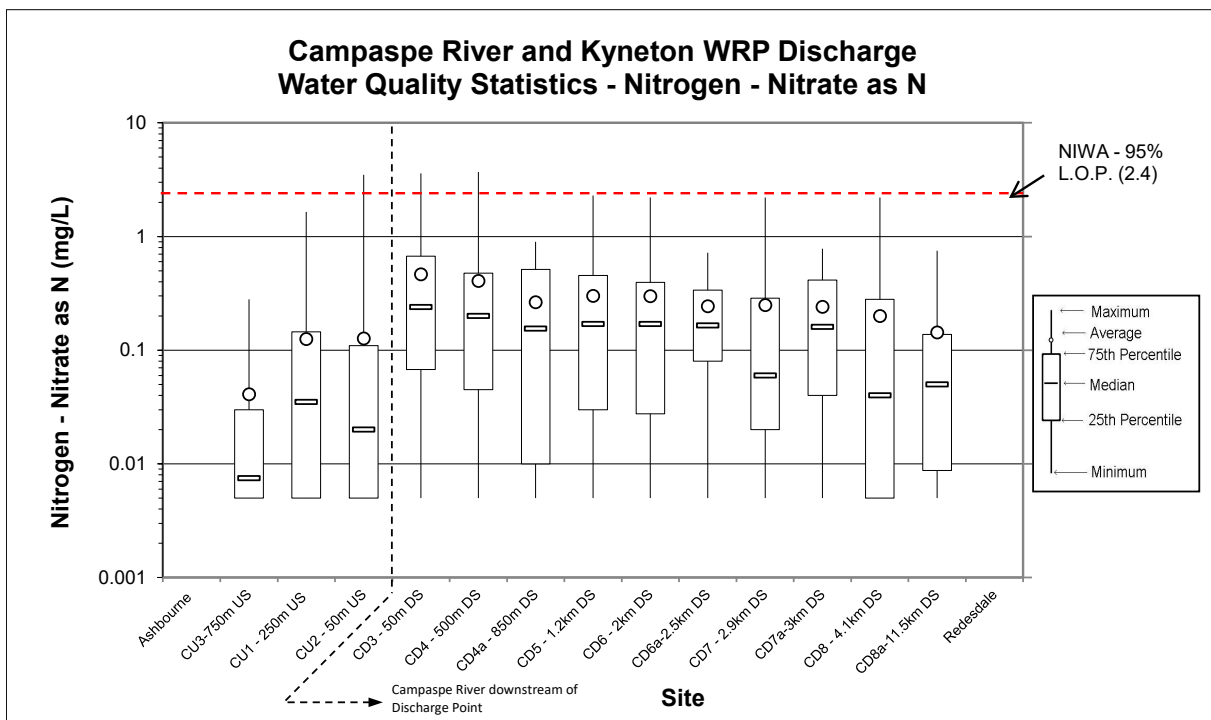
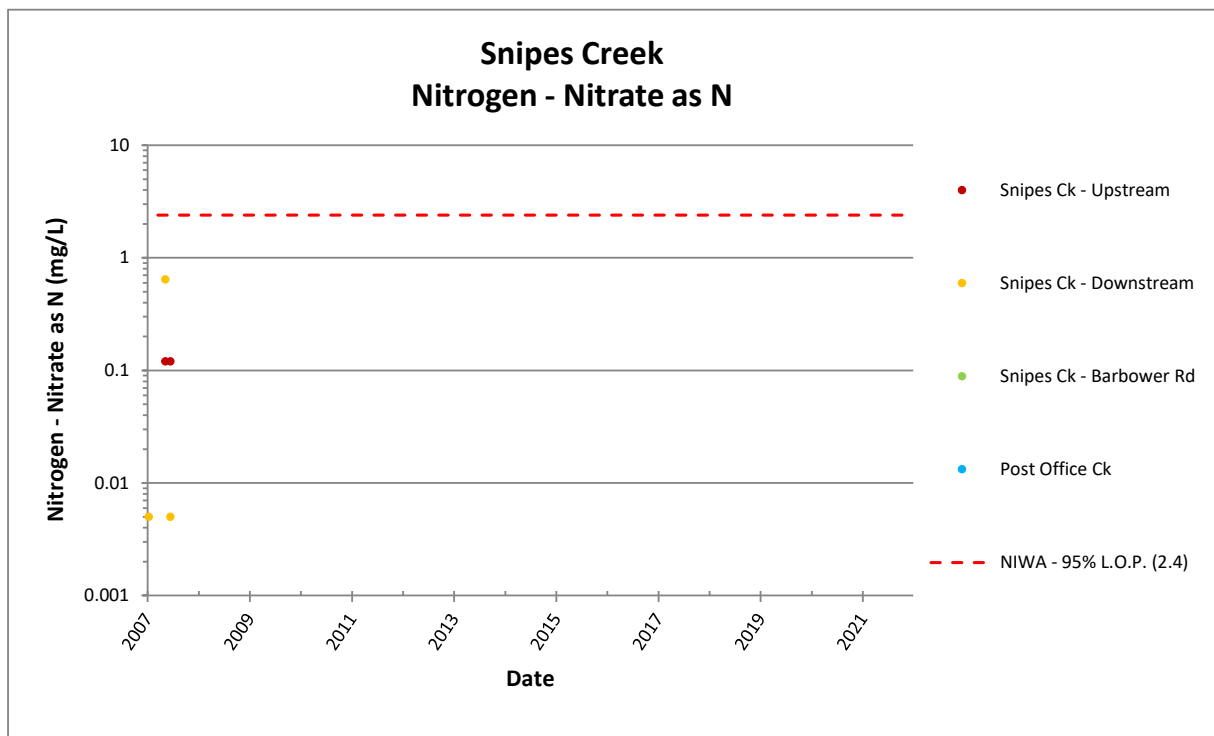


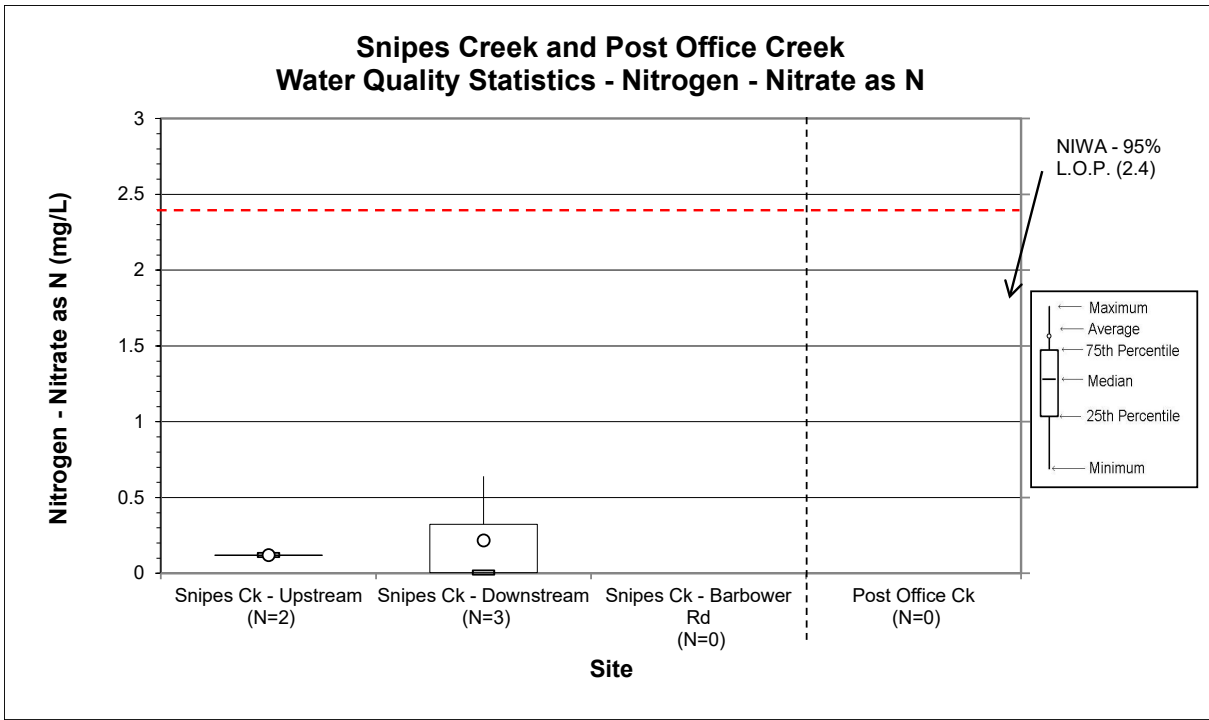
Figure 81 Nitrogen – nitrate as N statistics – Campaspe River

**Table 50 Nitrogen – nitrate as N statistics – Campaspe River**

	Ashbourne	CU3 - 750m US	CU1 - 250m US	CU2 - 50m US	CD3 - 50m DS	CD4 - 500m DS	CD4a - 850m DS	CD5 - 1.2km DS	CD6 - 2km DS	CD6a - 2.5km DS	CD7 - 2.9km DS	CD7a - 3km DS	CD8 - 4.1km DS	CD8a - 11.5km DS	Redesdale
Maximum		0.280	1.650	3.500	3.600	3.700	0.900	2.300	2.200	0.720	2.200	0.780	2.200	0.750	
90th percentile		0.124	0.250	0.250	1.095	0.884	0.638	0.702	0.759	0.591	0.785	0.620	0.382	0.520	
75th percentile		0.030	0.145	0.110	0.673	0.475	0.515	0.455	0.395	0.338	0.288	0.415	0.280	0.138	
Median		0.008	0.035	0.020	0.240	0.200	0.155	0.170	0.170	0.165	0.060	0.160	0.040	0.050	
25th percentile		0.005	0.005	0.005	0.068	0.045	0.010	0.030	0.028	0.080	0.020	0.040	0.005	0.009	
10th percentile		0.005	0.005	0.005	0.005	0.010	0.005	0.005	0.005	0.005	0.005	0.010	0.005	0.005	
Minimum		0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	
Average		0.041	0.126	0.127	0.464	0.408	0.265	0.300	0.299	0.244	0.249	0.241	0.200	0.143	
Number	0	34	81	121	112	79	32	87	52	30	62	31	39	32	0



**Figure 82 Nitrogen – nitrate as N data – Snipes Creek and Post Office Creek**



**Figure 83** Nitrogen – nitrate as N statistics – Snipes Creek and Post Office Creek

**Table 51** Nitrogen – nitrate as N statistics – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	0.120	0.640		
90th percentile	0.120	0.513		
75th percentile	0.120	0.323		
Median	0.120	0.005		
25th percentile	0.120	0.005		
10th percentile	0.120	0.005		
Minimum	0.120	0.005		
Average	0.120	0.217		
Number	2	3	0	0

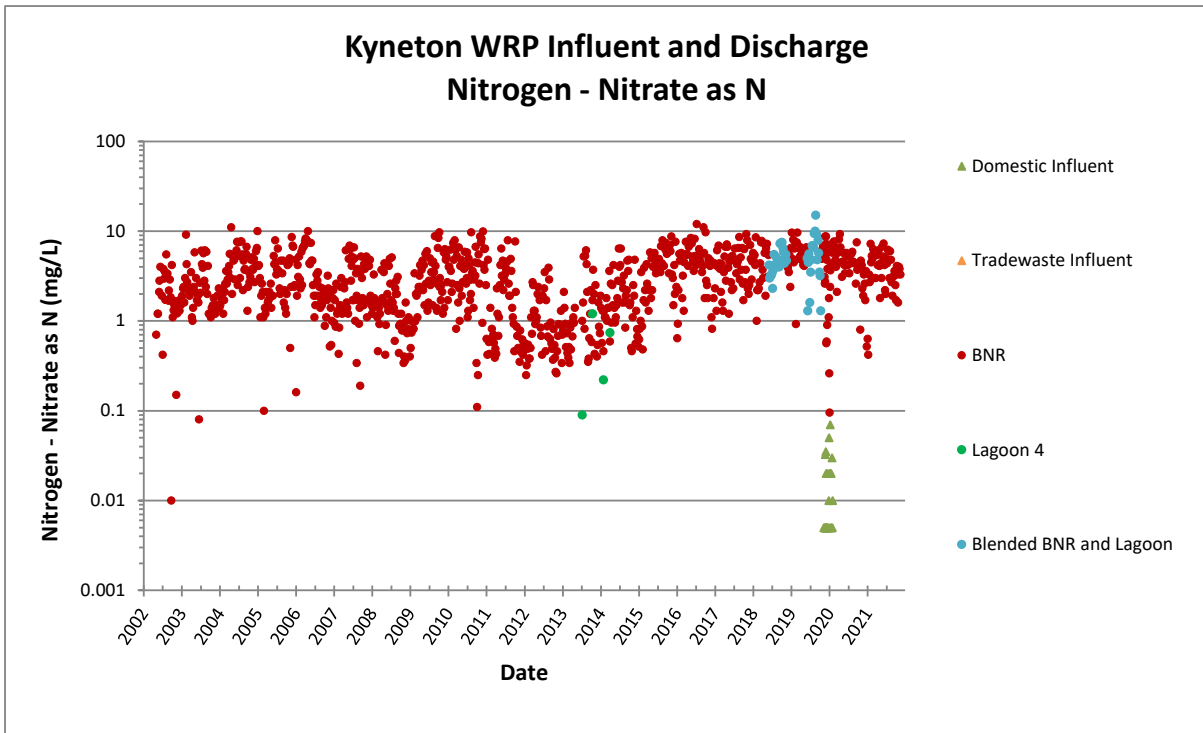


Figure 84 Nitrogen – nitrate as N data – Kyneton WRP

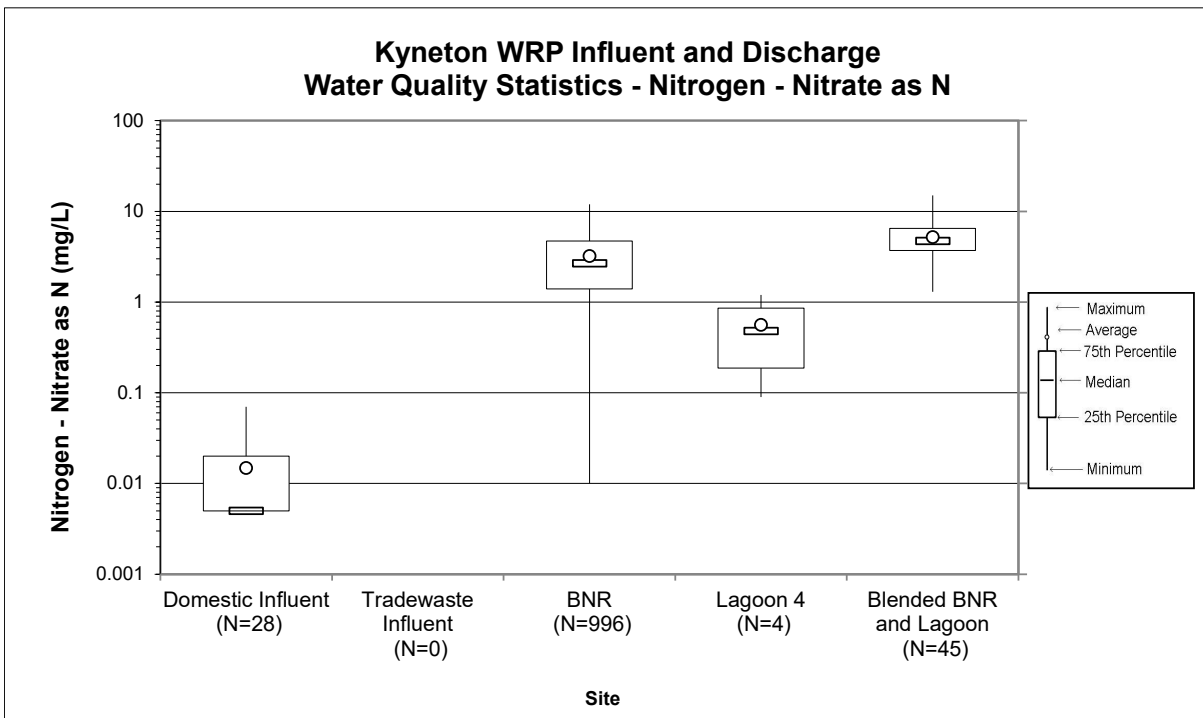
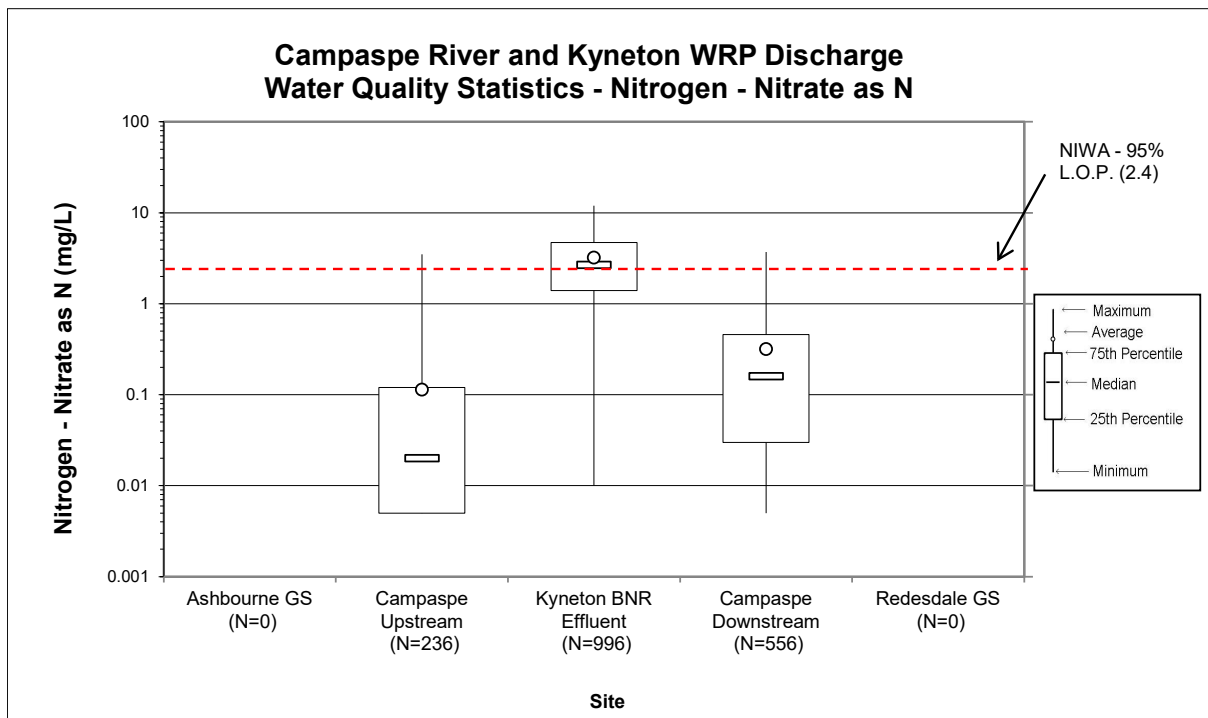


Figure 85 Nitrogen – nitrate as N statistics – Kyneton WRP

**Table 52 Nitrogen – nitrate as N statistics – Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	0.070		12	1.2	15
90th percentile	0.033		6.500	1.062	7.740
75th percentile	0.020		4.700	0.855	6.500
Median	0.005		2.680	0.480	4.700
25th percentile	0.005		1.400	0.188	3.700
10th percentile	0.005		0.680	0.129	3.080
Minimum	0.005		0.010	0.090	1.300
Average	0.015		3.237	0.563	5.207
Number	28	0	996	4	45



**Figure 86 Nitrogen – nitrate as N statistics – Campaspe River and Kyneton WRP**

**Table 53 Nitrogen – nitrate as N statistics – Campaspe River and Kyneton WRP**

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum		3.5	12	3.7	
90th percentile		0.250	6.500	0.800	
75th percentile		0.120	4.700	0.460	
Median		0.020	2.680	0.160	
25th percentile		0.005	1.400	0.030	
10th percentile		0.005	0.680	0.005	
Minimum		0.005	0.010	0.005	
Average		0.114	3.237	0.318	
Number	0	236	996	556	0



### 4.3 Nitrogen - Nitrite as N

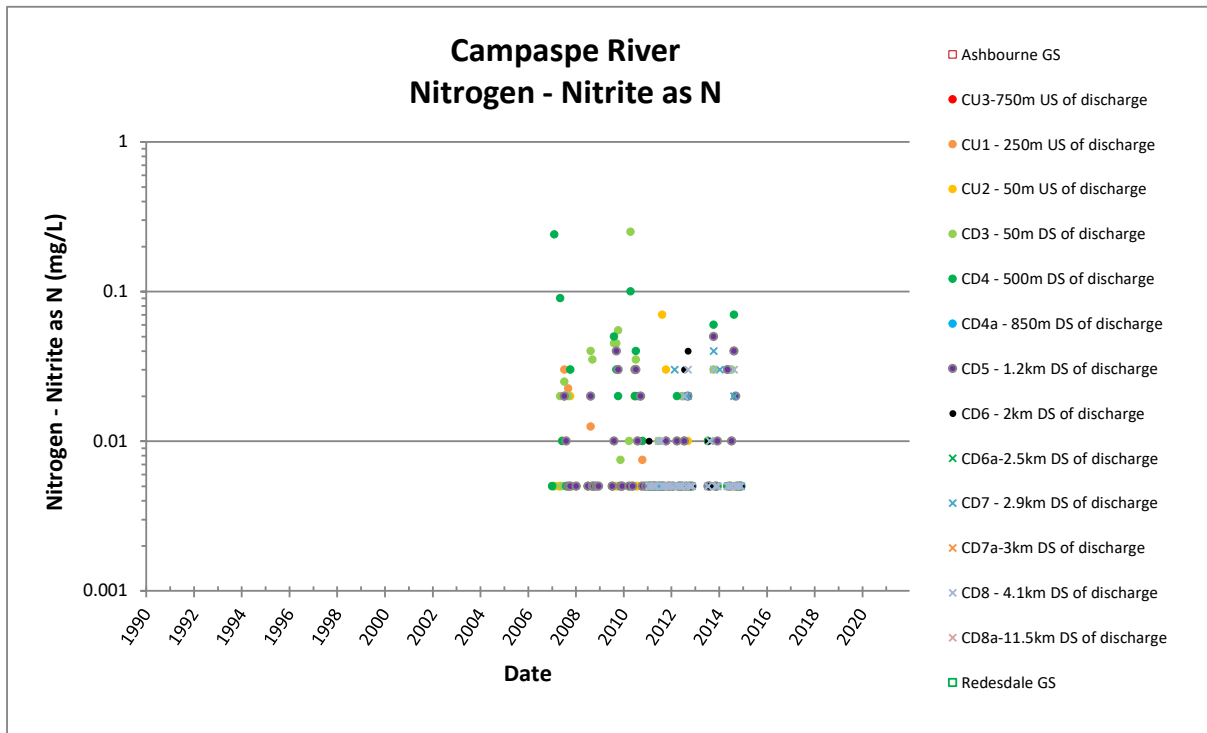


Figure 87 Nitrogen – nitrite as N data – Campaspe River

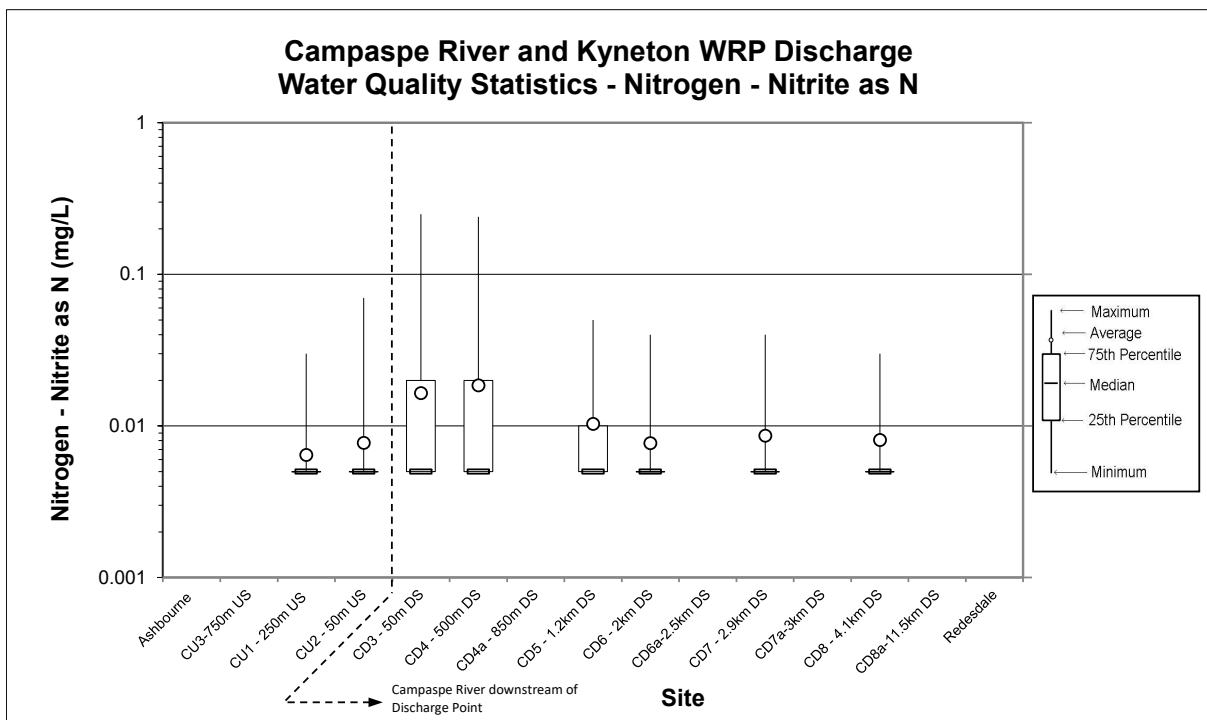
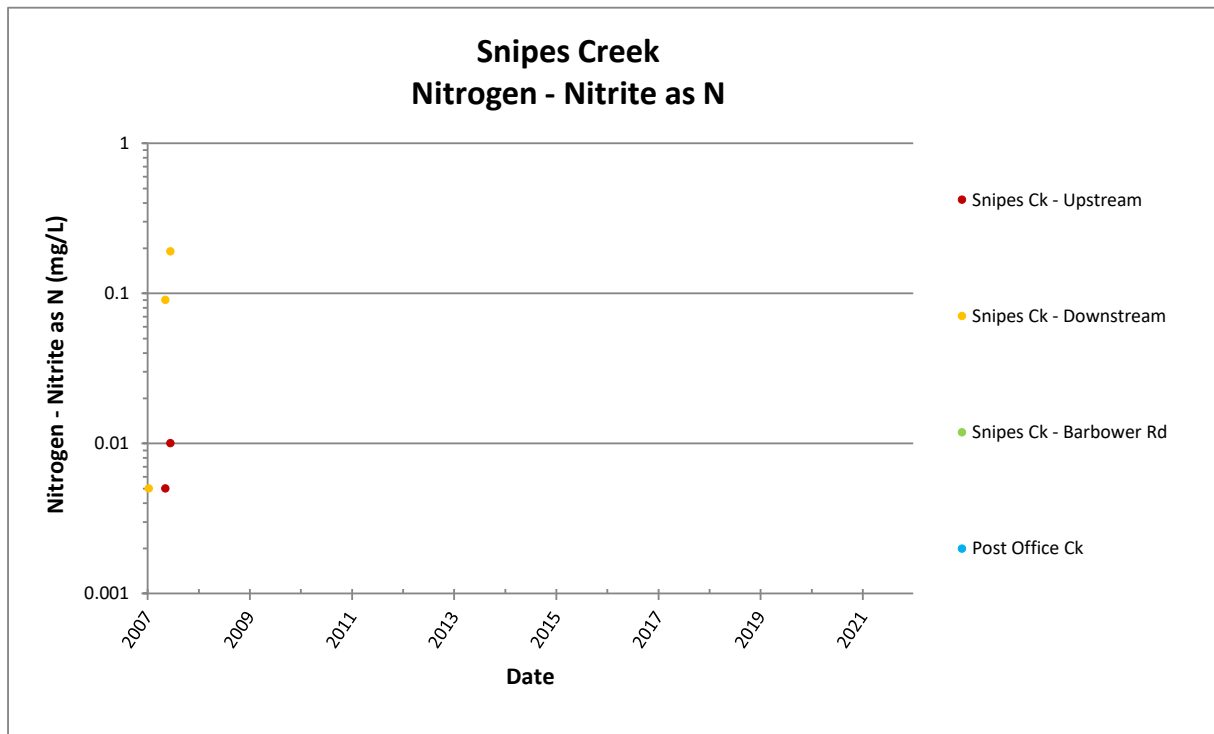


Figure 88 Nitrogen – nitrite as N statistics – Campaspe River

**Table 54 Nitrogen – nitrite as N statistics – Campaspe River**

	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale
Maximum			0.030	0.070	0.250	0.240		0.050	0.040		0.040		0.030		
90th percentile			0.010	0.010	0.035	0.041		0.030	0.010		0.020		0.017		
75th percentile			0.005	0.005	0.020	0.020		0.010	0.005		0.005		0.005		
Median			0.005	0.005	0.005	0.005		0.005	0.005		0.005		0.005		
25th percentile			0.005	0.005	0.005	0.005		0.005	0.005		0.005		0.005		
10th percentile			0.005	0.005	0.005	0.005		0.005	0.005		0.005		0.005		
Minimum			0.000	0.005	0.005	0.005		0.000	0.005		0.005		0.005		
Average			0.006	0.008	0.016	0.019		0.010	0.008		0.009		0.008		
Number	0	0	61	64	63	60	0	61	26	0	37	0	34	0	0



**Figure 89 Nitrogen – nitrite as N data – Snipes Creek and Post Office Creek**

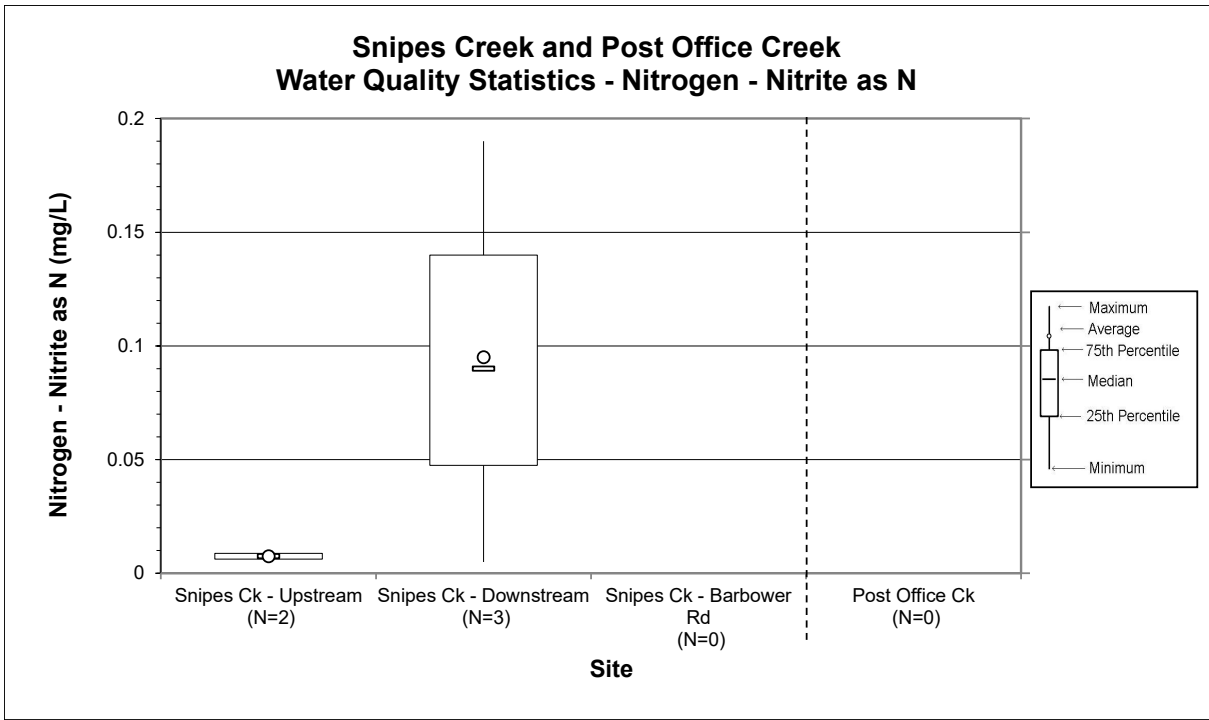


Figure 90 Nitrogen – nitrite as N statistics – Snipes Creek and Post Office Creek

Table 55 Nitrogen – nitrite as N statistics – – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	0.010	0.190		
90th percentile	0.010	0.170		
75th percentile	0.009	0.140		
Median	0.008	0.090		
25th percentile	0.006	0.048		
10th percentile	0.006	0.022		
Minimum	0.005	0.005		
Average	0.008	0.095		
Number	2	3	0	0

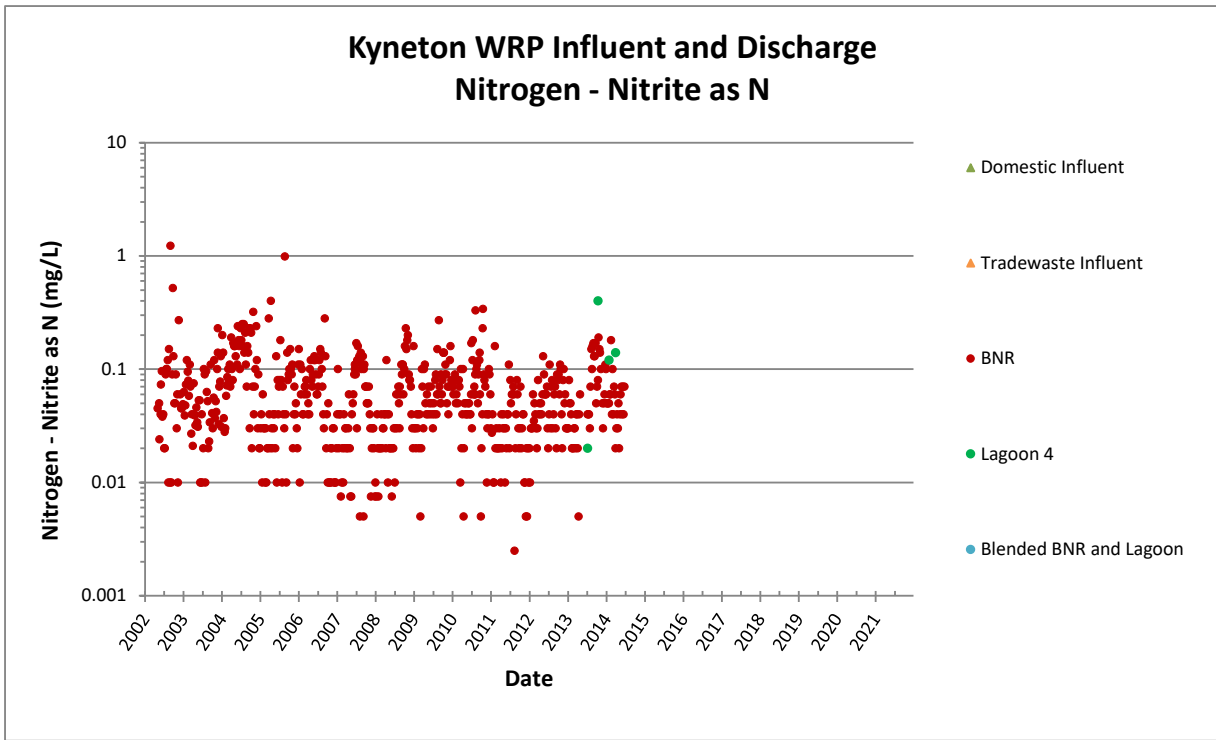


Figure 91 Nitrogen – nitrite as N data – Kyneton WRP

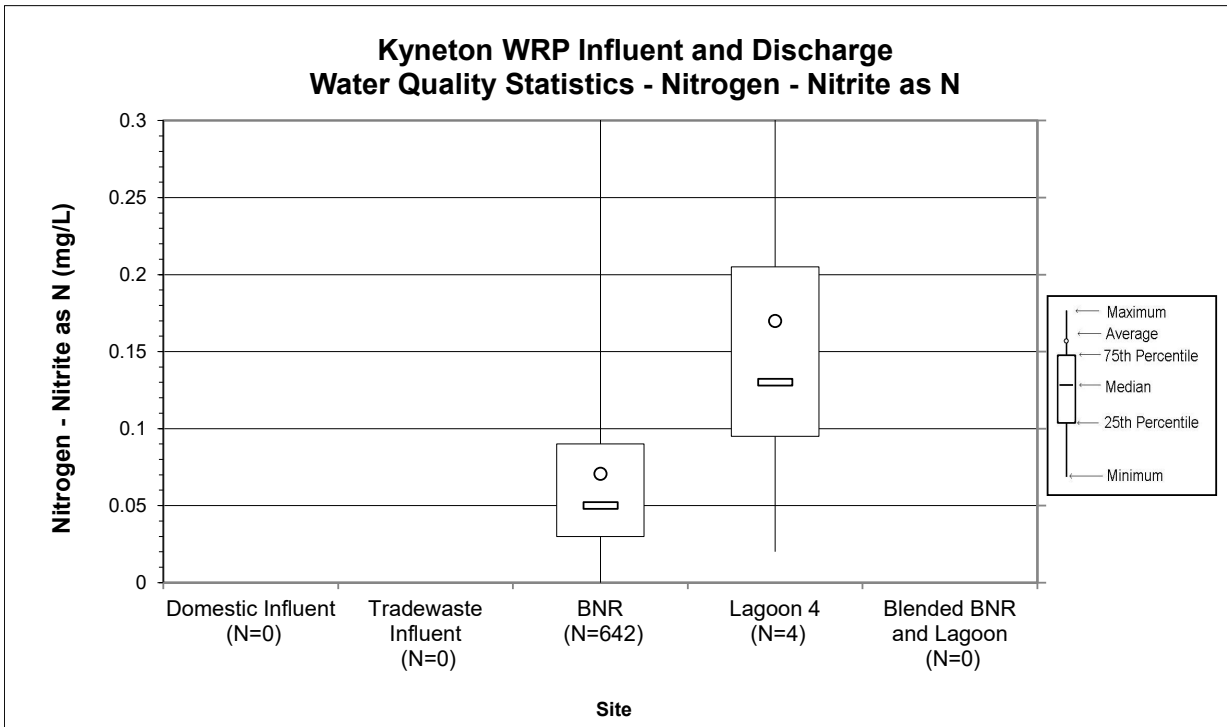
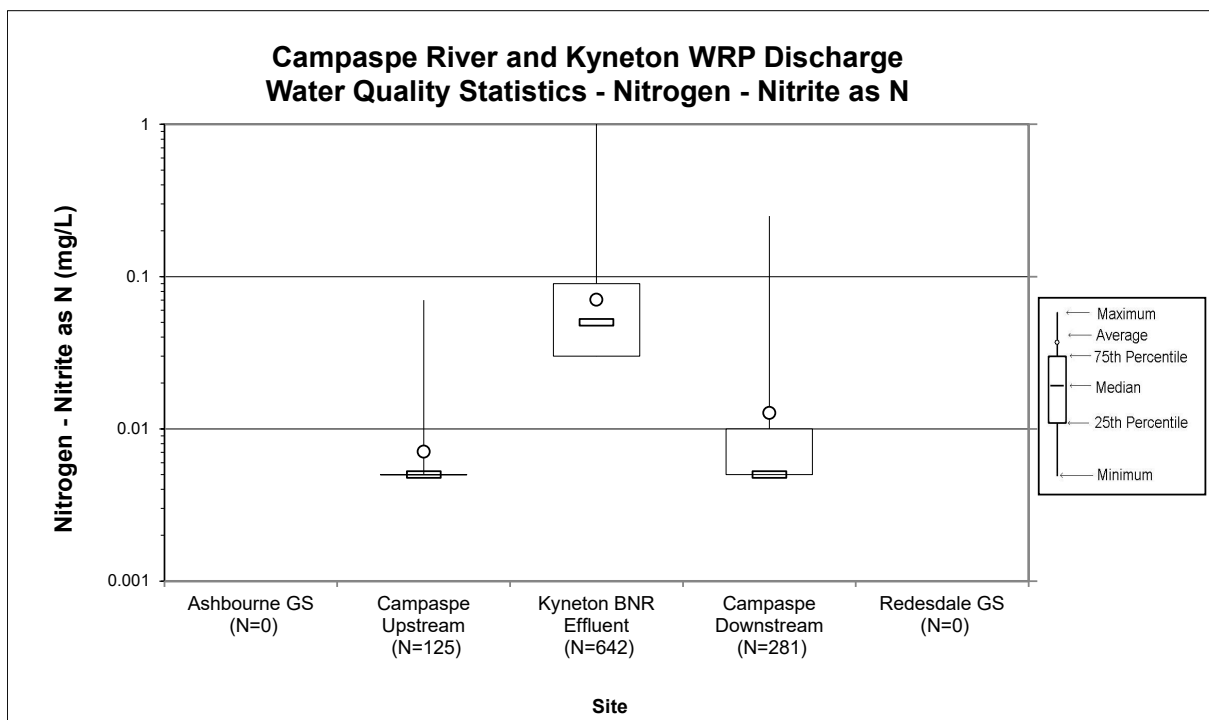


Figure 92 Nitrogen – nitrite as N statistics – Kyneton WRP

**Table 56 Nitrogen – nitrite as N statistics – Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum			1.230	0.400	
90th percentile			0.140	0.322	
75th percentile			0.090	0.205	
Median			0.050	0.130	
25th percentile			0.030	0.095	
10th percentile			0.020	0.050	
Minimum			0.000	0.020	
Average			0.071	0.170	
Number	0	0	642	4	0



**Figure 93 Nitrogen – nitrite as N statistics – Campaspe River and Kyneton WRP**

**Table 57 Nitrogen – nitrite as N statistics – Campaspe River and Kyneton WRP**

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum		0.070	1.230	0.250	
90th percentile		0.010	0.140	0.030	
75th percentile		0.005	0.090	0.010	
Median		0.005	0.050	0.005	
25th percentile		0.005	0.030	0.005	
10th percentile		0.005	0.020	0.005	
Minimum		0.000	0.000	0.000	
Average		0.007	0.071	0.013	
Number	0	125	642	281	0

# 4.4 Nitrogen – NOx

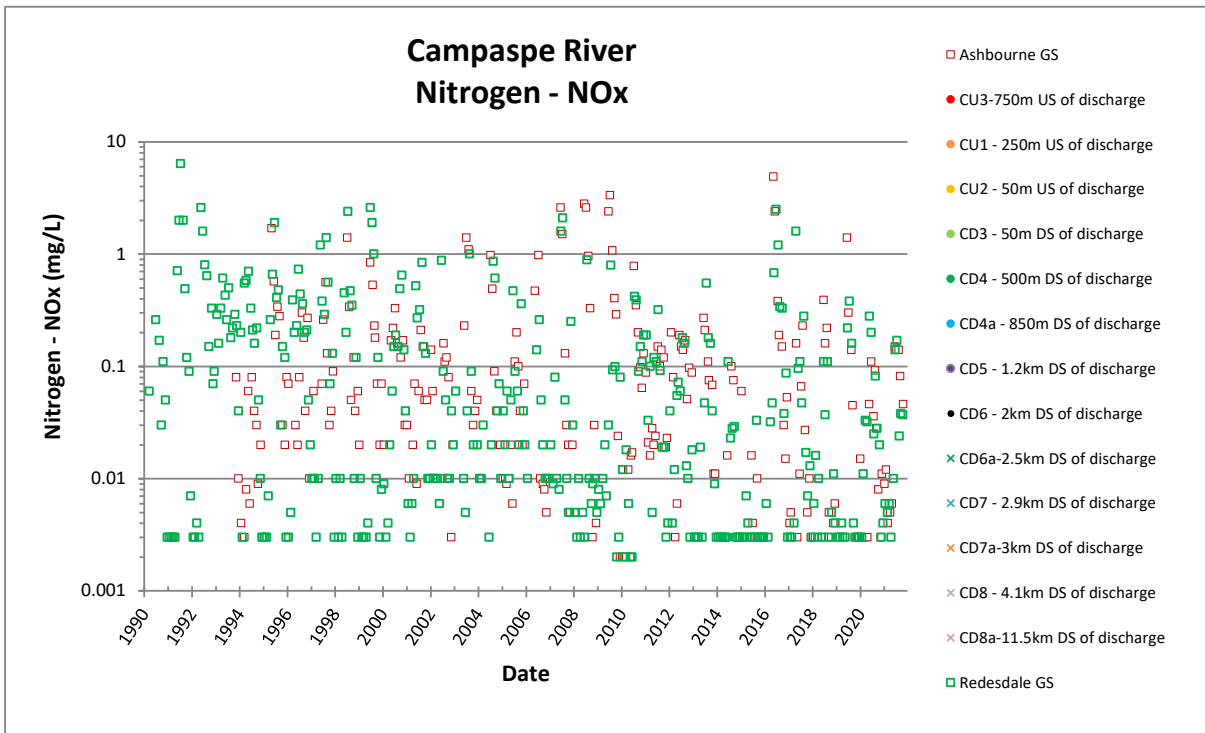


Figure 94 Nitrogen – NOx as N data – Campaspe River

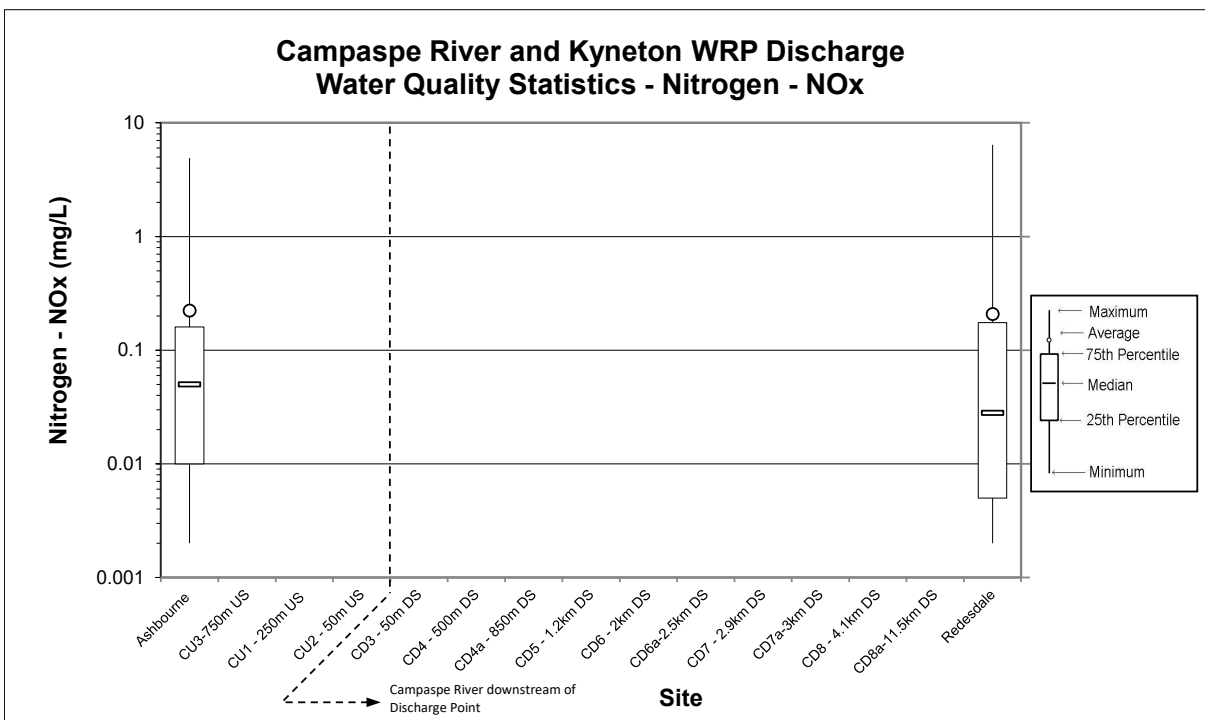
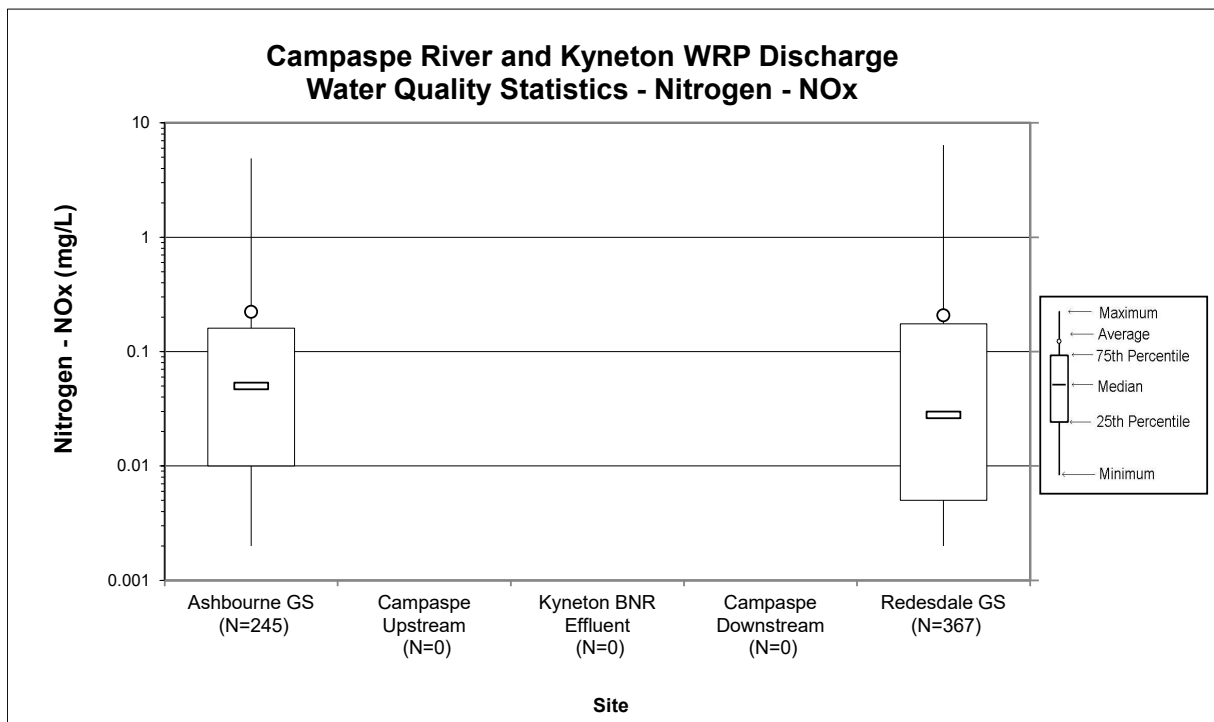


Figure 95 Nitrogen – NOx as N statistics – Campaspe River

**Table 58 Nitrogen – NOx as N statistics – Campaspe River**

	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale
Maximum	4.900														6.400
90th percentile	0.398														0.532
75th percentile	0.160														0.175
Median	0.050														0.028
25th percentile	0.010														0.005
10th percentile	0.003														0.003
Minimum	0.002														0.002
Average	0.223														0.208
Number	245	0	0	0	0	0	0	0	0	0	0	0	0	0	367



**Figure 96 Nitrogen – NOx as N statistics – Campaspe River and Kyneton WRP**

**Table 59 Nitrogen – NOx as N statistics – Campaspe River and Kyneton WRP**

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum	4.900				6.400
90th percentile	0.398				0.532
75th percentile	0.160				0.175
Median	0.050				0.028
25th percentile	0.010				0.005
10th percentile	0.003				0.003
Minimum	0.002				0.002
Average	0.223				0.208
Number	245	0	0	0	367

# 4.5 Nitrogen - Total Kjeldahl

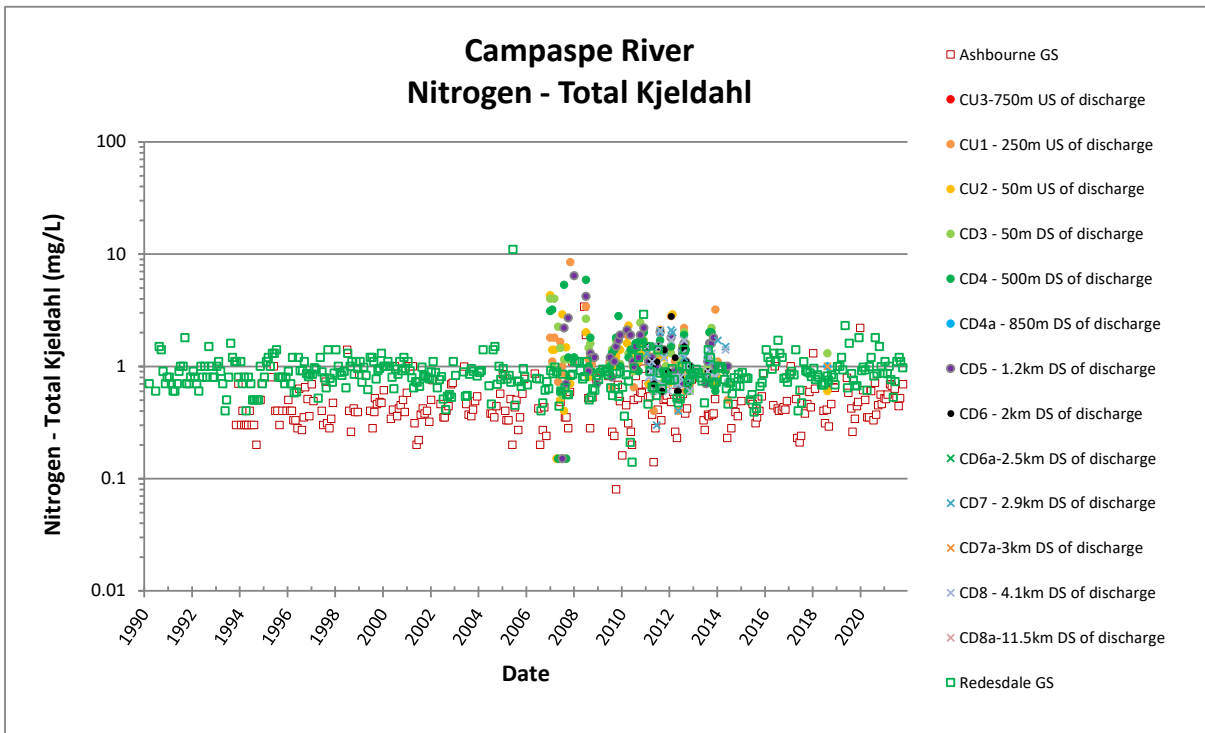


Figure 97 Nitrogen – Total Kjeldahl as N data – Campaspe River

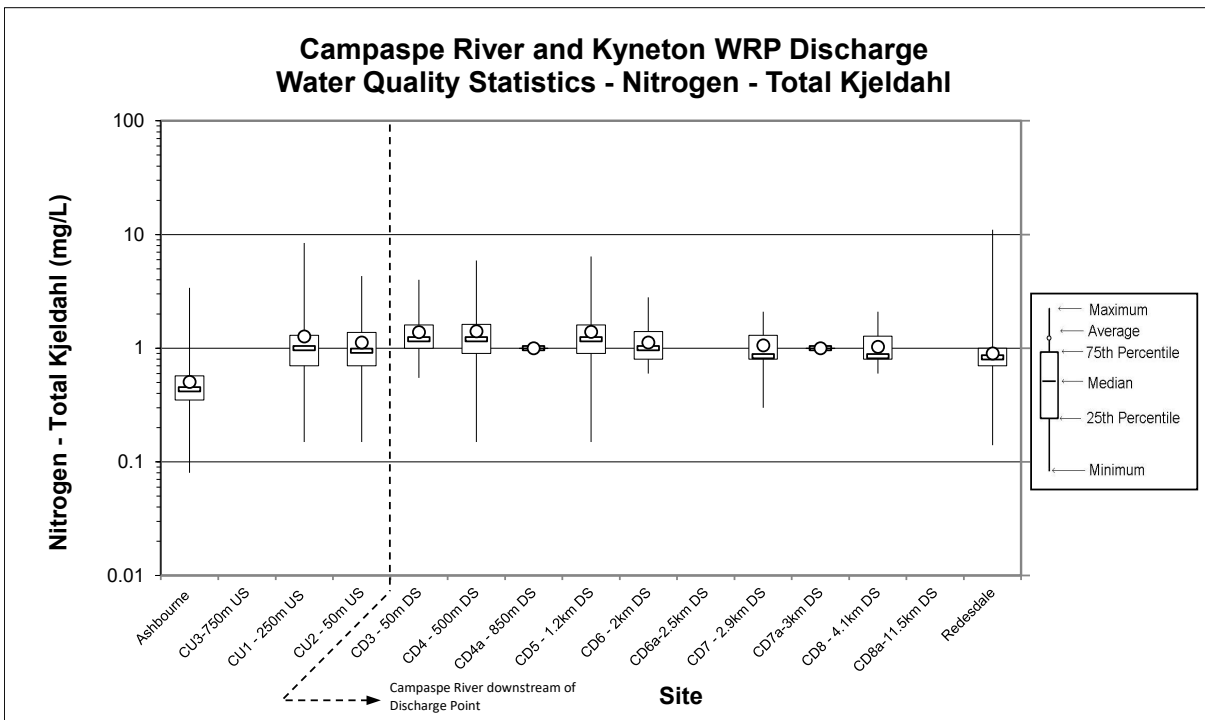
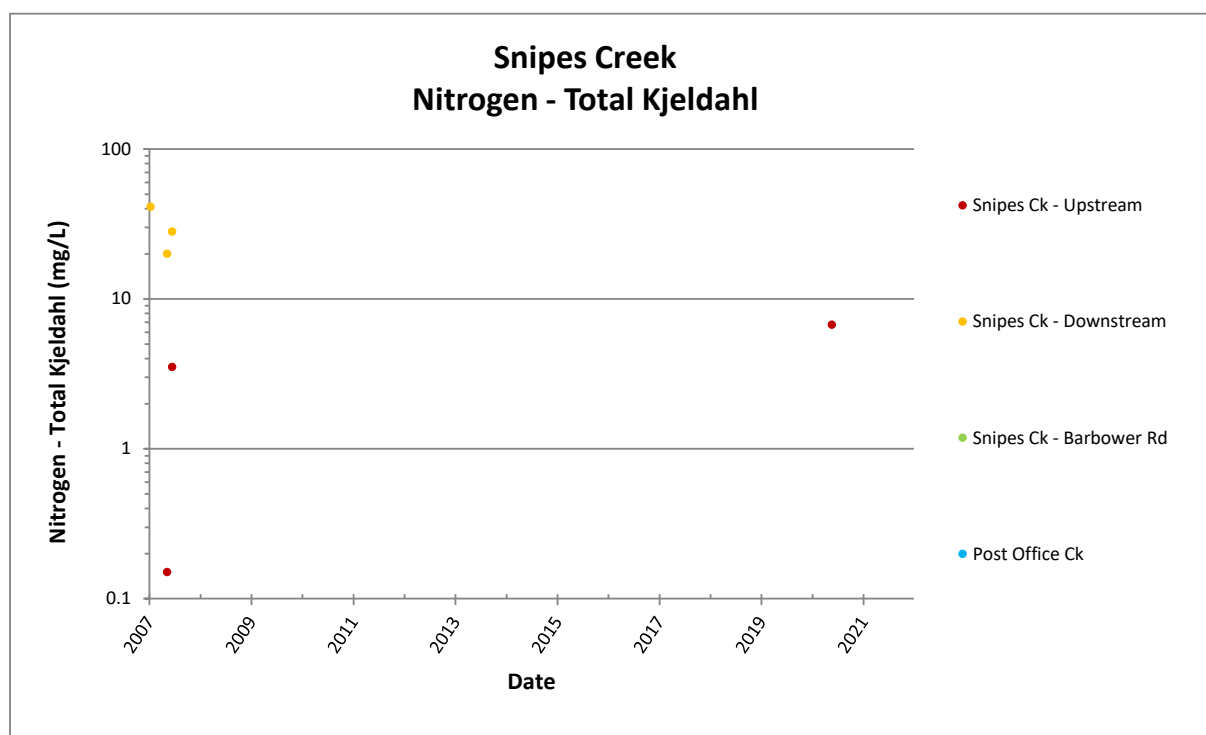


Figure 98 Nitrogen – Total Kjeldahl as N statistics – Campaspe River



**Table 60 Nitrogen – Total Kjeldahl as N statistics – Campaspe River**

	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale
Maximum	3.4		8.45	4.3	4	5.9	1	6.4	2.8		2.1	1	2.1		11
90th percentile	0.783		1.980	1.600	2.100	2.000	1.000	2.060	1.500		1.680	1.000	1.520		1.200
75th percentile	0.573		1.300	1.375	1.600	1.625	1.000	1.600	1.400		1.300	1.000	1.275		1.000
Median	0.435		1.000	0.950	1.200	1.200	1.000	1.200	1.000		0.850	1.000	0.850		0.830
25th percentile	0.350		0.700	0.700	1.000	0.900	1.000	0.900	0.800		0.800	1.000	0.800		0.700
10th percentile	0.277		0.630	0.610	0.800	0.600	1.000	0.700	0.630		0.700	1.000	0.690		0.546
Minimum	0.080		0.150	0.150	0.550	0.150	1.000	0.150	0.600		0.300	1.000	0.600		0.140
Average	0.506		1.269	1.122	1.382	1.408	1.000	1.395	1.125		1.059	1.000	1.027		0.900
Number	248	0	57	62	61	56	1	55	24	0	32	1	30	0	367



**Figure 99 Nitrogen – Total Kjeldahl as N data – Snipes Creek and Post Office Creek**

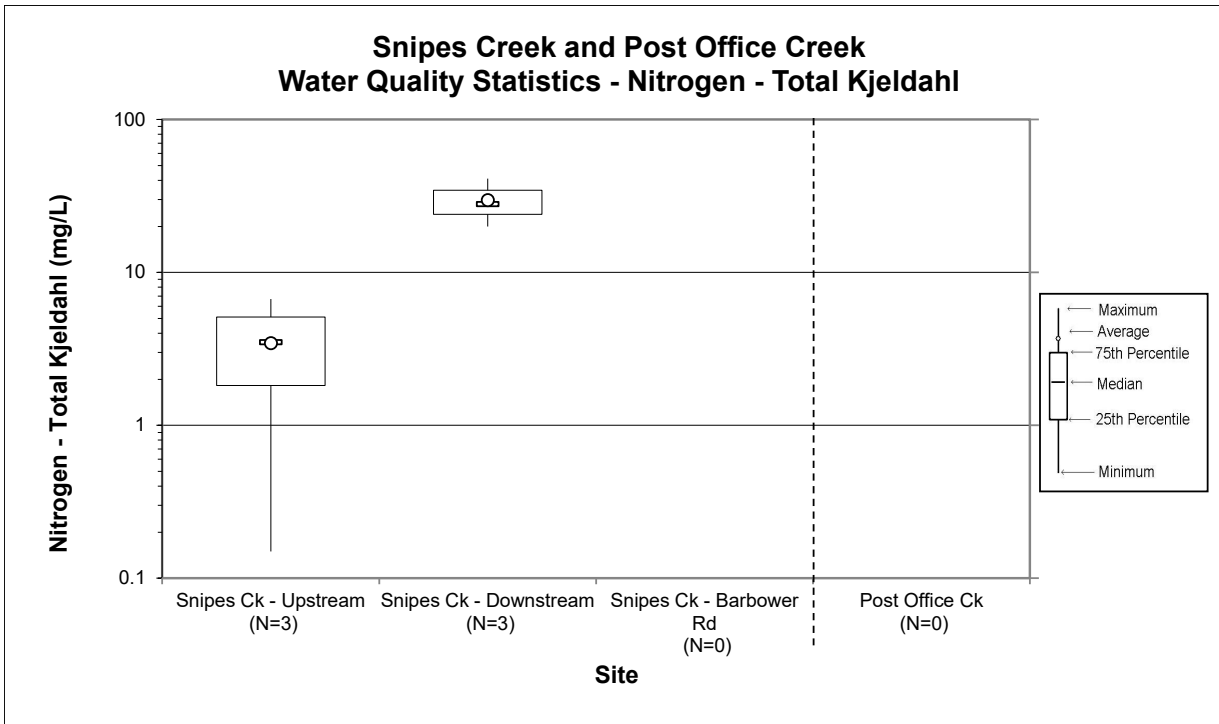


Figure 100 Nitrogen – Total Kjeldahl as N statistics – Snipes Creek and Post Office Creek

Table 61 Nitrogen – Total Kjeldahl as N statistics – – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	6.7	41		
90th percentile	6.060	38.400		
75th percentile	5.100	34.500		
Median	3.500	28.000		
25th percentile	1.825	24.000		
10th percentile	0.820	21.600		
Minimum	0.150	20.000		
Average	3.450	29.667		
Number	3	3	0	0

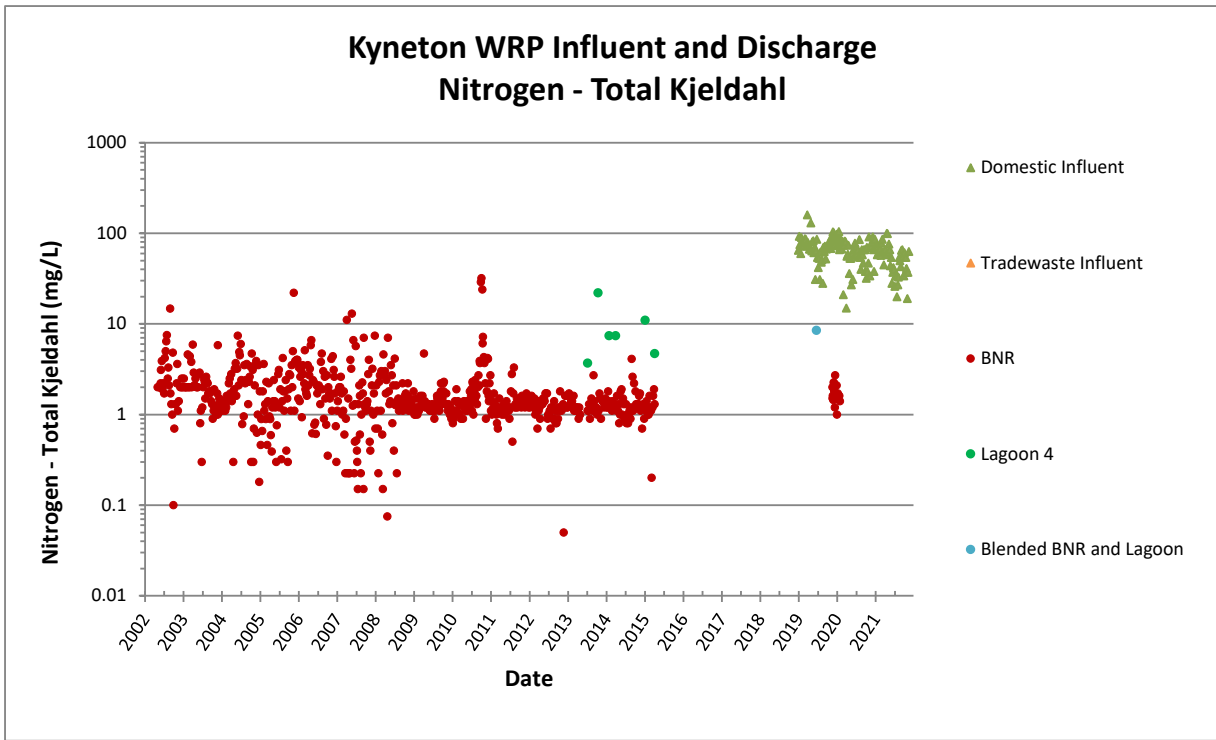


Figure 101 Nitrogen – Total Kjeldahl as N data – Kyneton WRP

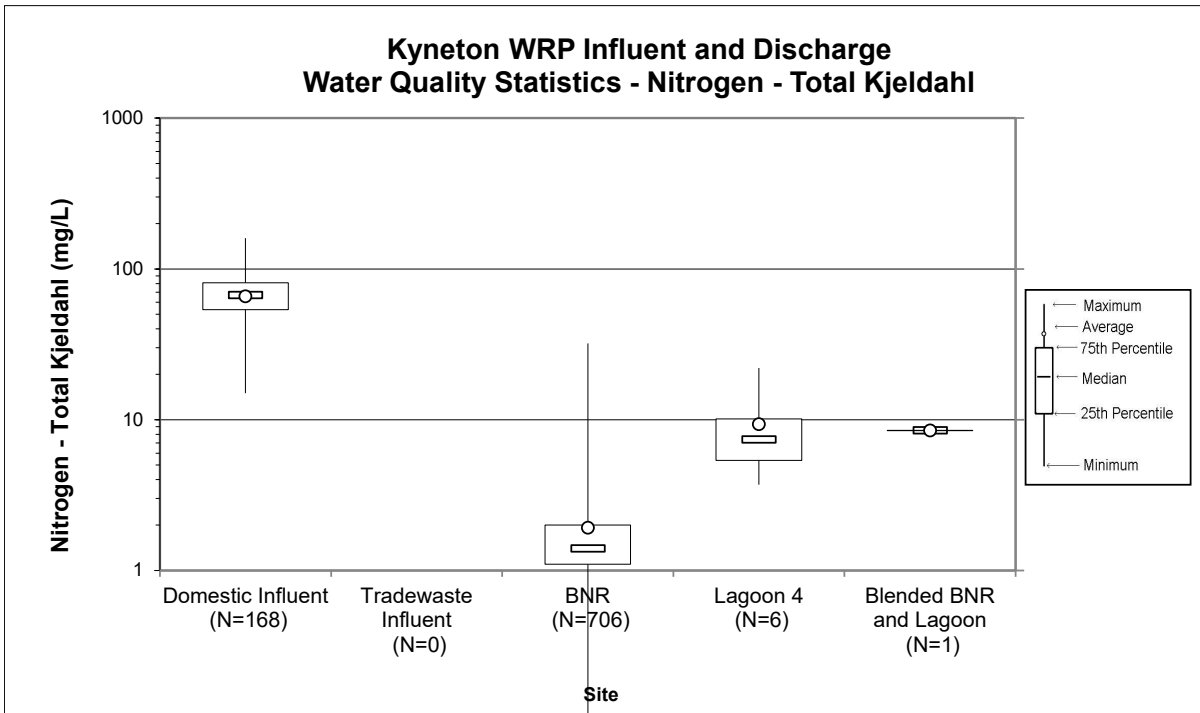
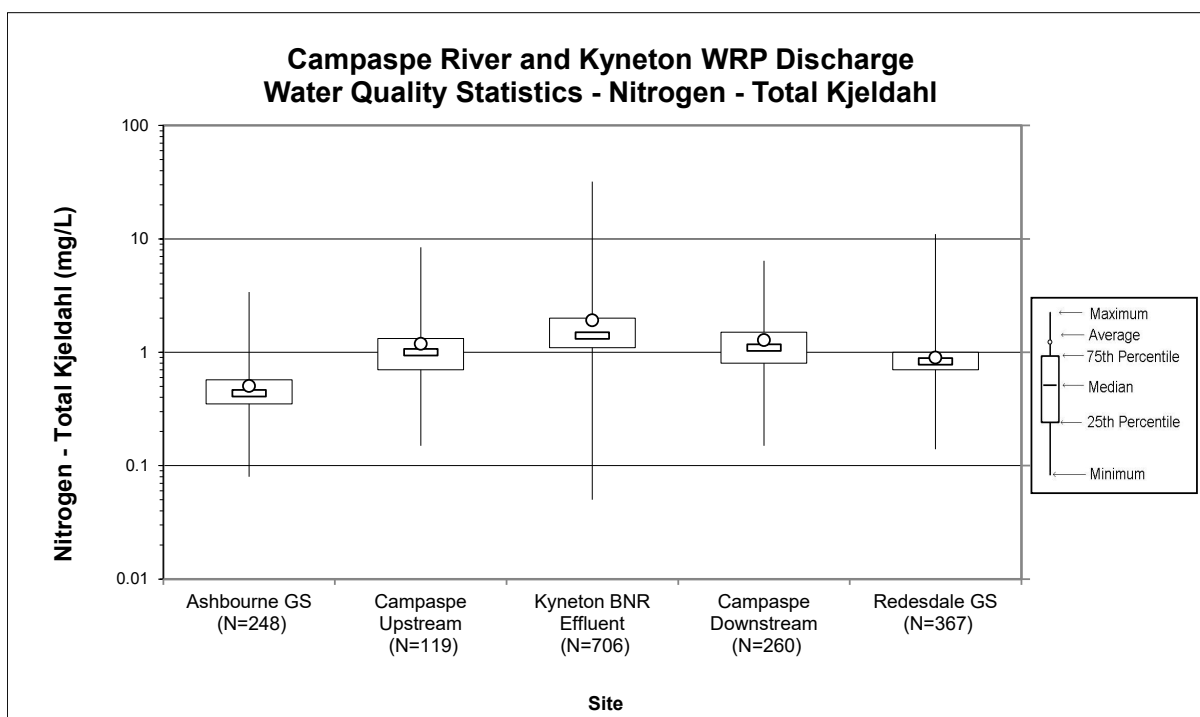


Figure 102 Nitrogen – Total Kjeldahl as N statistics – Kyneton WRP

**Table 62 Nitrogen – Total Kjeldahl as N statistics – Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	160		32	22	8.5
90th percentile	90.650		3.250	16.500	8.500
75th percentile	81.000		2.000	10.100	8.500
Median	67.000		1.400	7.400	8.500
25th percentile	53.750		1.100	5.375	8.500
10th percentile	34.000		0.895	4.200	8.500
Minimum	15.000		0.050	3.700	8.500
Average	65.897		1.922	9.367	8.500
Number	168	0	706	6	1



**Figure 103 Nitrogen – Total Kjeldahl as N statistics – Campaspe River and Kyneton WRP**

**Table 63 Nitrogen – Total Kjeldahl as N statistics – Campaspe River and Kyneton WRP**

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum	3.4	8.45	32	6.4	11
90th percentile	0.783	1.920	3.250	2.000	1.200
75th percentile	0.573	1.325	2.000	1.500	1.000
Median	0.435	1.000	1.400	1.100	0.830
25th percentile	0.350	0.700	1.100	0.800	0.700
10th percentile	0.277	0.600	0.895	0.700	0.546
Minimum	0.080	0.150	0.050	0.150	0.140
Average	0.506	1.192	1.922	1.283	0.900
Number	248	119	706	260	367

# 4.6 Nitrogen – Total

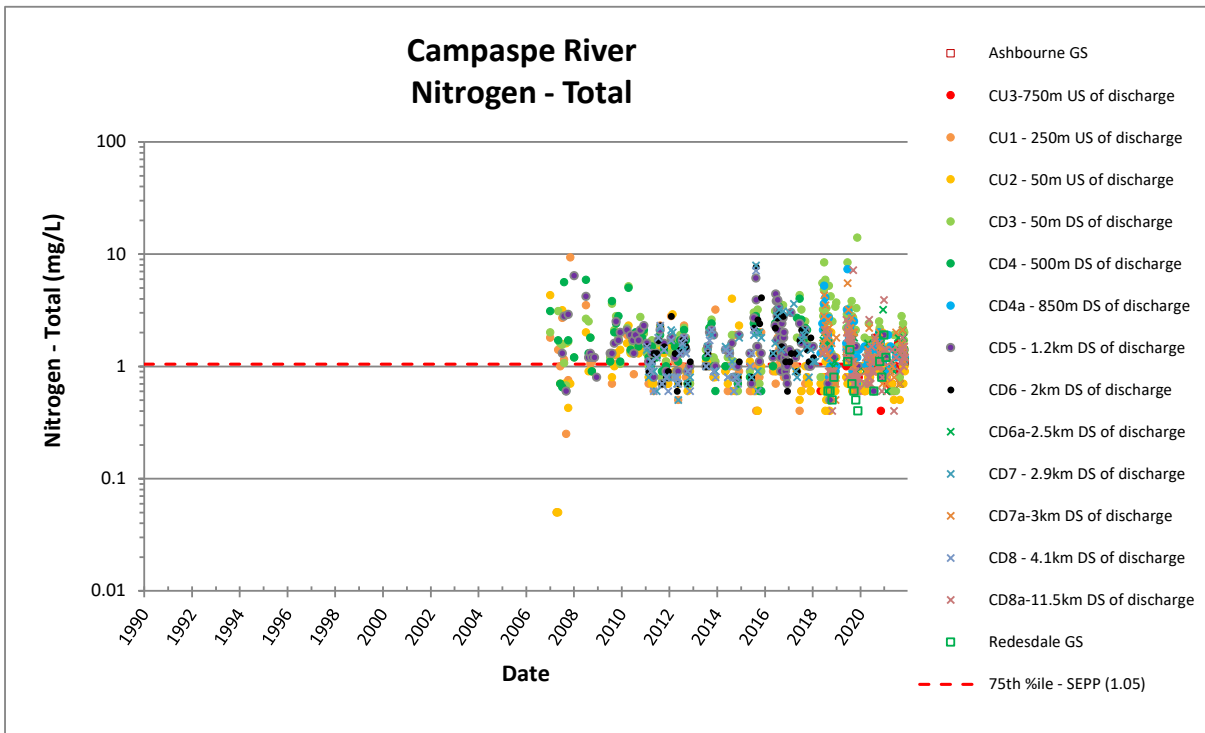


Figure 104 Nitrogen – Total as N data – Campaspe River

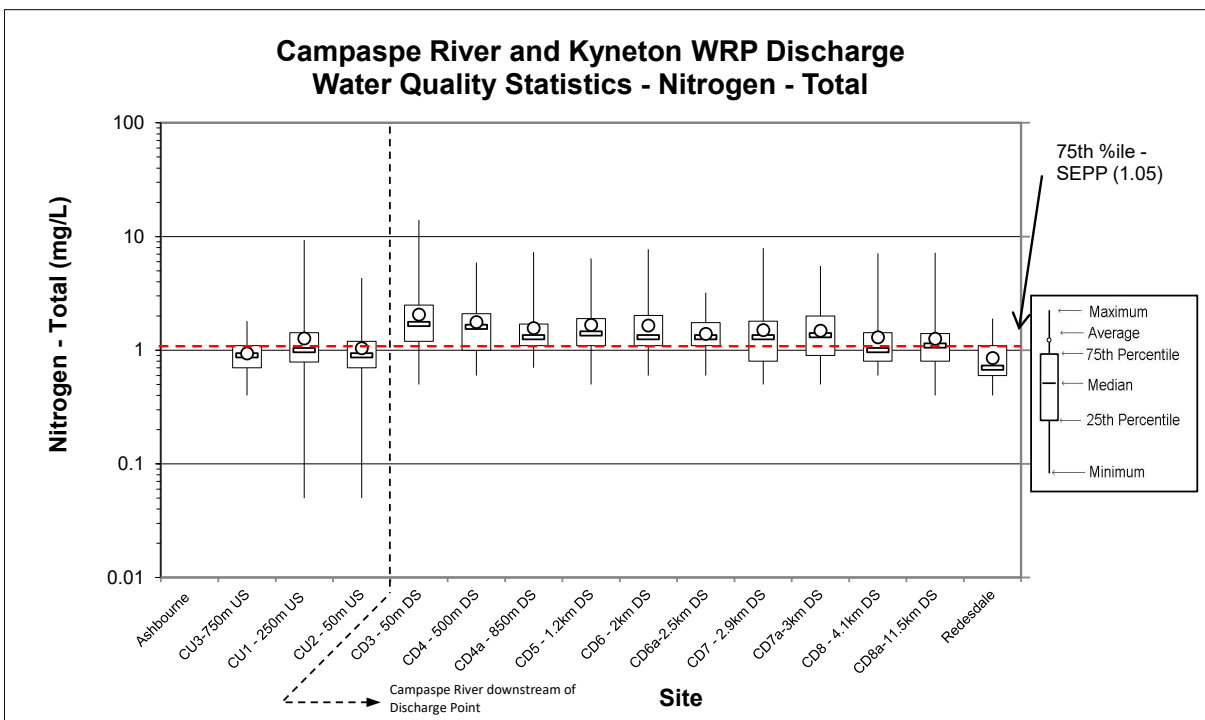
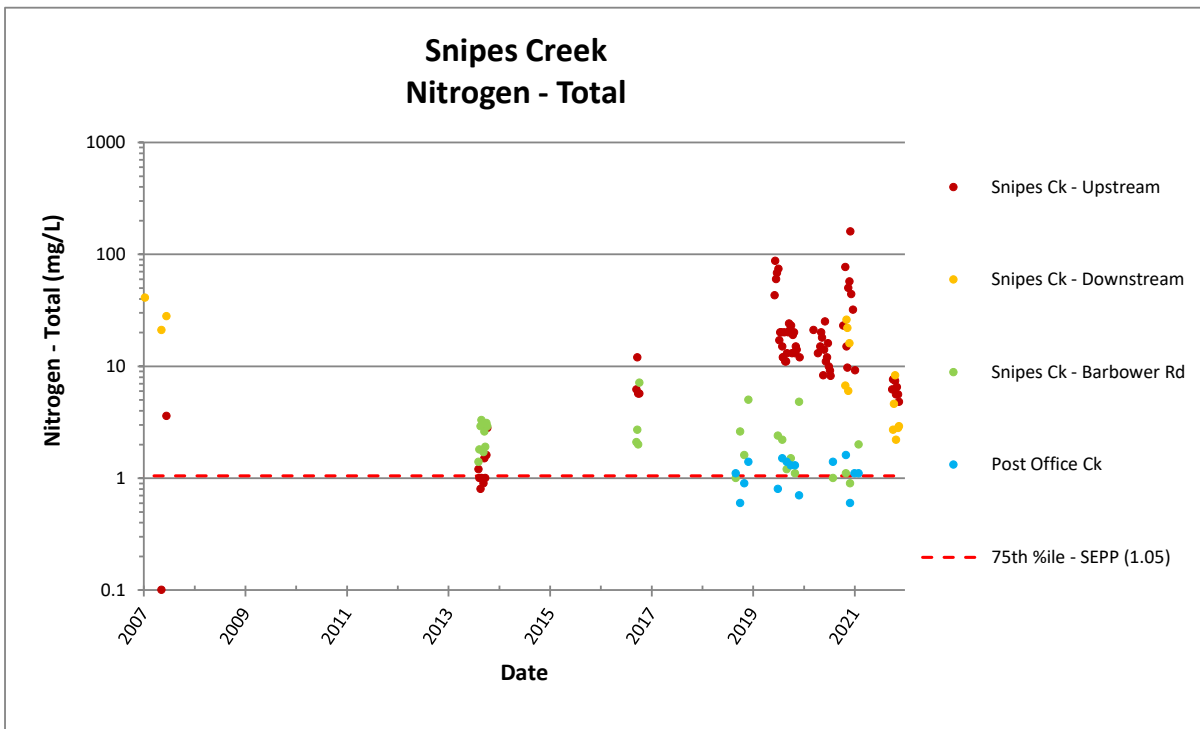


Figure 105 Nitrogen – Total as N statistics – Campaspe River

**Table 64 Nitrogen – Total as N statistics – Campaspe River**

	Ashbourne	CU3 - 750m US	CU1 - 250m US	CU2 - 50m US	CD3 - 50m DS	CD4 - 500m DS	CD4a - 850m DS	CD5 - 1.2km DS	CD6 - 2km DS	CD6a - 2.5km DS	CD7 - 2.9km DS	CD7a - 3km DS	CD8 - 4.1km DS	CD8a - 11.5km DS	Redesdale
Maximum		1.80	9.30	4.30	14.00	5.90	7.30	6.40	7.70	3.20	7.90	5.50	7.10	7.20	1.90
90th percentile		1.35	1.91	1.60	3.30	2.84	2.43	2.80	2.69	1.90	2.19	2.20	1.83	1.90	1.32
75th percentile		1.10	1.43	1.20	2.50	2.10	1.70	1.90	2.03	1.75	1.80	2.00	1.43	1.40	1.10
Median		0.90	1.00	0.90	1.70	1.60	1.30	1.40	1.30	1.30	1.30	1.35	1.00	1.10	0.70
25th percentile		0.70	0.79	0.70	1.20	1.00	1.10	1.10	1.10	1.10	0.80	0.90	0.80	0.80	0.60
10th percentile		0.60	0.60	0.60	0.80	0.70	0.90	0.80	0.80	0.90	0.80	0.70	0.60	0.70	0.50
Minimum		0.40	0.05	0.05	0.50	0.60	0.70	0.50	0.60	0.60	0.50	0.50	0.60	0.40	0.40
Average		0.94	1.27	1.04	2.06	1.77	1.57	1.67	1.65	1.39	1.51	1.48	1.30	1.26	0.85
Number	0	46	100	187	175	79	98	130	52	43	62	96	40	89	15



**Figure 106 Nitrogen – Total as N data – Snipes Creek and Post Office Creek**

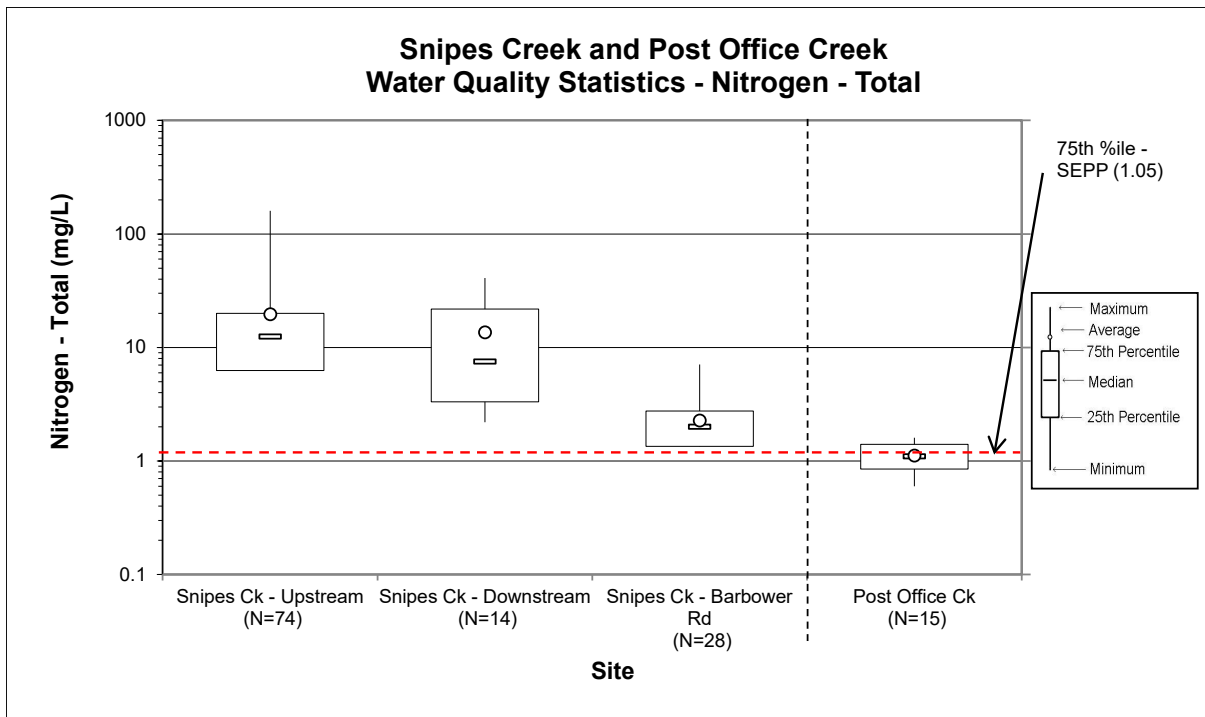


Figure 107 Nitrogen – Total statistics – Snipes Creek and Post Office Creek

Table 65 Nitrogen – Total statistics – – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	160	41	7.1	1.6
90th percentile	48.20	27.40	3.75	1.46
75th percentile	20.00	21.75	2.75	1.40
Median	12.50	7.50	2.00	1.10
25th percentile	6.28	3.33	1.35	0.85
10th percentile	1.29	2.73	1.00	0.64
Minimum	0.00	2.20	0.00	0.60
Average	19.61	13.59	2.28	1.12
Number	74	14	28	15

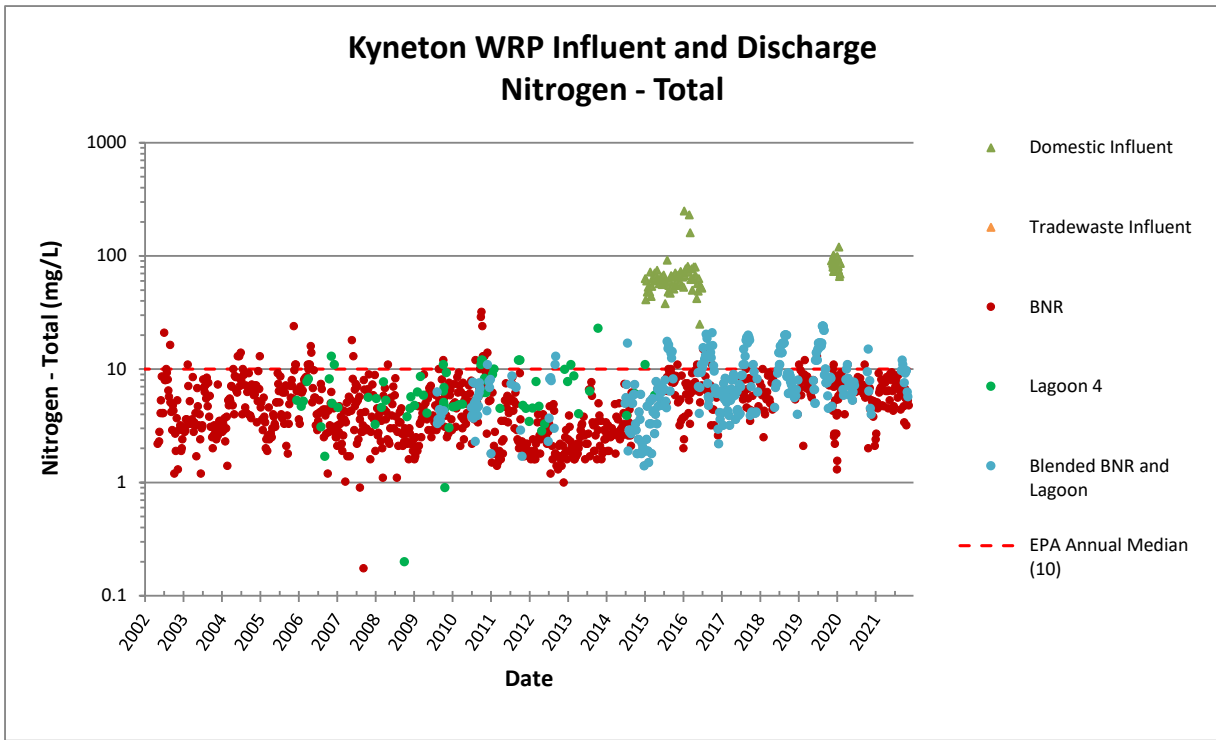


Figure 108 Nitrogen – Total data – Kyneton WRP

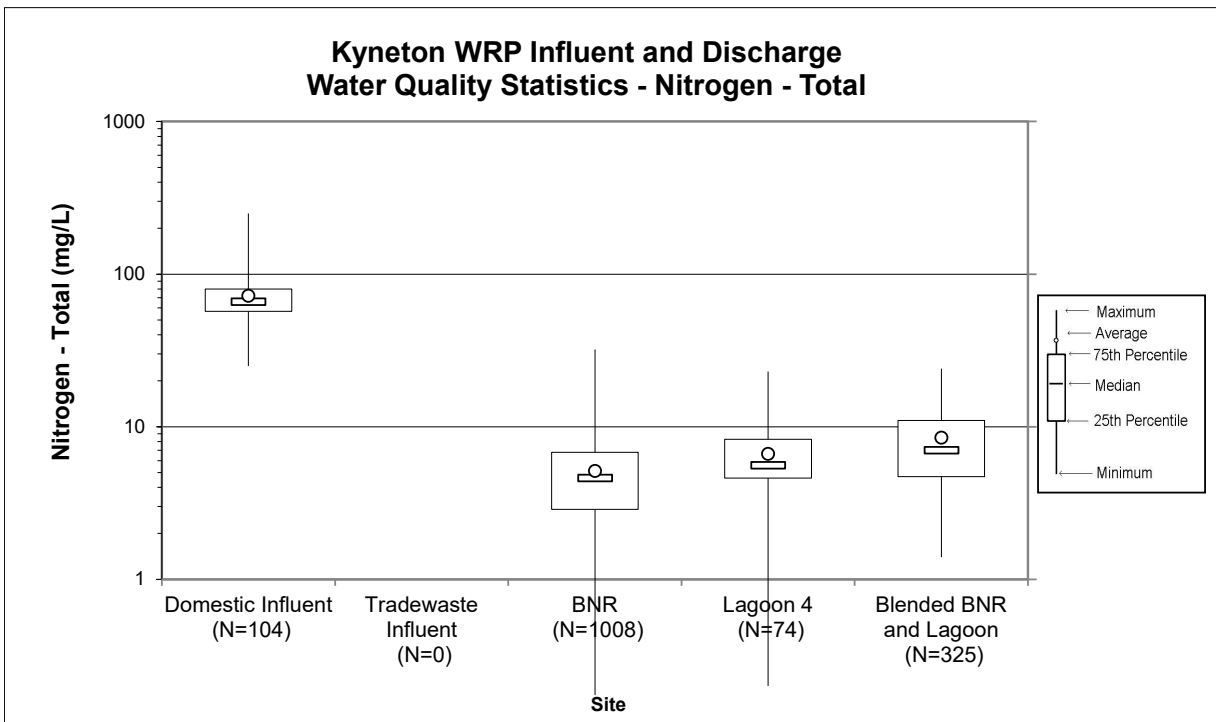
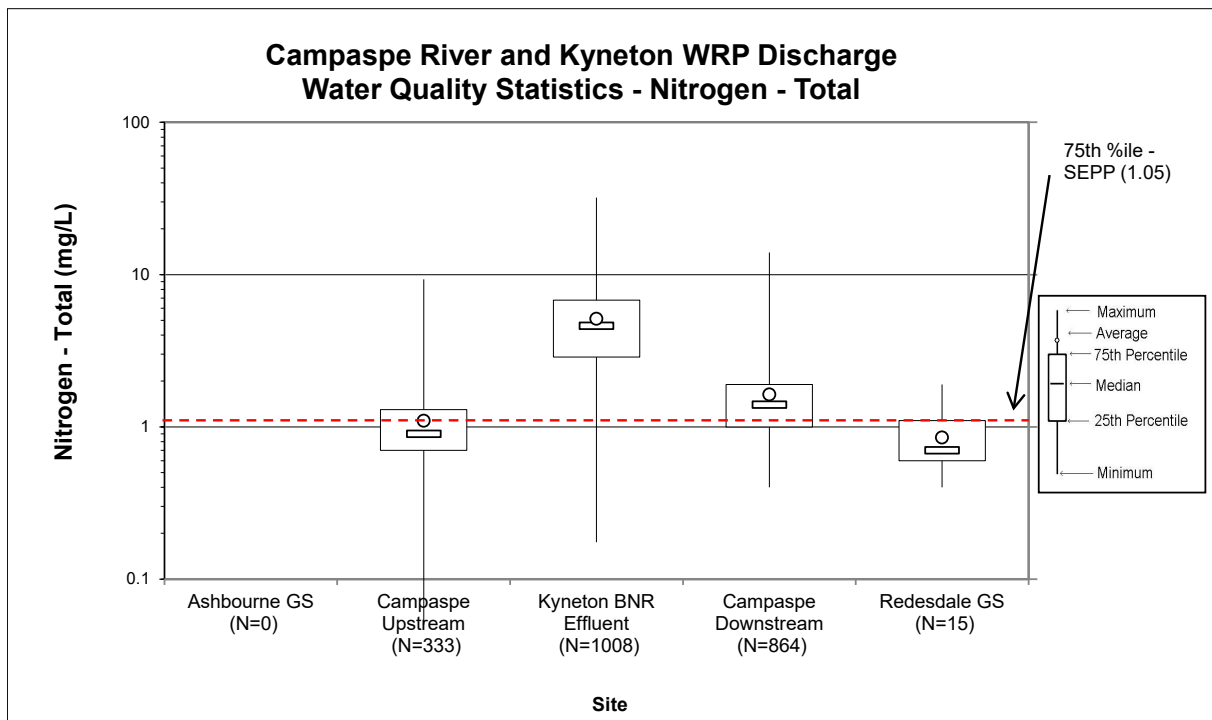


Figure 109 Nitrogen – Total statistics – Kyneton WRP



**Table 66 Nitrogen – Total statistics – Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	250		32	23	24
90th percentile	91.70		8.53	11.00	17.00
75th percentile	80.00		6.80	8.28	11.00
Median	66.00		4.60	5.58	7.00
25th percentile	57.00		2.88	4.60	4.70
10th percentile	49.30		2.00	3.35	3.30
Minimum	25.00		0.18	0.20	1.40
Average	72.14		5.14	6.64	8.50
Number	104	0	1008	74	325



**Figure 110 Nitrogen – Total statistics – Campaspe River and Kyneton WRP**

**Table 67 Nitrogen – Total statistics – Campaspe River and Kyneton WRP**

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum		9.30	32.00	14.00	1.90
90th percentile		1.70	8.53	2.80	1.32
75th percentile		1.30	6.80	1.90	1.10
Median		0.90	4.60	1.40	0.70
25th percentile		0.70	2.88	1.00	0.60
10th percentile		0.60	2.00	0.80	0.50
Minimum		0.05	0.18	0.40	0.40
Average		1.10	5.14	1.64	0.85
Number	0	333	1008	864	15

# 4.7 Phosphorus - Phosphate as P

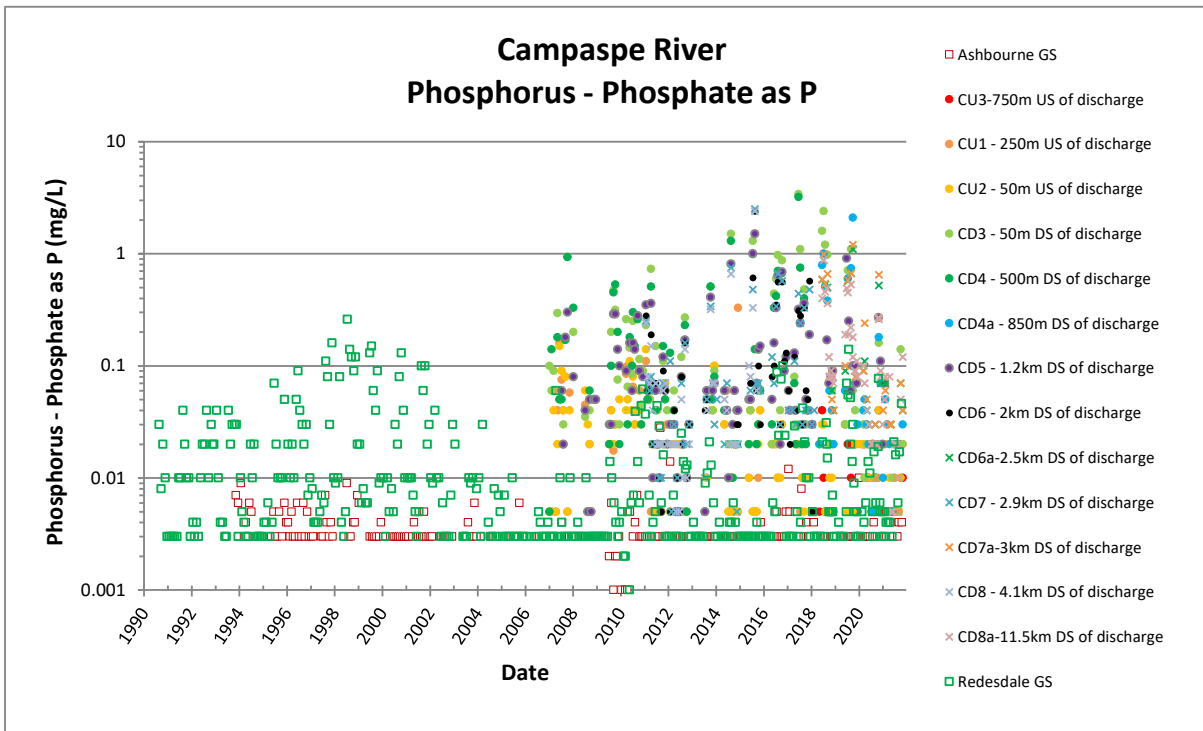


Figure 111 Phosphorus - phosphate as P data – Campaspe River

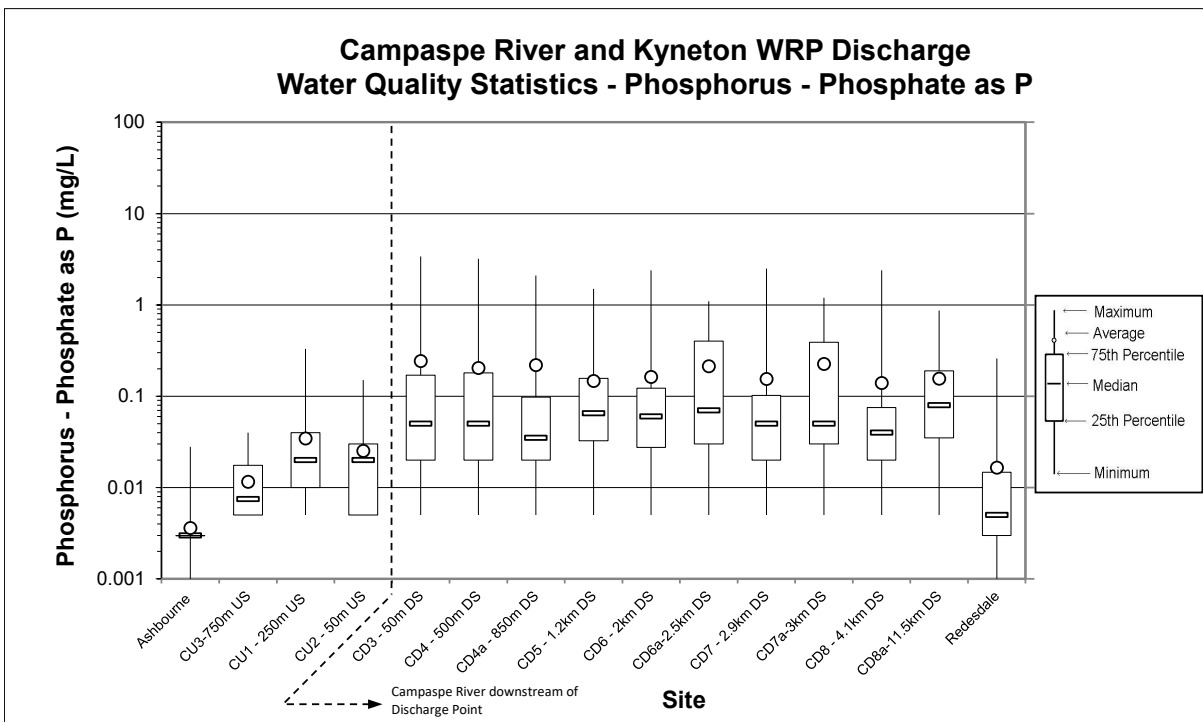
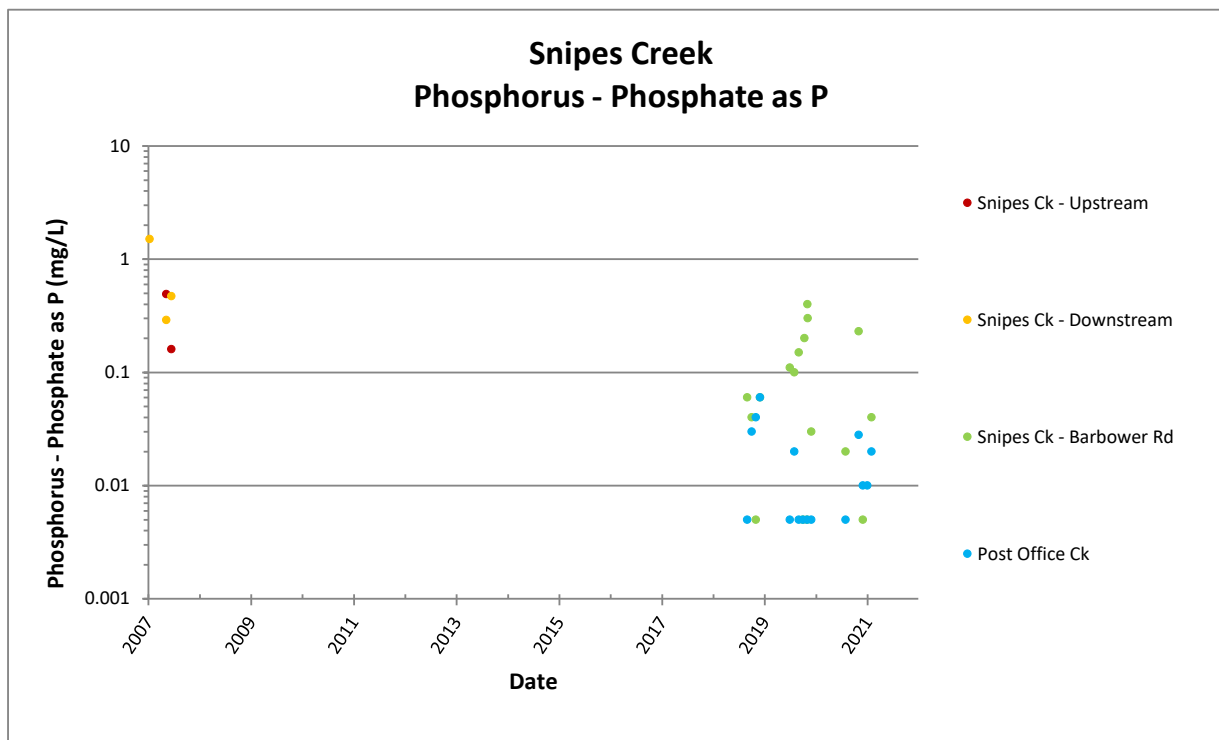


Figure 112 Phosphorus - phosphate as P statistics – Campaspe River

**Table 68 Phosphorus - phosphate as P statistics – Campaspe River**

	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale
Maximum	0.028	0.040	0.330	0.150	3.400	3.200	2.100	1.500	2.400	1.100	2.500	1.200	2.400	0.870	0.260
90th percentile	0.005	0.020	0.075	0.050	0.842	0.514	0.726	0.329	0.348	0.598	0.430	0.660	0.256	0.454	0.040
75th percentile	0.003	0.018	0.040	0.030	0.170	0.180	0.098	0.158	0.123	0.403	0.103	0.390	0.075	0.190	0.015
Median	0.003	0.008	0.020	0.020	0.050	0.050	0.035	0.065	0.060	0.070	0.050	0.050	0.040	0.080	0.005
25th percentile	0.003	0.005	0.010	0.005	0.020	0.020	0.020	0.033	0.028	0.030	0.020	0.030	0.020	0.035	0.003
10th percentile	0.003	0.005	0.005	0.005	0.010	0.009	0.011	0.011	0.010	0.020	0.010	0.010	0.010	0.020	0.003
Minimum	0.001	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.001
Average	0.004	0.012	0.035	0.025	0.243	0.203	0.220	0.147	0.163	0.214	0.155	0.227	0.140	0.156	0.017
Number	248	34	81	122	113	79	32	102	52	30	62	31	39	47	378



**Figure 113 Phosphorus - phosphate as P data – Snipes Creek and Post Office Creek**

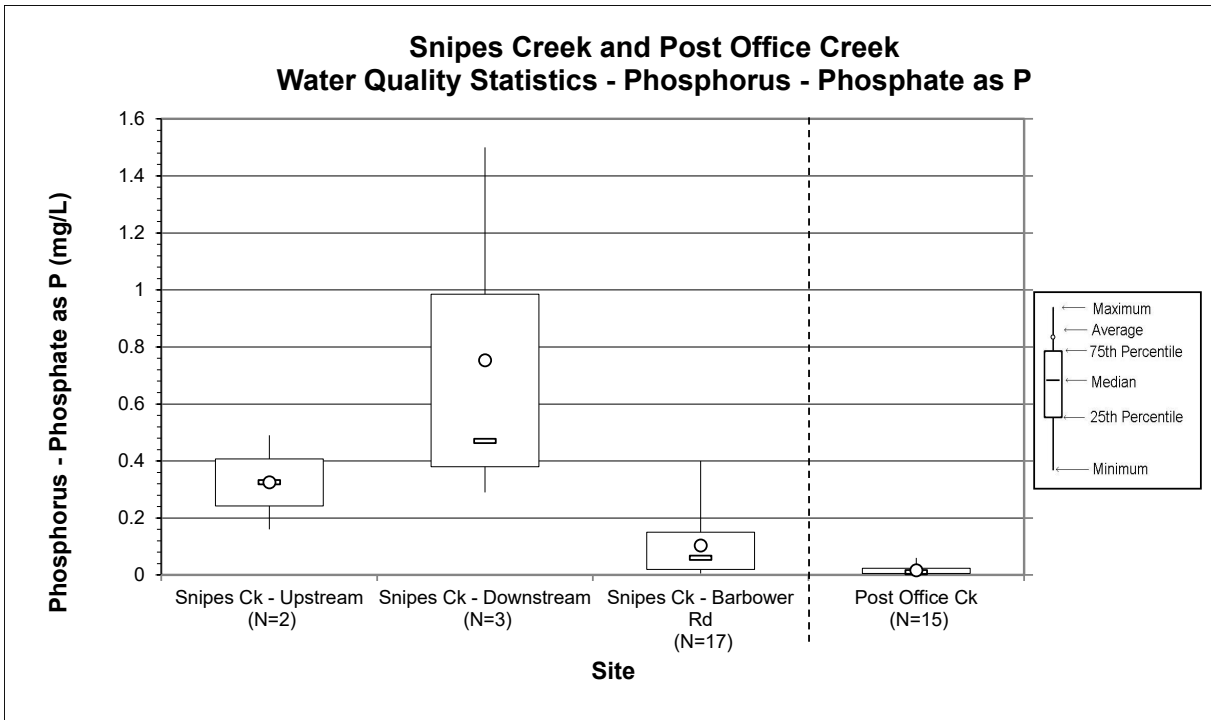


Figure 114 Phosphorus - phosphate as P statistics – Snipes Creek and Post Office Creek

Table 69 Phosphorus - phosphate as P statistics – – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	0.490	1.500	0.400	0.060
90th percentile	0.457	1.294	0.258	0.036
75th percentile	0.408	0.985	0.150	0.024
Median	0.325	0.470	0.060	0.010
25th percentile	0.243	0.380	0.020	0.005
10th percentile	0.193	0.326	0.005	0.005
Minimum	0.160	0.290	0.005	0.005
Average	0.325	0.753	0.104	0.017
Number	2	3	17	15

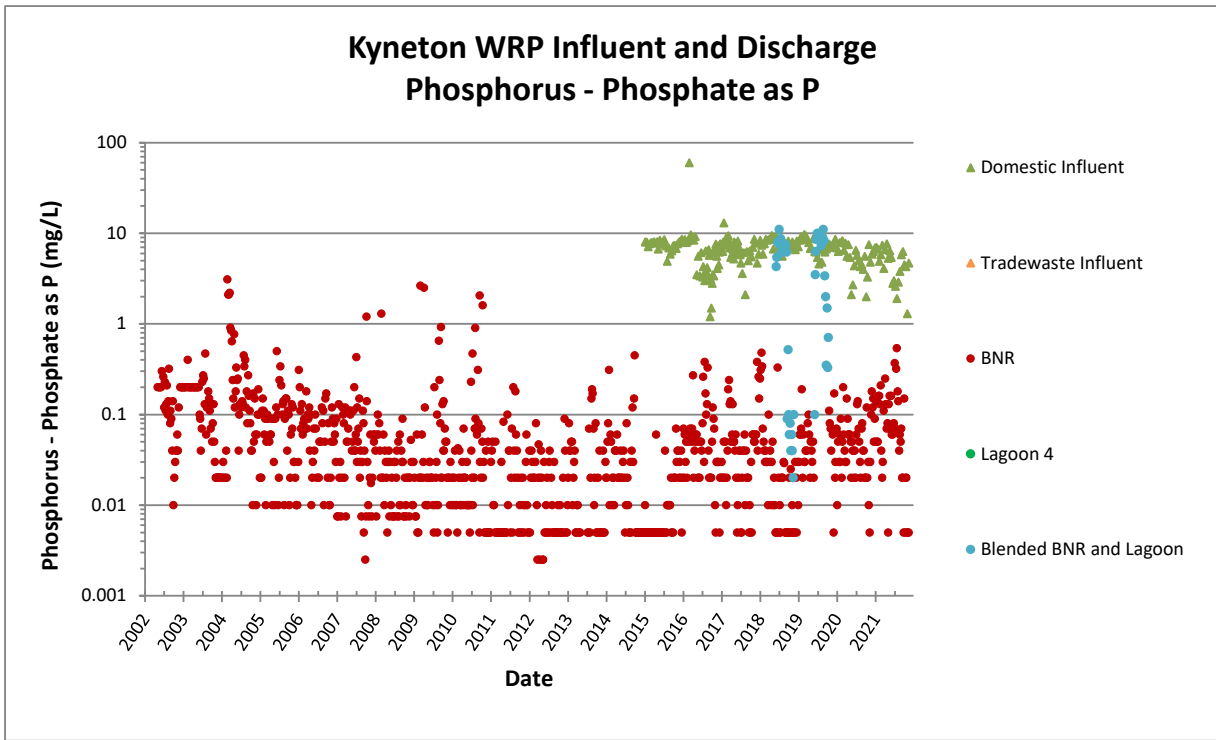


Figure 115 Phosphorus - phosphate as P data – Kyneton WRP

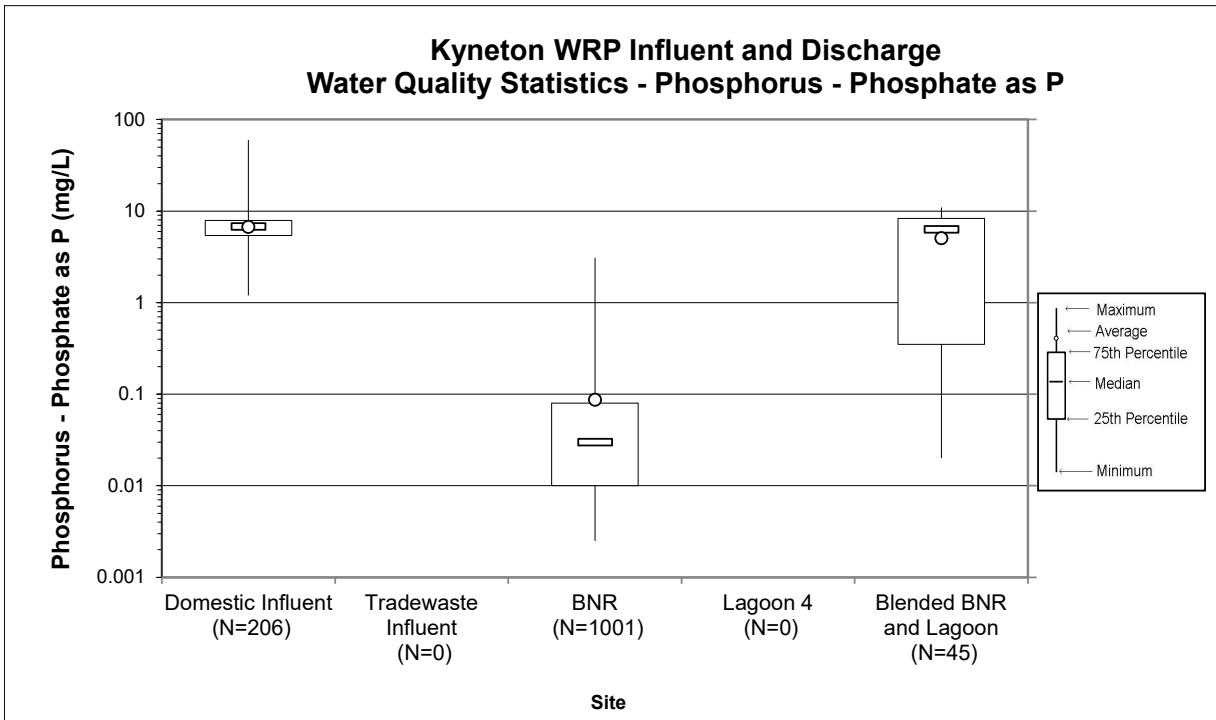
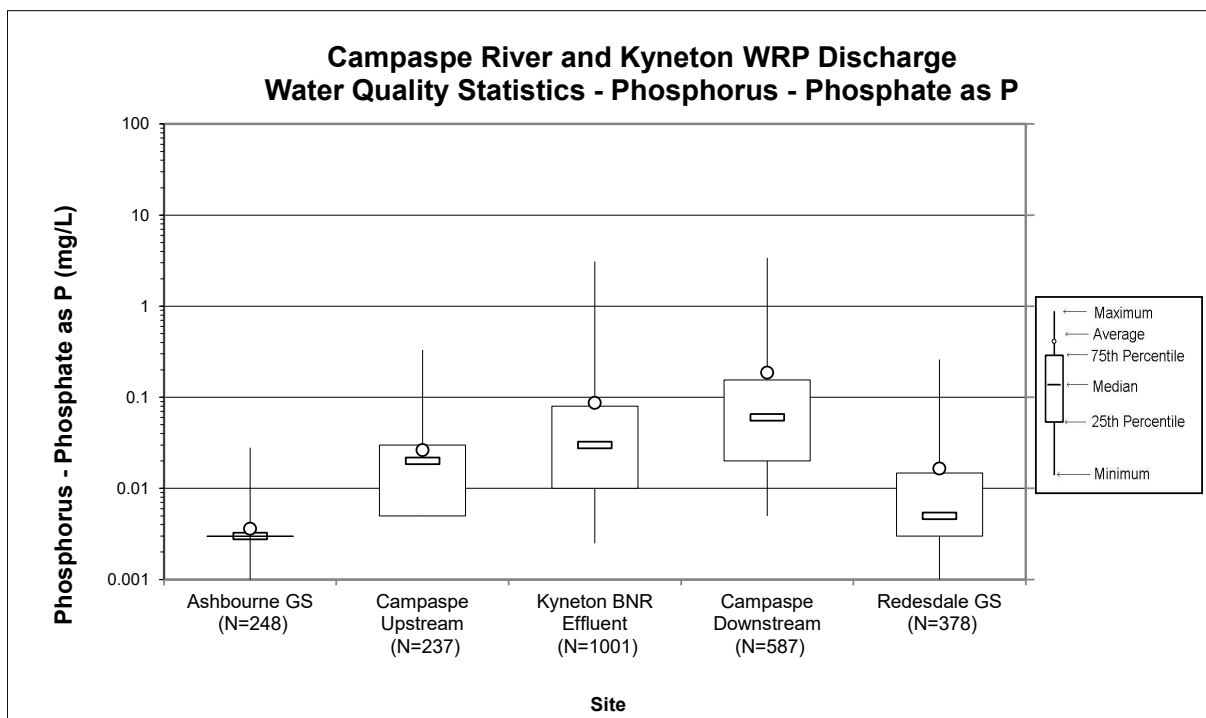


Figure 116 Phosphorus - phosphate as P statistics – Kyneton WRP

**Table 70 Phosphorus - phosphate as P statistics – Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	60.000		3.100		11.000
90th percentile	8.500		0.190		9.260
75th percentile	7.900		0.080		8.300
Median	6.800		0.030		6.300
25th percentile	5.400		0.010		0.350
10th percentile	3.500		0.005		0.068
Minimum	1.200		0.003		0.020
Average	6.719		0.087		5.053
Number	206	0	1001	0	45



**Figure 117 Phosphorus - phosphate as P statistics – Campaspe River and Kyneton WRP**

**Table 71 Phosphorus - phosphate as P statistics – Campaspe River and Kyneton WRP**

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum	0.028	0.330	3.100	3.400	0.260
90th percentile	0.005	0.060	0.190	0.530	0.040
75th percentile	0.003	0.030	0.080	0.155	0.015
Median	0.003	0.020	0.030	0.060	0.005
25th percentile	0.003	0.005	0.010	0.020	0.003
10th percentile	0.003	0.005	0.005	0.010	0.003
Minimum	0.001	0.005	0.003	0.005	0.001
Average	0.004	0.026	0.087	0.187	0.017
Number	248	237	1001	587	378

# 4.8 Phosphorus - Total

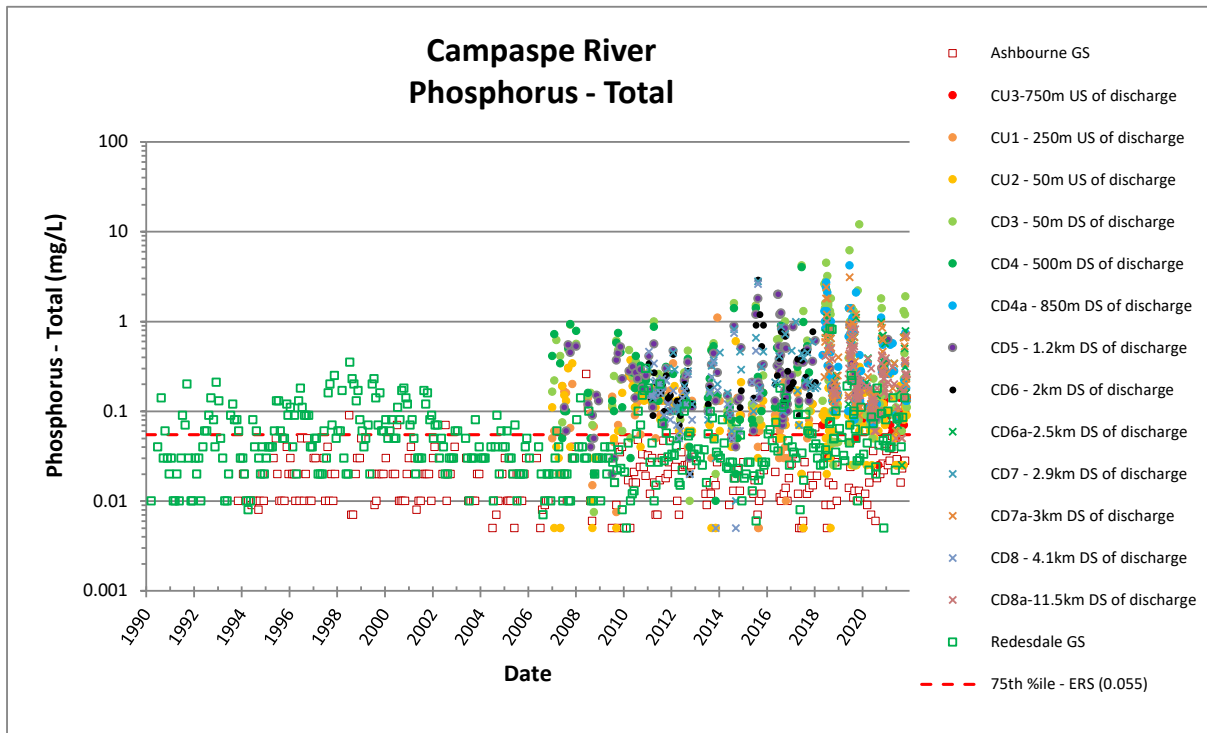


Figure 118 Phosphorus - Total data – Campaspe River

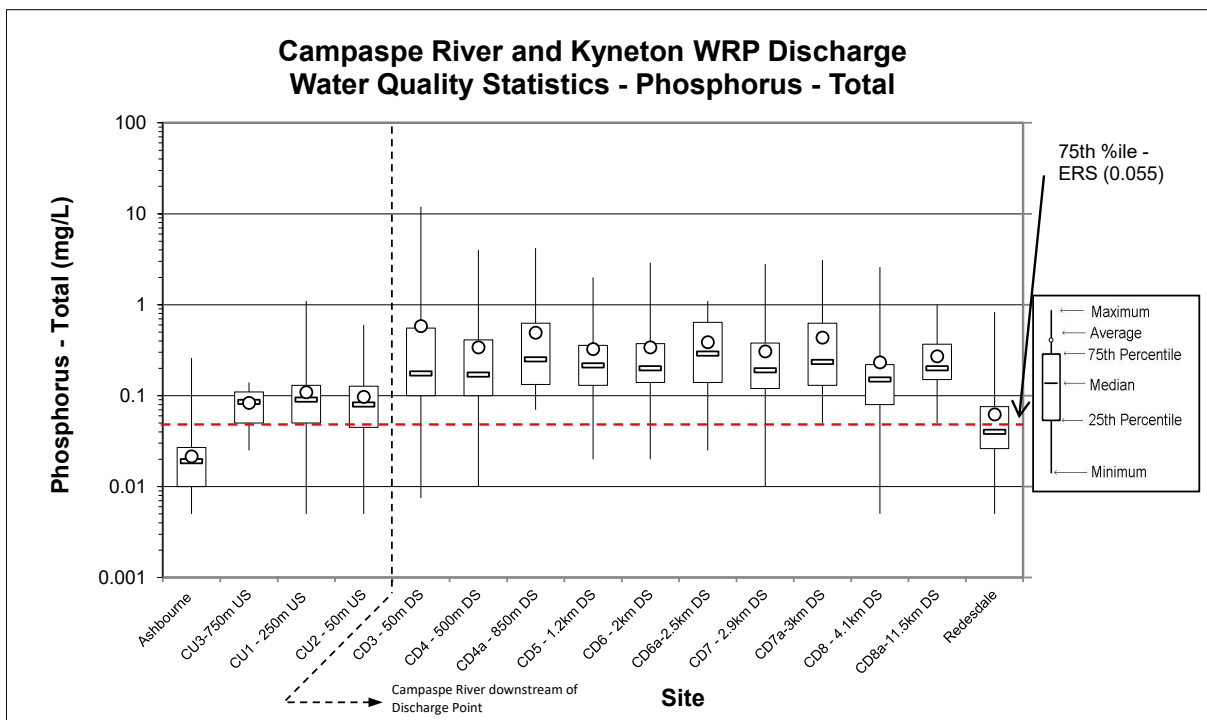
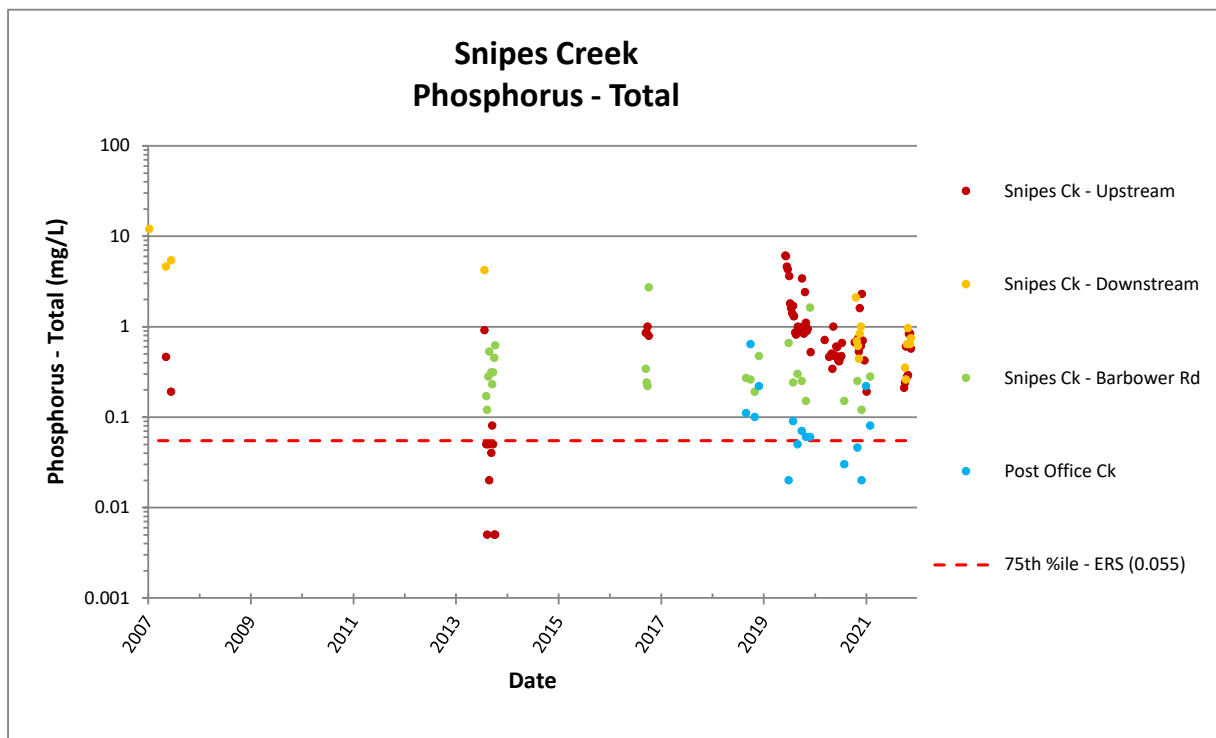


Figure 119 Phosphorus - Total statistics – Campaspe River

**Table 72 Phosphorus - Total statistics – Campaspe River**

	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale
Maximum	0.260	0.140	1.1	0.6	12	4	4.2	2	2.9	1.1	2.8	3.1	2.6	1	0.83
90th percentile	0.037	0.135	0.198	0.161	1.400	0.785	1.100	0.612	0.762	0.732	0.566	0.900	0.361	0.517	0.130
75th percentile	0.027	0.110	0.130	0.128	0.553	0.410	0.628	0.358	0.373	0.640	0.380	0.628	0.220	0.368	0.076
Median	0.019	0.085	0.090	0.080	0.175	0.170	0.250	0.215	0.200	0.290	0.190	0.235	0.150	0.200	0.040
25th percentile	0.010	0.050	0.050	0.045	0.100	0.100	0.133	0.130	0.140	0.140	0.120	0.130	0.080	0.150	0.026
10th percentile	0.009	0.030	0.022	0.025	0.060	0.050	0.090	0.089	0.101	0.100	0.082	0.100	0.050	0.100	0.016
Minimum	0.005	0.025	0.005	0.005	0.008	0.010	0.070	0.020	0.020	0.025	0.010	0.050	0.005	0.050	0.005
Average	0.021	0.083	0.109	0.097	0.580	0.339	0.492	0.325	0.339	0.386	0.306	0.436	0.233	0.272	0.062
Number	248	46	103	190	176	80	98	130	52	43	63	96	40	90	382



**Figure 120 Phosphorus - Total data – Snipes Creek and Post Office Creek**



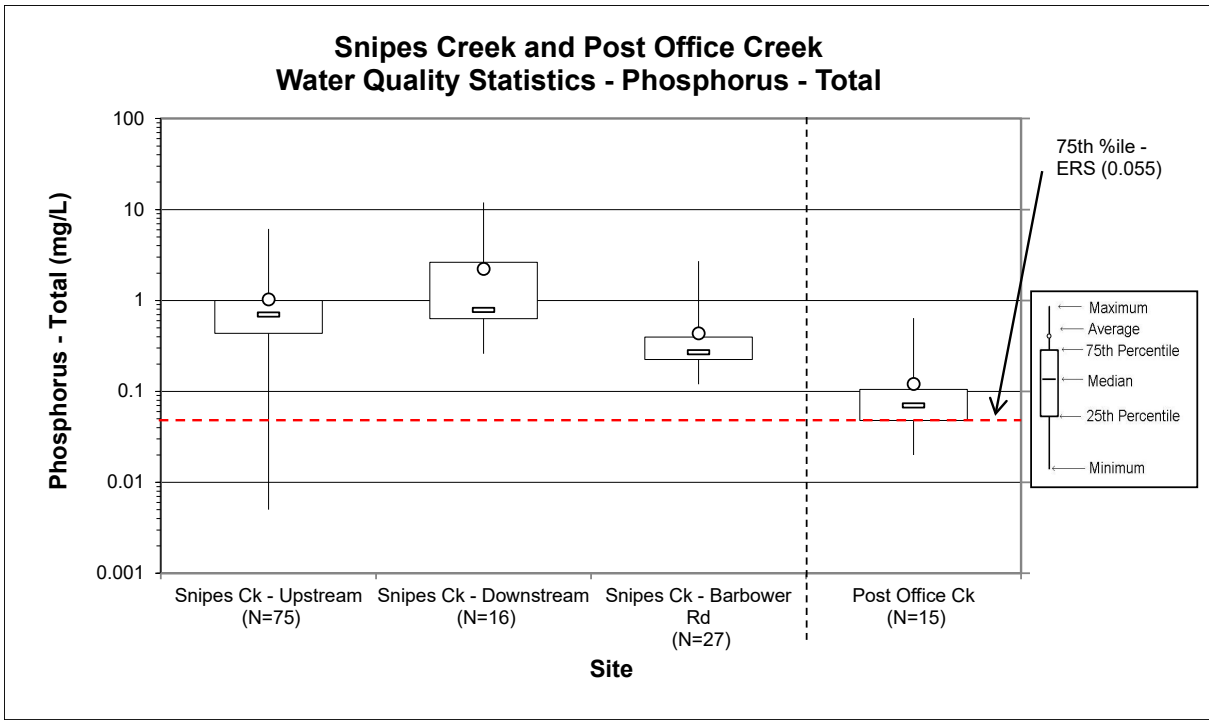


Figure 121 Phosphorus - Total statistics – Snipes Creek and Post Office Creek

Table 73 Phosphorus - Total statistics – – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	6.1	12	2.7	0.64
90th percentile	2.100	5.000	0.636	0.220
75th percentile	1.000	2.625	0.395	0.105
Median	0.700	0.785	0.270	0.070
25th percentile	0.435	0.633	0.225	0.048
10th percentile	0.062	0.395	0.150	0.024
Minimum	0.005	0.260	0.120	0.020
Average	1.028	2.216	0.434	0.121
Number	75	16	27	15

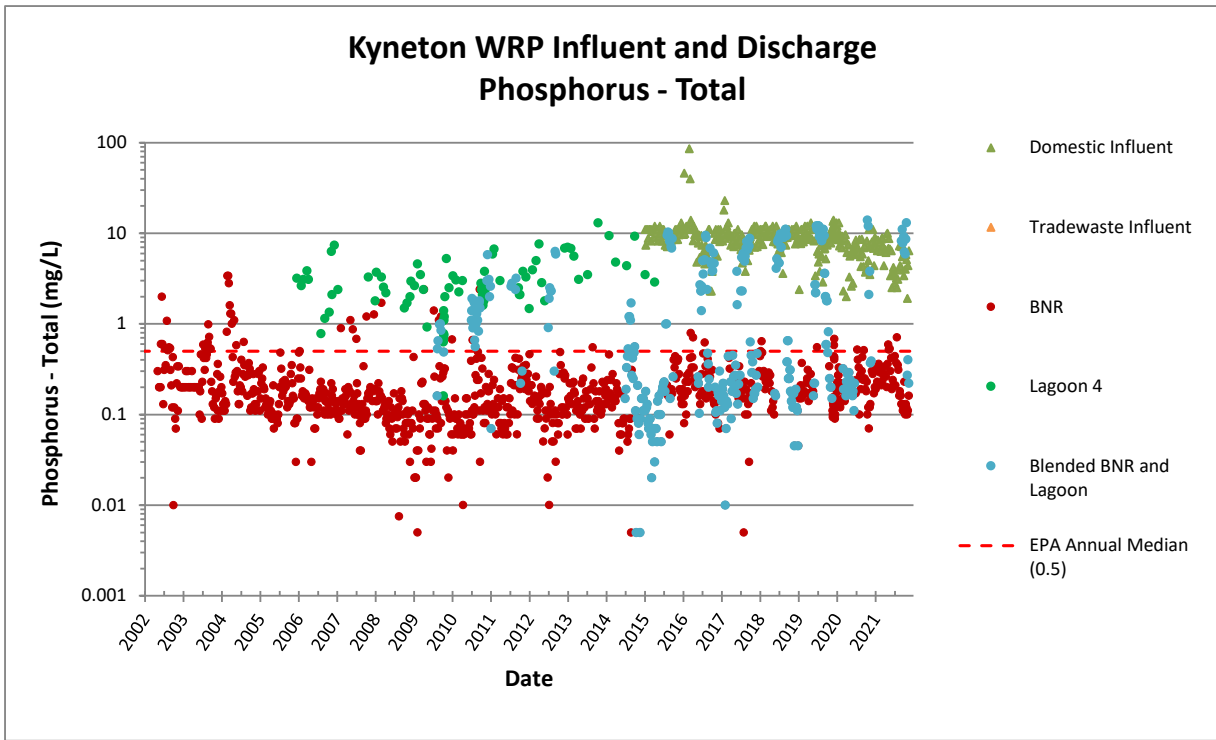


Figure 122 Phosphorus - Total data – Kyneton WRP

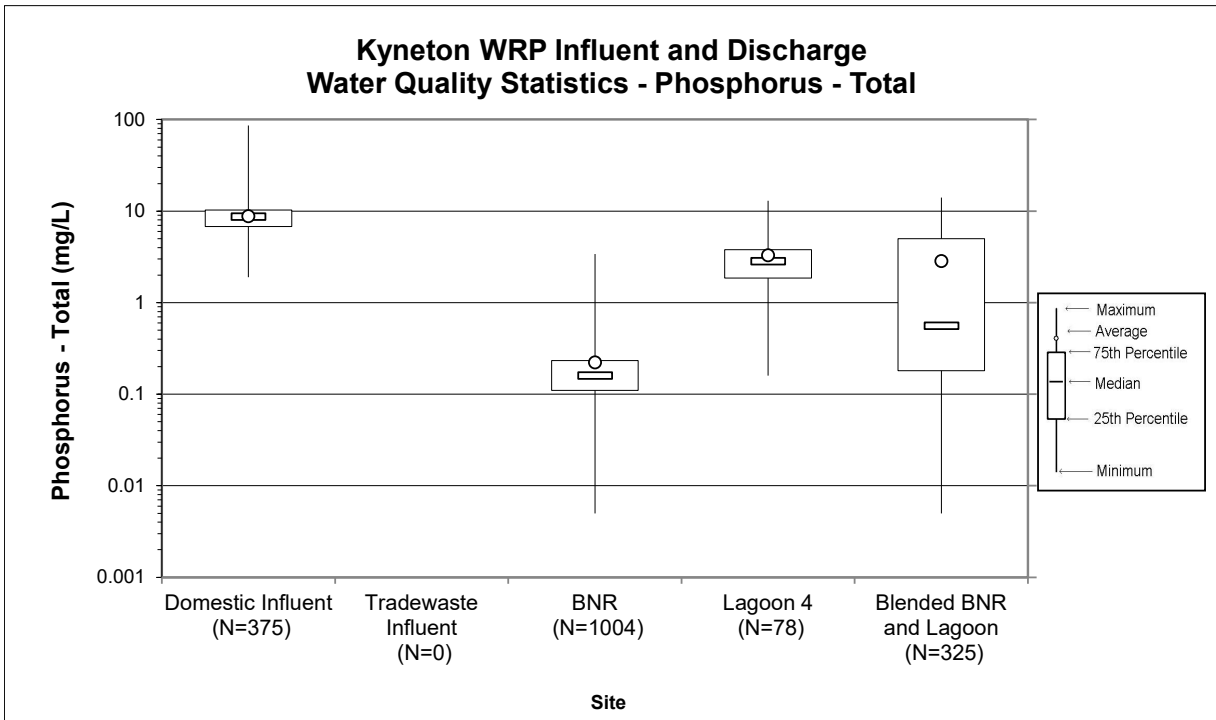
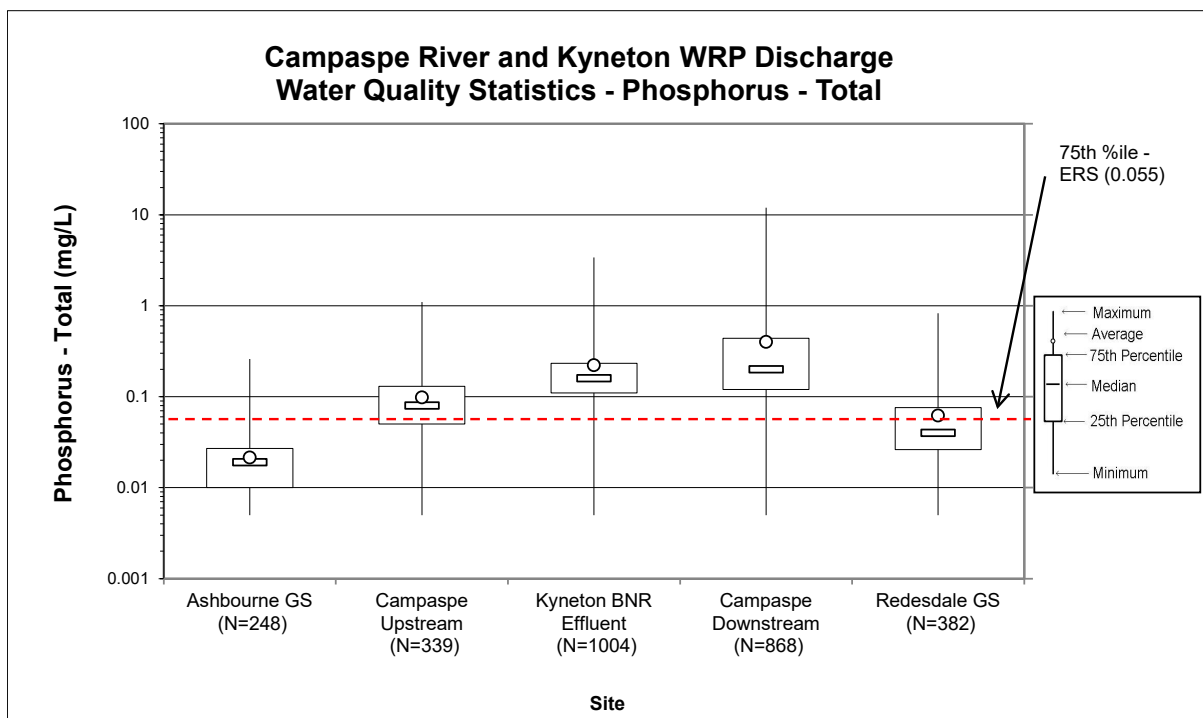


Figure 123 Phosphorus - Total statistics – Kyneton WRP

**Table 74 Phosphorus - Total statistics – Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	86		3.4	13	14
90th percentile	11.000		0.404	6.730	9.200
75th percentile	10.283		0.233	3.800	4.993
Median	8.700		0.160	2.825	0.560
25th percentile	6.800		0.110	1.850	0.180
10th percentile	4.400		0.070	1.100	0.110
Minimum	1.900		0.005	0.160	0.005
Average	8.821		0.223	3.293	2.845
Number	375	0	1004	78	325



**Figure 124 Phosphorus - Total statistics – Campaspe River and Kyneton WRP**

**Table 75 Phosphorus - Total statistics – Campaspe River and Kyneton WRP**

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum	0.26	1.1	3.4	12	0.83
90th percentile	0.037	0.166	0.404	0.880	0.130
75th percentile	0.027	0.130	0.233	0.440	0.076
Median	0.019	0.080	0.160	0.200	0.040
25th percentile	0.010	0.050	0.110	0.120	0.026
10th percentile	0.009	0.025	0.070	0.080	0.016
Minimum	0.005	0.005	0.005	0.005	0.005
Average	0.021	0.099	0.223	0.402	0.062
Number	248	339	1004	868	382

# 5. Metals

## 5.1 Aluminium

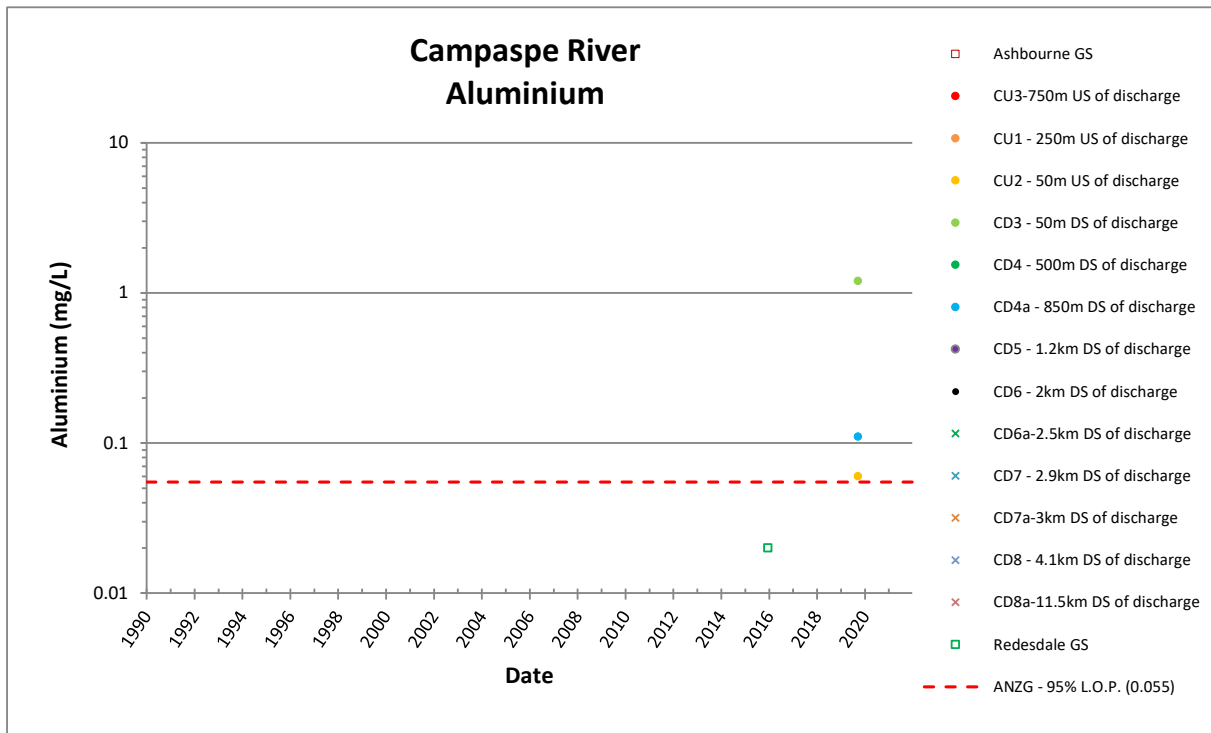


Figure 125 Aluminium data – Campaspe River

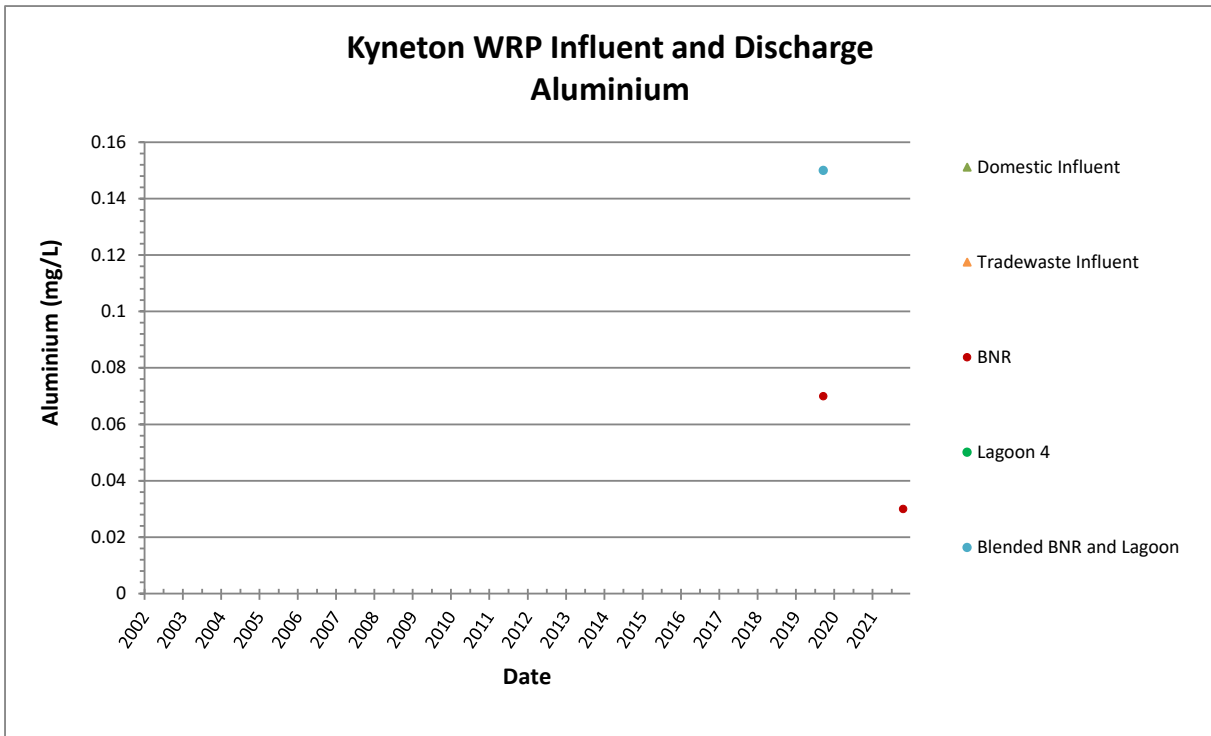


Figure 126 Aluminium data – Kyneton WRP

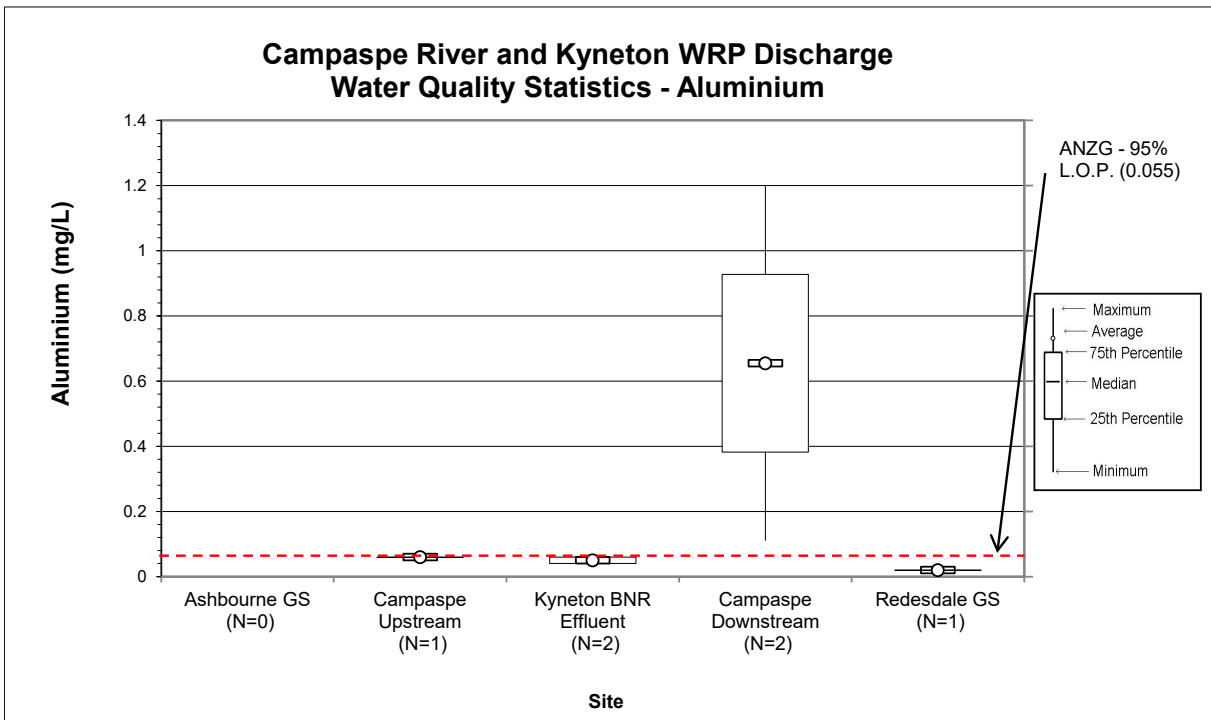


Figure 127 Aluminium statistics – Campaspe River and Kyneton WRP

**Table 76 Aluminium statistics – Campaspe River and Kyneton WRP**

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum		0.060	0.070	1.200	0.020
90th percentile		0.060	0.066	1.091	0.020
75th percentile		0.060	0.060	0.928	0.020
Median		0.060	0.050	0.655	0.020
25th percentile		0.060	0.040	0.383	0.020
10th percentile		0.060	0.034	0.219	0.020
Minimum		0.060	0.030	0.110	0.020
Average		0.060	0.050	0.655	0.020
Number	0	1	2	2	1

## 5.2 Aluminium (Soluble)

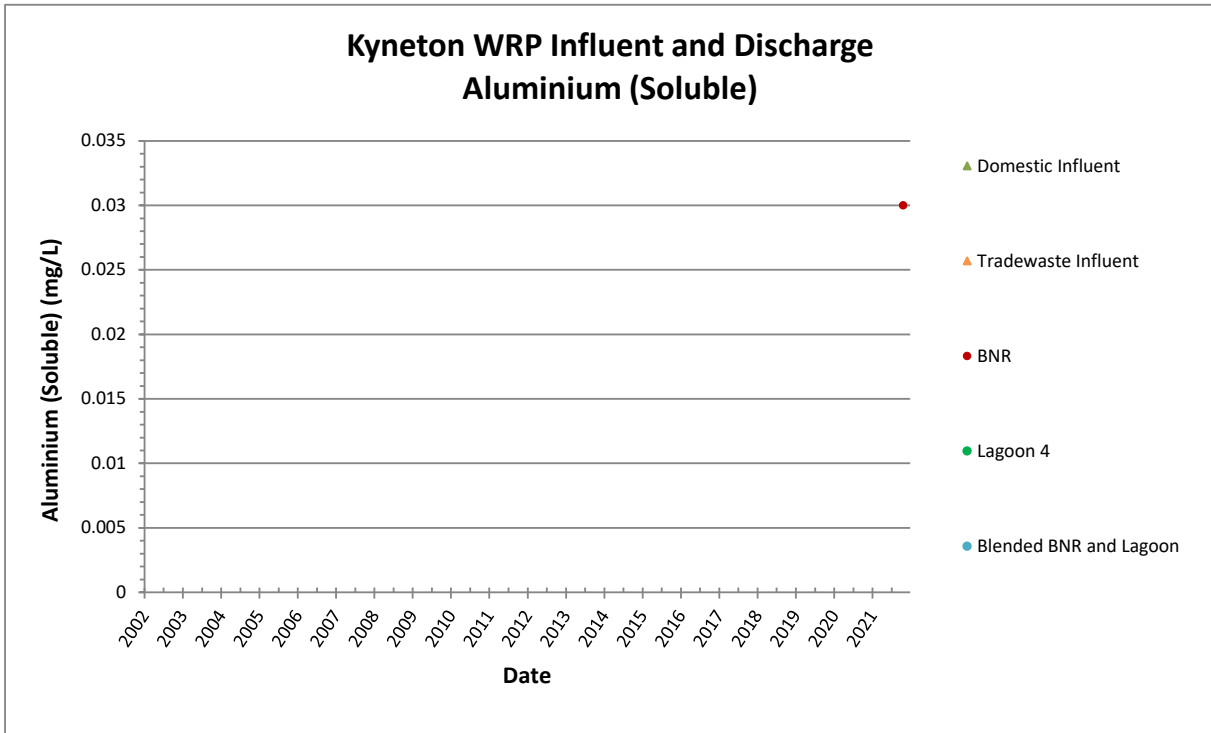


Figure 128 Aluminium (soluble) data – Kyneton WRP

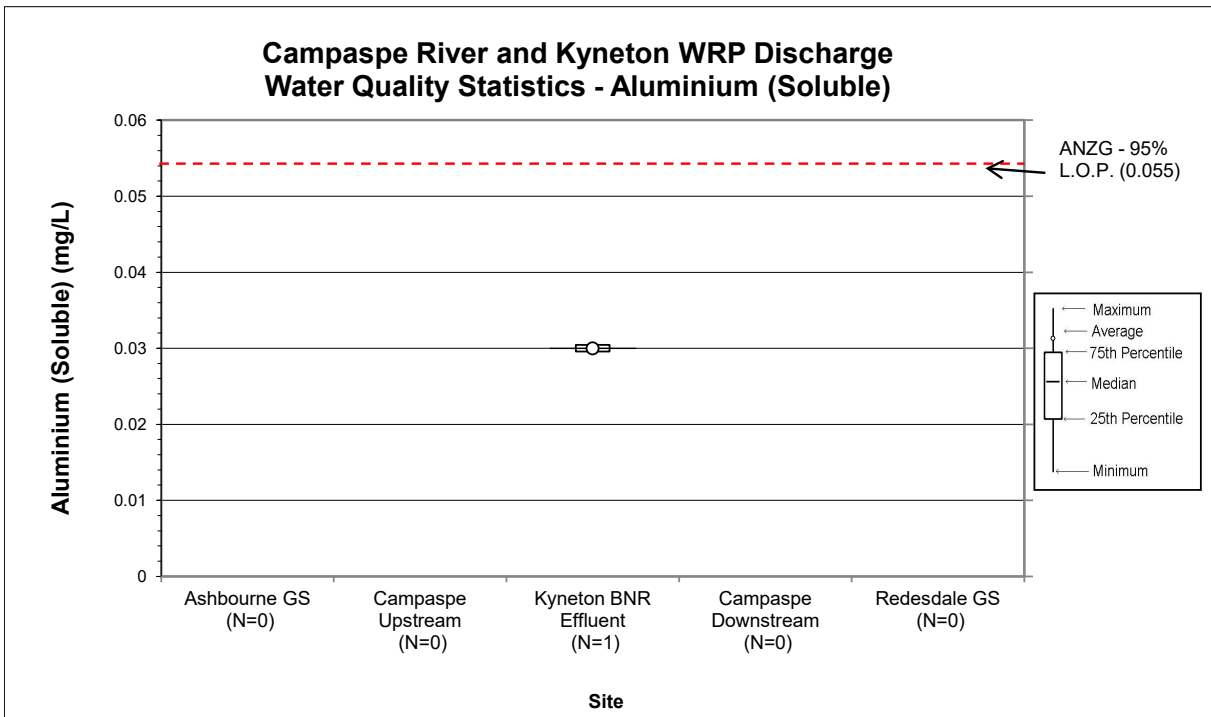


Figure 129 Aluminium (soluble) statistics – Campaspe River and Kyneton WRP

## 5.3 Antimony

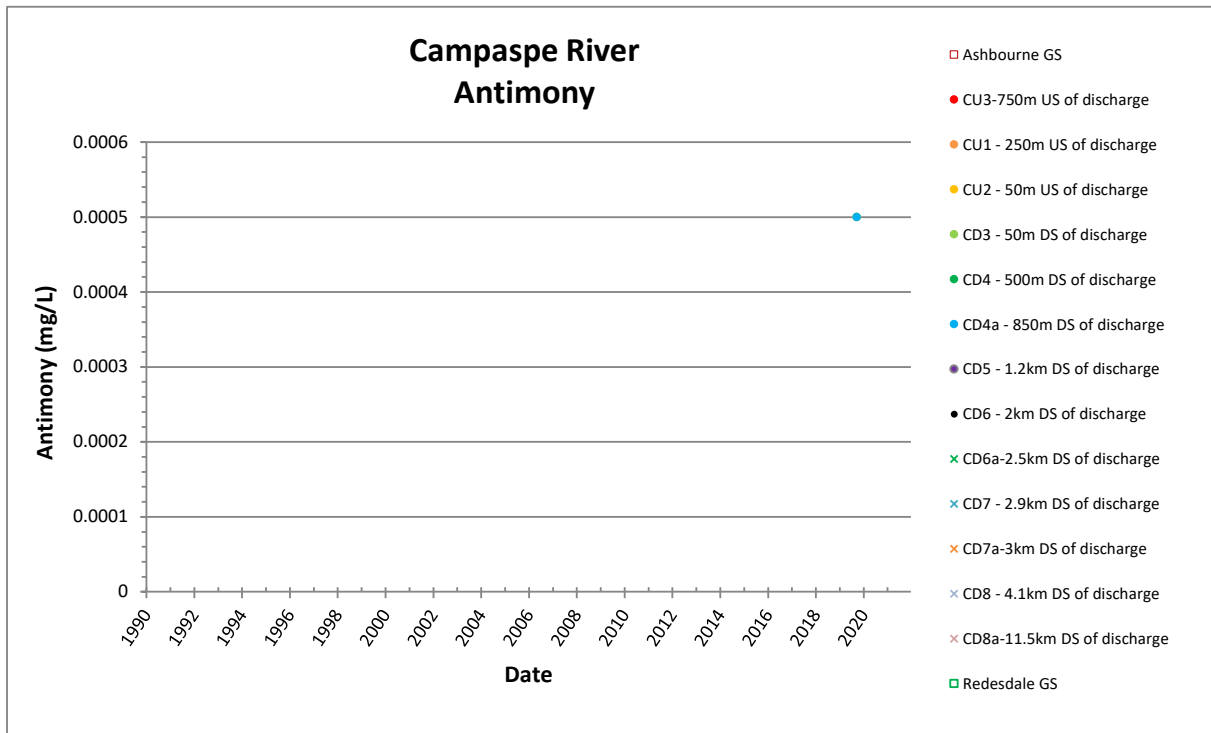


Figure 130 Antimony data – Campaspe River

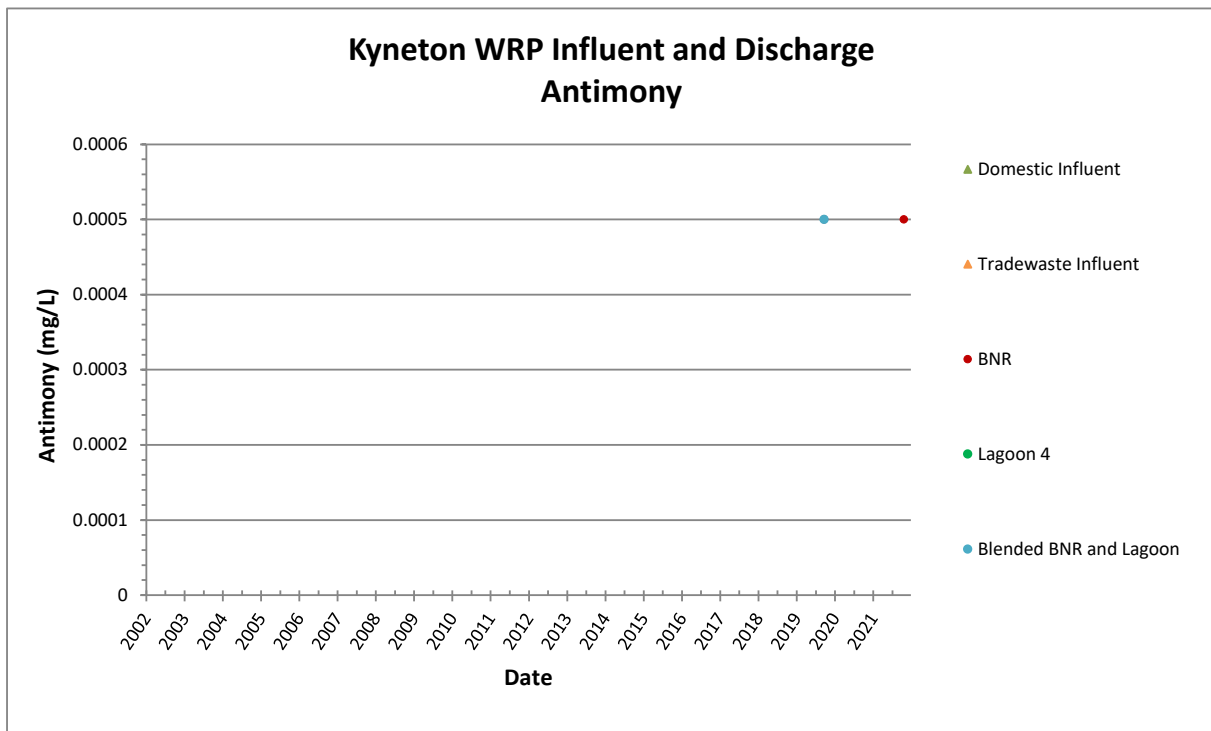


Figure 131 Antimony data – Kyneton WRPr



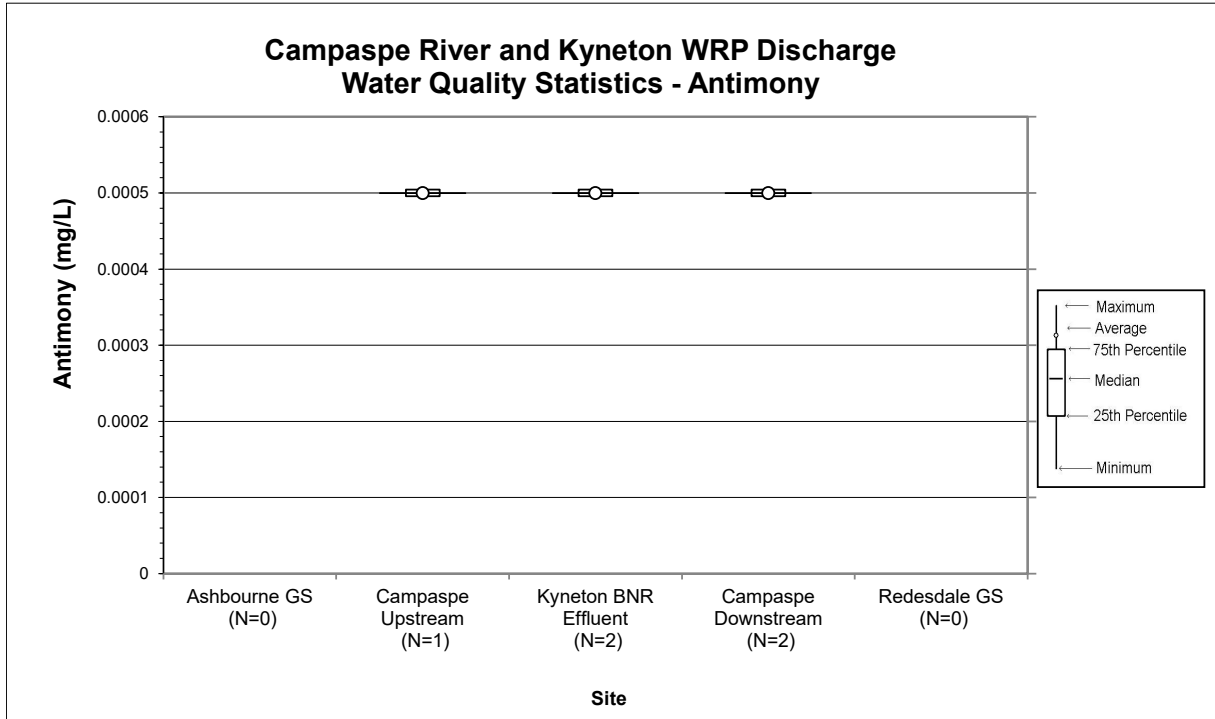


Figure 132 Antimony statistics – Campaspe River and Kyneton WRP

## 5.4 Antimony (Soluble)

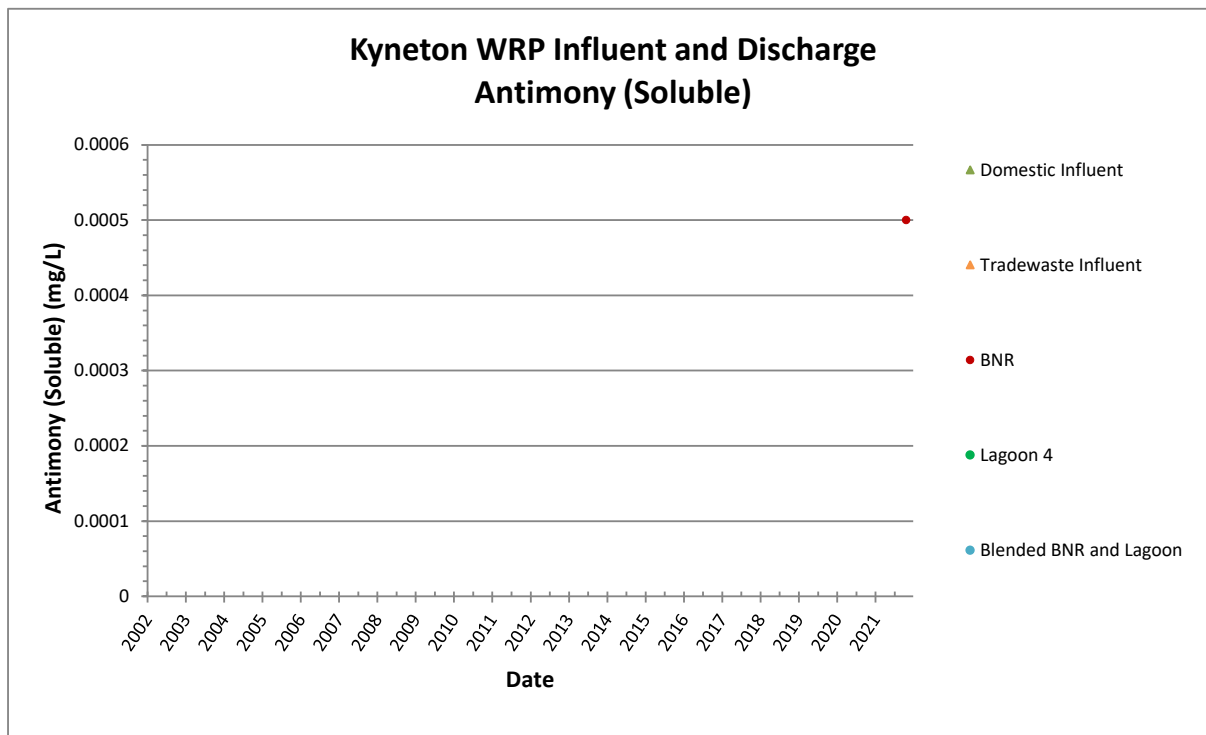


Figure 133 Antimony (soluble) data – Kyneton WRP

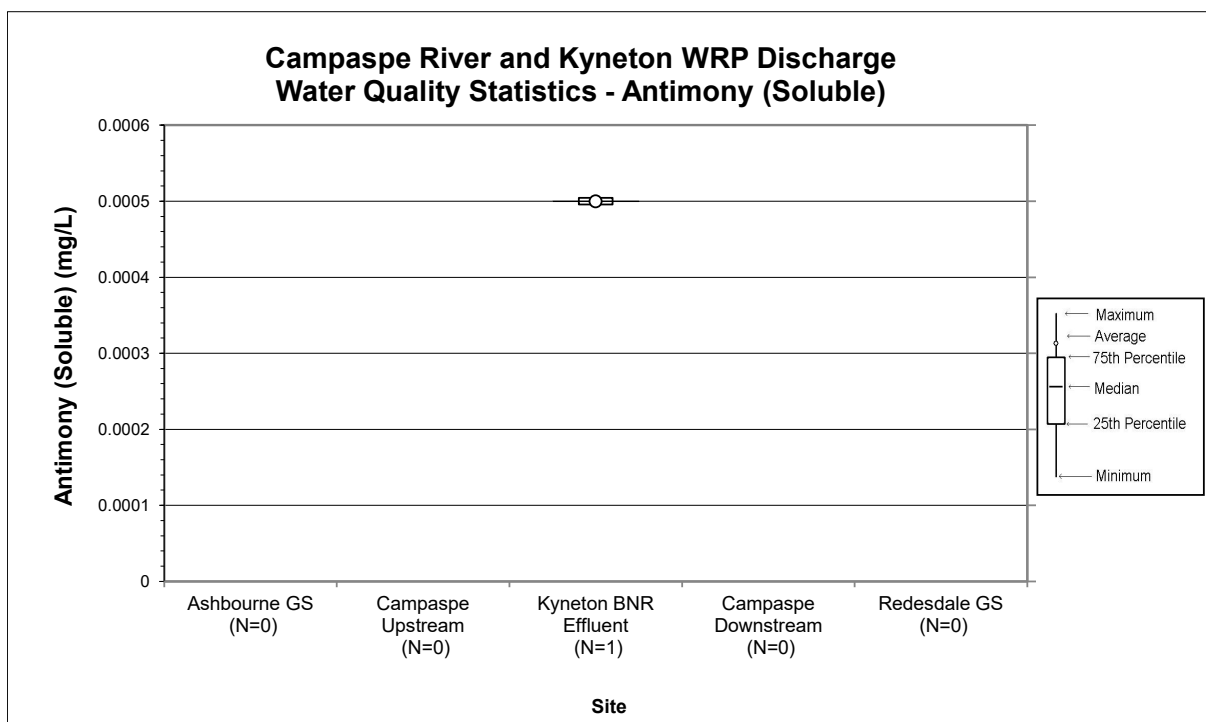


Figure 134 Antimony (soluble) statistics – Campaspe River and Kyneton WRP

# 5.5 Arsenic

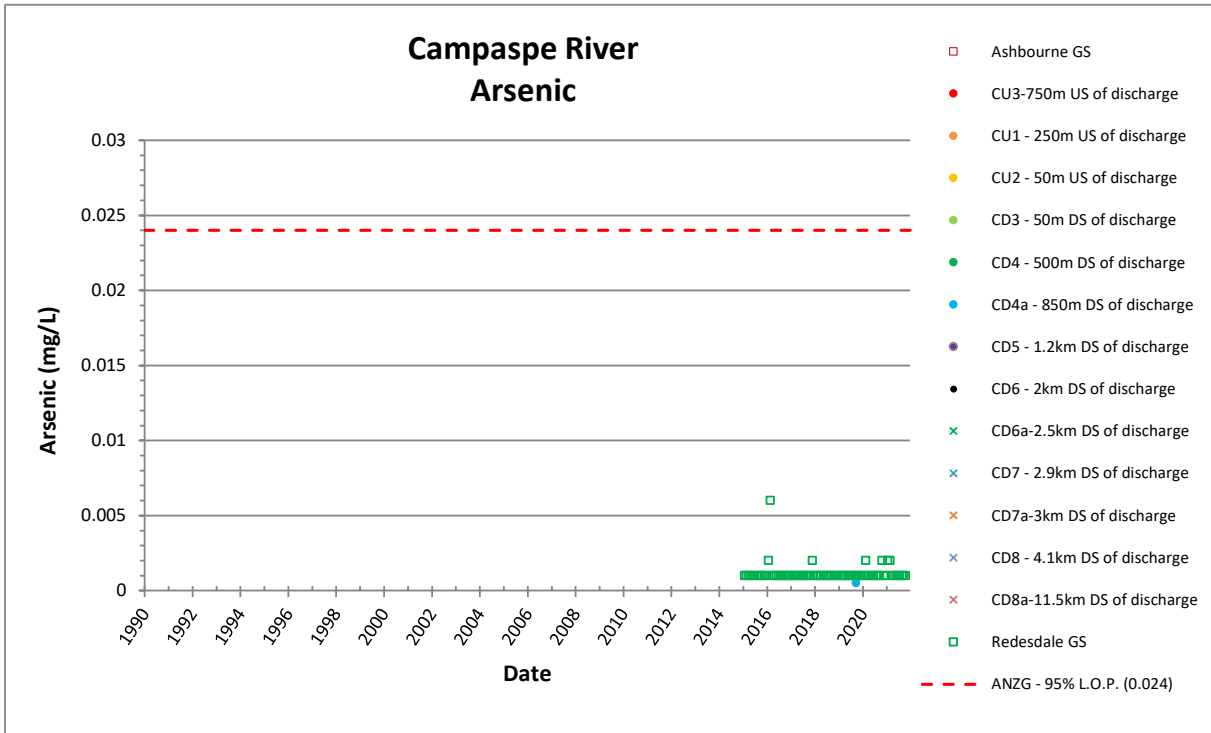


Figure 135 Arsenic data – Campaspe River

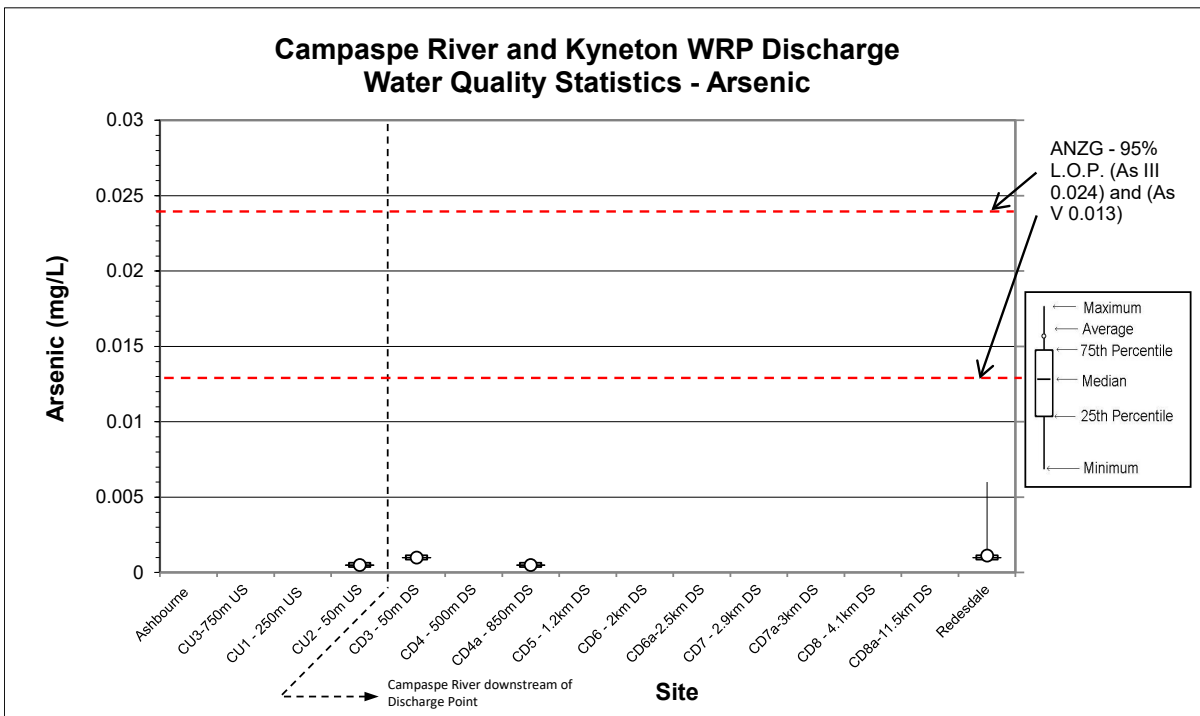


Figure 136 Arsenic statistics – Campaspe River

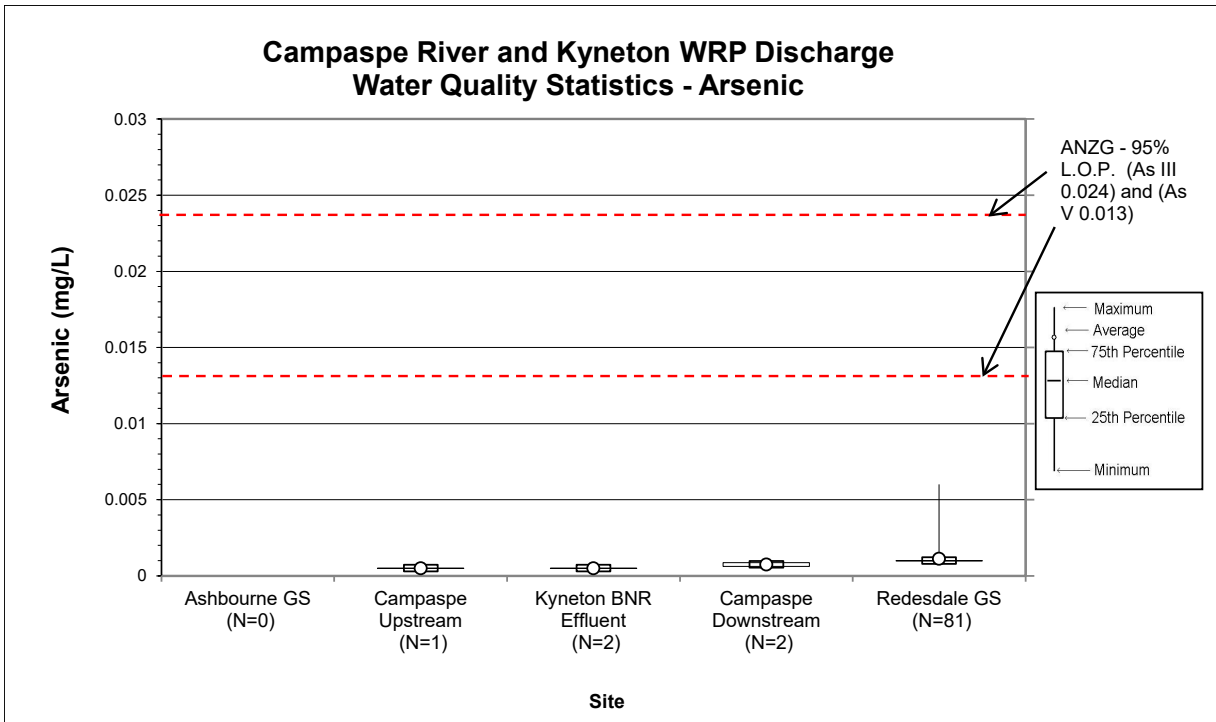


Figure 137 Arsenic statistics – Campaspe River and Kyneton WRP

## 5.6 Arsenic (Soluble)

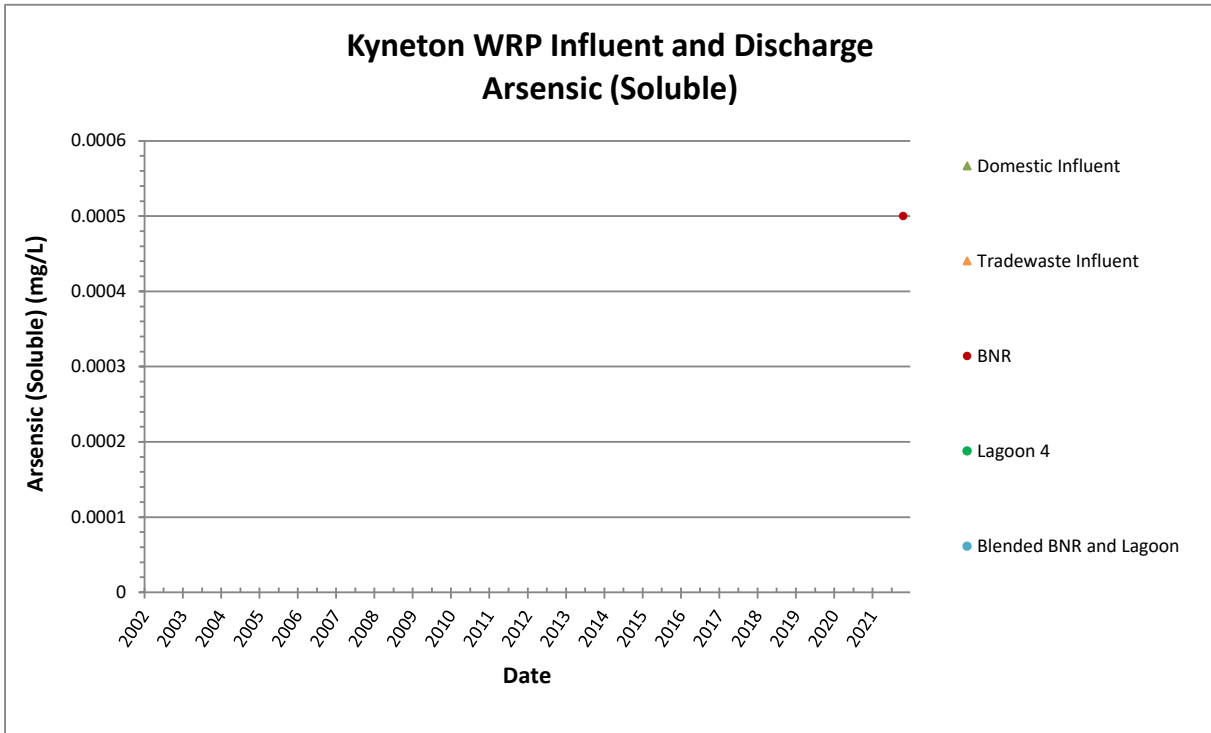


Figure 138 Arsenic (soluble) data – Kyneton WRP

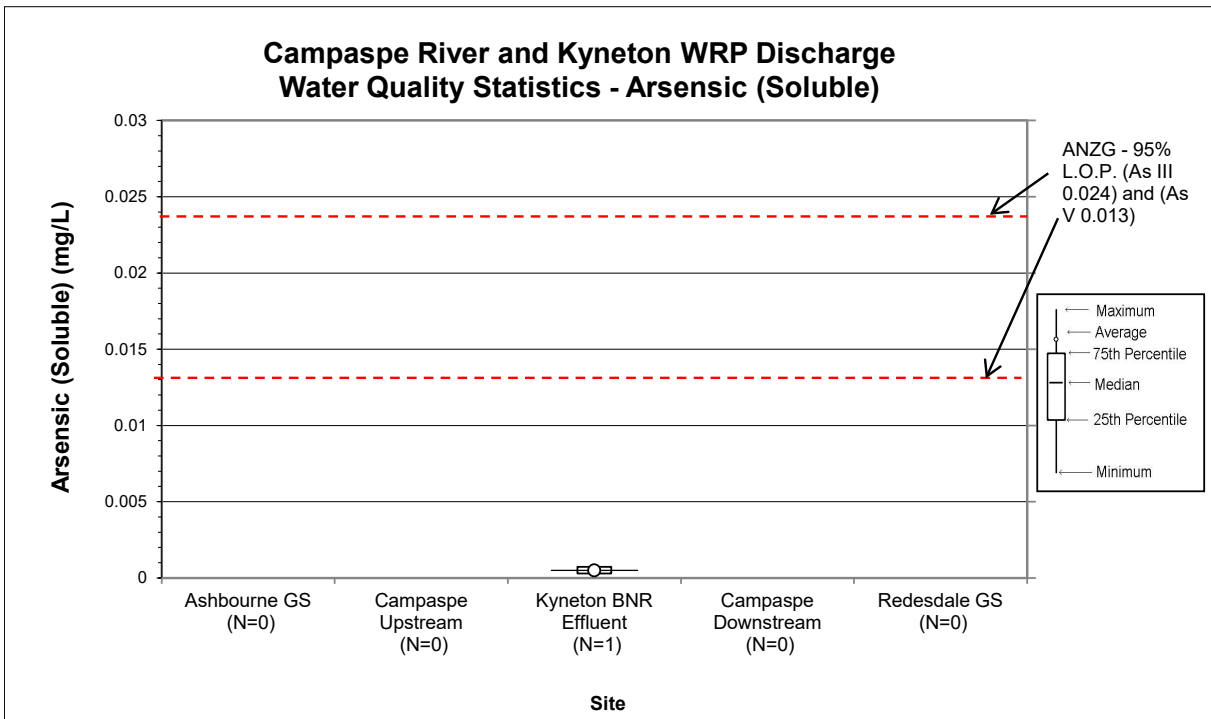


Figure 139 Antimony (soluble) statistics – Campaspe River and Kyneton WRP

## 5.7 Barium

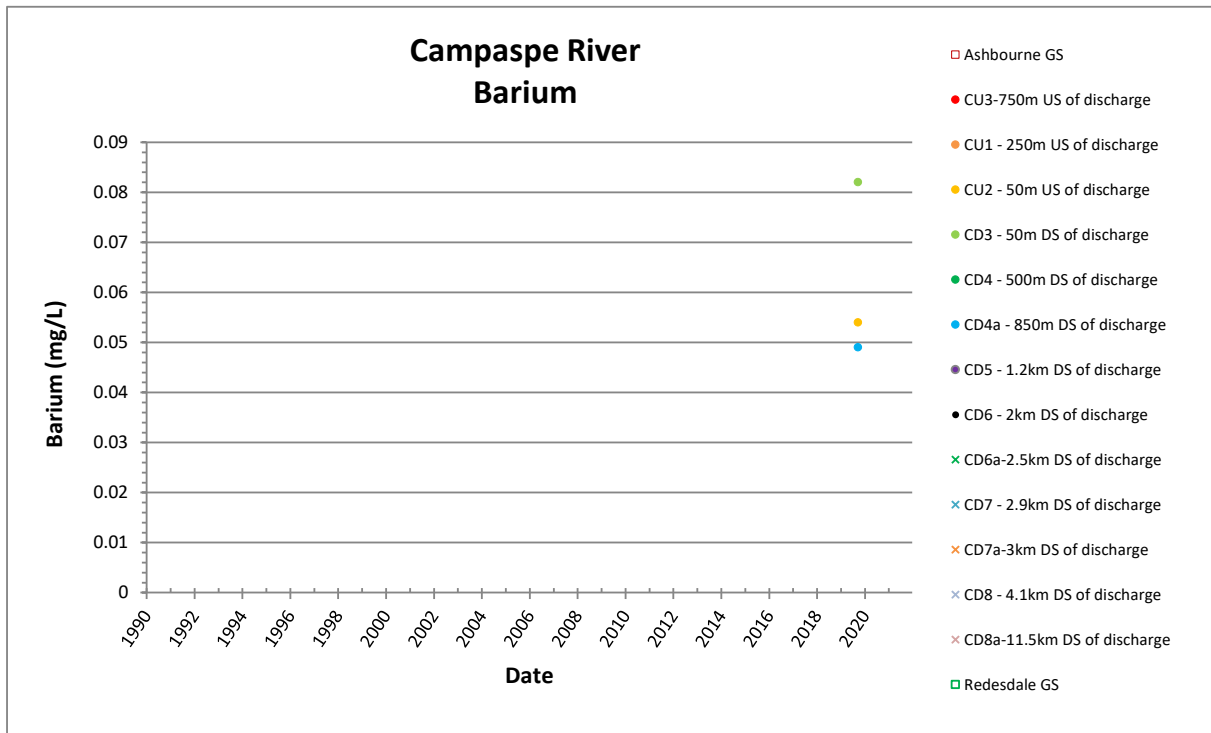


Figure 140 Barium data – Campaspe River

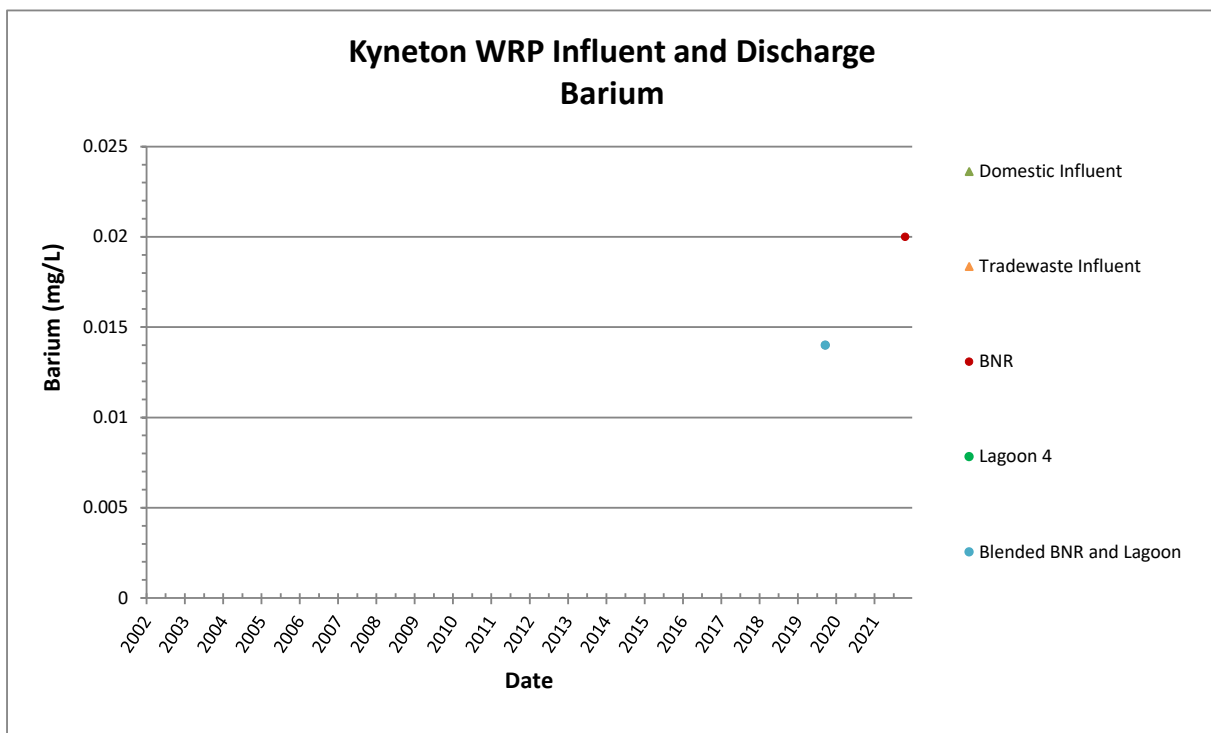


Figure 141 Barium data – Kyneton WRP

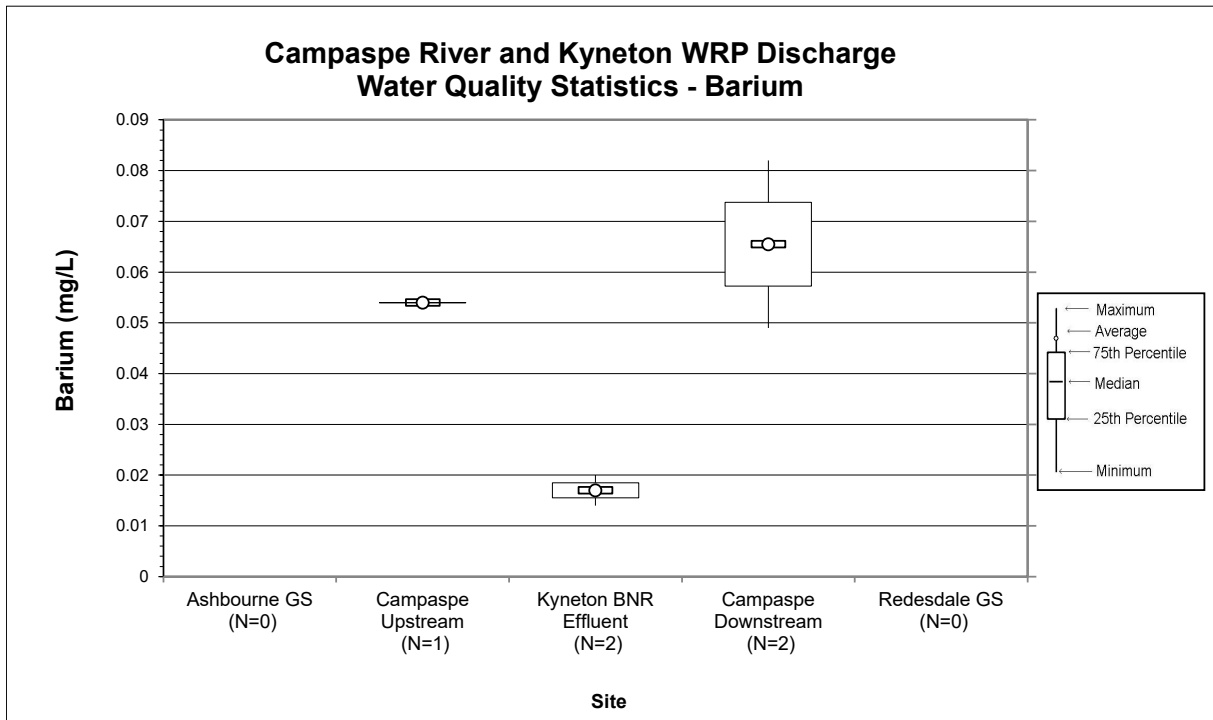


Figure 142 Barium statistics – Campaspe River and Kyneton WRP

## 5.8 Barium (Soluble)

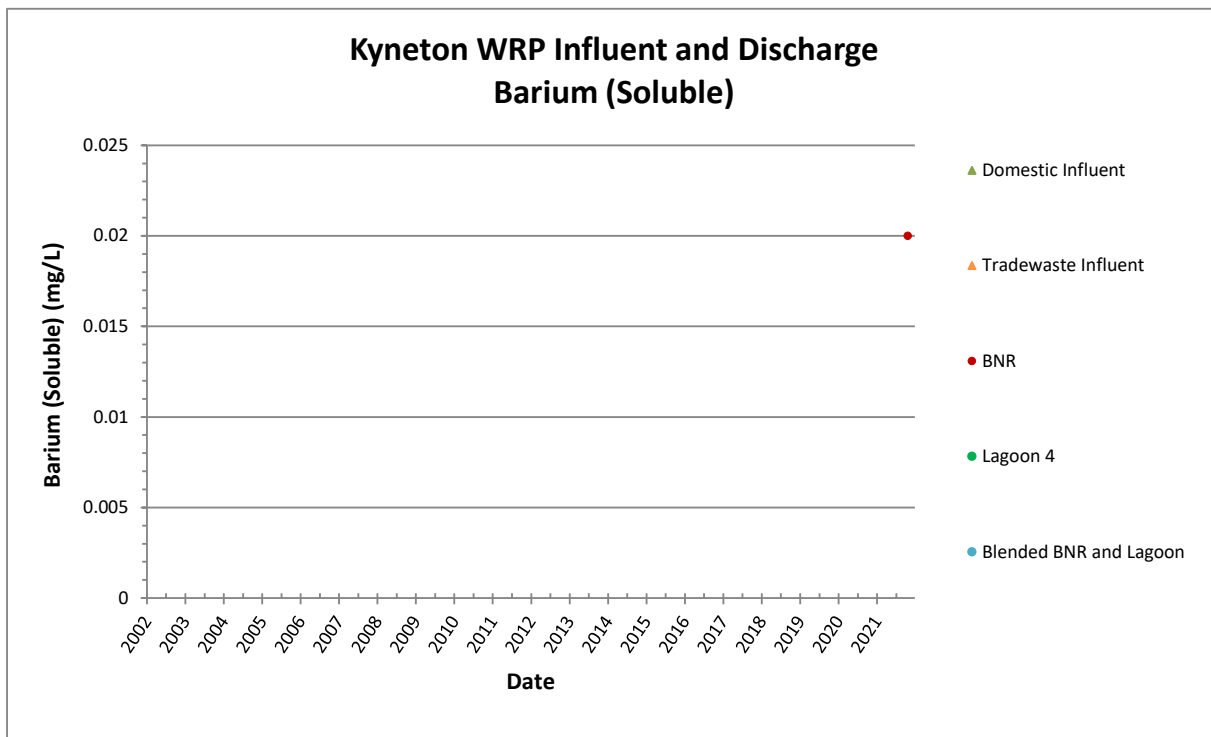


Figure 143 Barium (soluble) data – Kyneton WRP

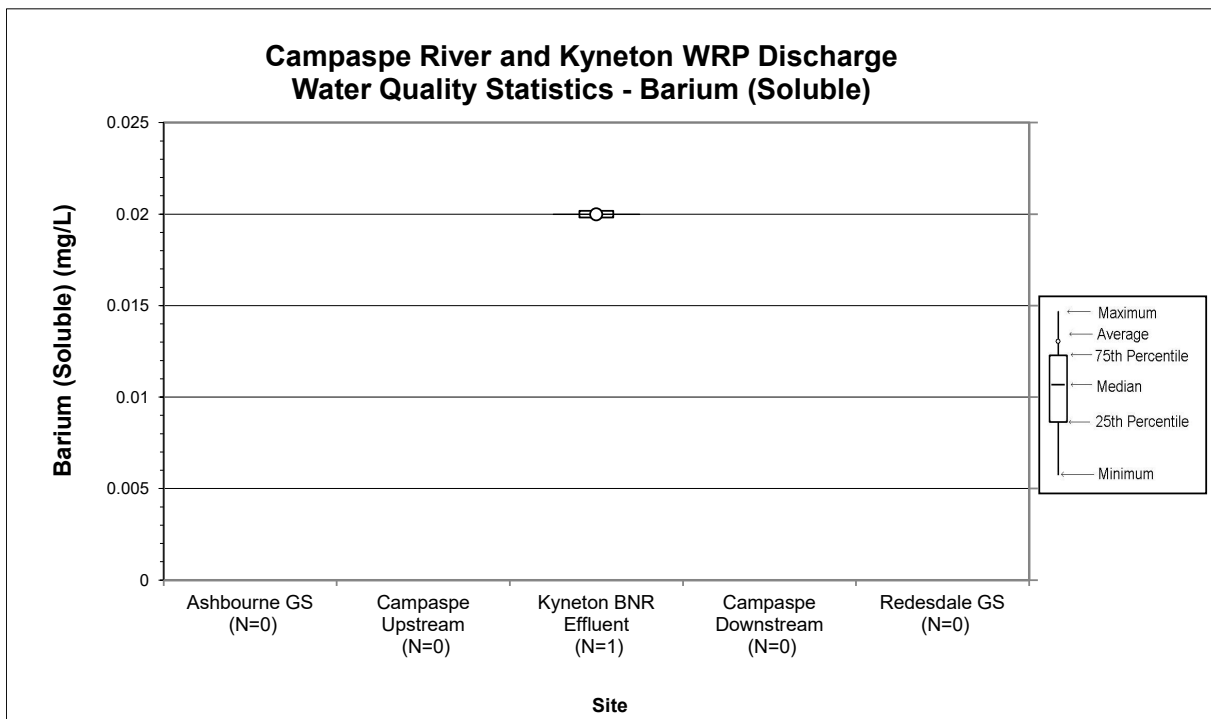


Figure 144 Barium (soluble) statistics – Campaspe River and Kyneton WRP



## 5.9 Beryllium

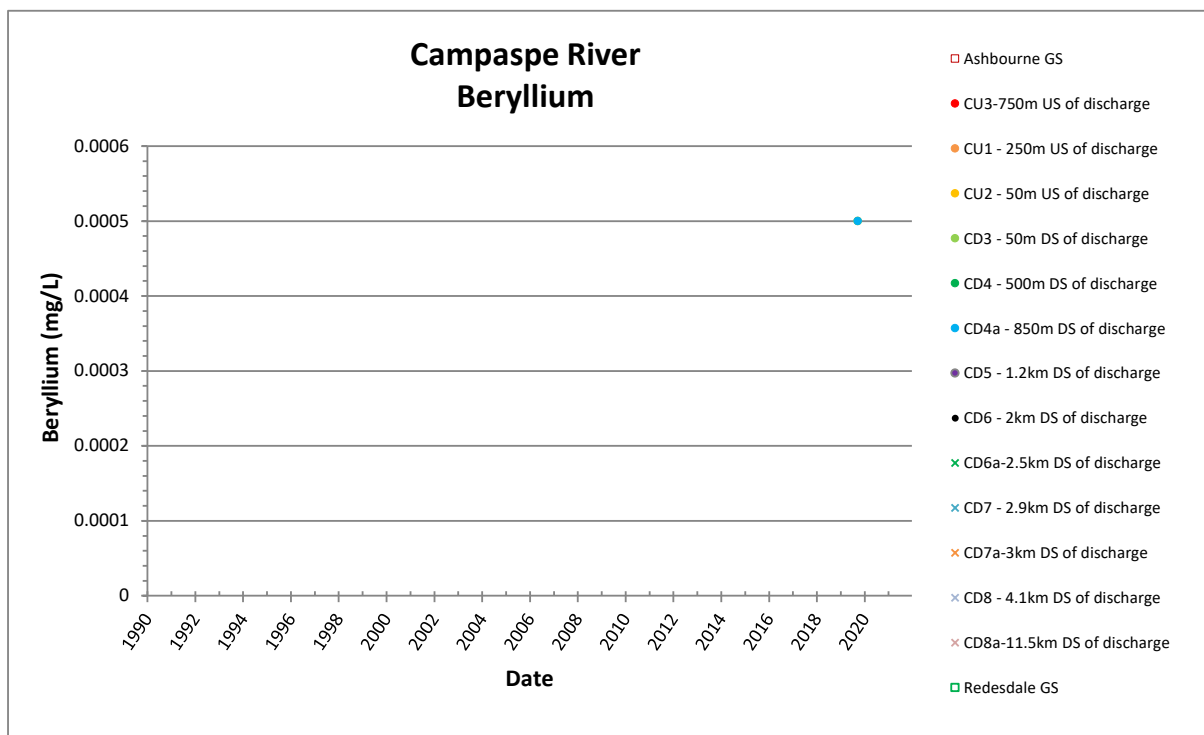


Figure 145 Beryllium data – Campaspe River

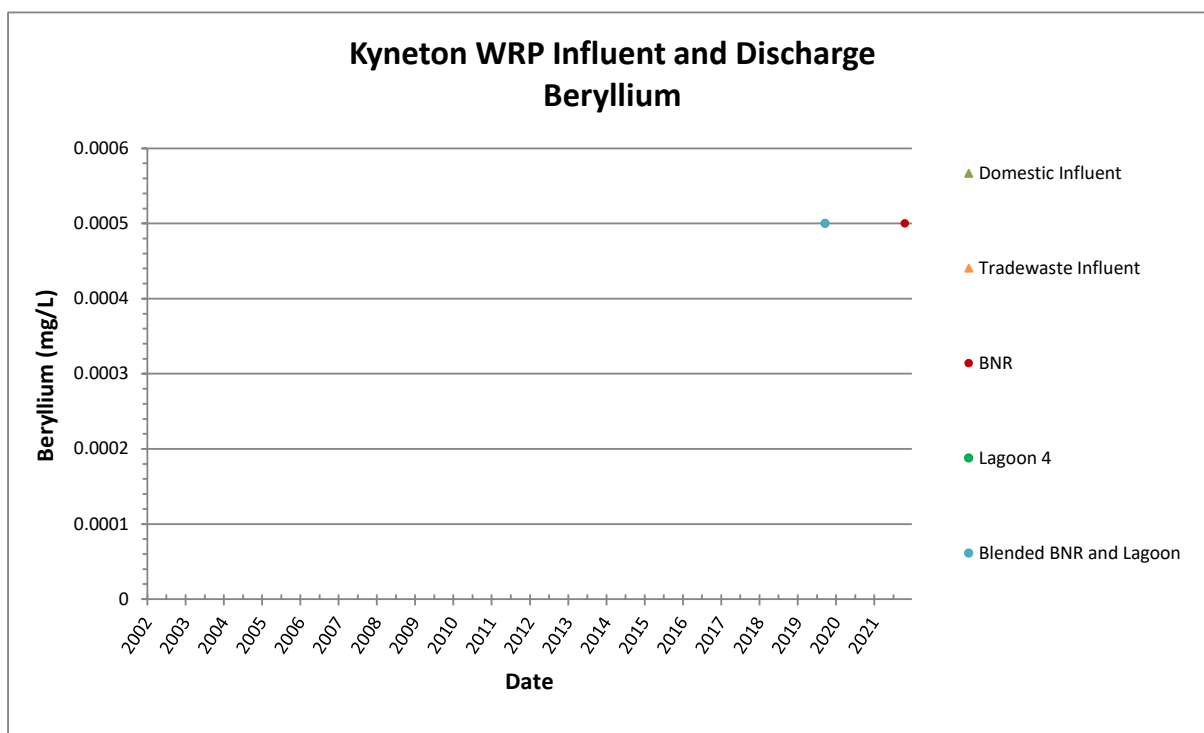


Figure 146 Beryllium data – Kyneton WRPr

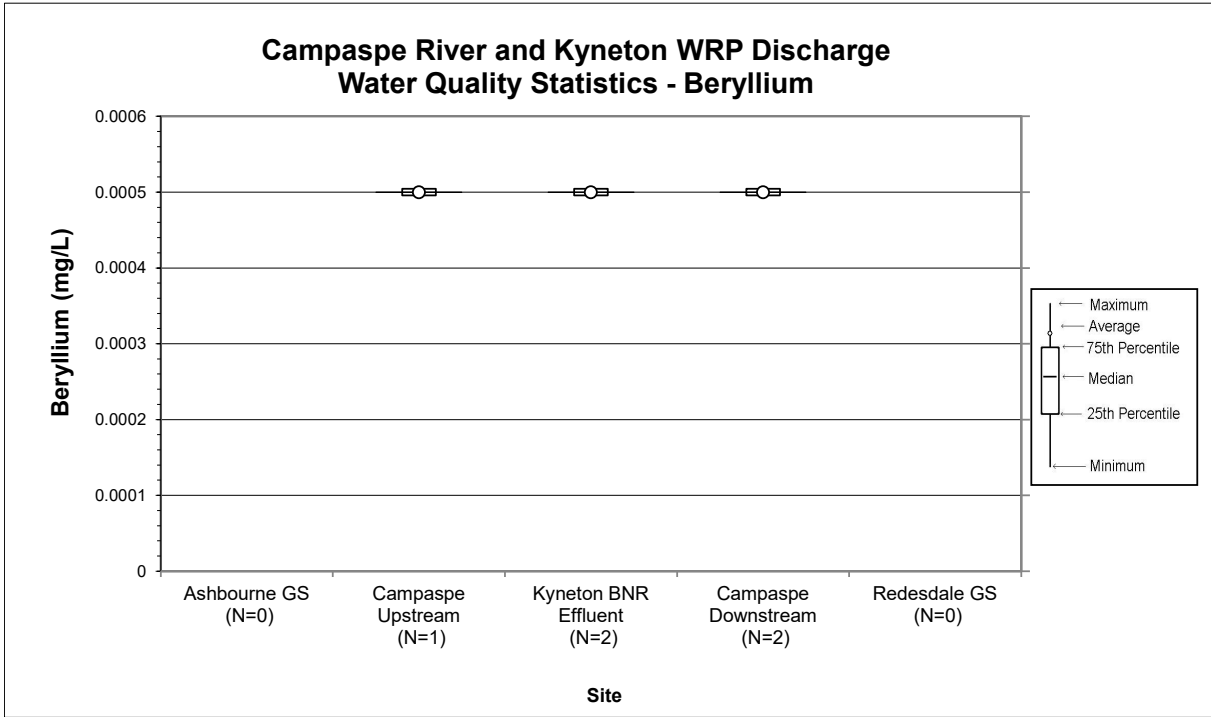


Figure 147 Beryllium statistics – Campaspe River and Kyneton WRP

## 5.10 Beryllium (Soluble)

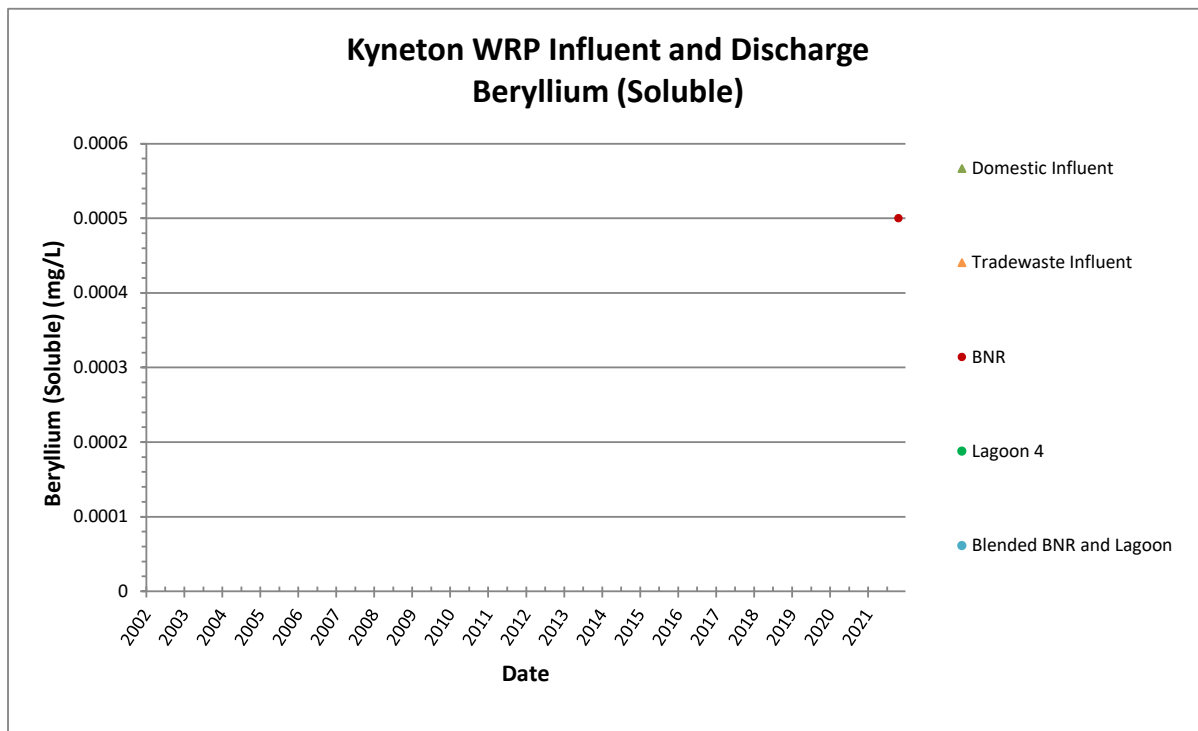


Figure 148 Beryllium (soluble) data – Kyneton WRP

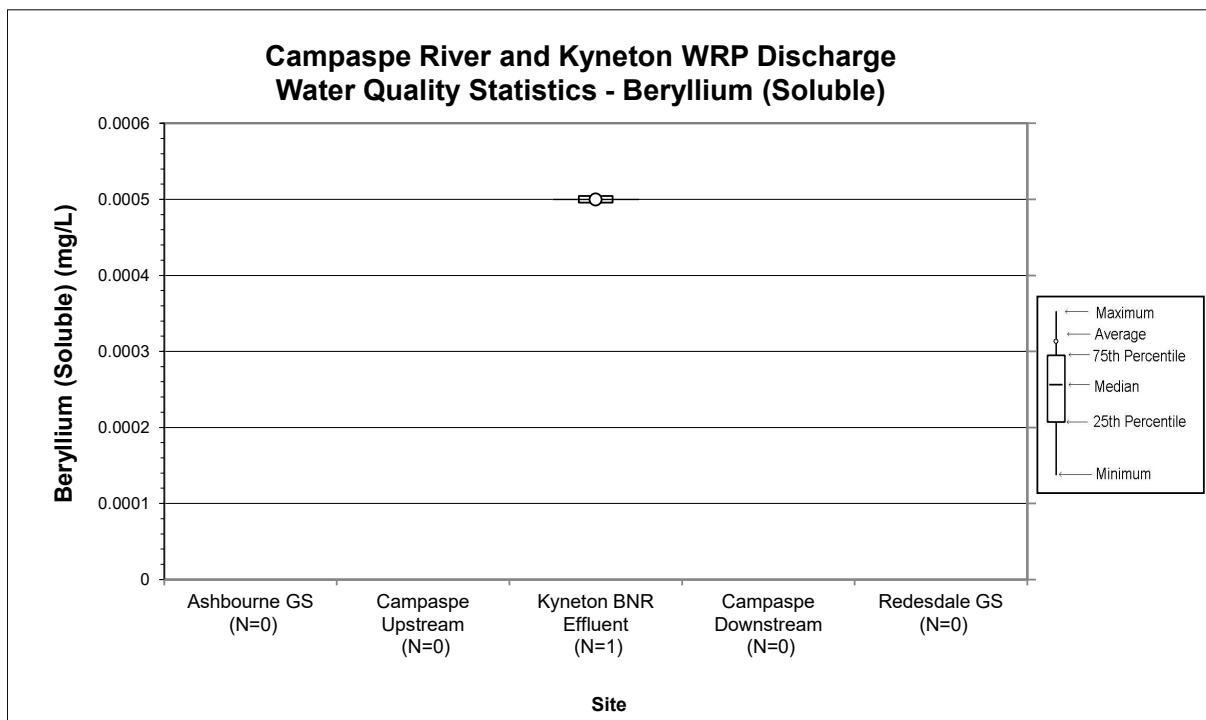


Figure 149 Beryllium (soluble) statistics – Campaspe River and Kyneton WRP

## 5.11 Boron

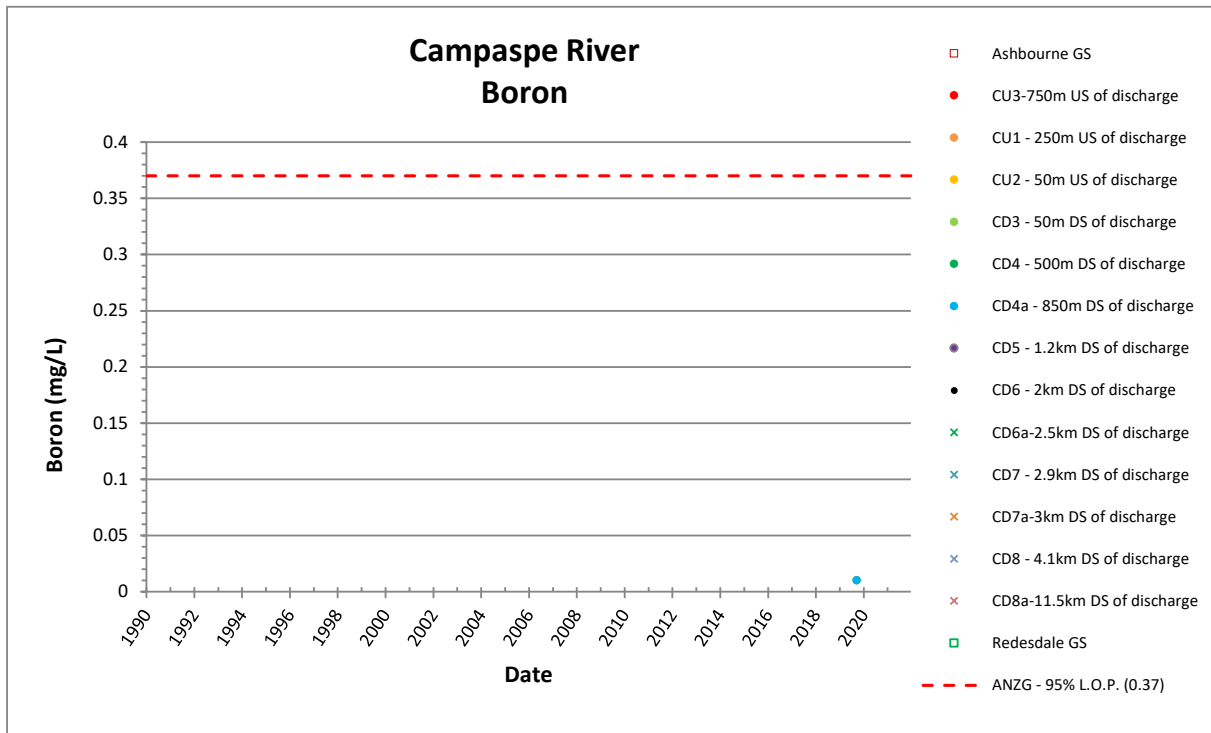


Figure 150 Boron data – Campaspe River

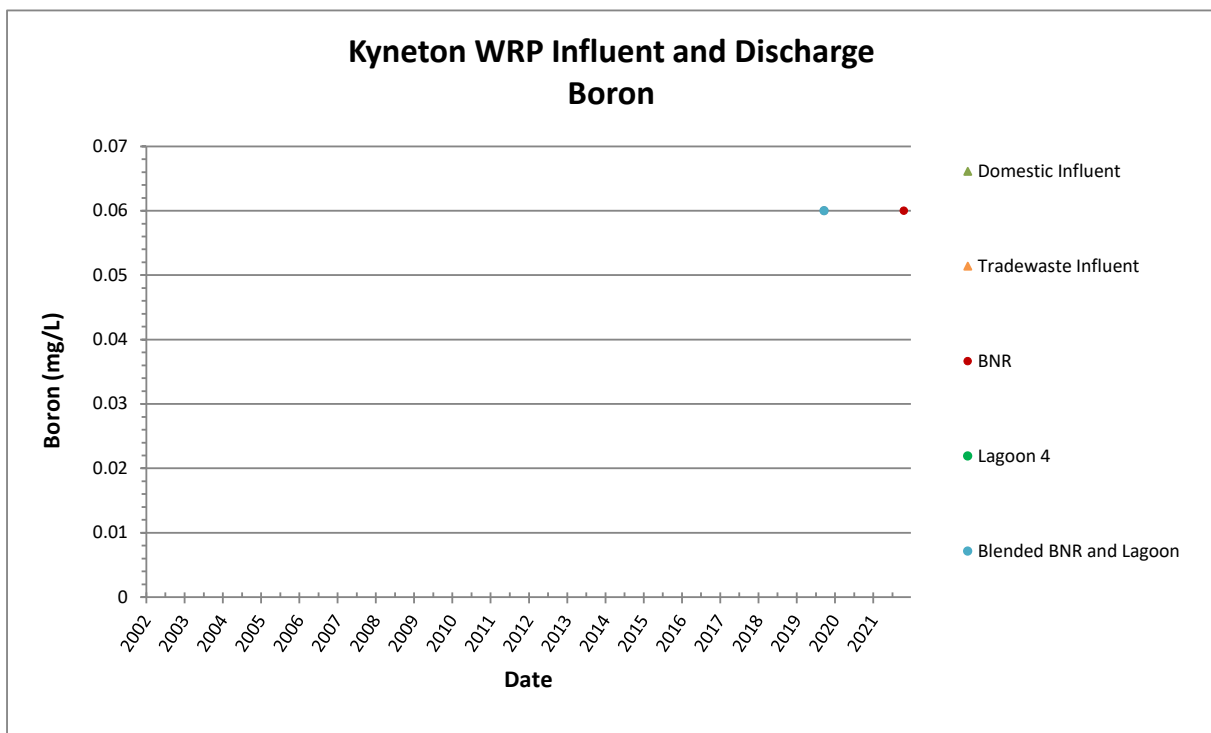


Figure 151 Boron data – Kyneton WRPr

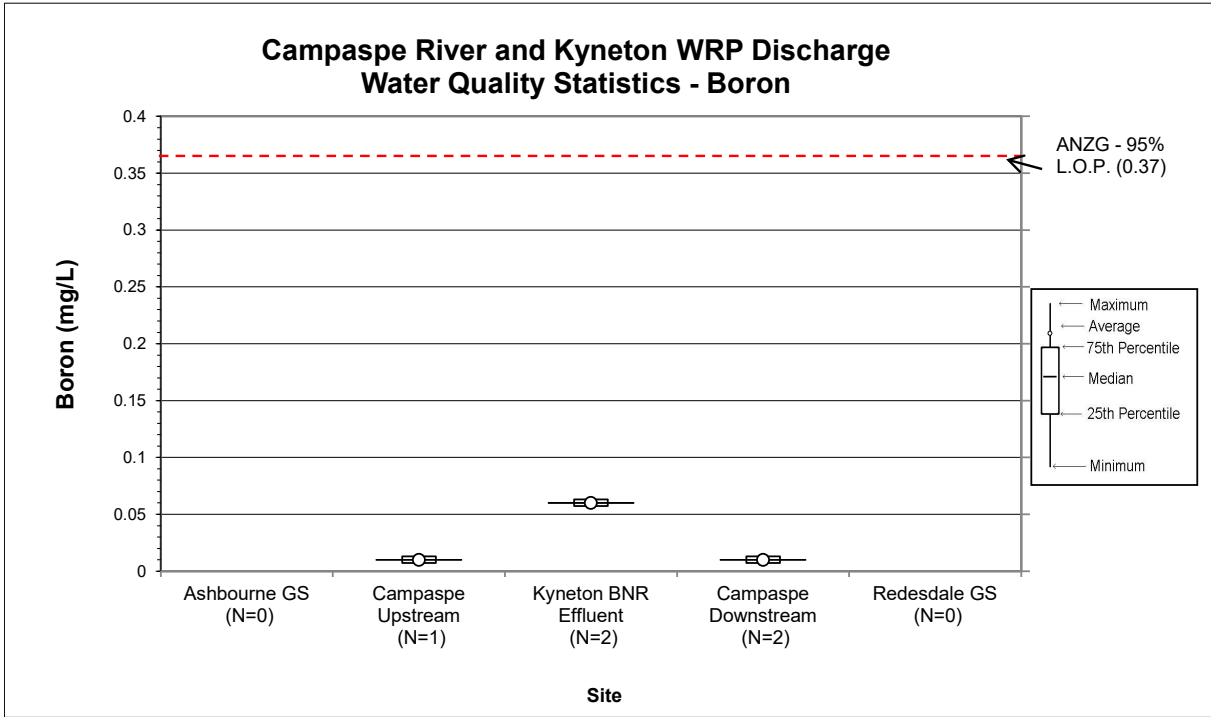


Figure 152 Boron statistics – Campaspe River and Kyneton WRP

## 5.12 Boron (Soluble)

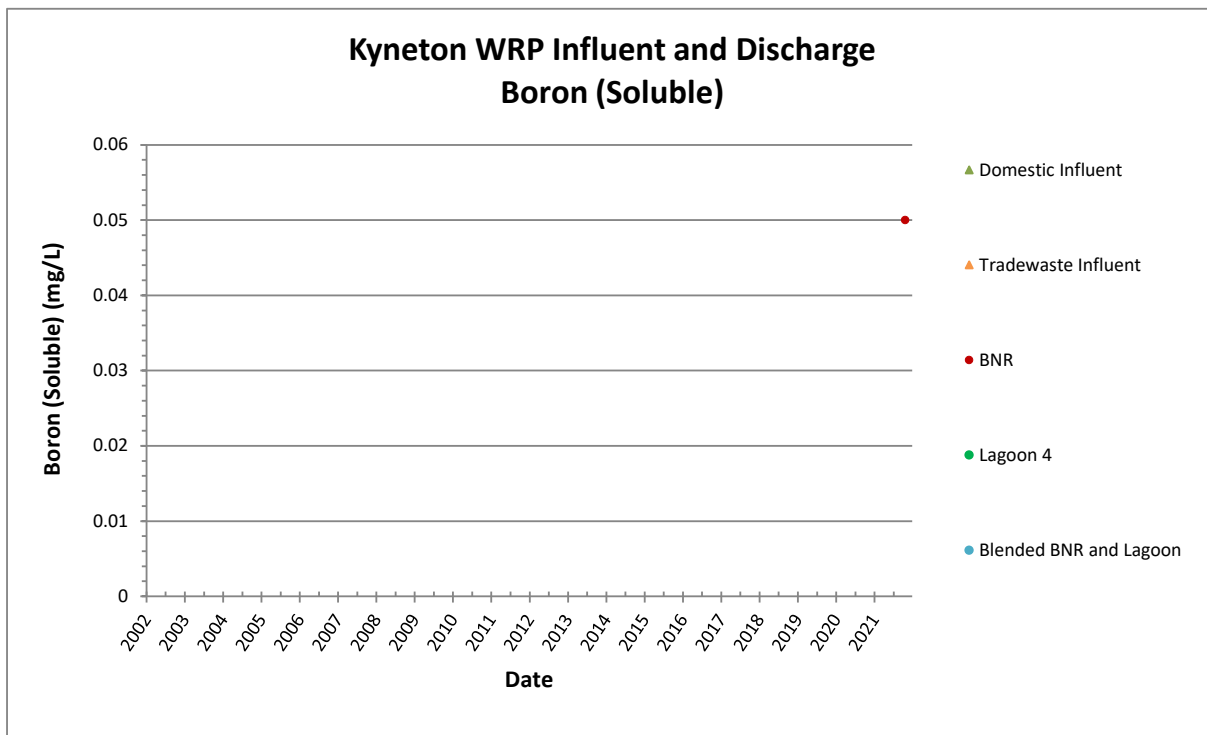


Figure 153 Boron (soluble) data – Kyneton WRP

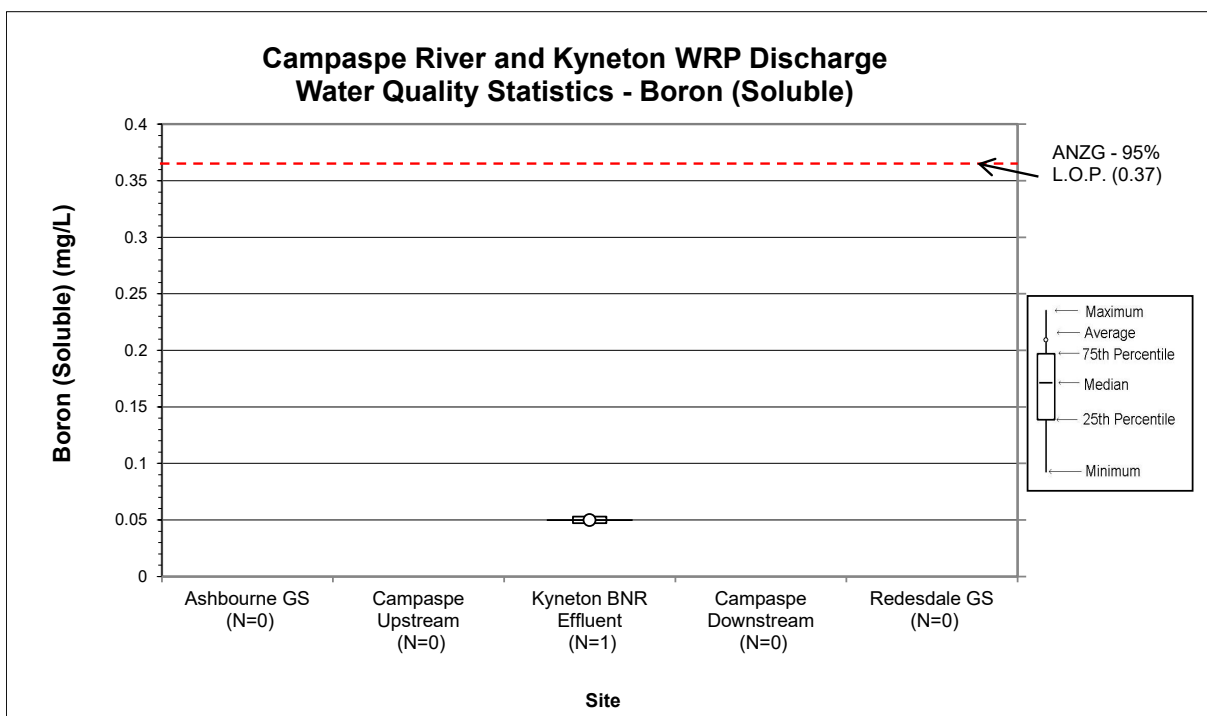


Figure 154 Boron (soluble) statistics – Campaspe River and Kyneton WRP

## 5.13 Cadmium

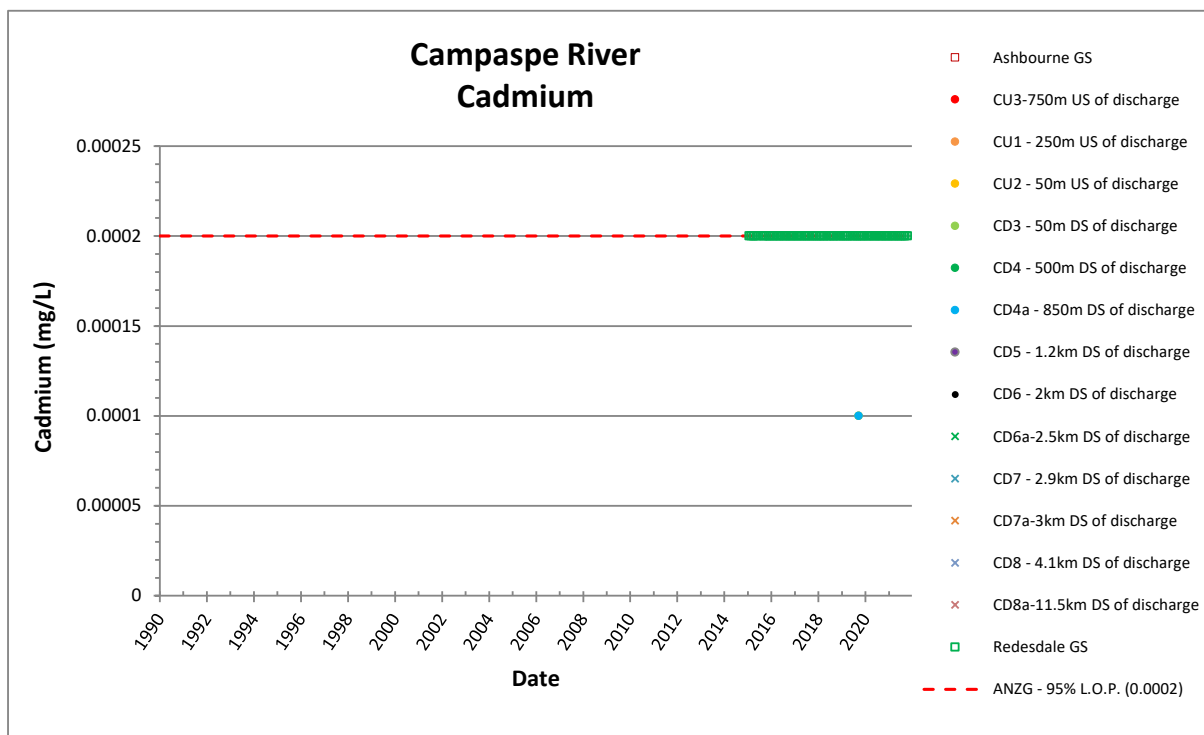


Figure 155 Cadmium data – Campaspe River

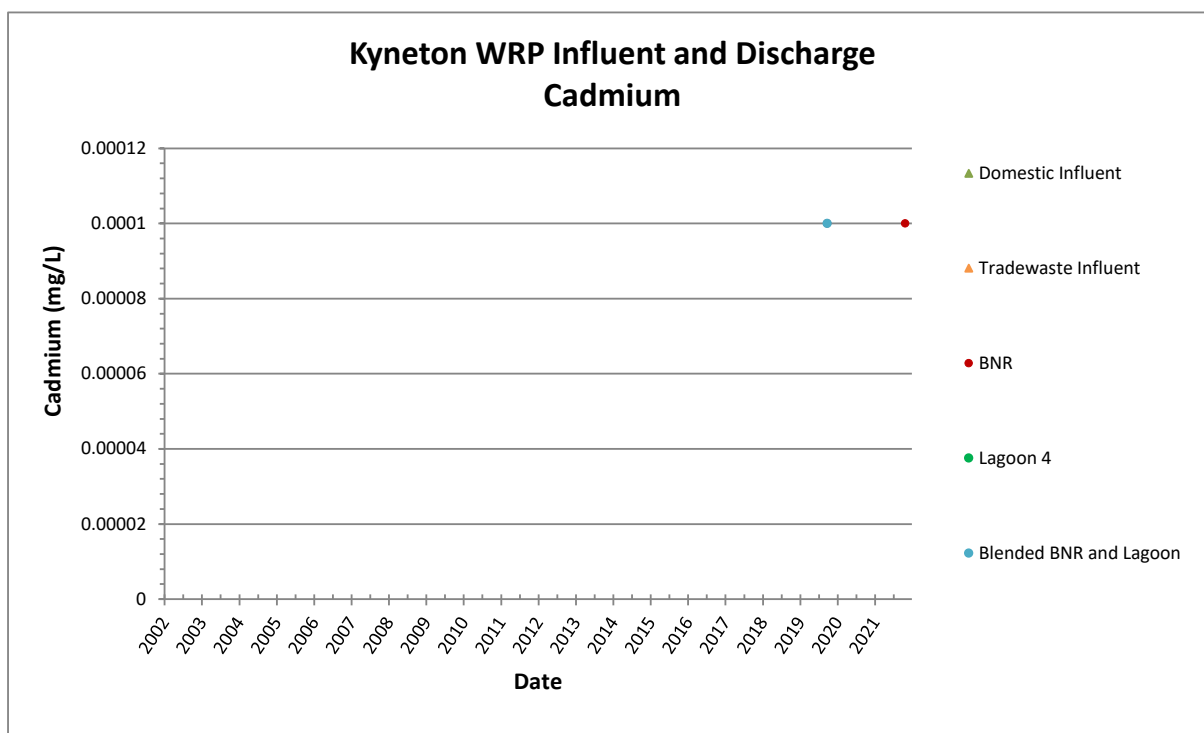


Figure 156 Cadmium data – Kyneton WRPr

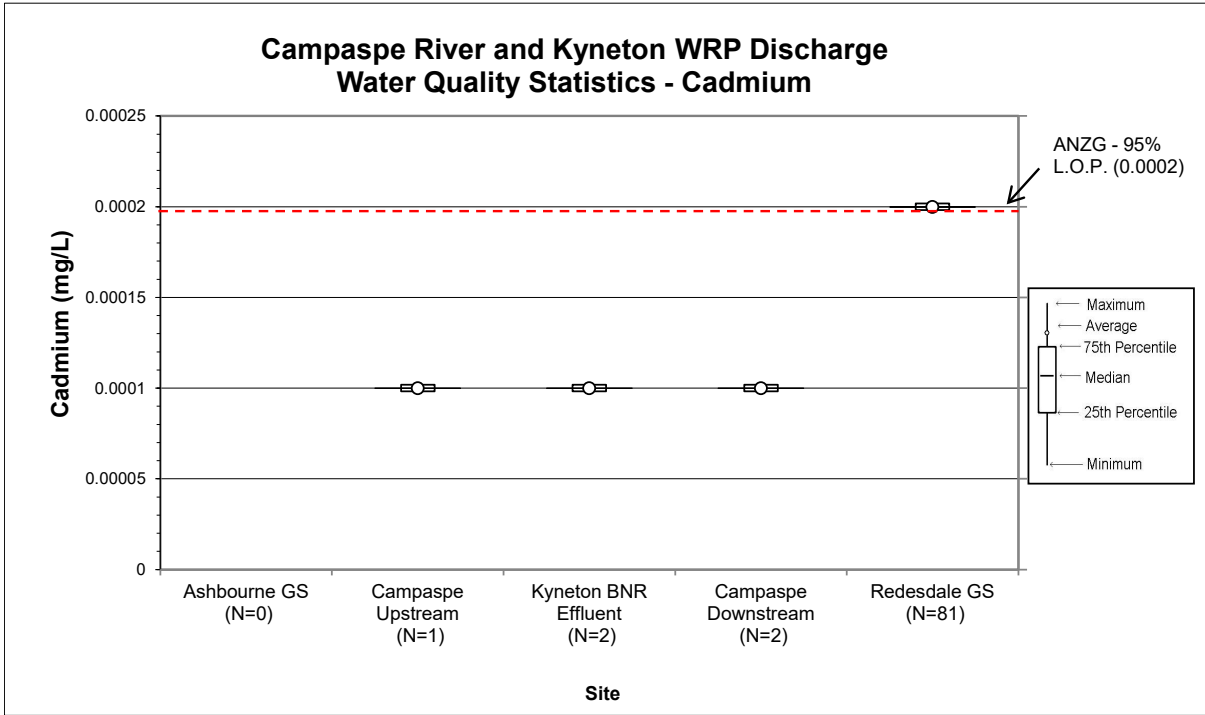


Figure 157 Cadmium statistics – Campaspe River and Kyneton WRP



## 5.14 Cadmium (Soluble)

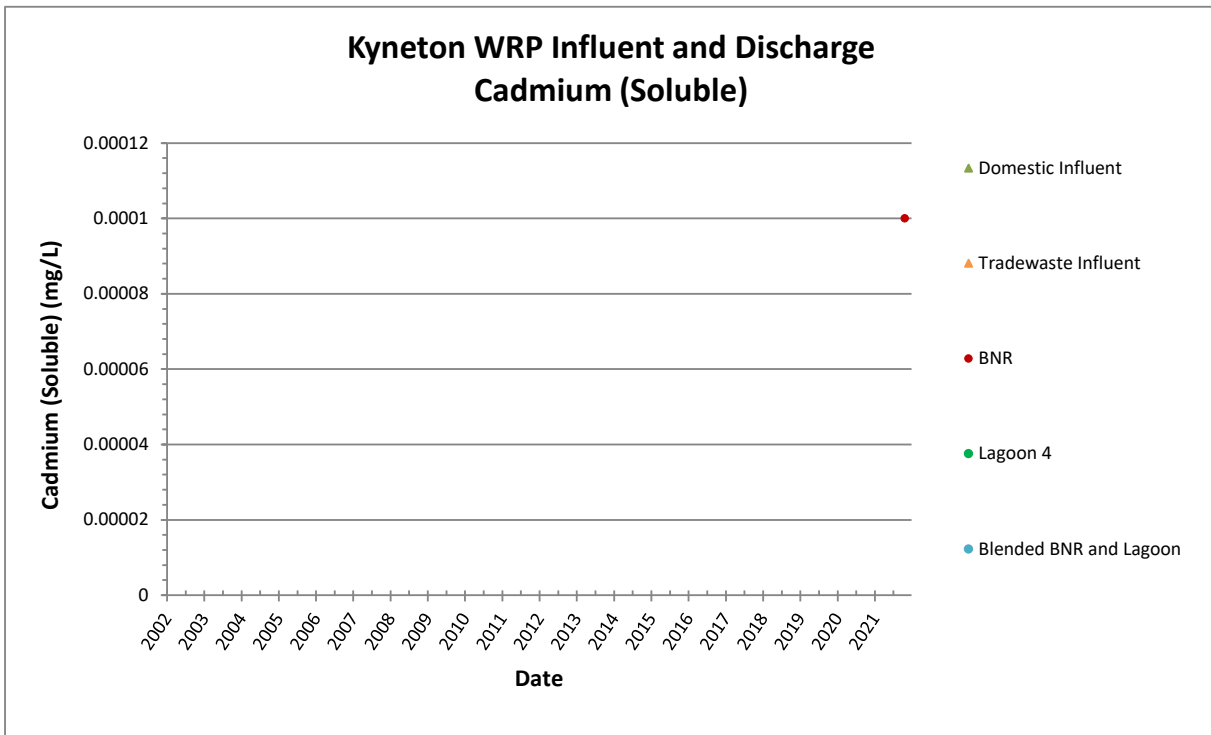


Figure 158 Cadmium (soluble) data – Kyneton WRP

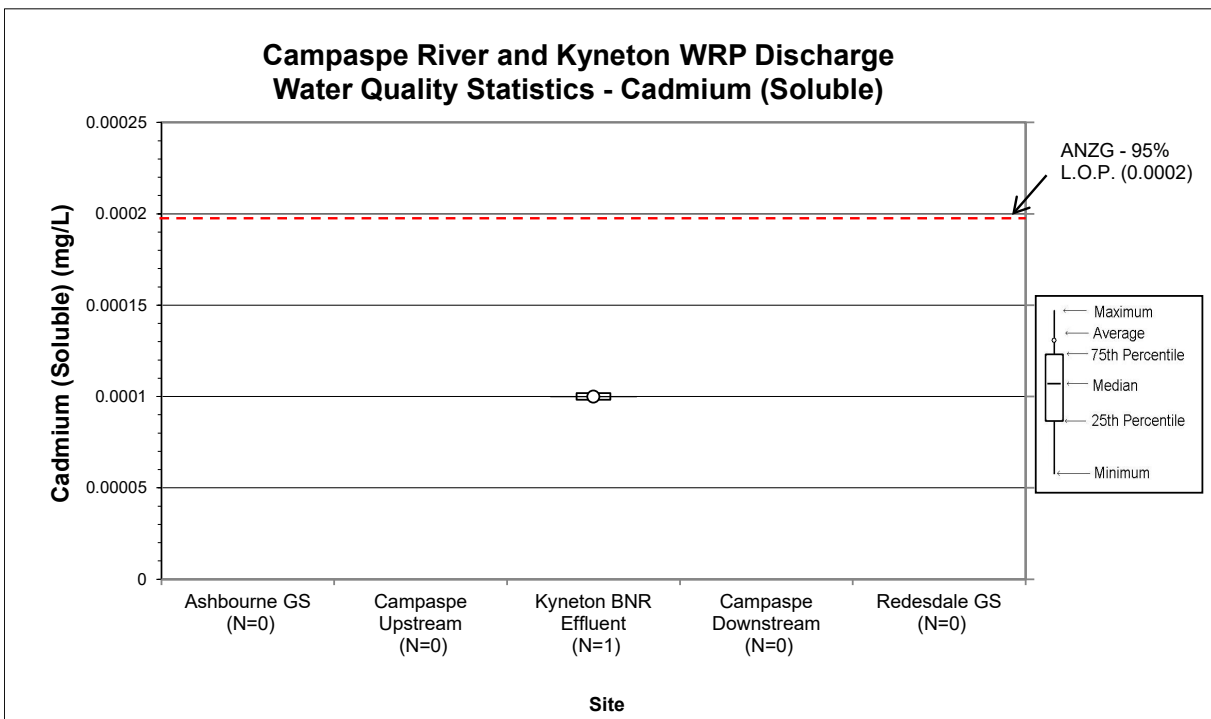


Figure 159 Cadmium (soluble) statistics – Campaspe River and Kyneton WRP

## 5.15 Chromium

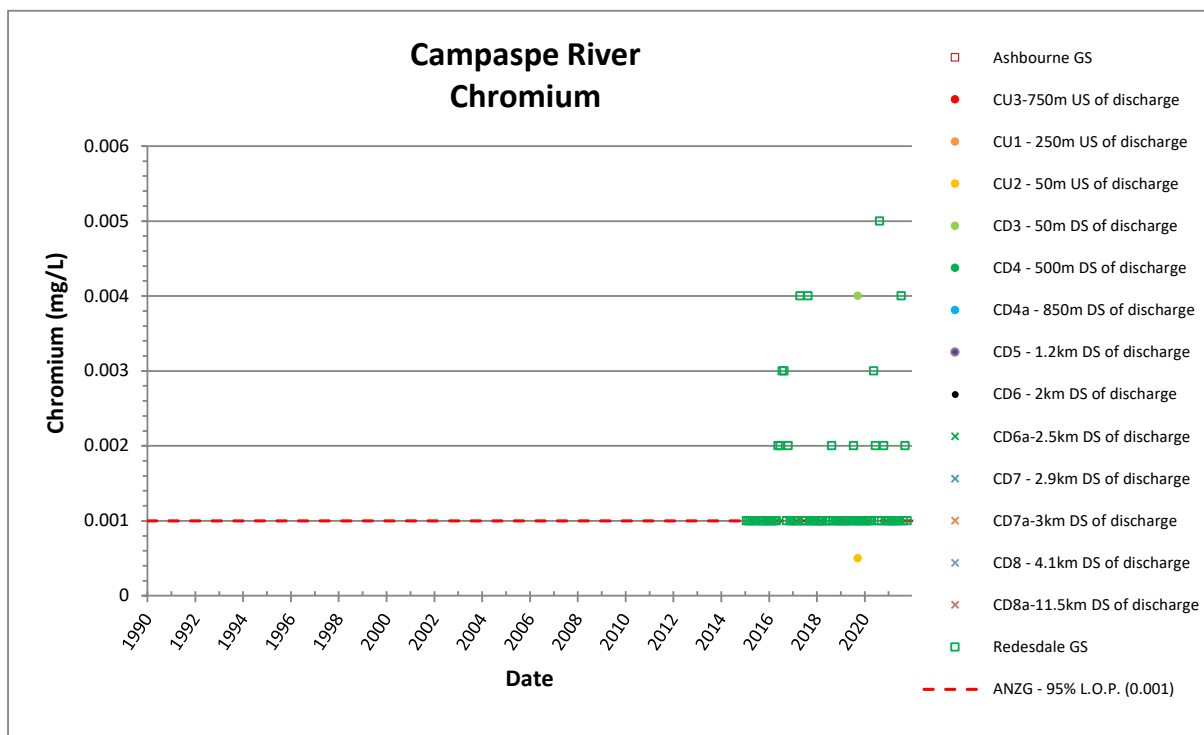


Figure 160 Chromium data – Campaspe River

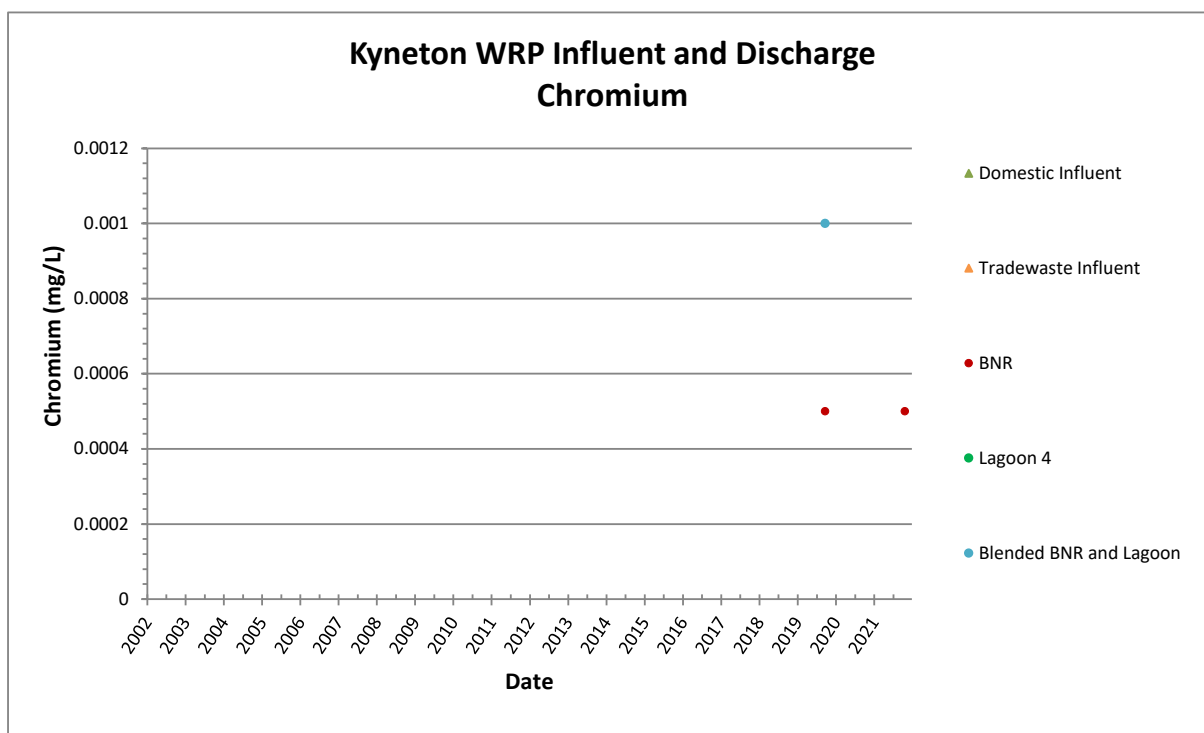


Figure 161 Chromium data – Kyneton WRPr

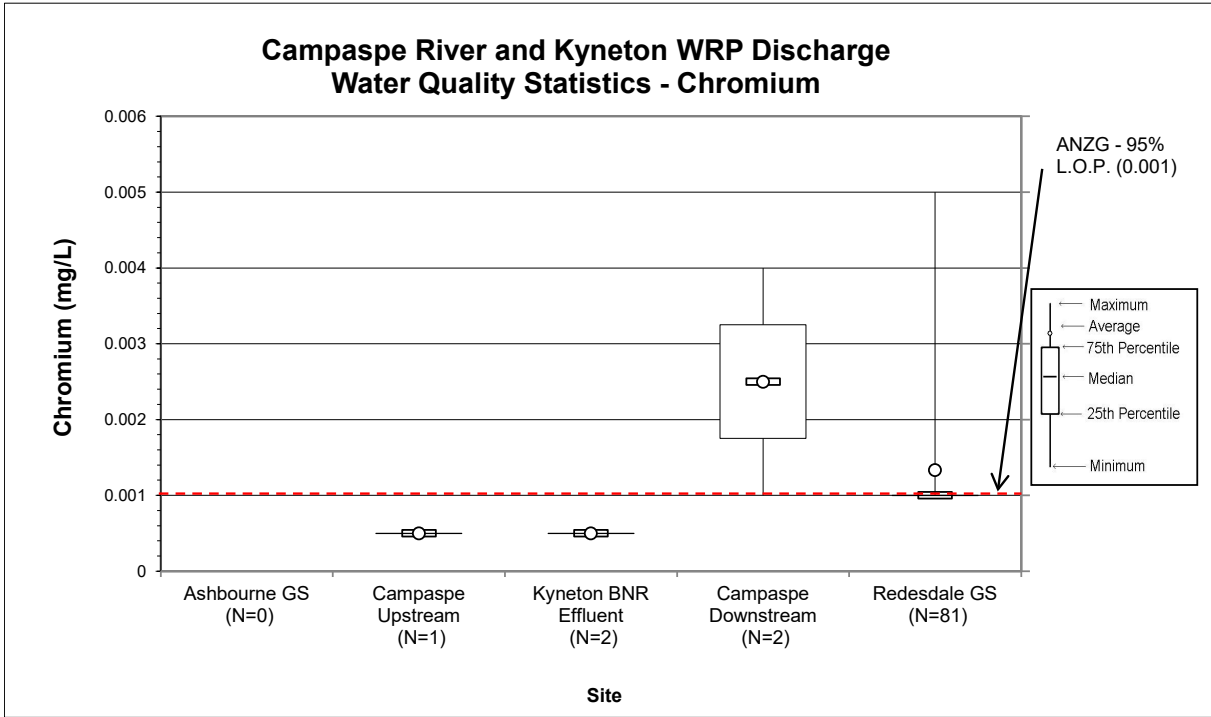


Figure 162 Chromium statistics – Campaspe River and Kyneton WRP

## 5.16 Chromium (Soluble)

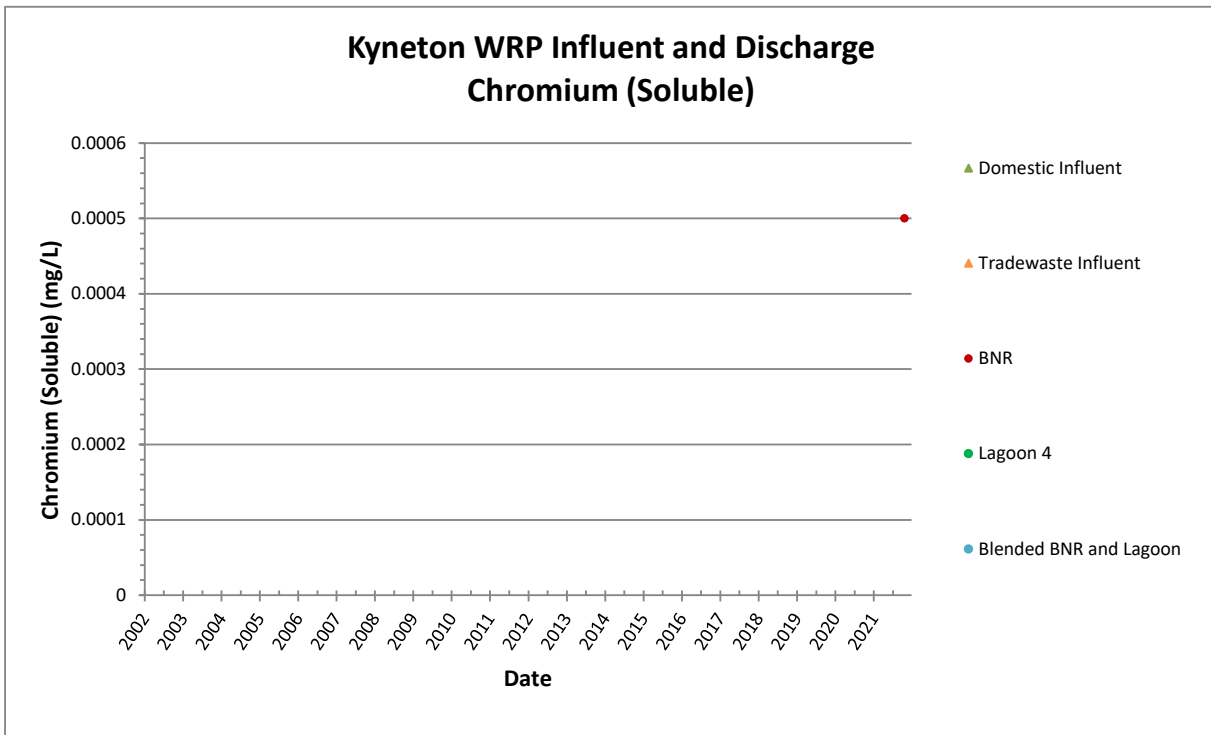


Figure 163 Chromium (soluble) data – Kyneton WRP

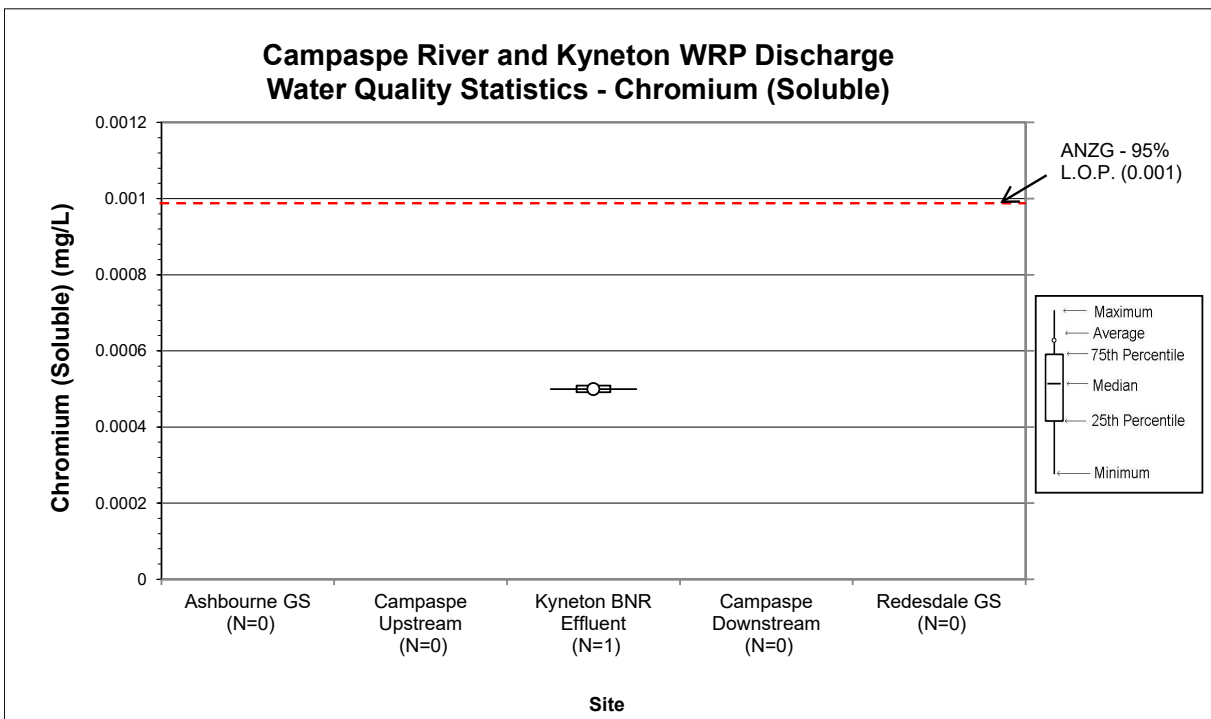


Figure 164 Chromium (soluble) statistics – Campaspe River and Kyneton WRP

## 5.17 Cobalt

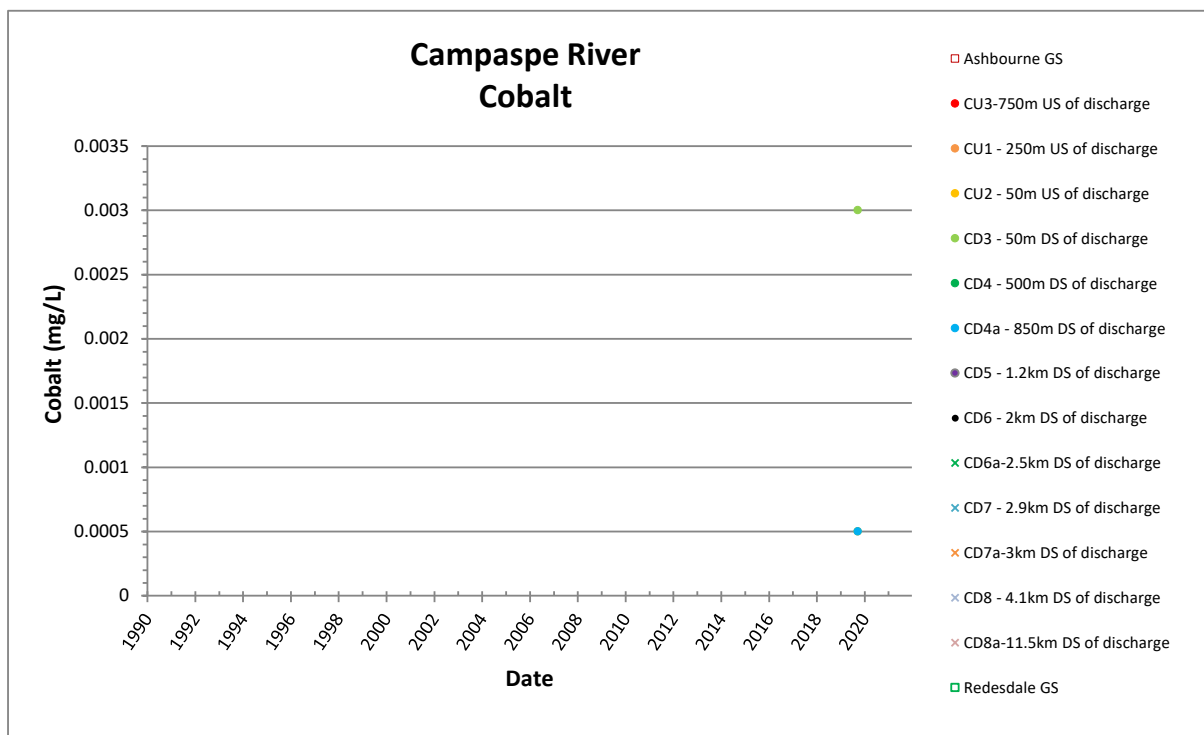


Figure 165 Cobalt data – Campaspe River

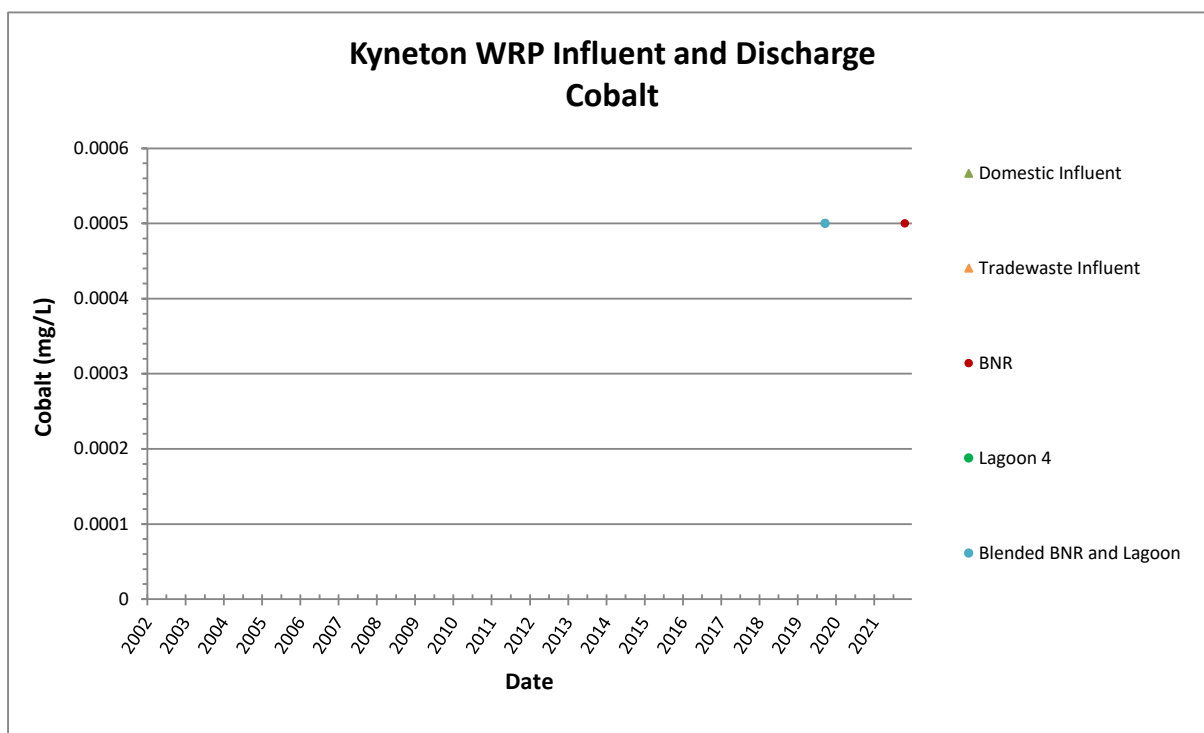


Figure 166 Cobalt data – Kyneton WRPr

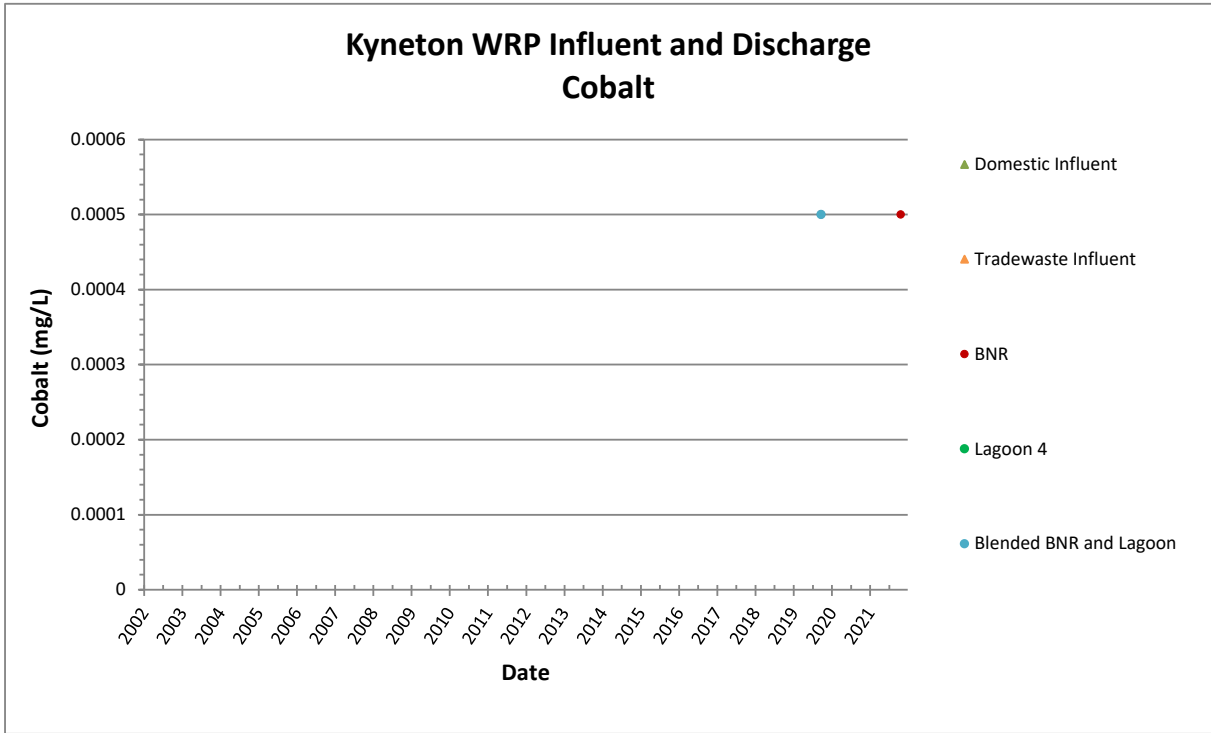


Figure 167 Cobalt statistics – Campaspe River and Kyneton WRP

# 5.18 Copper

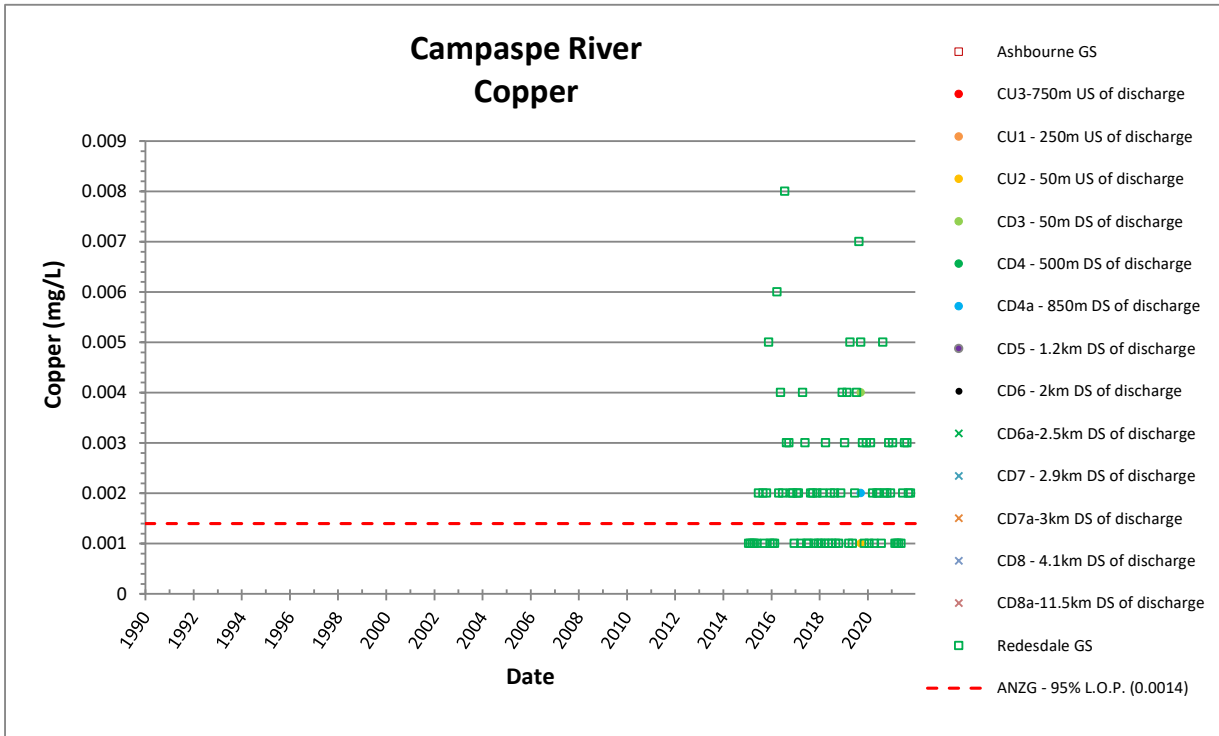


Figure 168 Copper data – Campaspe River

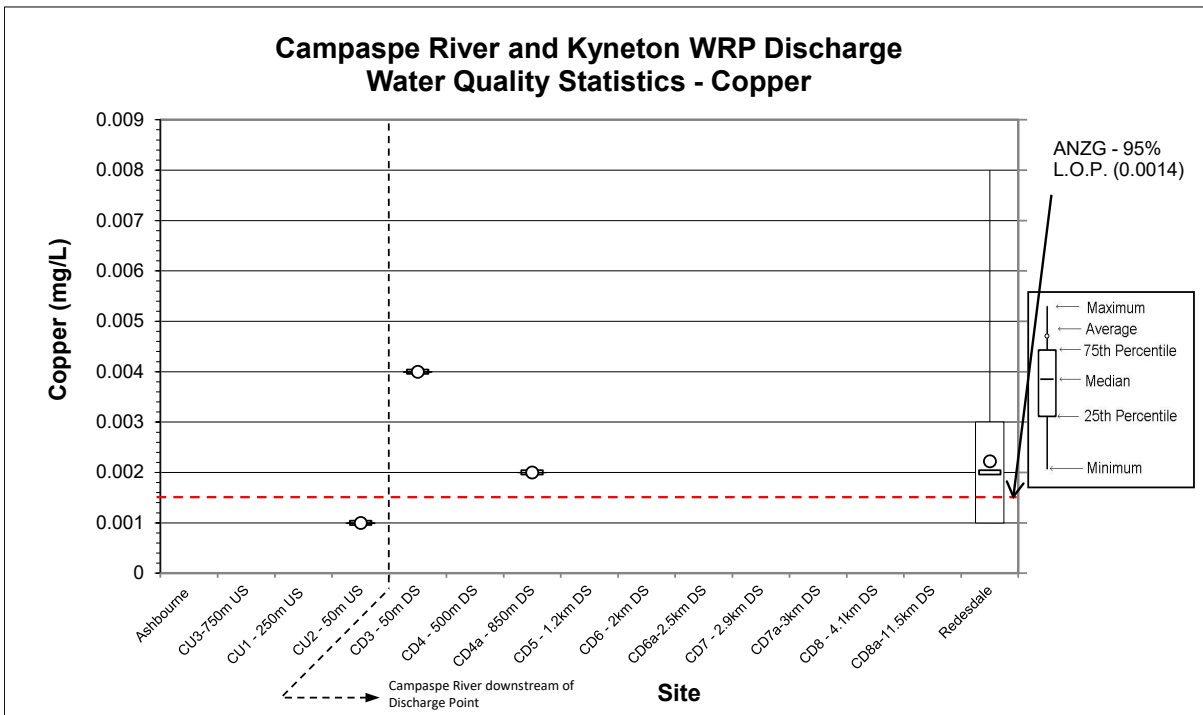
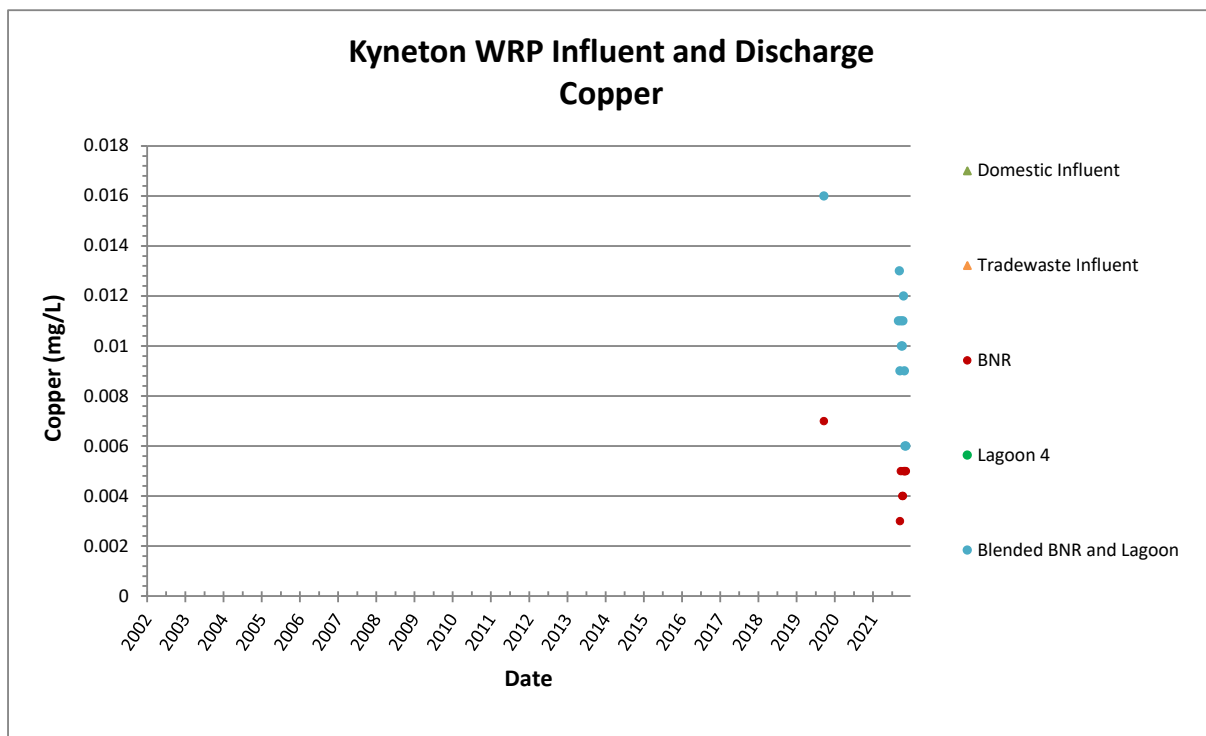


Figure 169 Copper statistics – Campaspe River

**Table 77** Copper statistics – Campaspe River

	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale
Maximum				0.001	0.004		0.002								0.008
90th percentile				0.001	0.004		0.002								0.004
75th percentile				0.001	0.004		0.002								0.003
Median				0.001	0.004		0.002								0.002
25th percentile				0.001	0.004		0.002								0.001
10th percentile				0.001	0.004		0.002								0.001
Minimum				0.001	0.004		0.002								0.001
Average				0.001	0.004		0.002								0.002
Number	0	0	0	1	1	0	1	0	0	0	0	0	0	0	81



**Figure 170** Copper data – Kyneton WRP



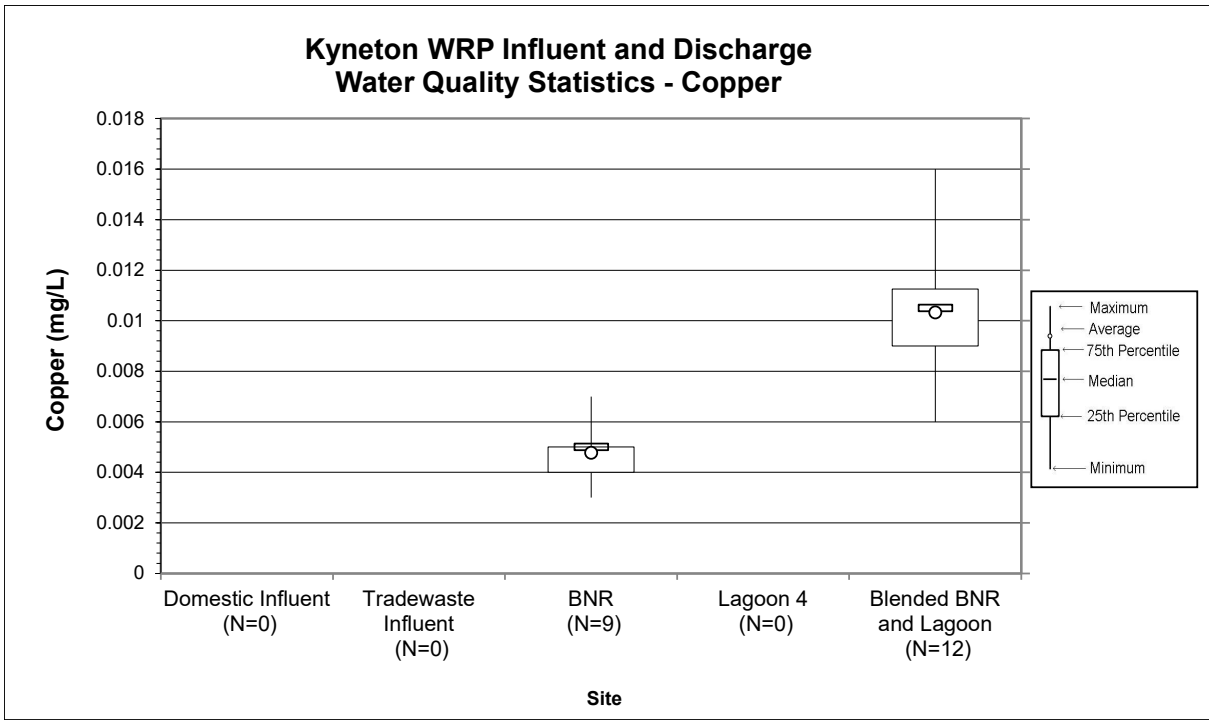


Figure 171 Copper statistics – Kyneton WRP

Table 78 Copper statistics – – Snipes Creek and Post Office Creek

	BNR	Blended BNR and Lagoon
Maximum	0.0070	0.0160
90th percentile	0.0054	0.0129
75th percentile	0.0050	0.0113
Median	0.0050	0.0105
25th percentile	0.0040	0.0090
10th percentile	0.0038	0.0063
Minimum	0.0030	0.0060
Average	0.0048	0.0103
Number	9	12

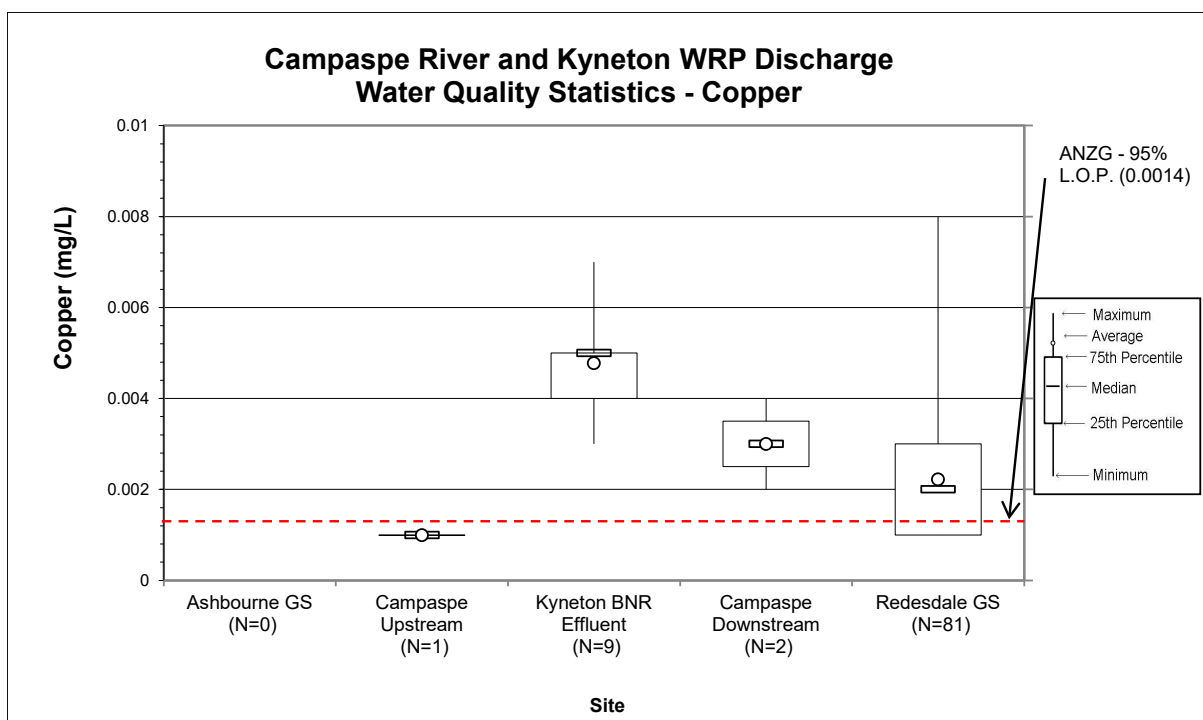


Figure 172 Copper statistics – Campaspe River and Kyneton WRP

Table 79 Copper statistics – Campaspe River and Kyneton WRP

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum		0.0010	0.0070	0.0040	0.0080
90th percentile		0.0010	0.0054	0.0038	0.0040
75th percentile		0.0010	0.0050	0.0035	0.0030
Median		0.0010	0.0050	0.0030	0.0020
25th percentile		0.0010	0.0040	0.0025	0.0010
10th percentile		0.0010	0.0038	0.0022	0.0010
Minimum		0.0010	0.0030	0.0020	0.0010
Average		0.0010	0.0048	0.0030	0.0022
Number	0	1	9	2	81

## 5.19 Copper (Soluble)

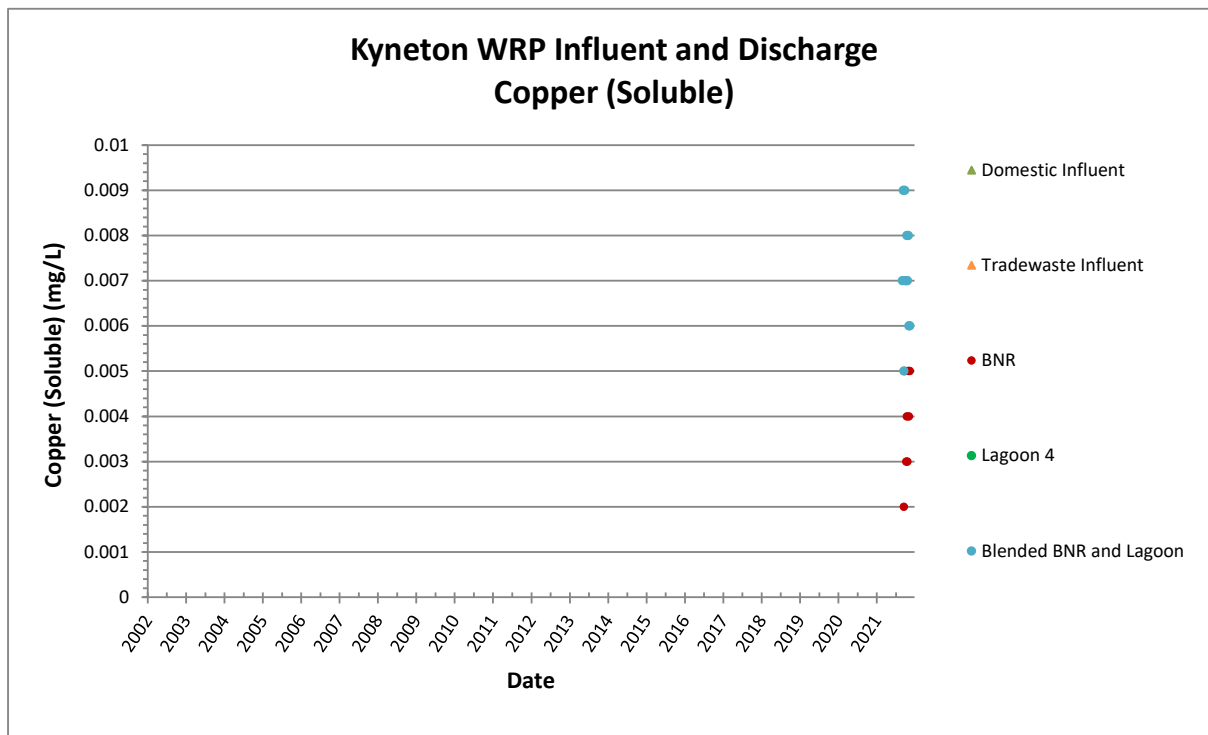


Figure 173 Copper (soluble) data – Kyneton WRP

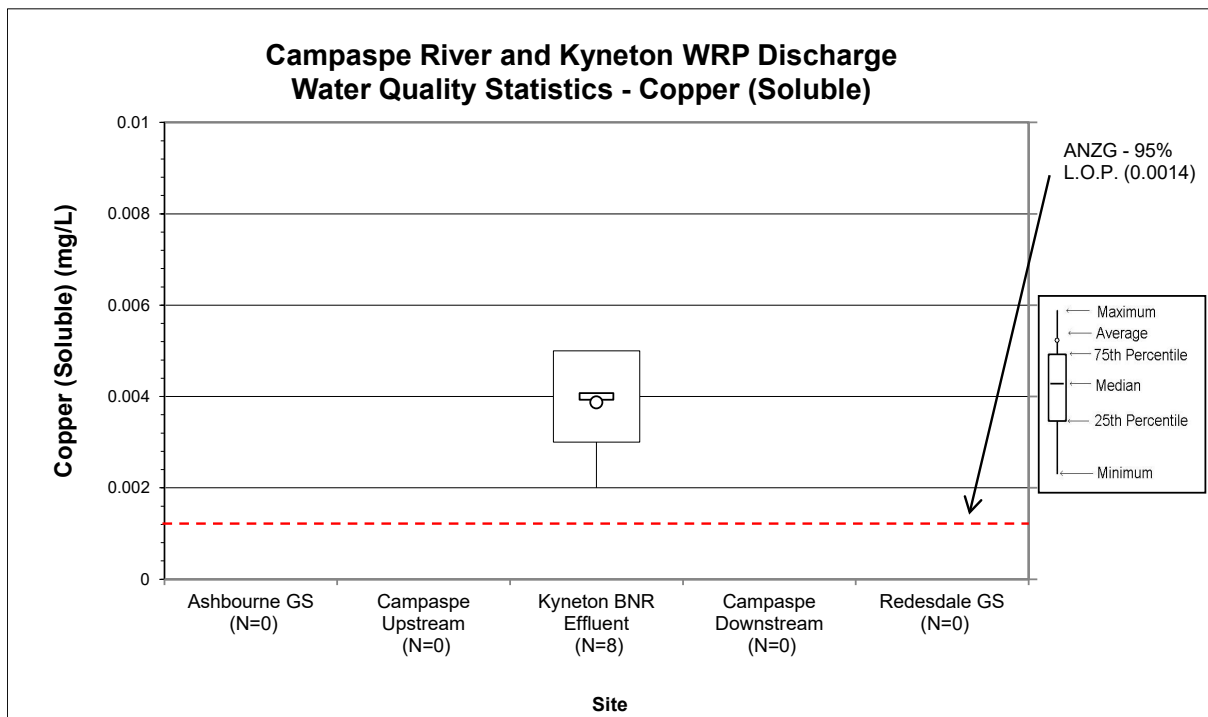


Figure 174 Copper (soluble) statistics – Campaspe River and Kyneton WRP

## 5.20 Iron

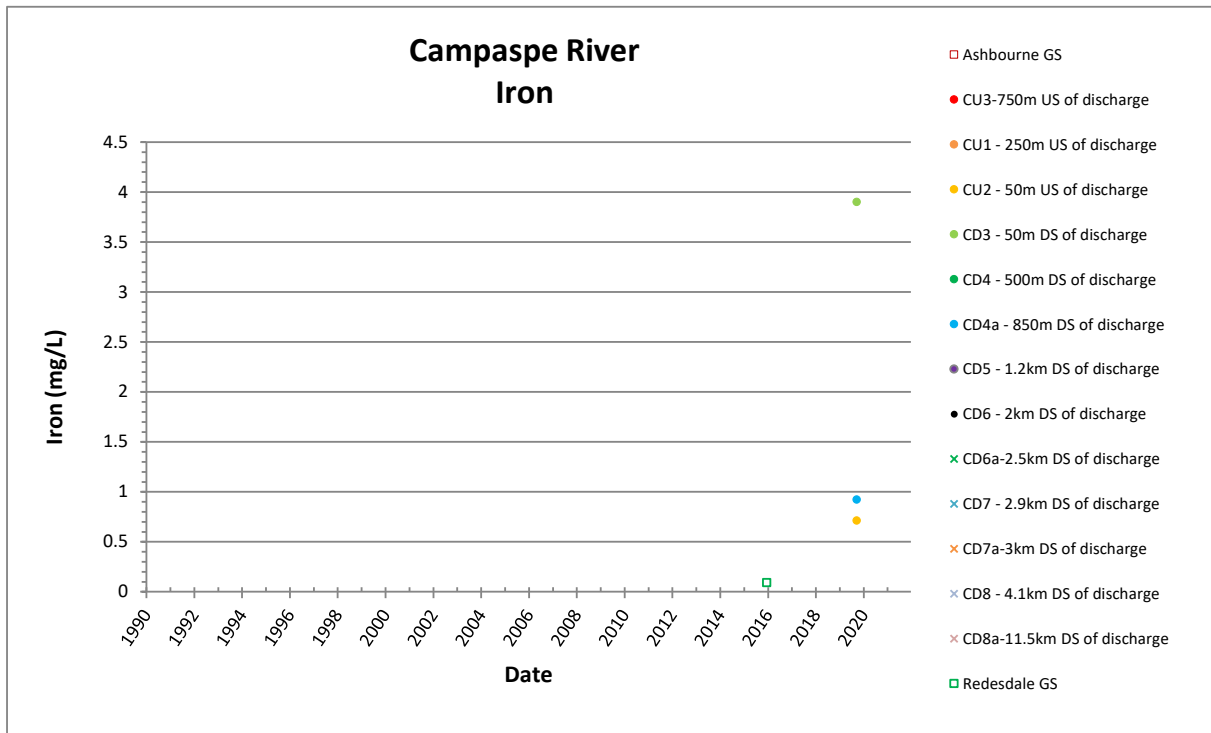


Figure 175 Iron data – Campaspe River

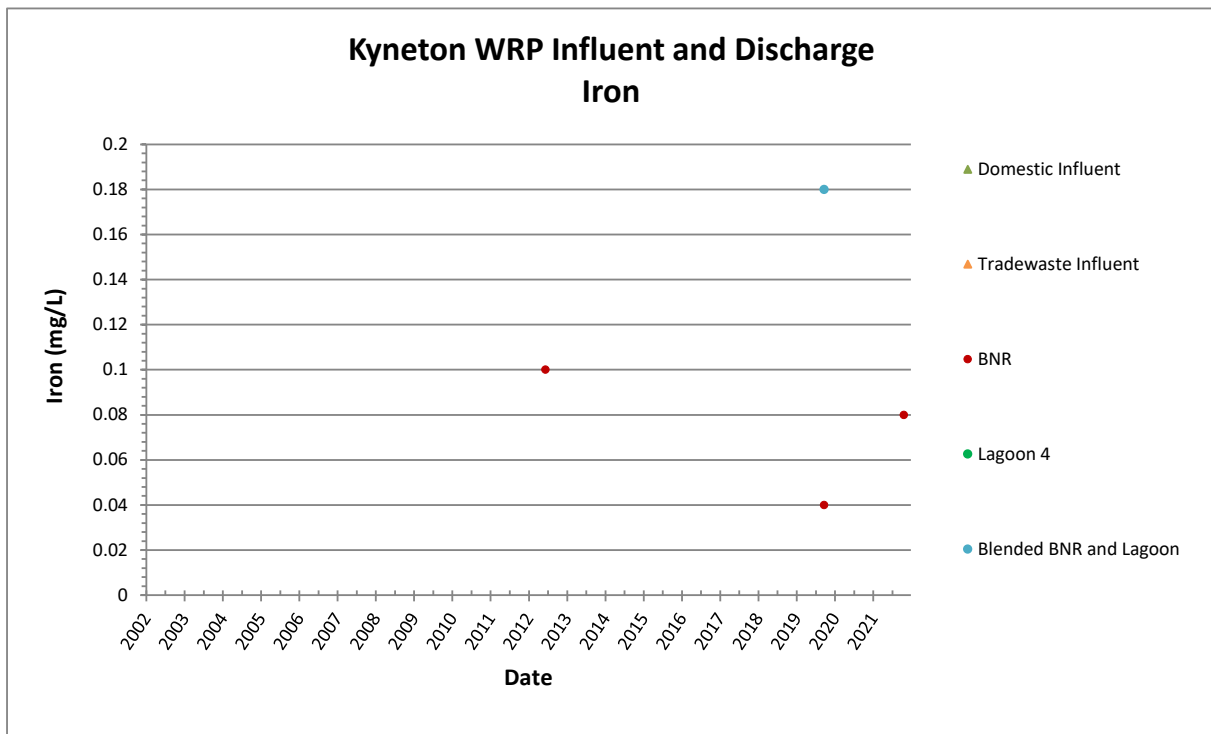


Figure 176 Iron statistics – Campaspe River

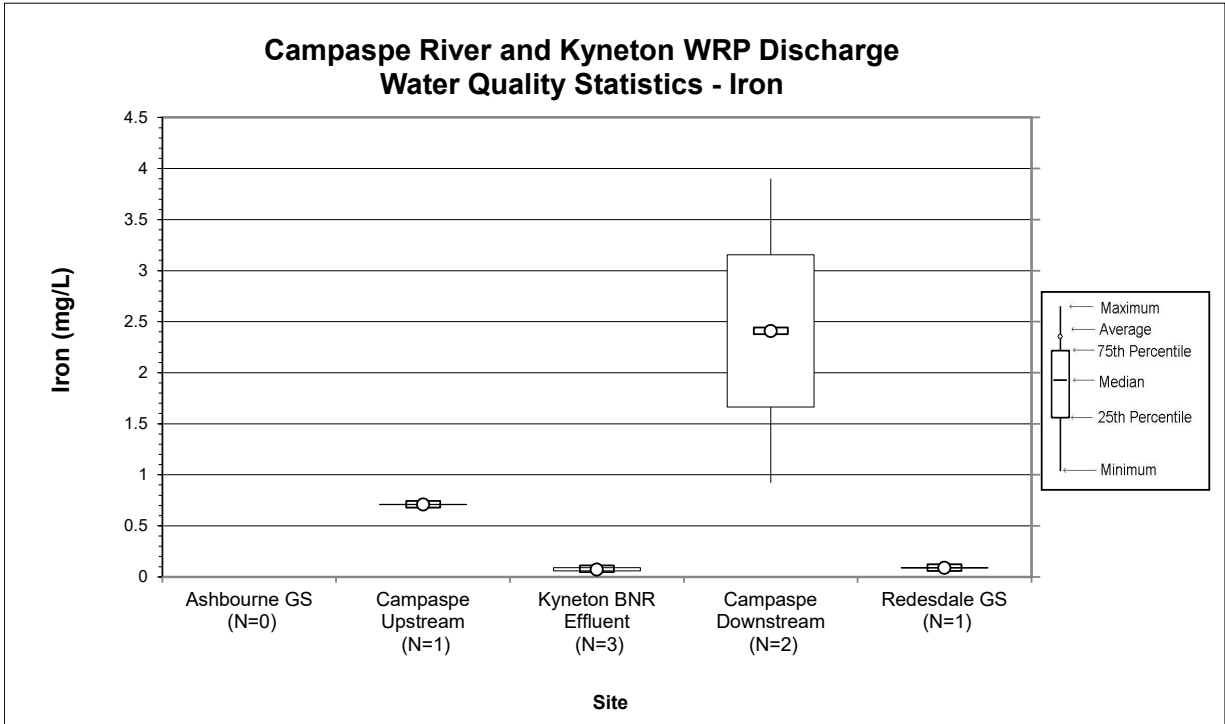


Figure 177 Iron statistics – Campaspe River and Kyneton WRP

## 5.21 Iron (Soluble)

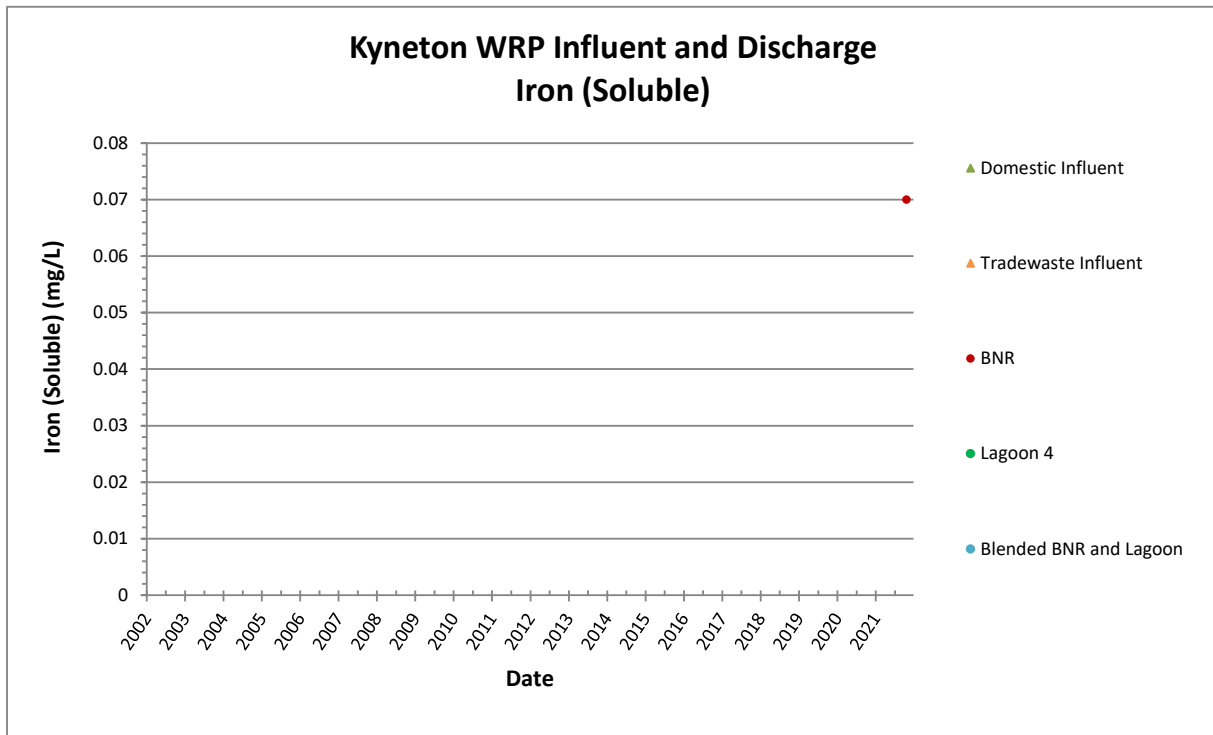


Figure 178 Iron (soluble) data – Kyneton WRP

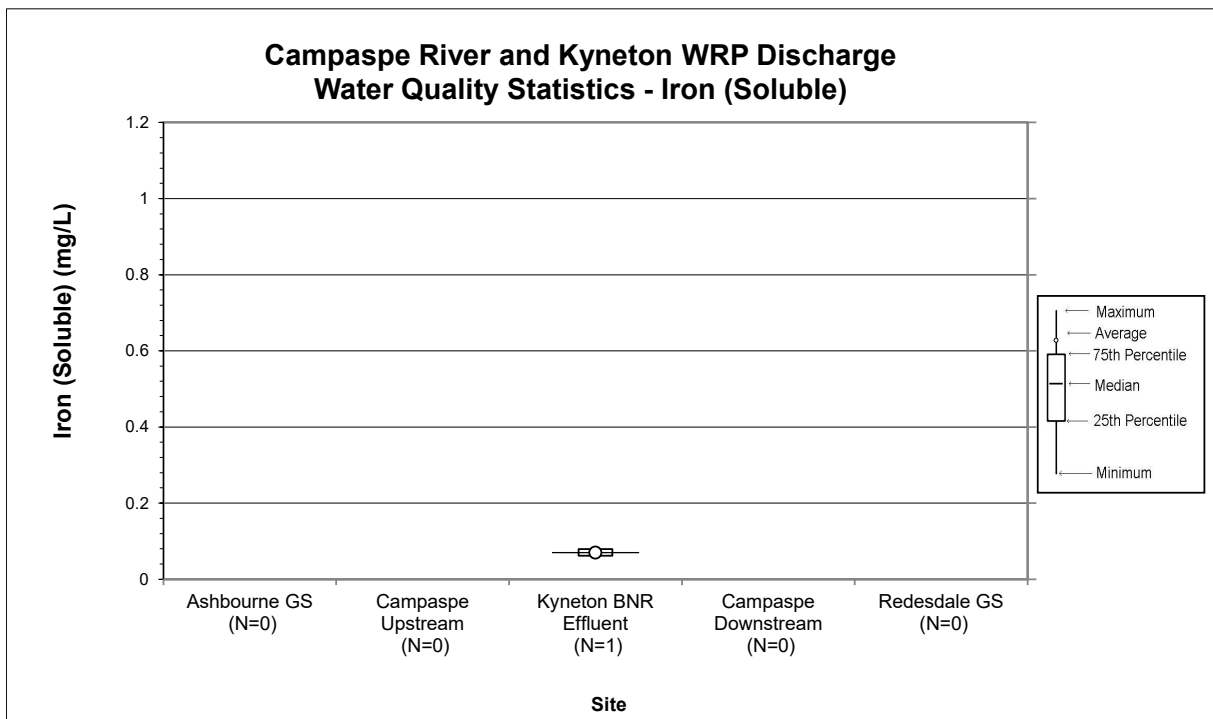


Figure 179 Iron (soluble) statistics – Campaspe River and Kyneton WRP

## 5.22 Lead

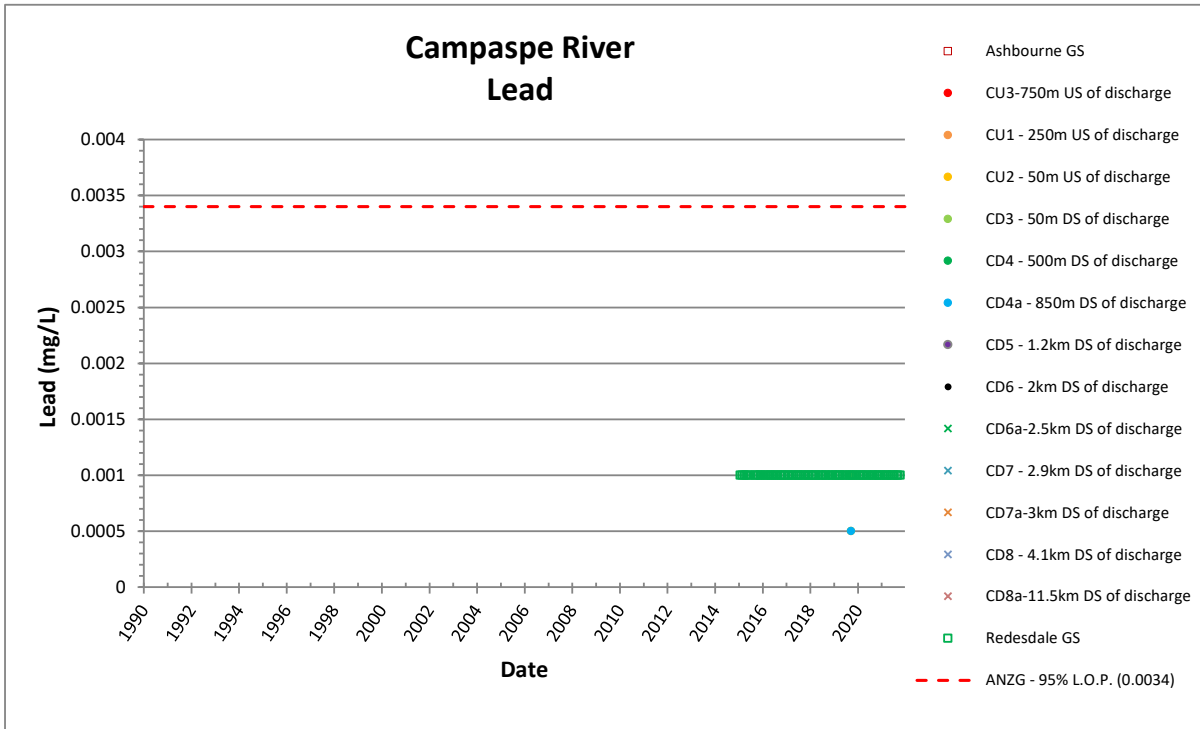


Figure 180 Lead data – Campaspe River

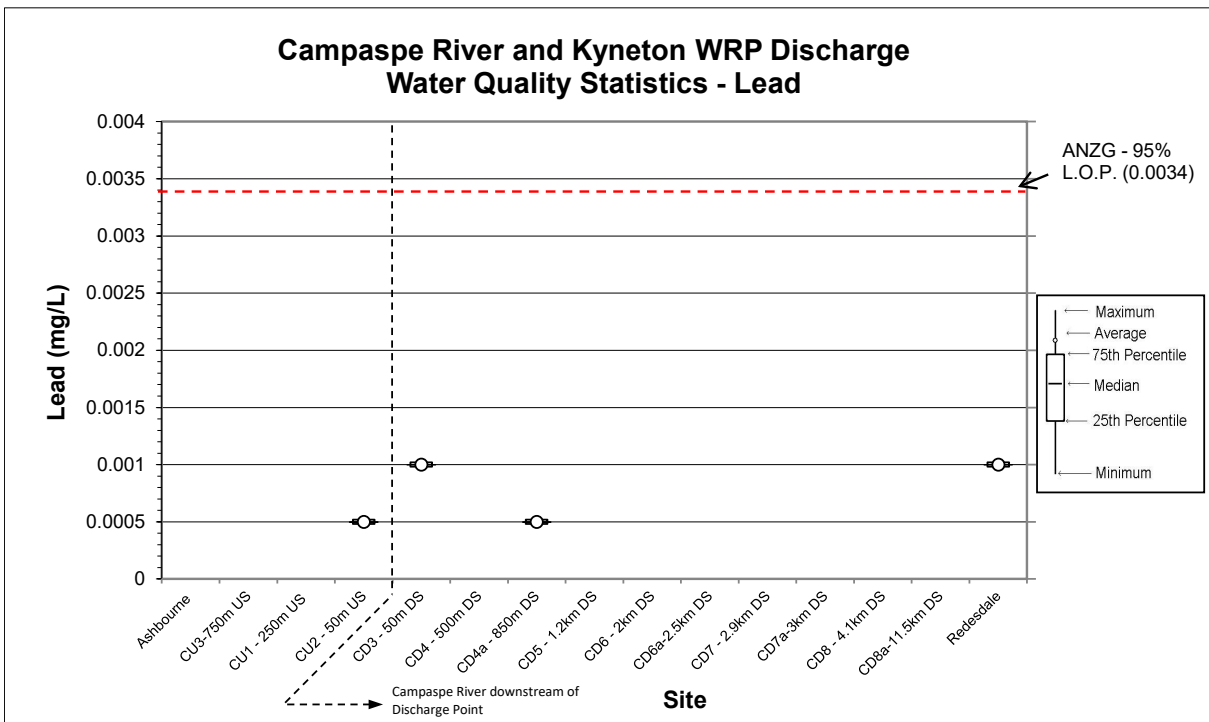
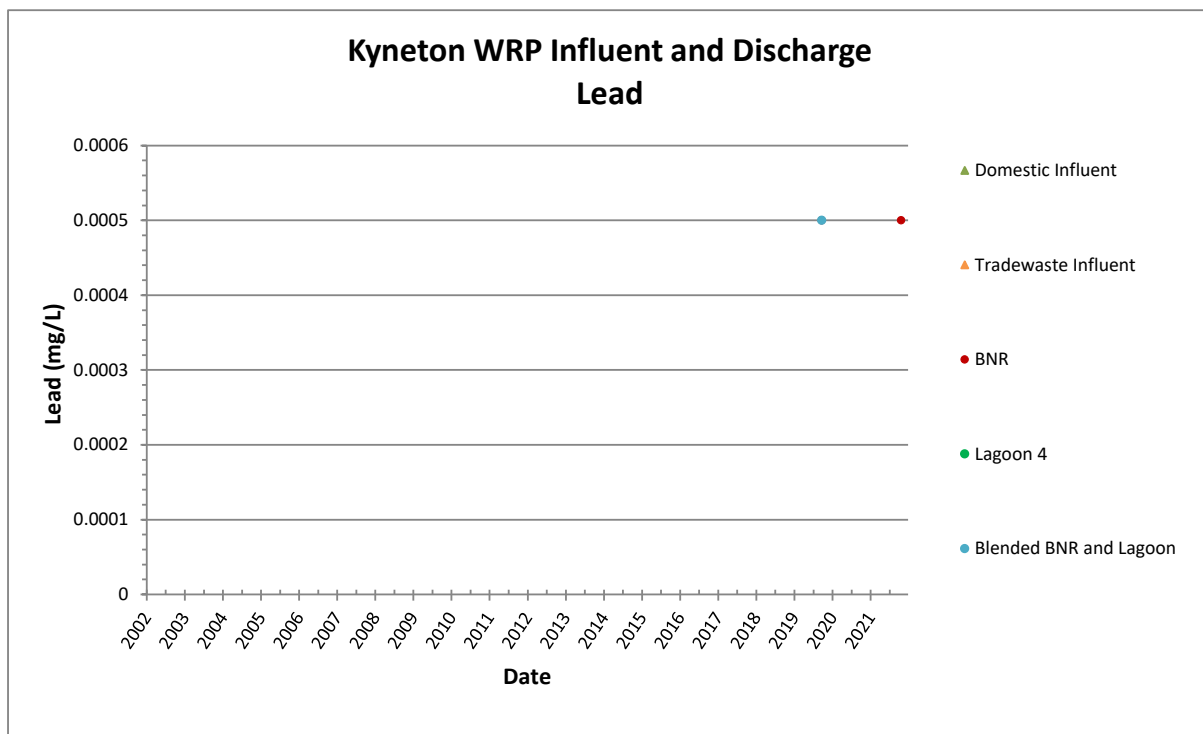


Figure 181 Lead statistics – Campaspe River

**Table 80**      **Lead statistics – Campaspe River**

	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale
Maximum				0.0005	0.0010		0.0005								0.0010
90th percentile				0.0005	0.0010		0.0005								0.0010
75th percentile				0.0005	0.0010		0.0005								0.0010
Median				0.0005	0.0010		0.0005								0.0010
25th percentile				0.0005	0.0010		0.0005								0.0010
10th percentile				0.0005	0.0010		0.0005								0.0010
Minimum				0.0005	0.0010		0.0005								0.0010
Average				0.0005	0.0010		0.0005								0.0010
Number	0	0	0	1	1	0	1	0	0	0	0	0	0	0	81



**Figure 182**      **Lead data – Kyneton WRP**



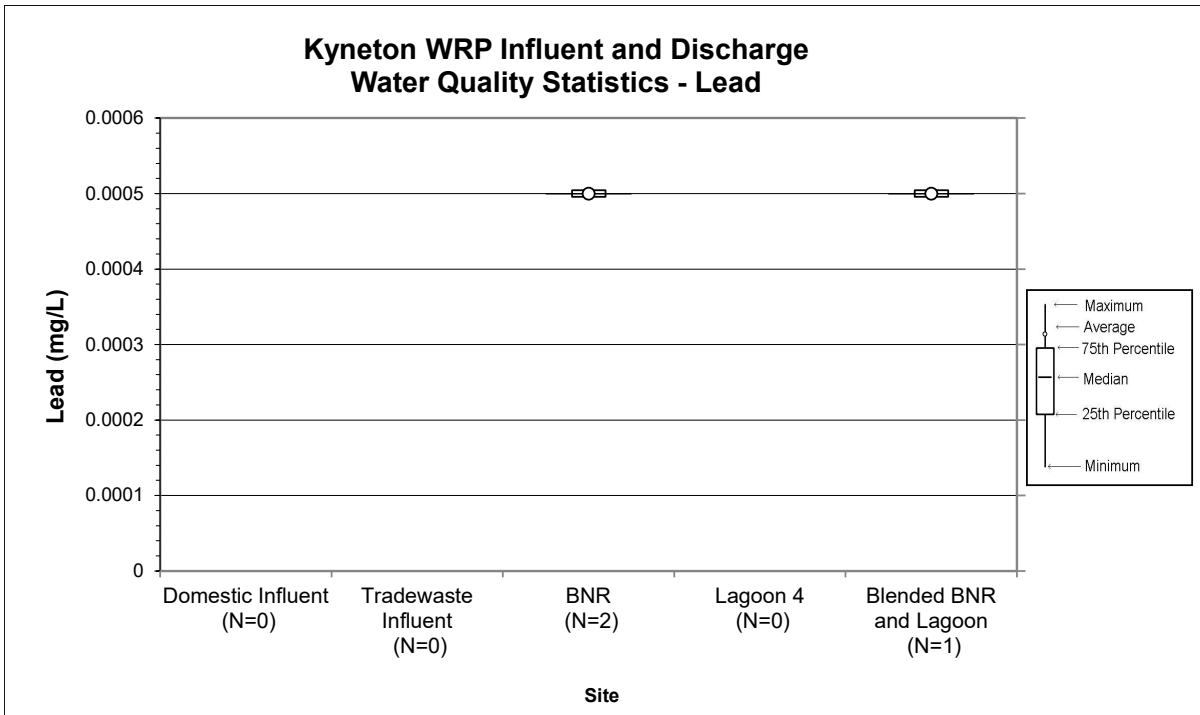


Figure 183 Lead statistics – Kyneton WRP

Table 81 Lead statistics – – Snipes Creek and Post Office Creek

	BNR	Blended BNR and Lagoon
Maximum	0.0005	0.0005
90th percentile	0.0005	0.0005
75th percentile	0.0005	0.0005
Median	0.0005	0.0005
25th percentile	0.0005	0.0005
10th percentile	0.0005	0.0005
Minimum	0.0005	0.0005
Average	0.0005	0.0005
Number	2	1

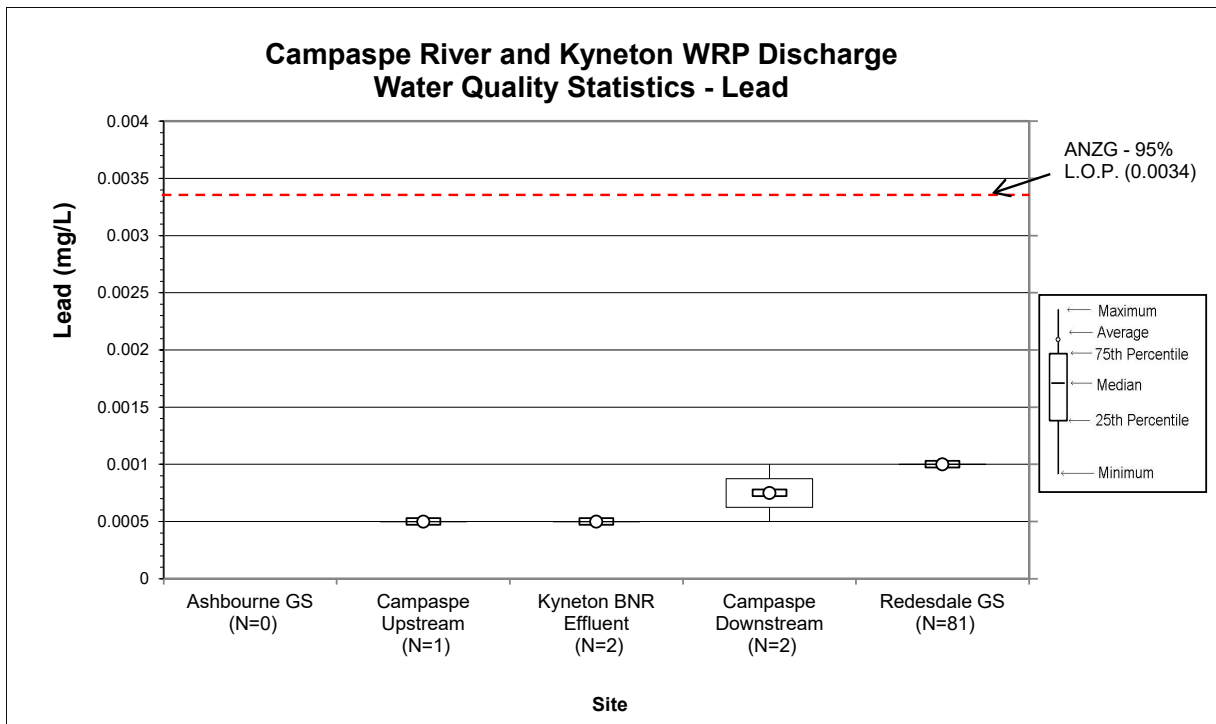


Figure 184 Lead statistics – Campaspe River and Kyneton WRP

Table 82 Lead statistics – Campaspe River and Kyneton WRP

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum		0.0005	0.0005	0.0010	0.0010
90th percentile		0.0005	0.0005	0.0010	0.0010
75th percentile		0.0005	0.0005	0.0009	0.0010
Median		0.0005	0.0005	0.0008	0.0010
25th percentile		0.0005	0.0005	0.0006	0.0010
10th percentile		0.0005	0.0005	0.0006	0.0010
Minimum		0.0005	0.0005	0.0005	0.0010
Average		0.0005	0.0005	0.0008	0.0010
Number	0	1	2	2	81

## 5.23 Lead (Soluble)

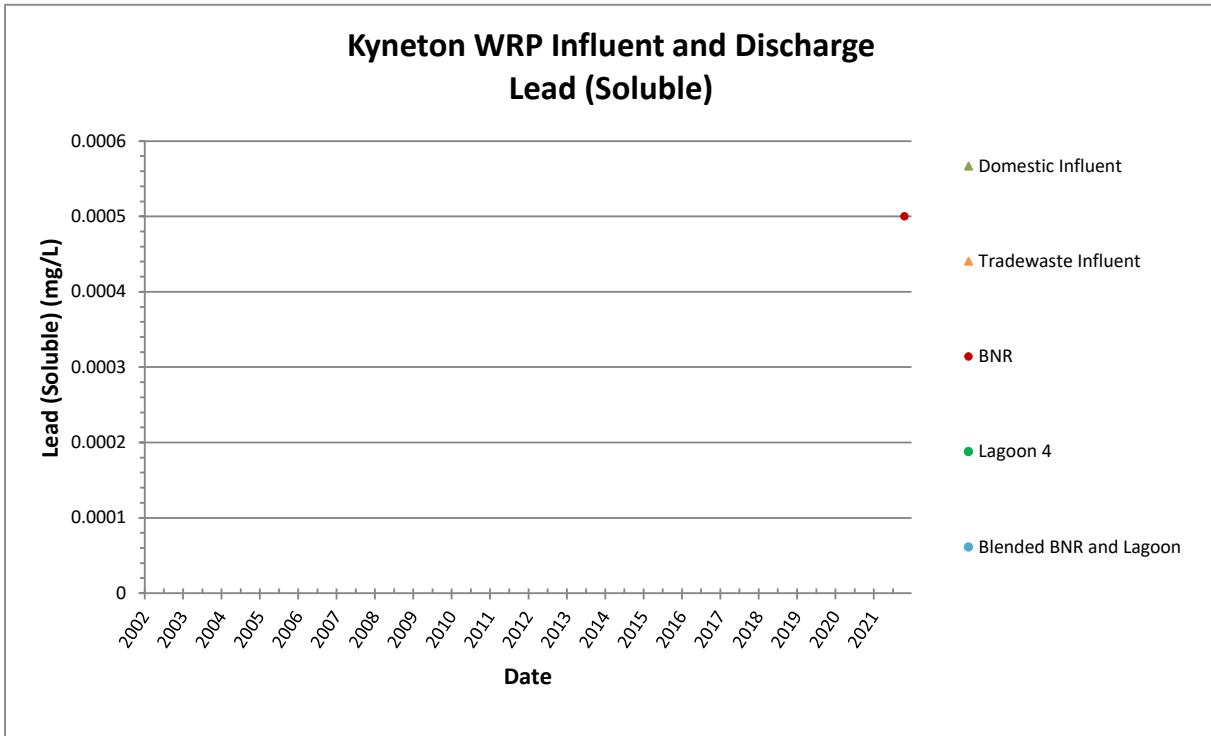


Figure 185 Lead (soluble) data – Kyneton WRP

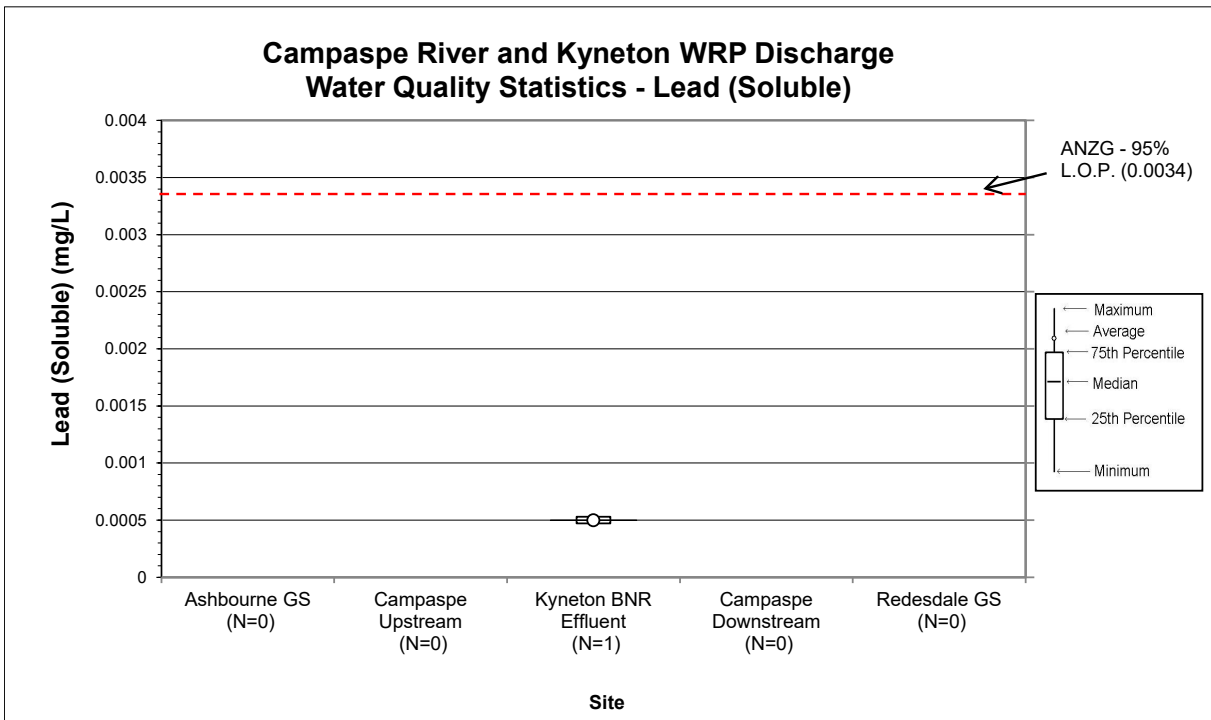


Figure 186 Lead (soluble) statistics – Campaspe River and Kyneton WRP

## 5.24 Manganese

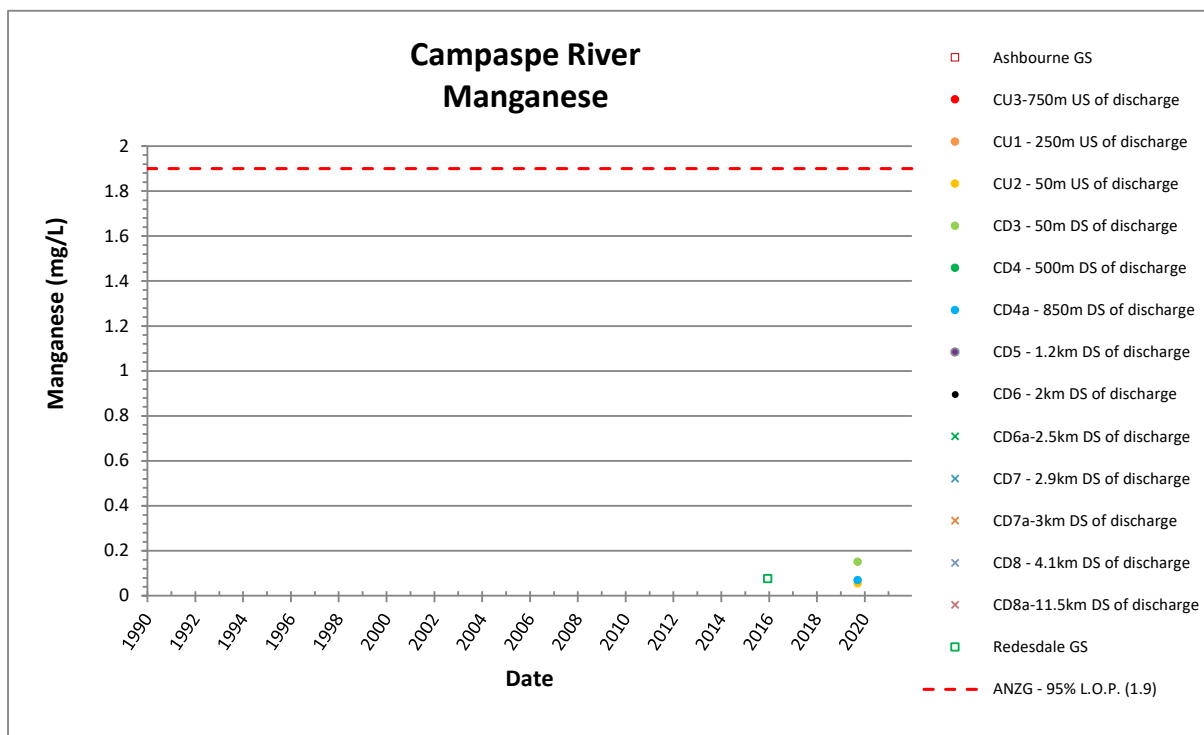


Figure 187 Manganese data – Campaspe River

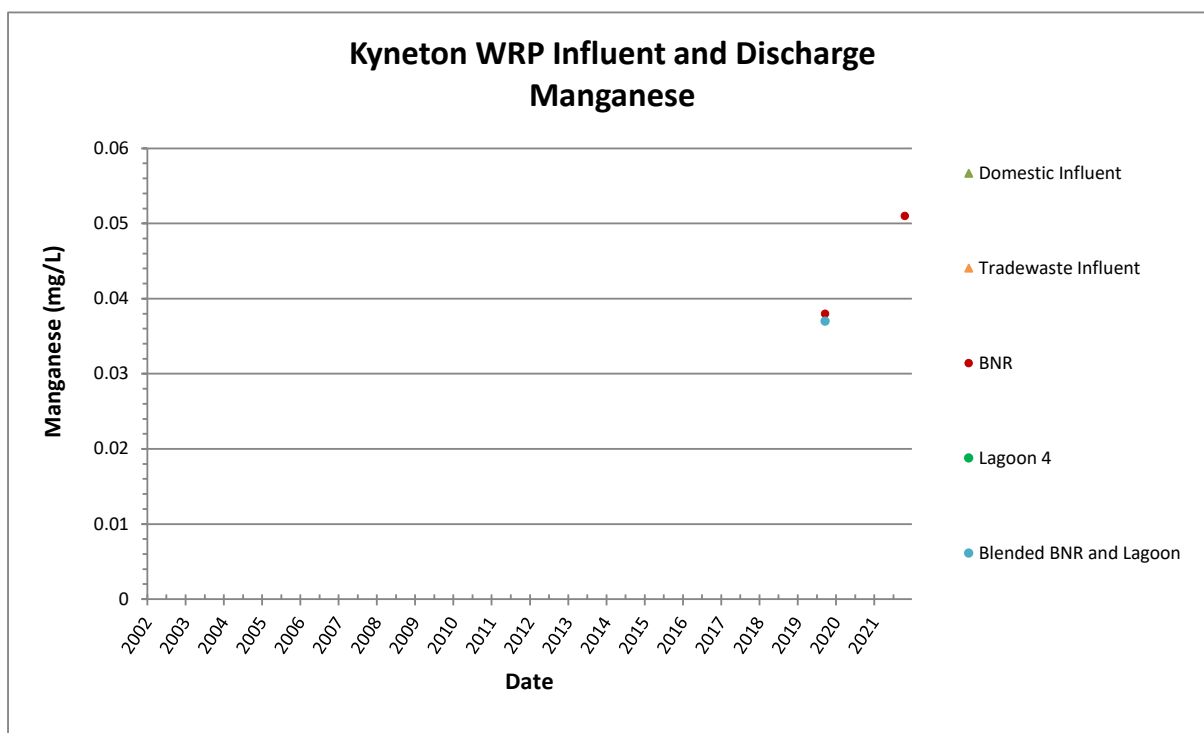


Figure 188 Manganese data – Kyneton WRP

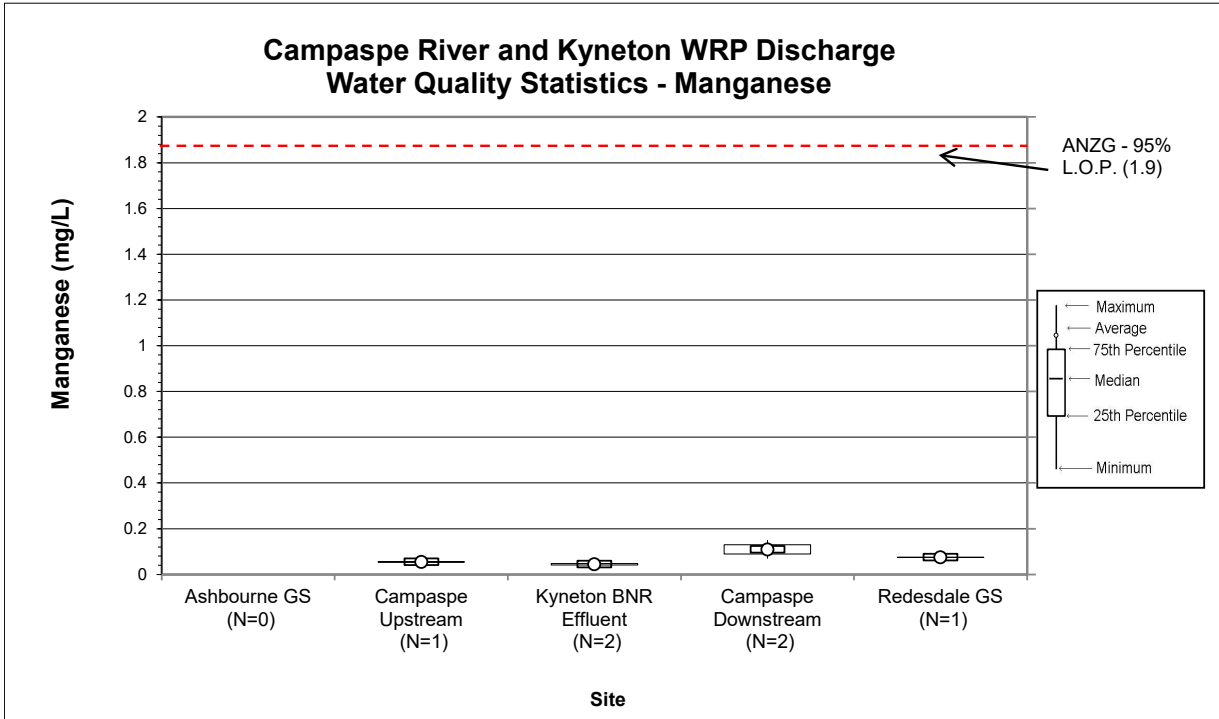


Figure 189 Manganese statistics – Campaspe River and Kyneton WRP

## 5.25 Manganese (Soluble)

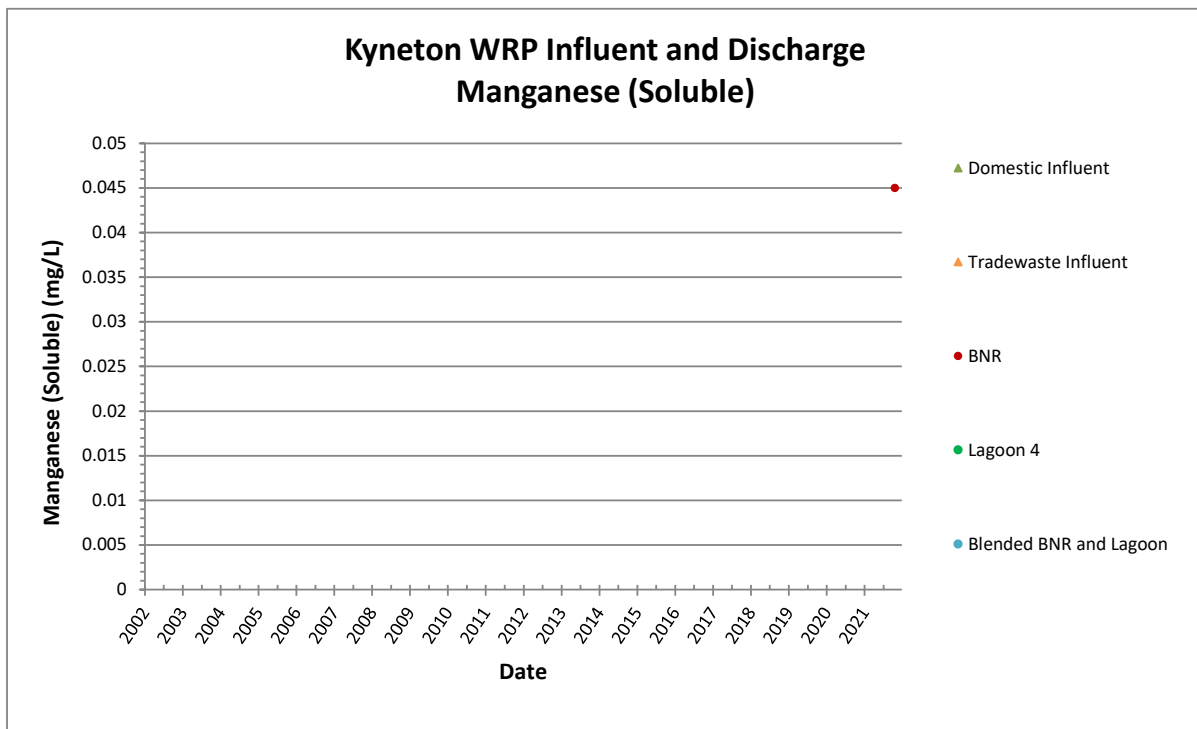


Figure 190 Manganese (soluble) data – Kyneton WRP

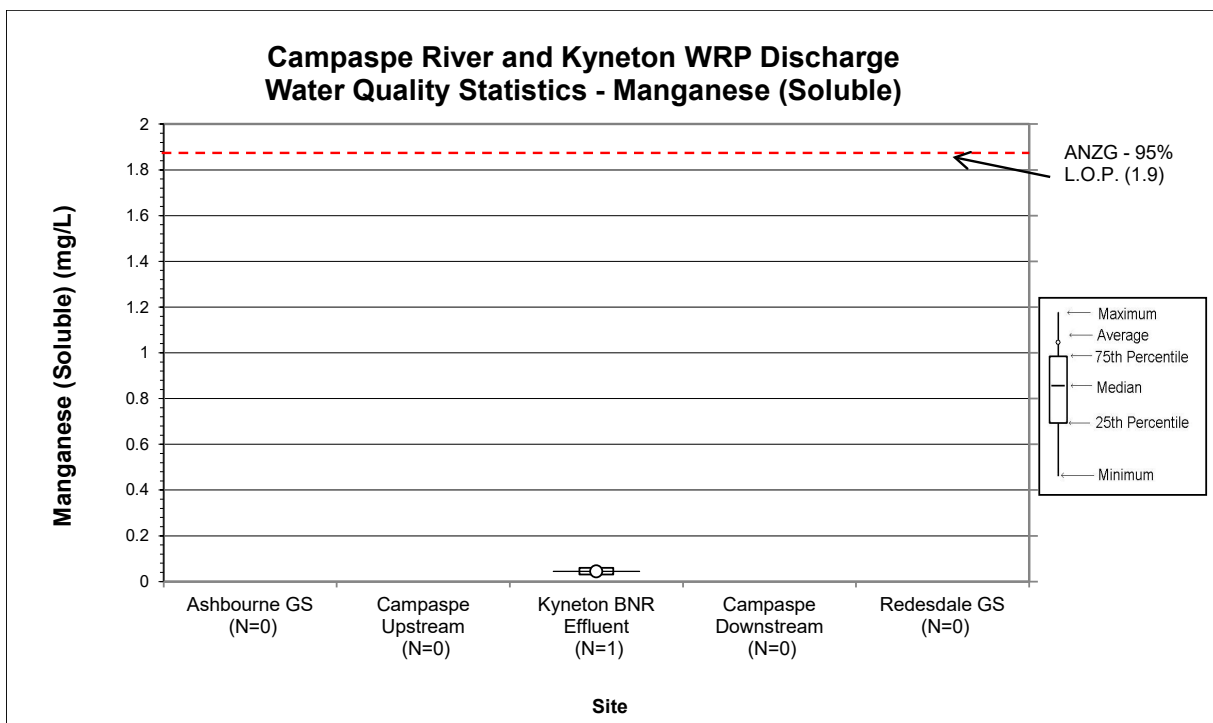


Figure 191 Manganese (soluble) statistics – Campaspe River and Kyneton WRP

## 5.26 Mercury

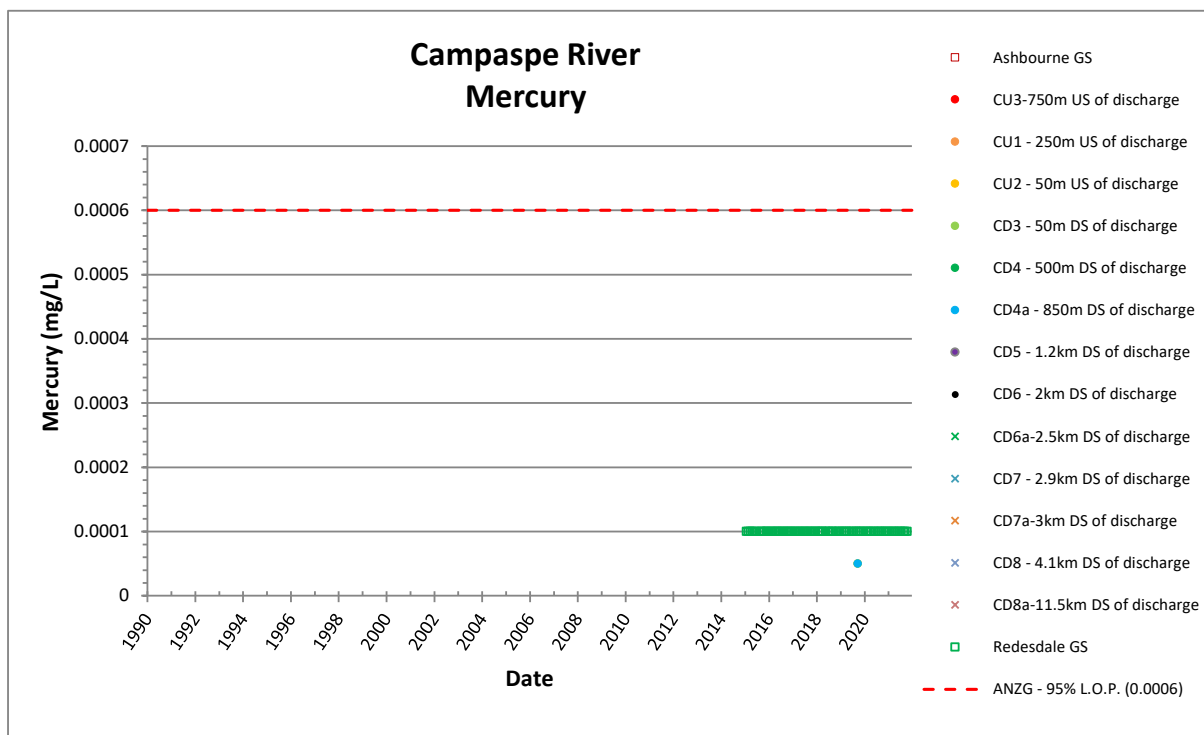


Figure 192 Mercury data – Campaspe River

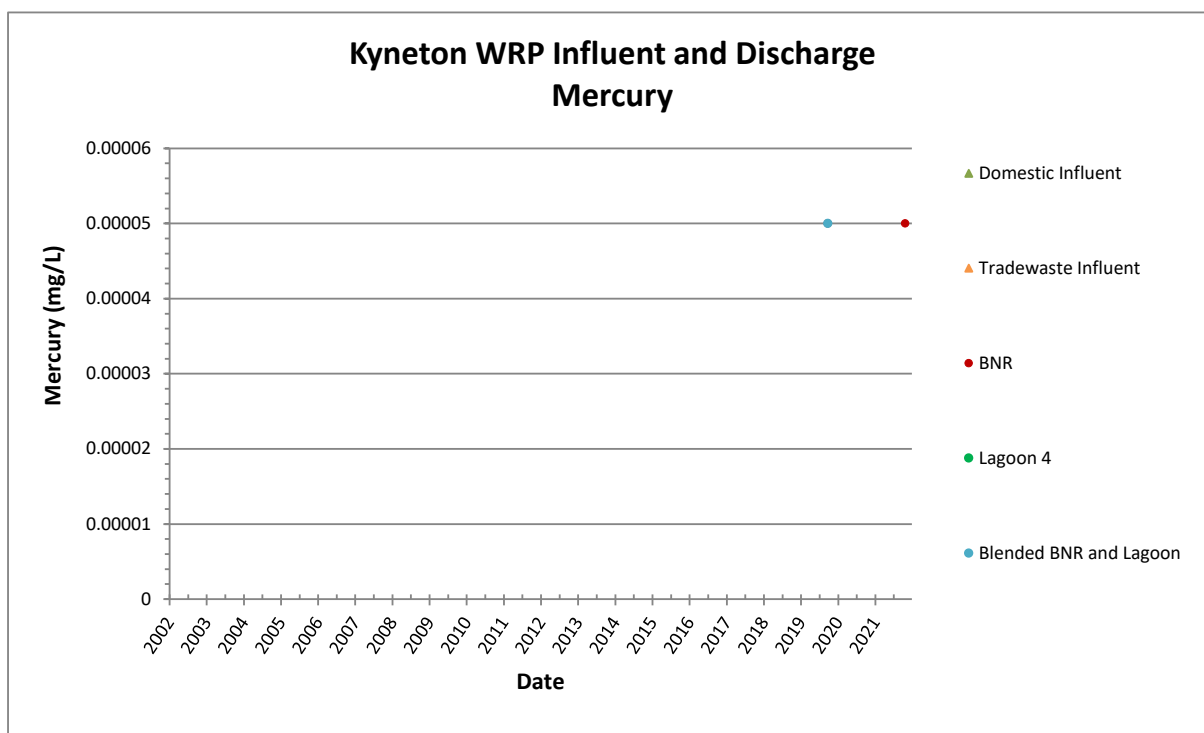


Figure 193 Mercury data – Kyneton WRP

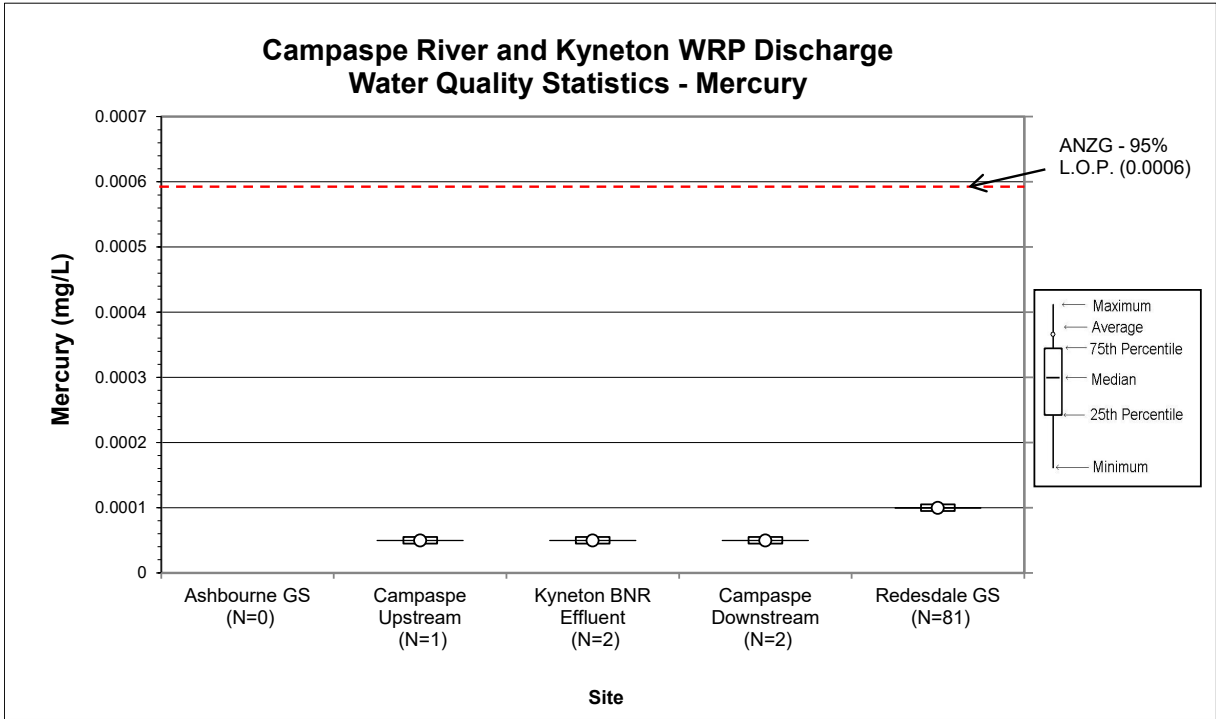


Figure 194 Mercury statistics – Campaspe River and Kyneton WRP



## 5.27 Mercury (Soluble)

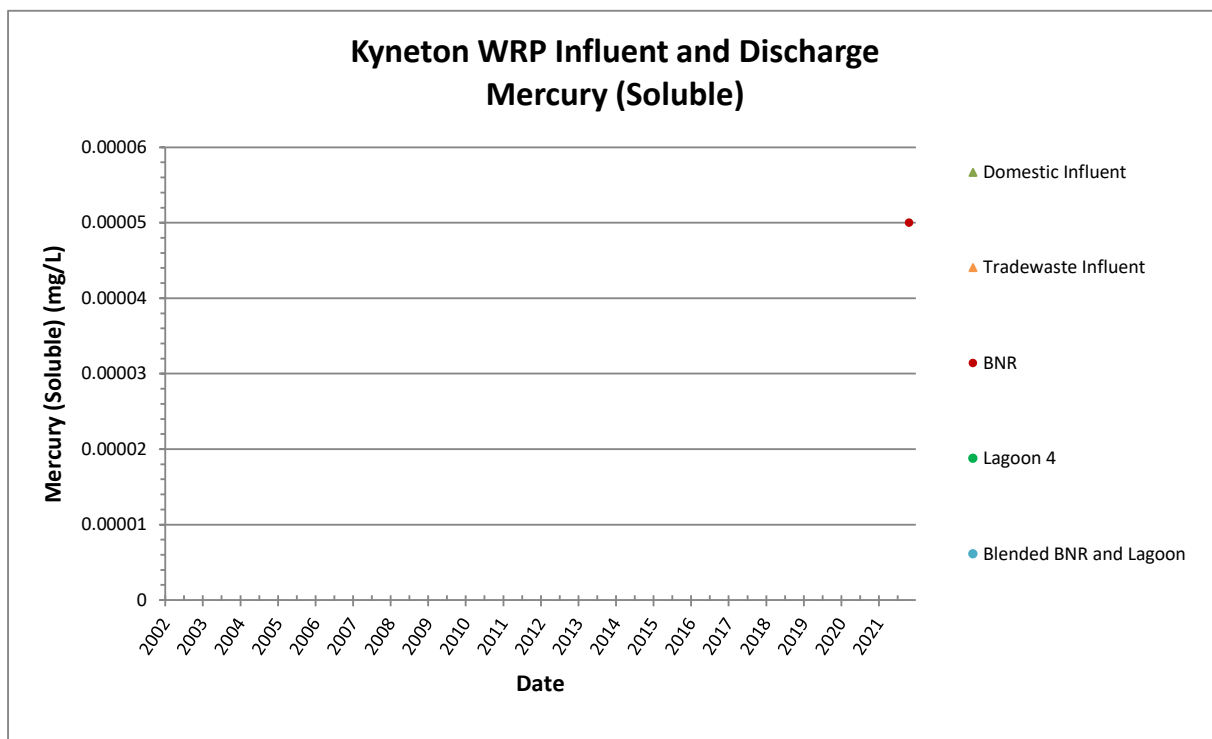


Figure 195 Mercury (soluble) data – Kyneton WRP

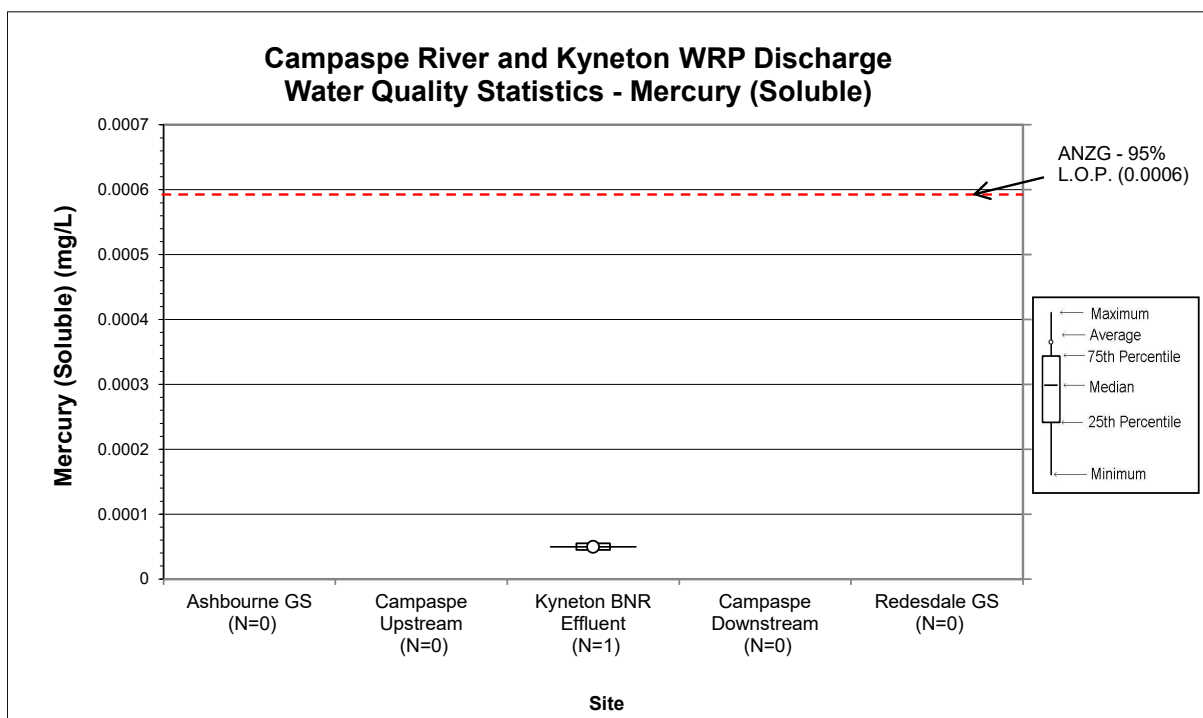


Figure 196 Mercury (soluble) statistics – Campaspe River and Kyneton WRP

## 5.28 Molybdenum

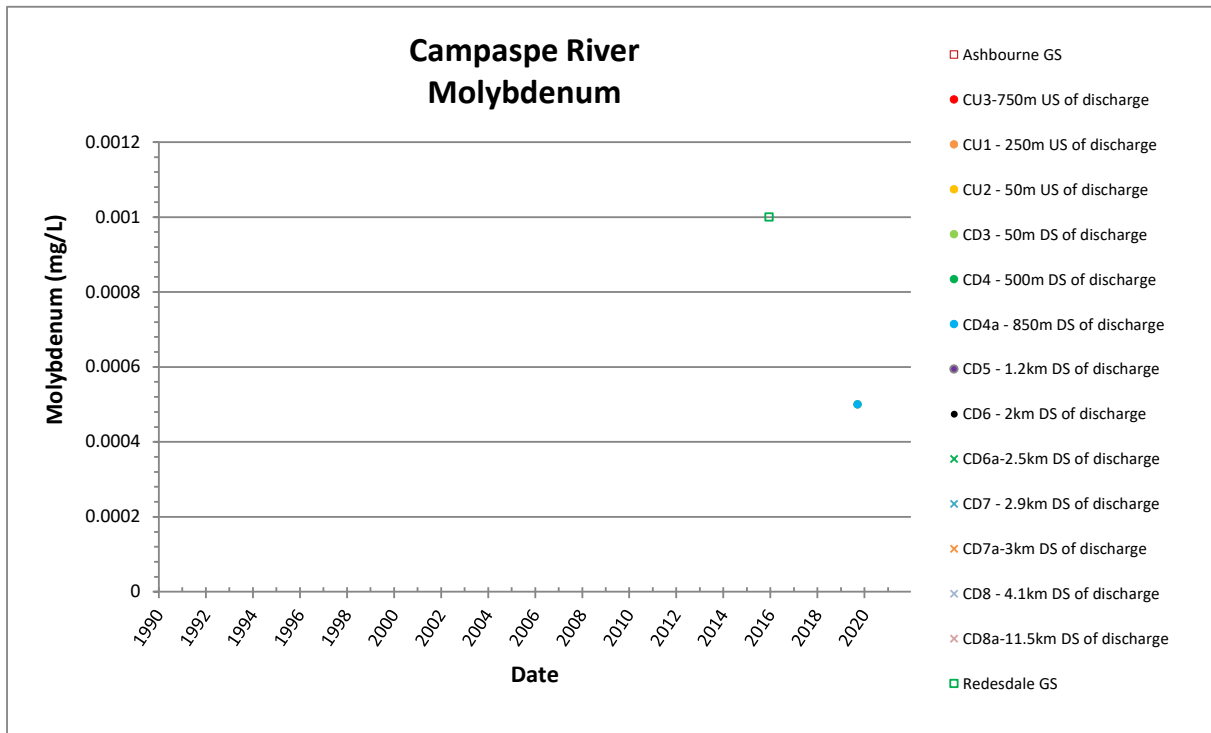


Figure 197 Molybdenum data – Campaspe River

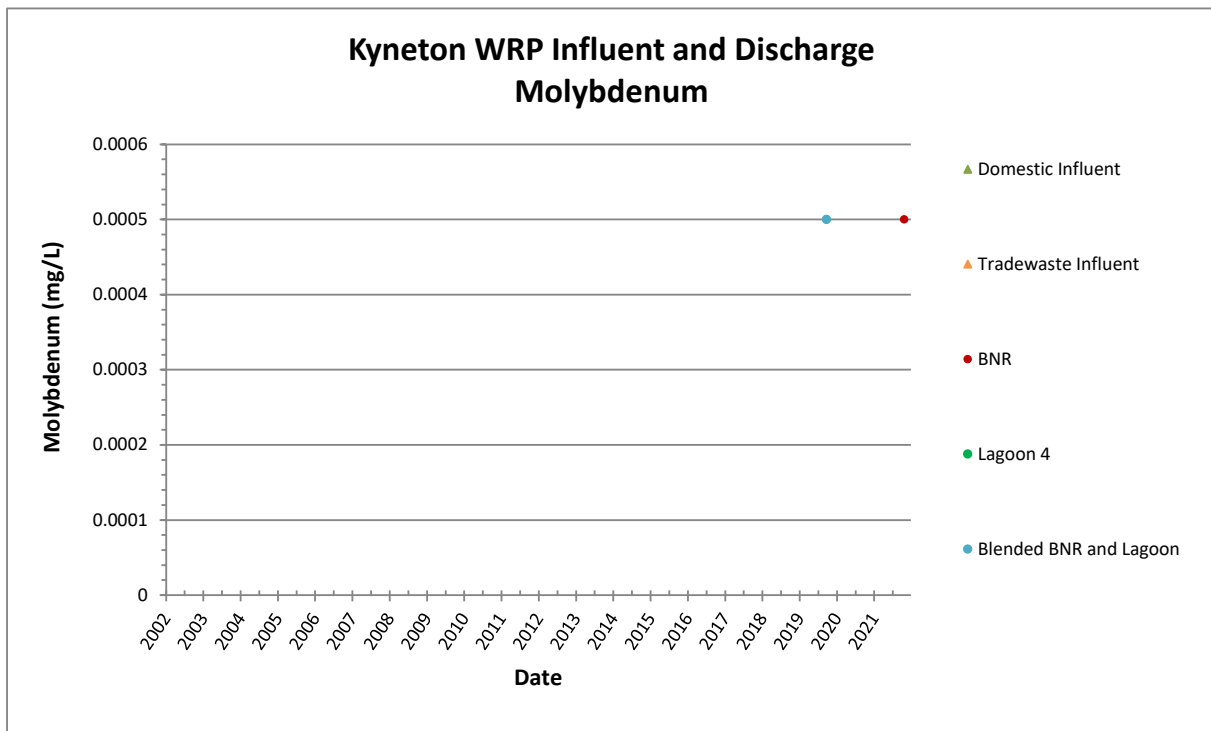


Figure 198 Molybdenum data – Kyneton WRP

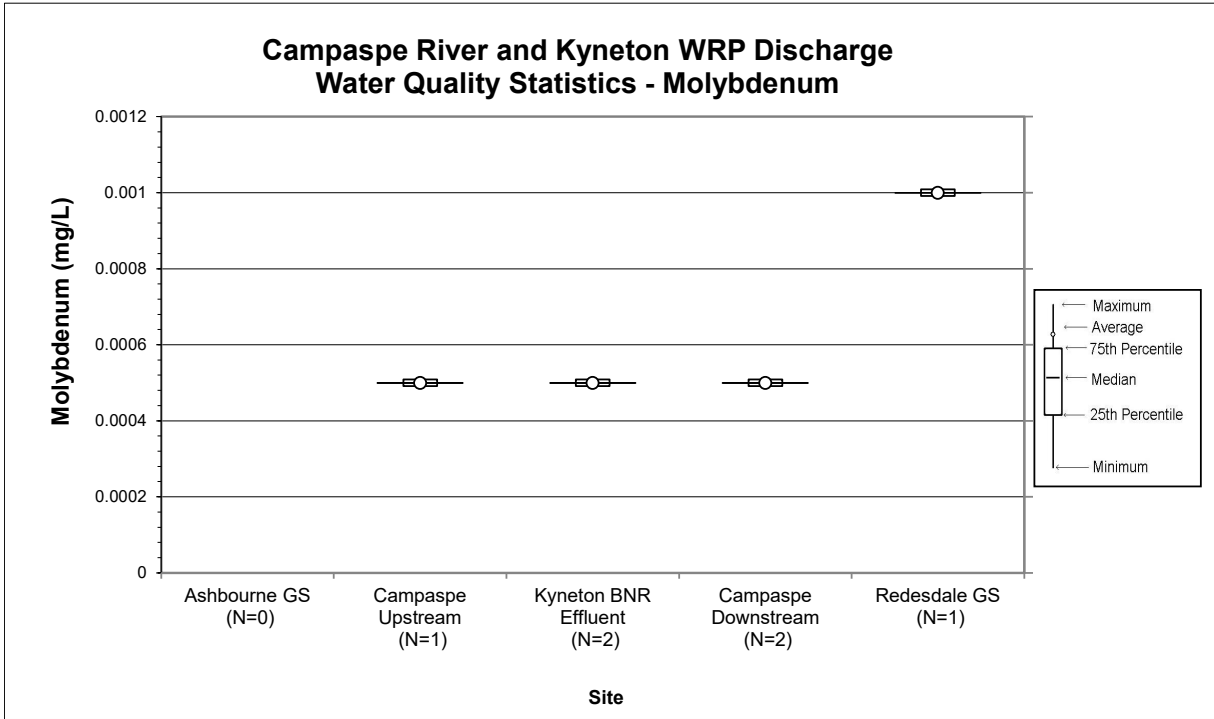


Figure 199 Molybdenum statistics – Campaspe River and Kyneton WRP

## 5.29 Molybdenum (Soluble)

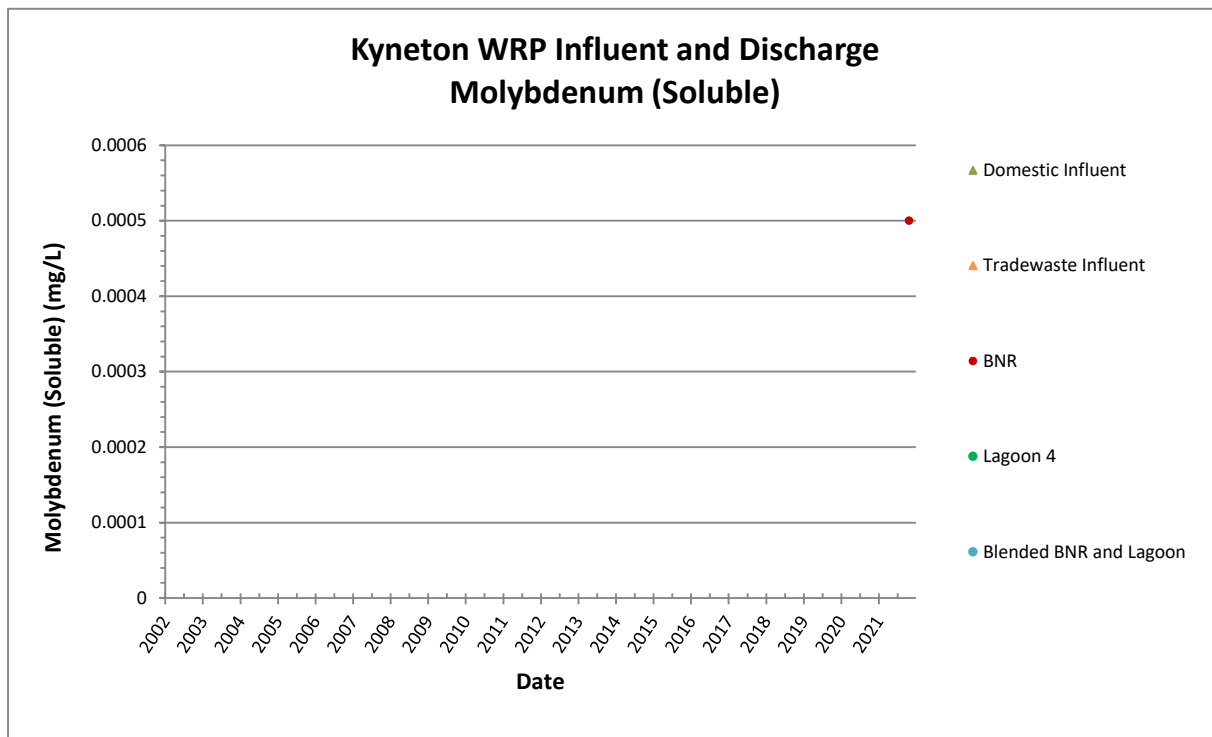


Figure 200 Molybdenum (soluble) data – Kyneton WRP

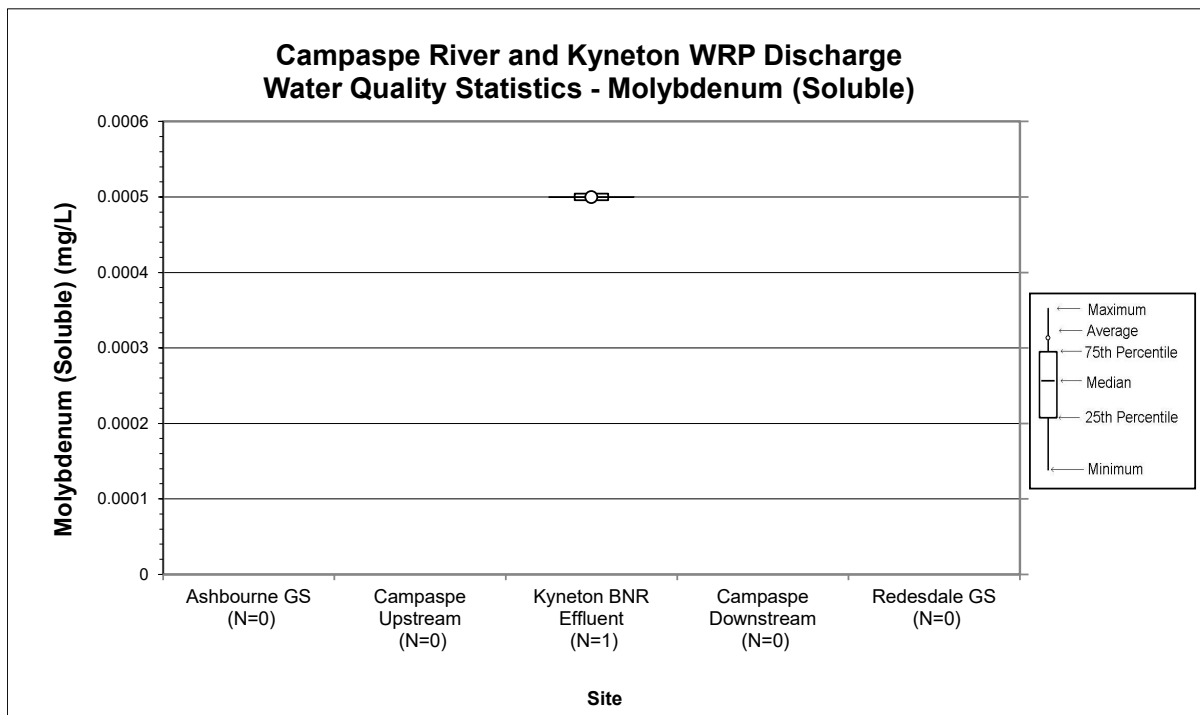


Figure 201 Molybdenum (soluble) statistics – Campaspe River and Kyneton WRP

## 5.30 Nickel

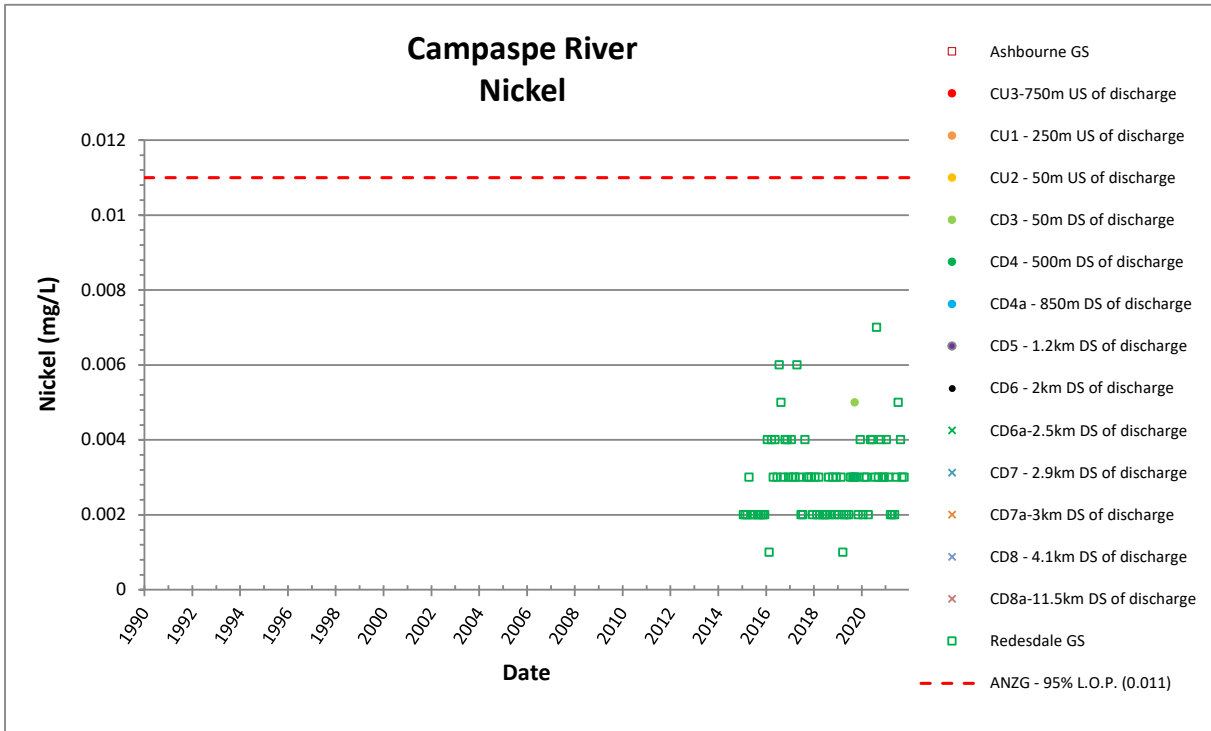


Figure 202 Nickel data – Campaspe River

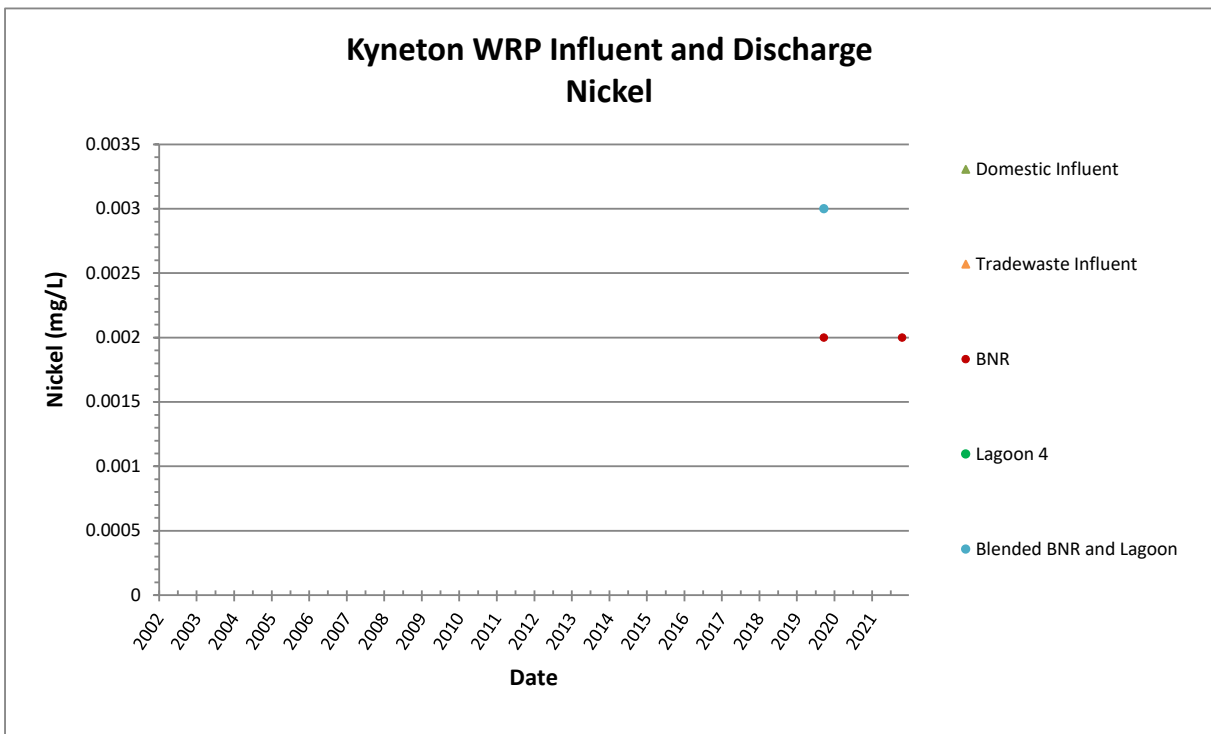


Figure 203 Nickel data – Kyneton WRP

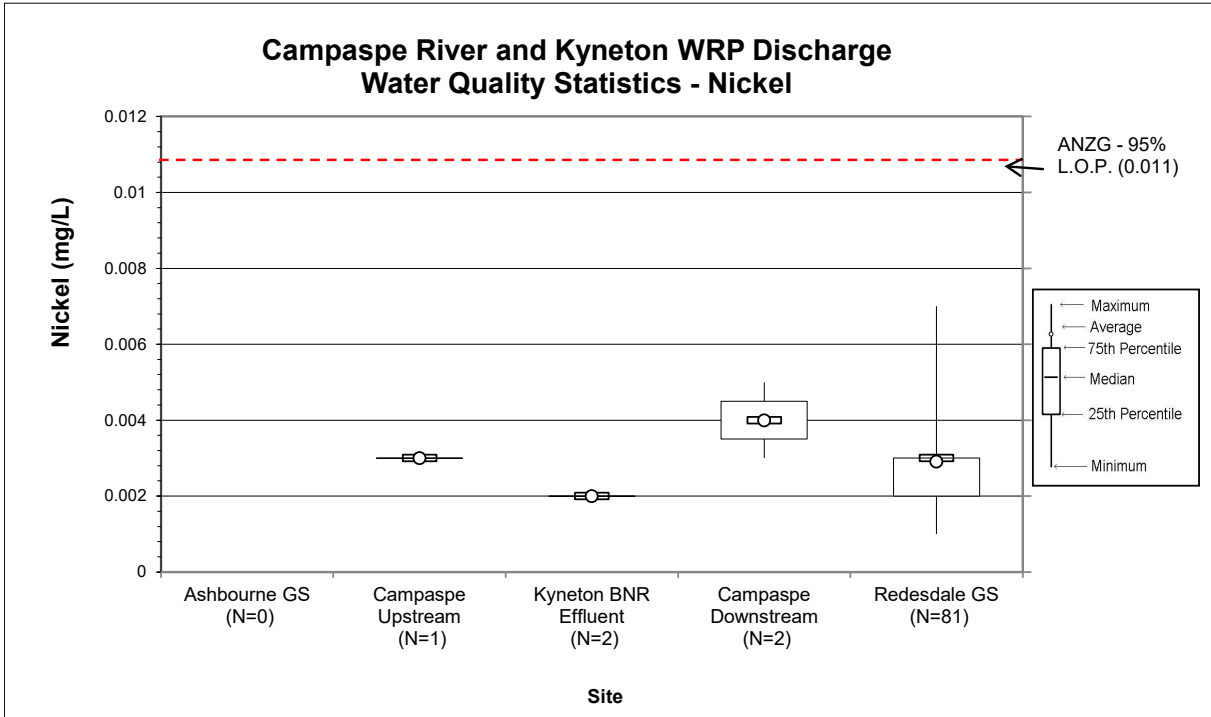


Figure 204 Nickel statistics – Campaspe River and Kyneton WRP

## 5.31 Nickel (Soluble)

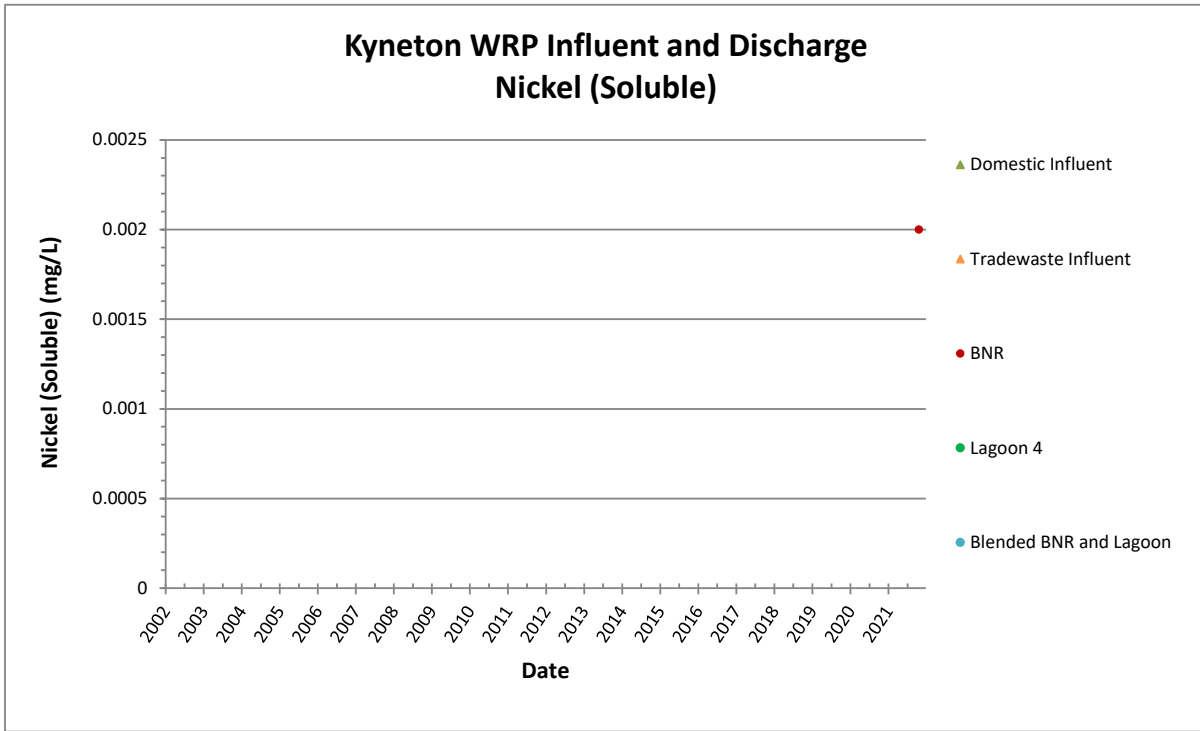


Figure 205 Nickel (soluble) data – Kyneton WRP

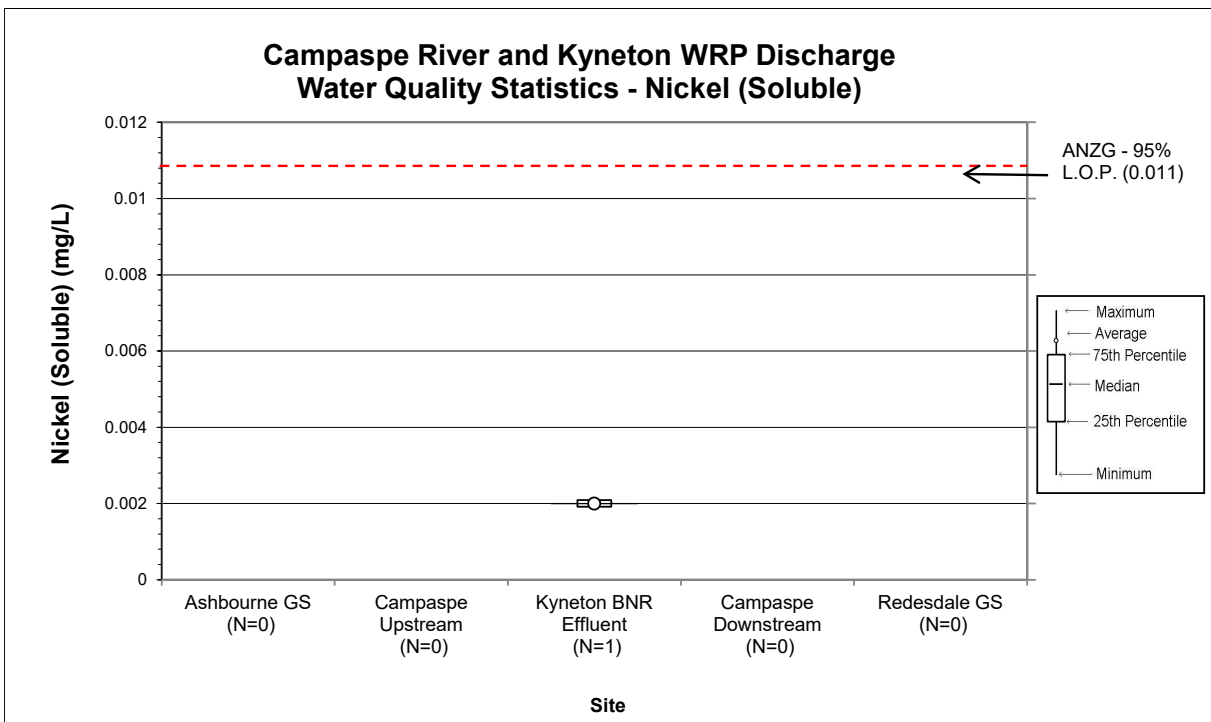


Figure 206 Nickel (soluble) statistics – Campaspe River and Kyneton WRP

## 5.32 Selenium

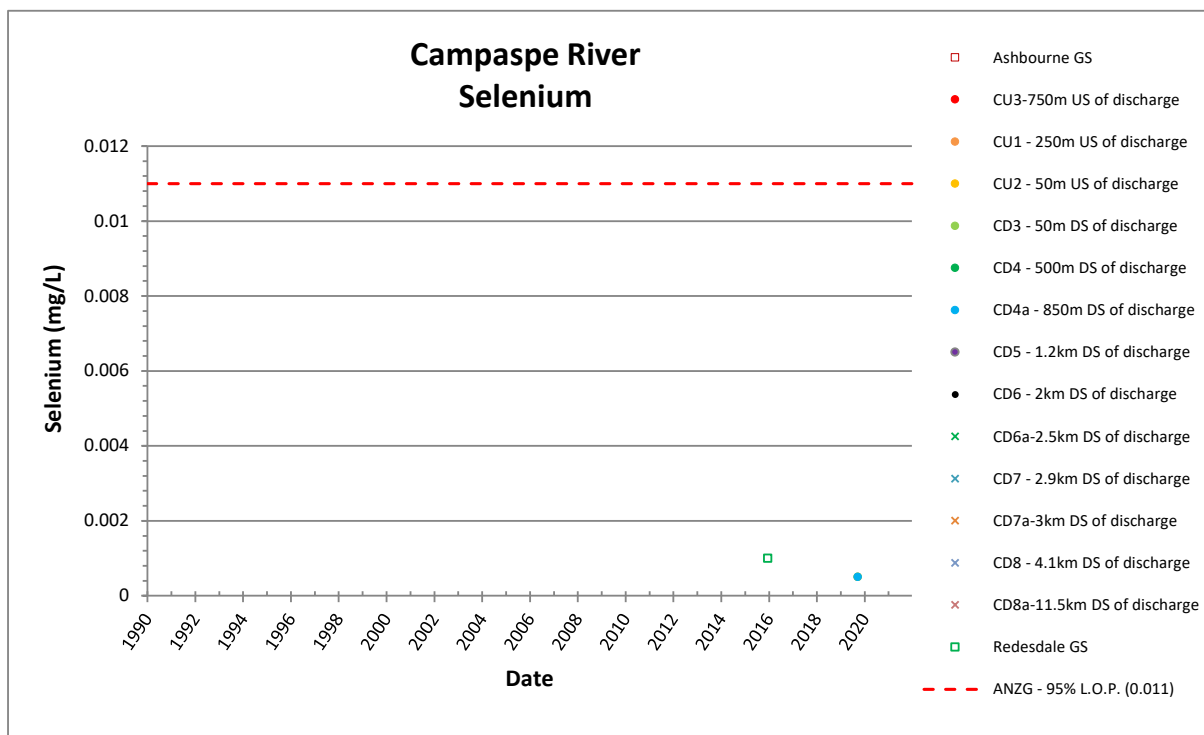


Figure 207 Selenium data – Campaspe River

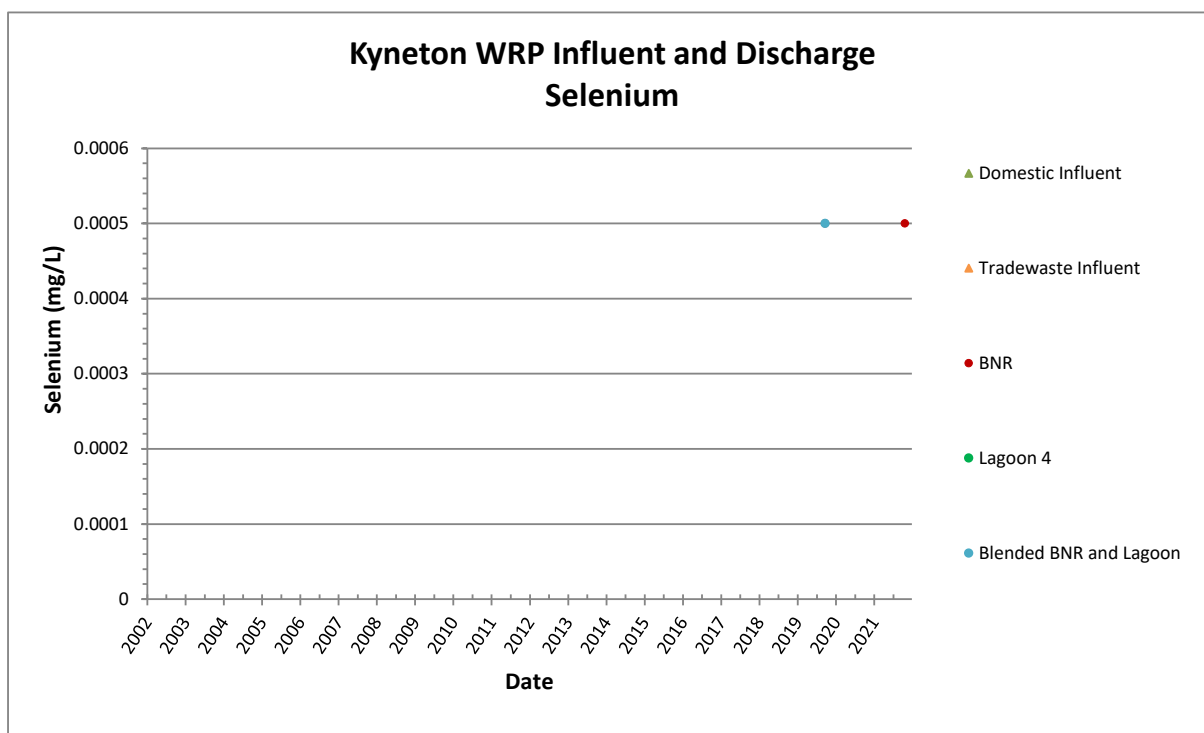


Figure 208 Selenium data – Kyneton WRP



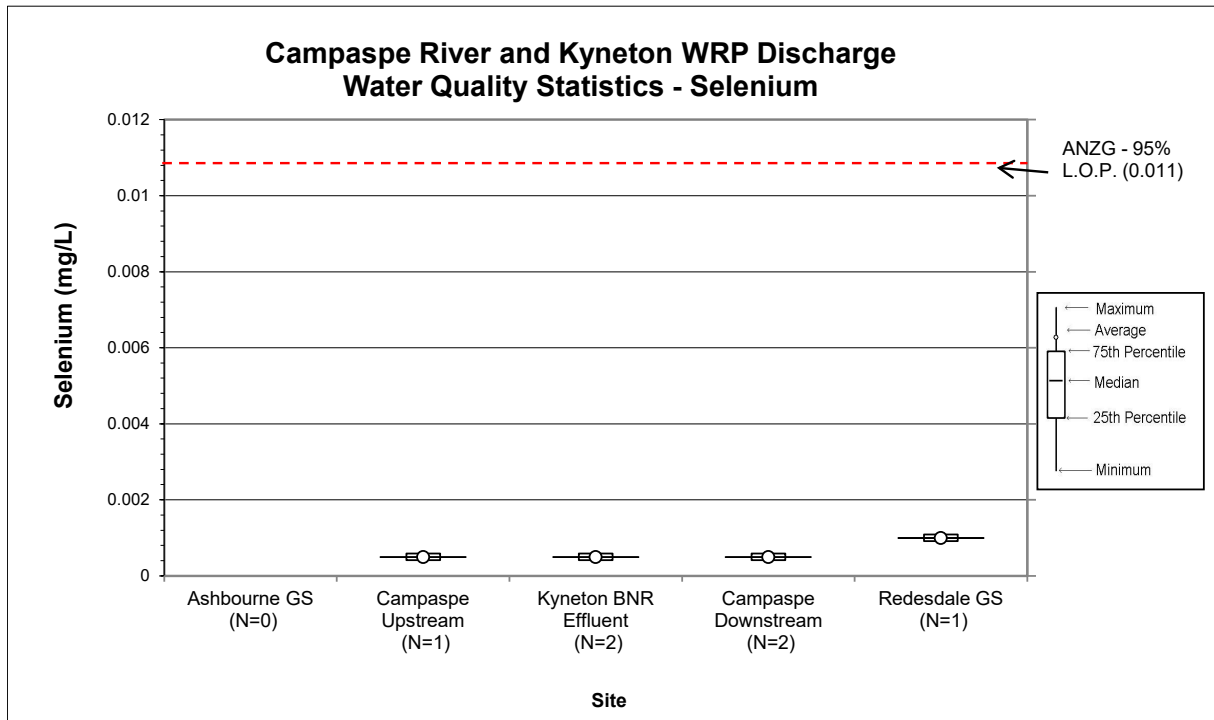


Figure 209 Selenium statistics – Campaspe River and Kyneton WRP

## 5.33 Selenium (Soluble)

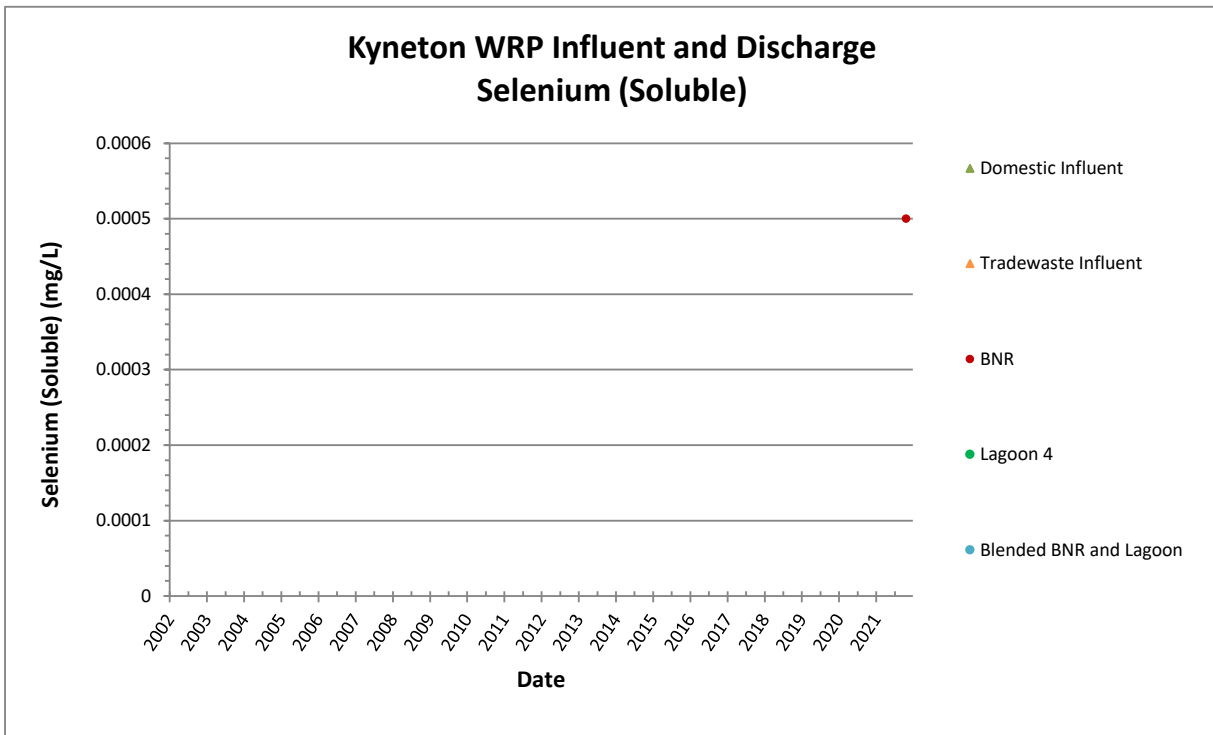


Figure 210 Selenium (soluble) data – Kyneton WRP

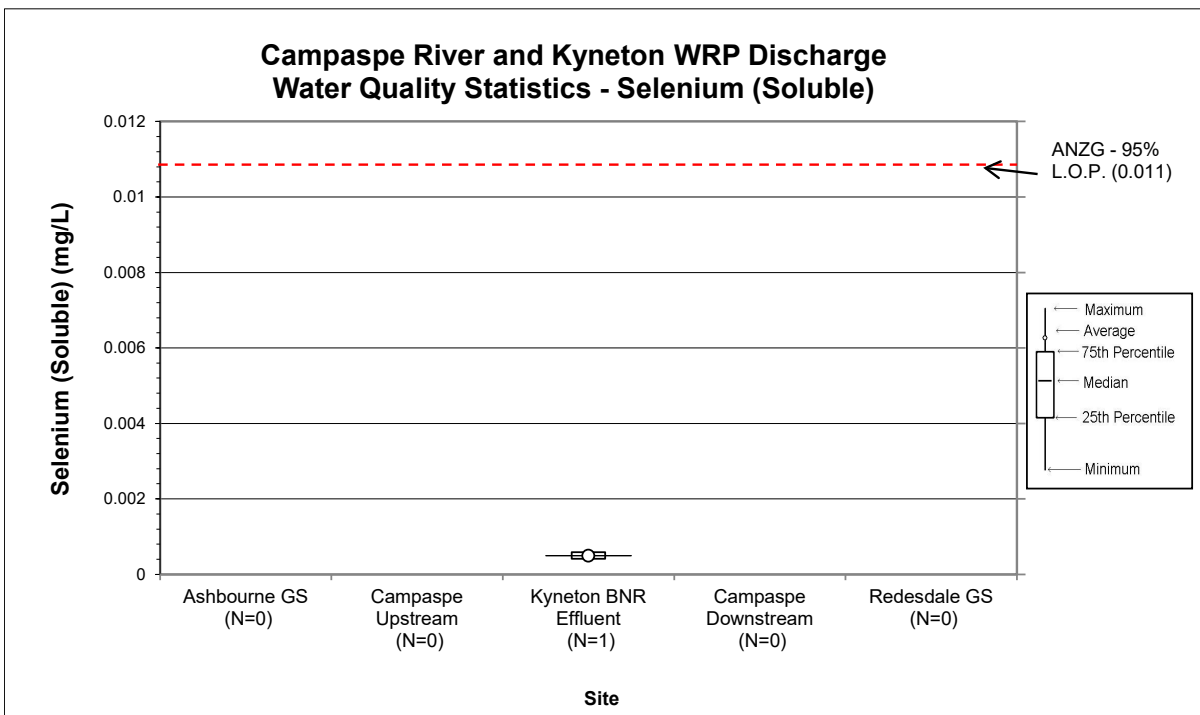


Figure 211 Selenium (soluble) statistics – Campaspe River and Kyneton WRP

## 5.34 Silver

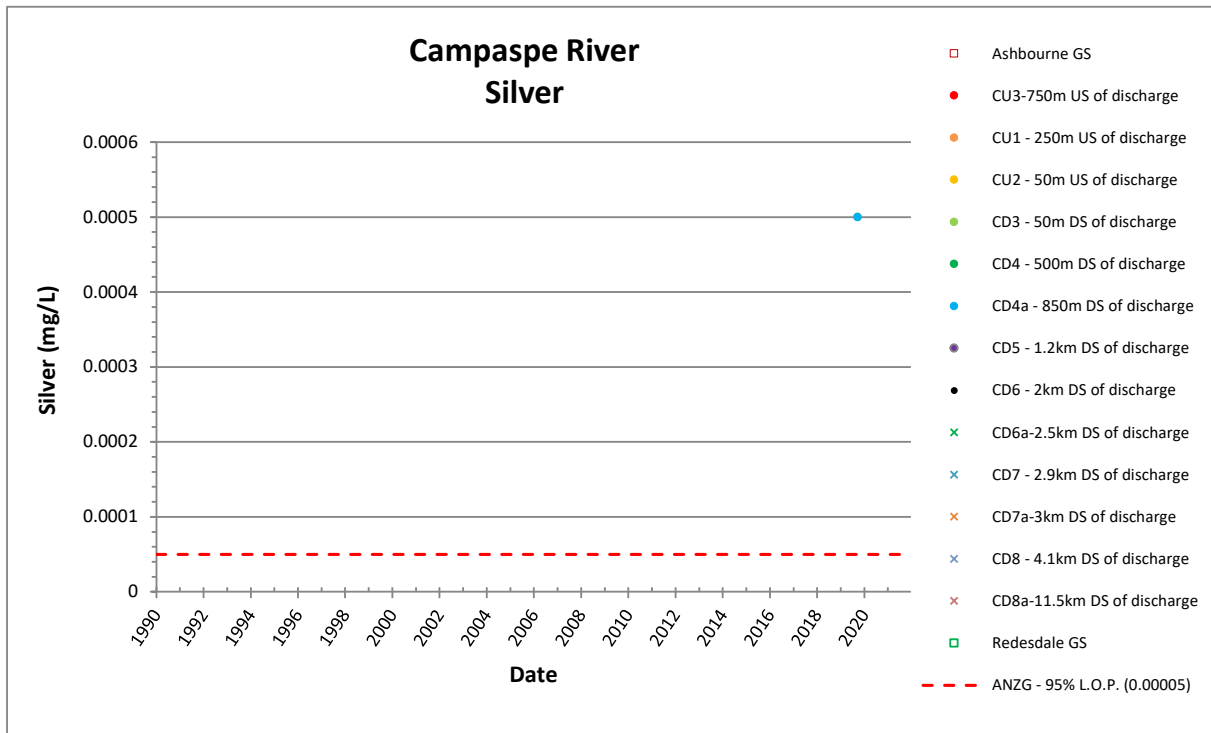


Figure 212 Silver data – Campaspe River

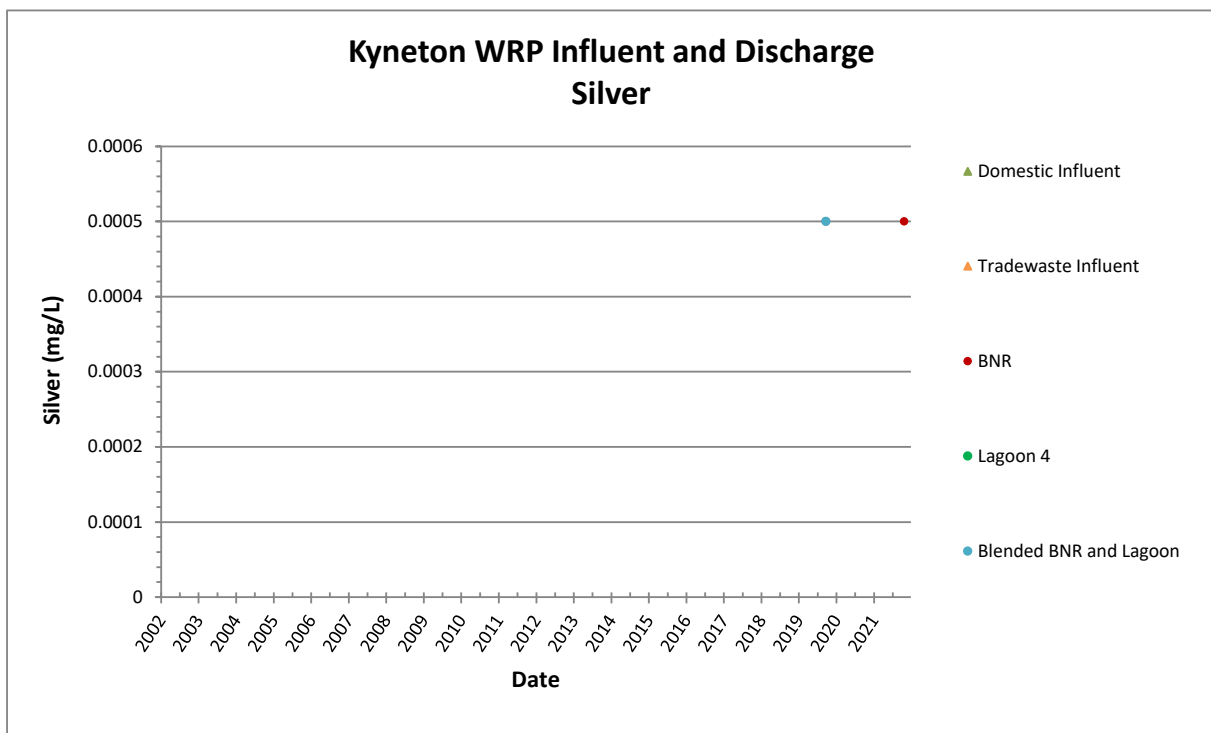


Figure 213 Silver data – Kyneton WRP

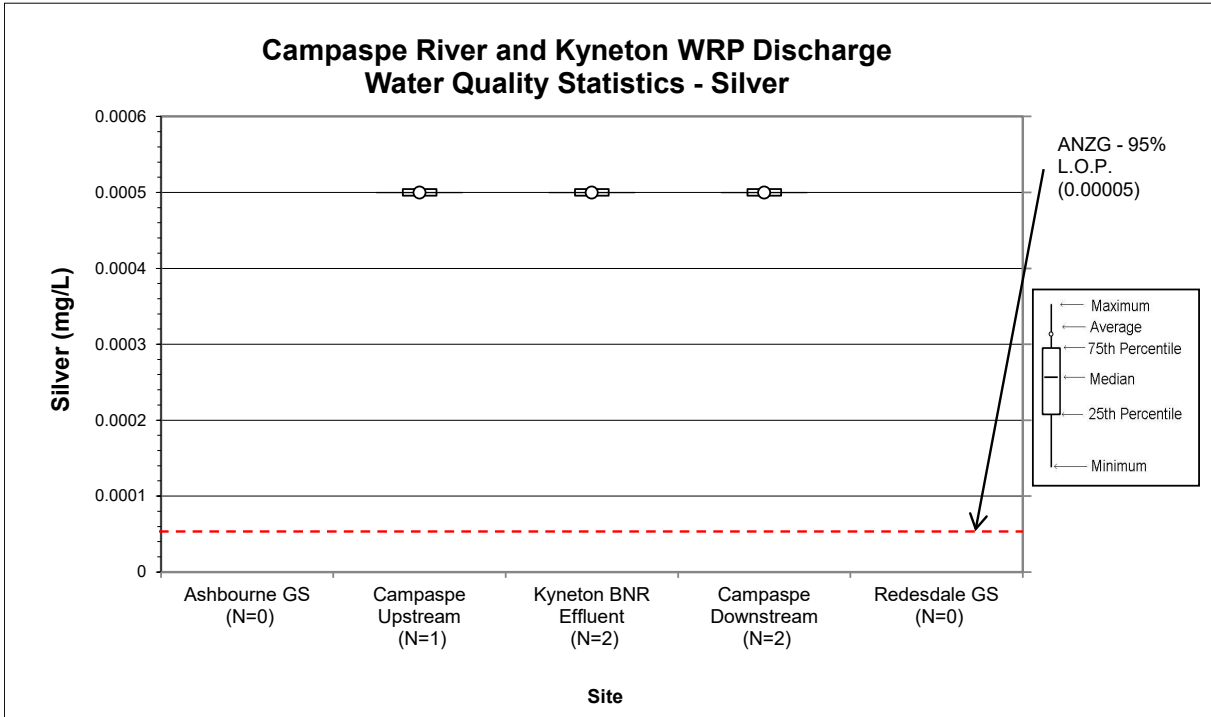


Figure 214 Silver statistics – Campaspe River and Kyneton WRP

## 5.35 Silver (Soluble)

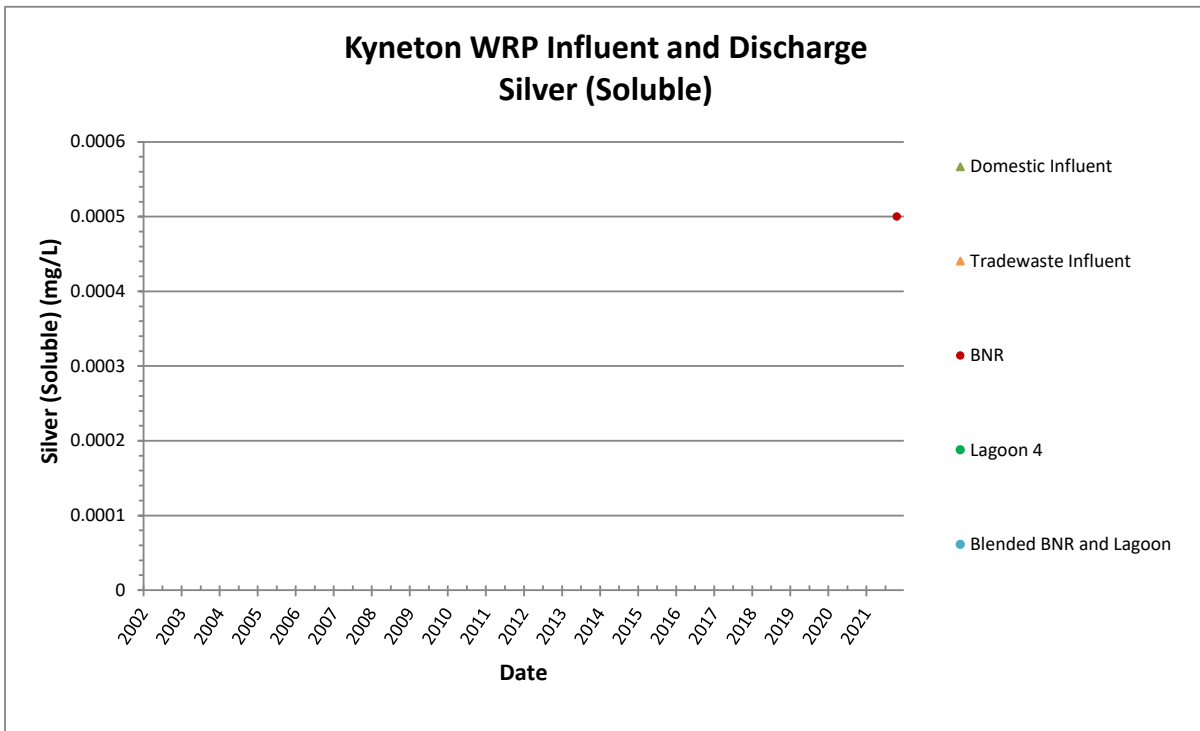


Figure 215 Silver (soluble) data – Kyneton WRP

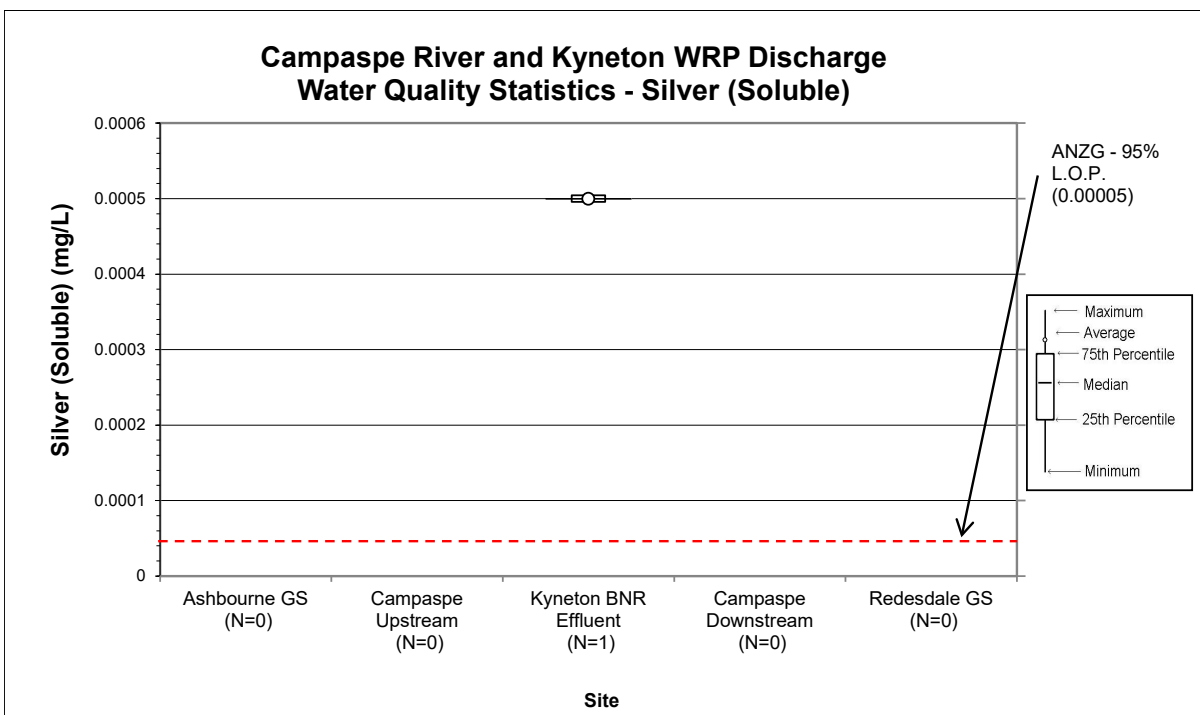


Figure 216 Silver (soluble) statistics – Campaspe River and Kyneton WRP

## 5.36 Strontium

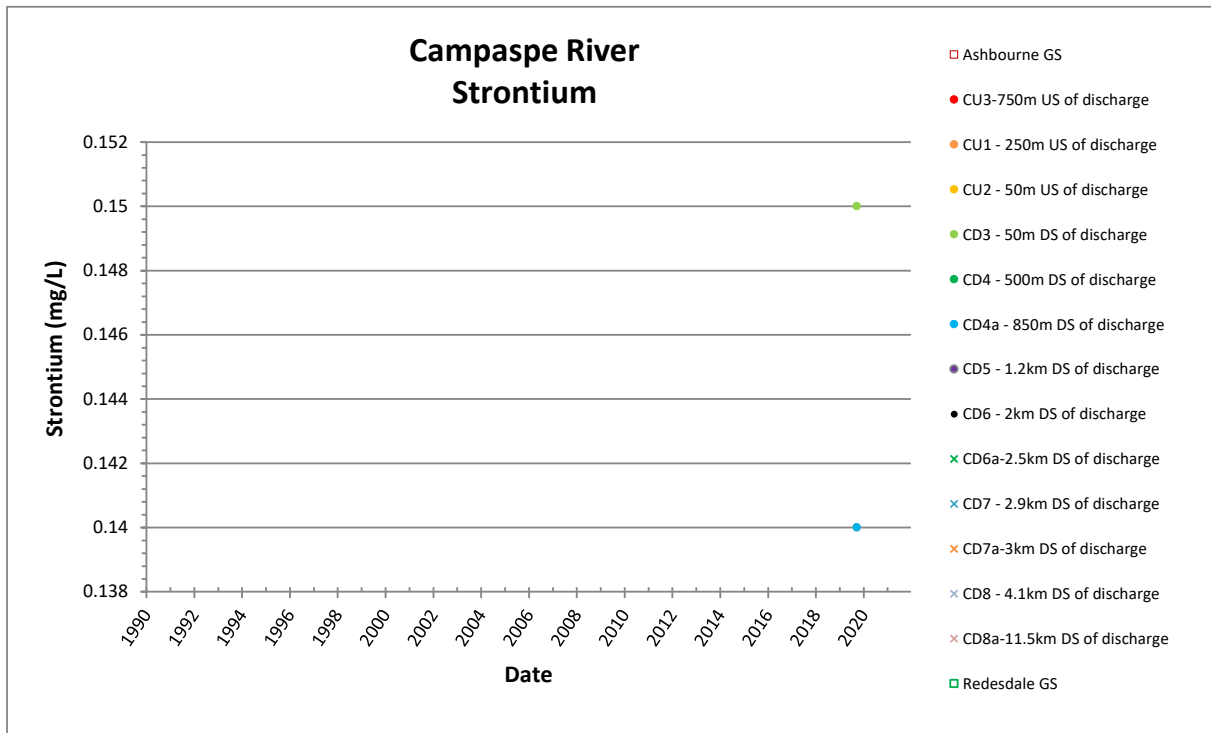


Figure 217 Strontium data – Campaspe River

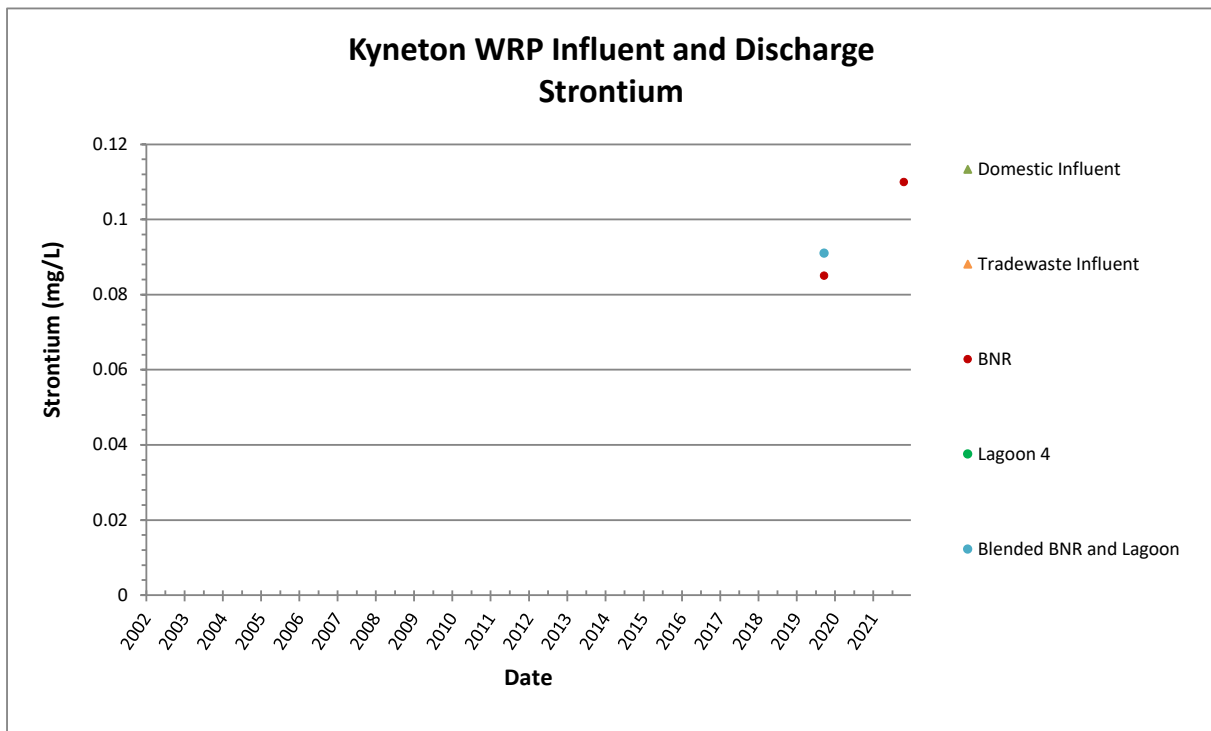


Figure 218 Strontium data – Kyneton WRP

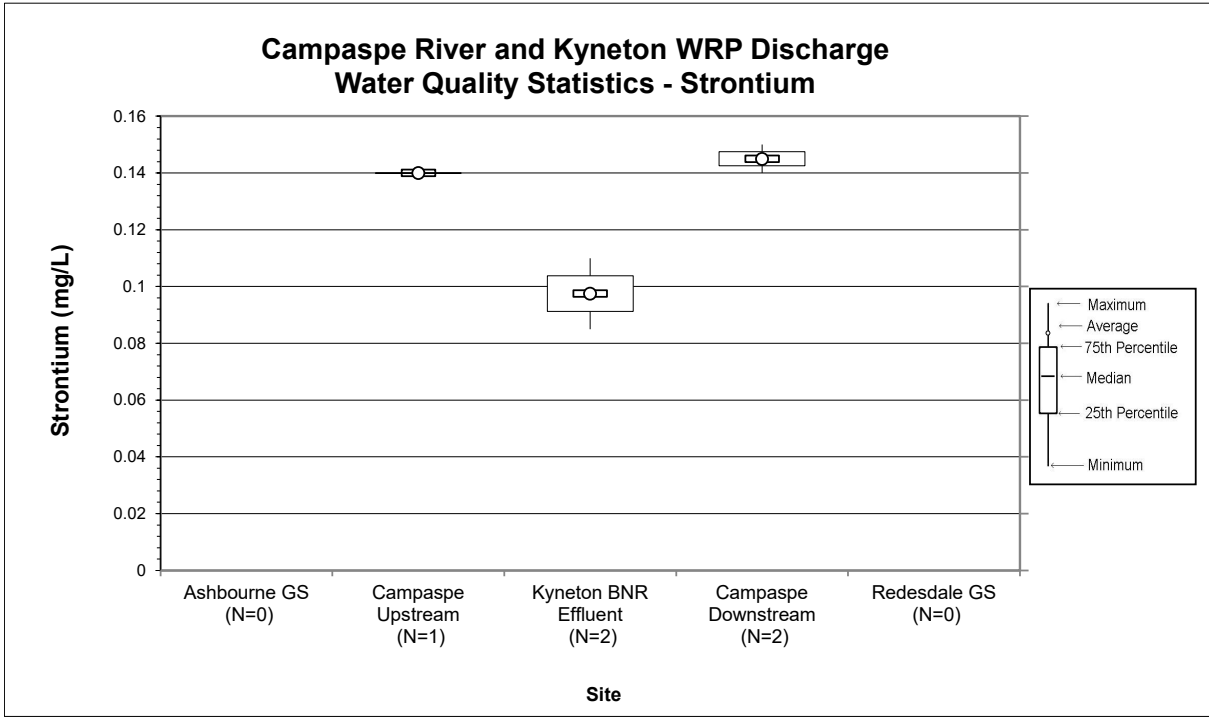


Figure 219 Strontium statistics – Campaspe River and Kyneton WRP

## 5.37 Strontium (Soluble)

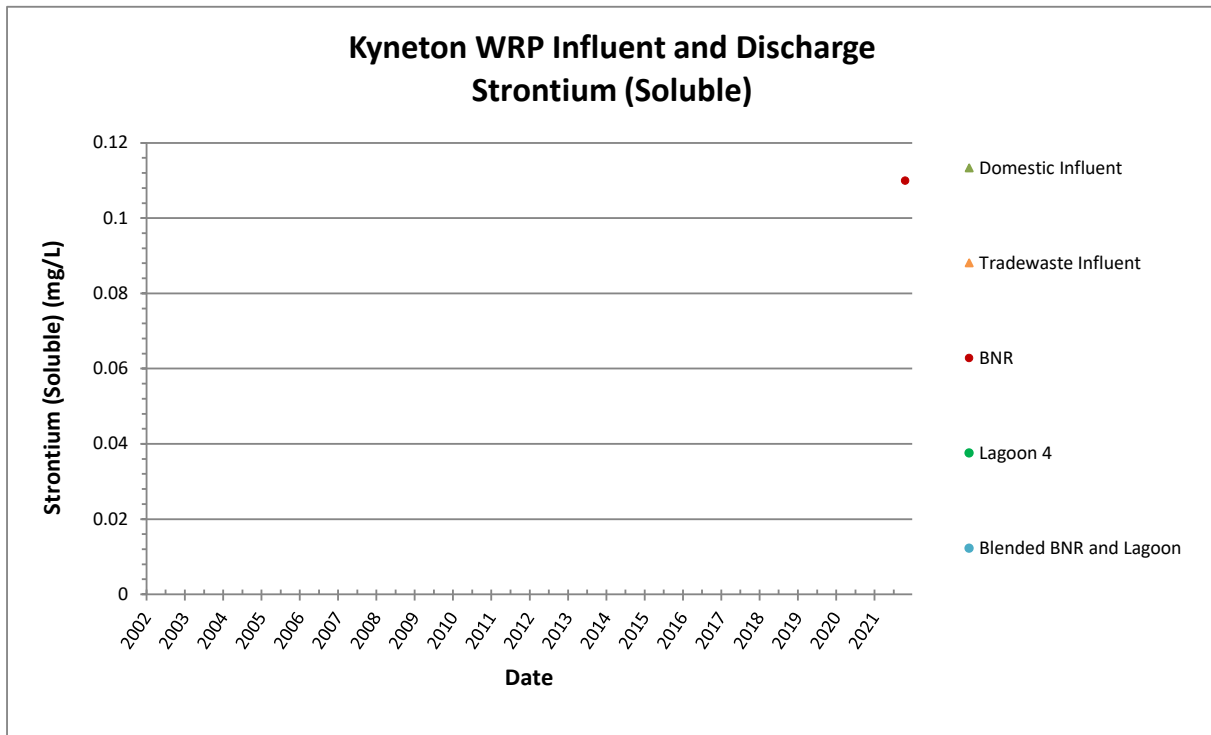


Figure 220 Strontium (soluble) data – Kyneton WRP

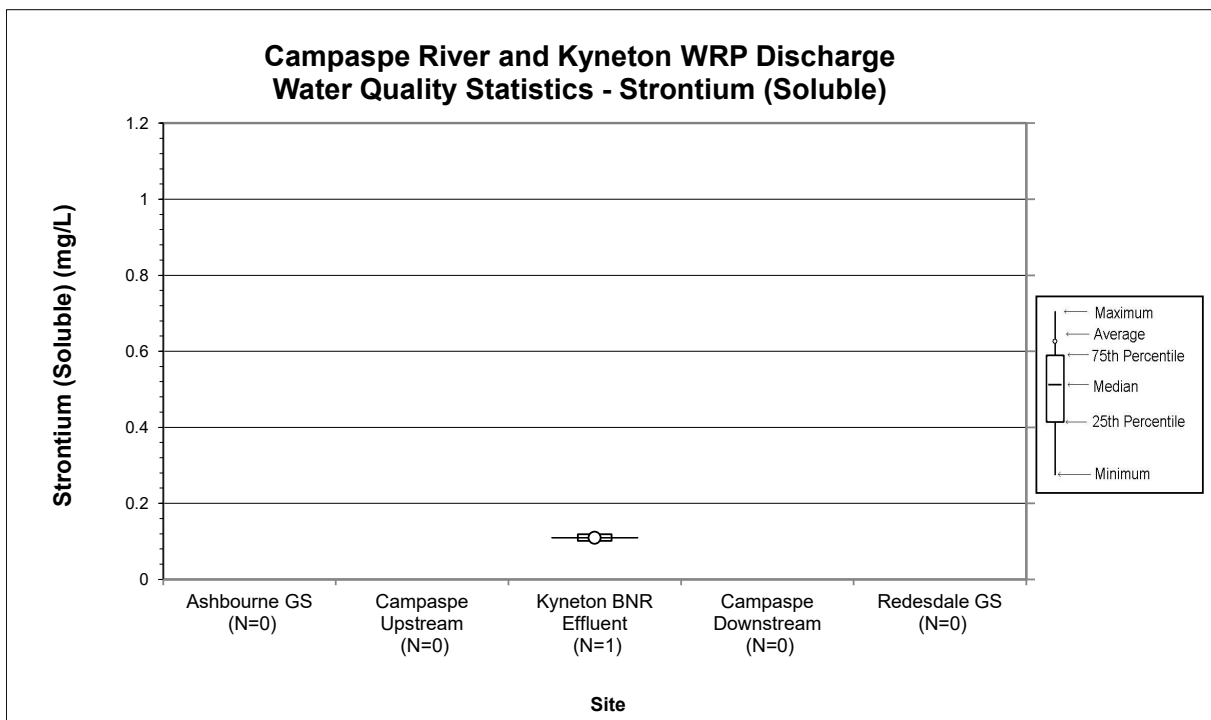


Figure 221 Strontium (soluble) statistics – Campaspe River and Kyneton WRP



## 5.38 Thallium

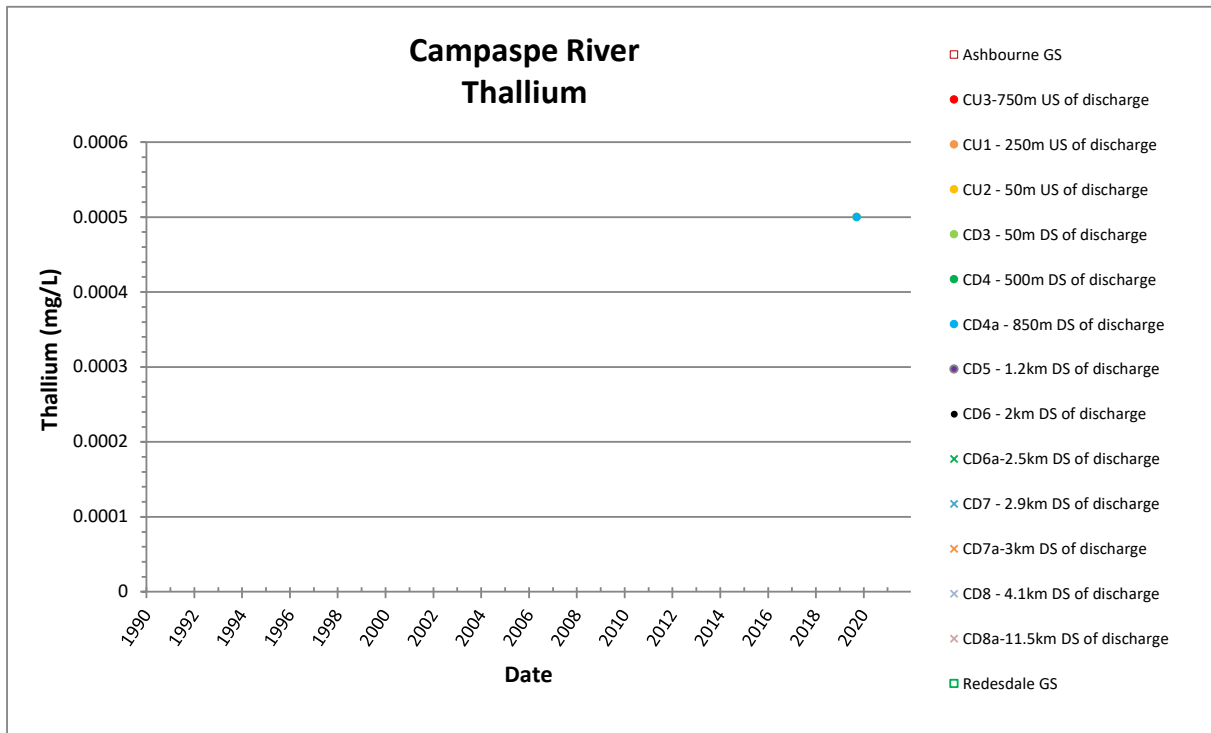


Figure 222 Thallium data – Campaspe River

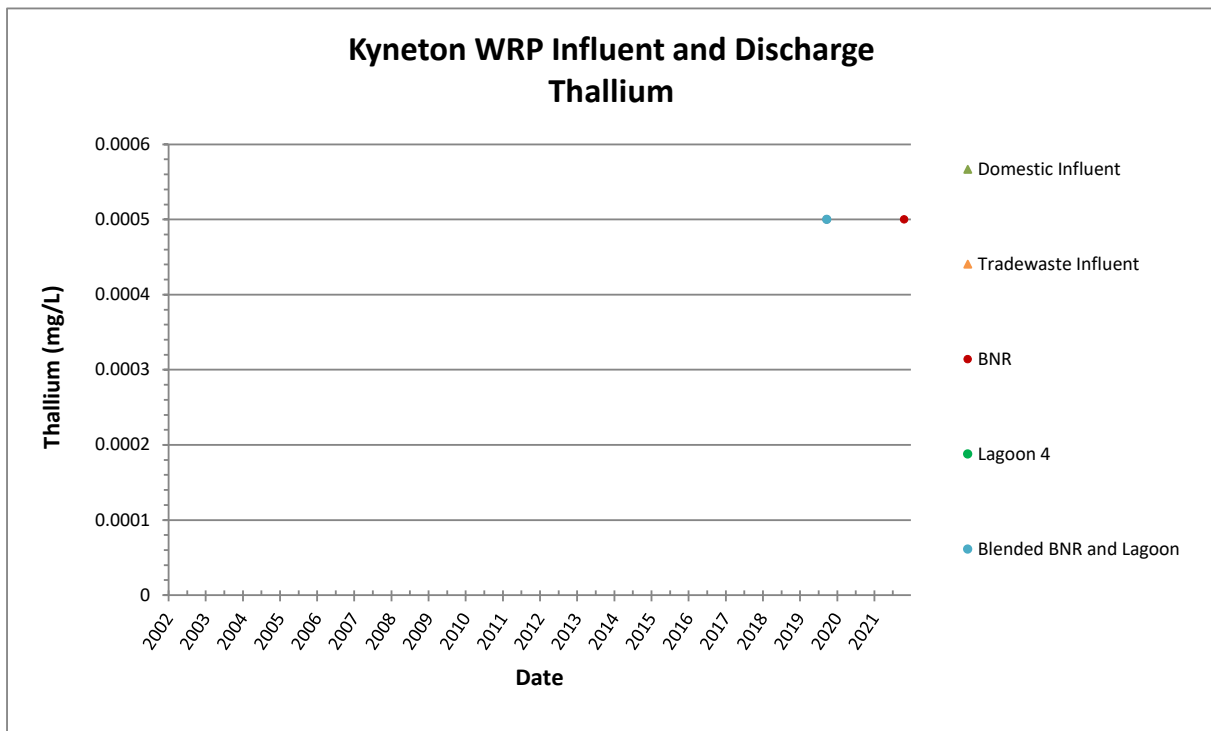


Figure 223 Thallium data – Kyneton WRP

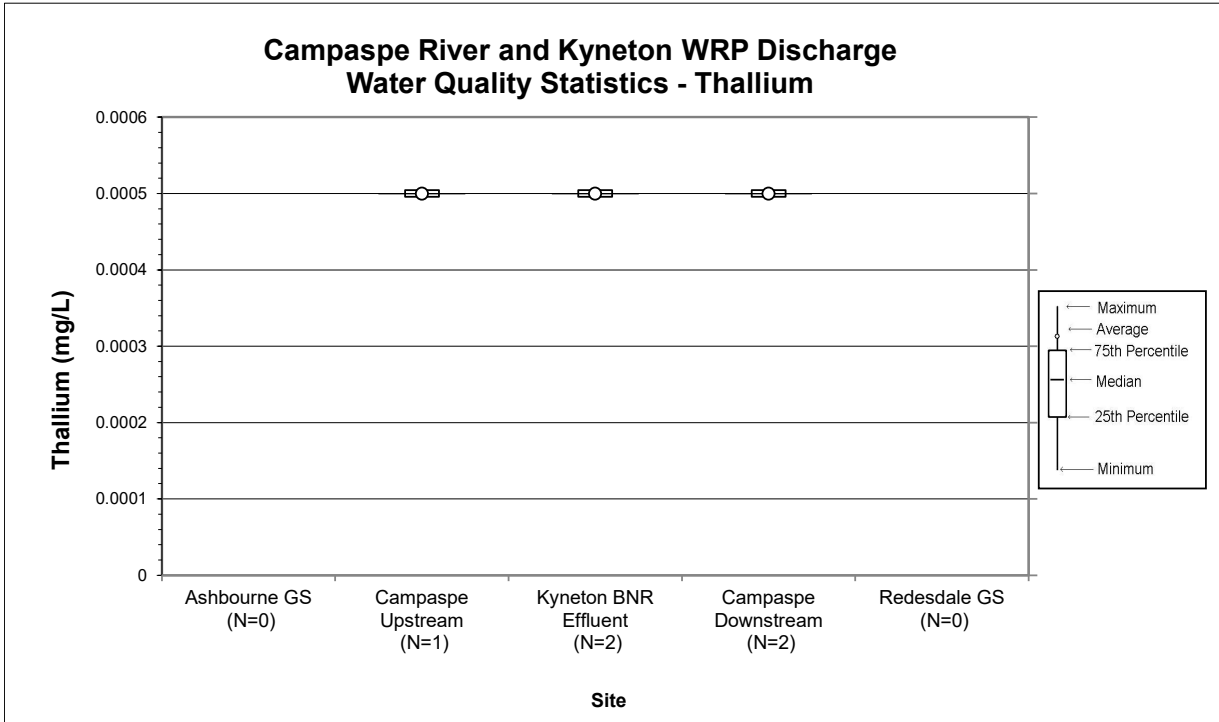


Figure 224 Thallium statistics – Campaspe River and Kyneton WRP

## 5.39 Thallium (Soluble)

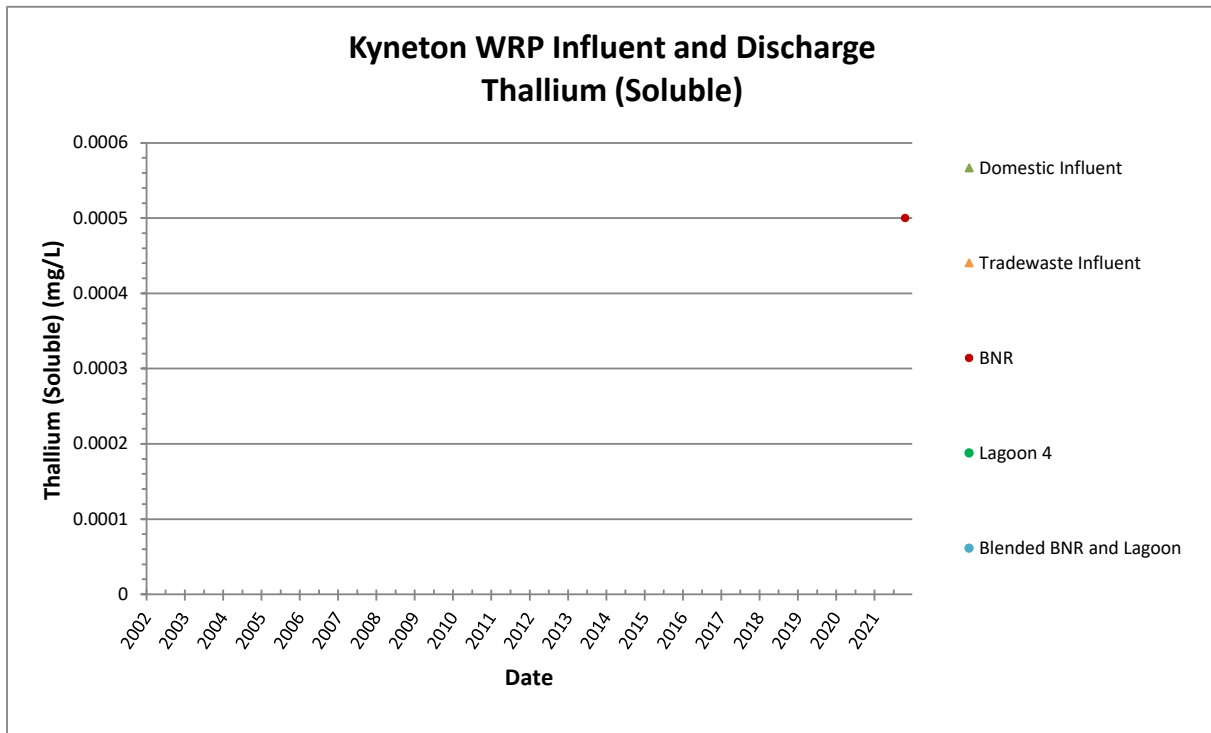


Figure 225 Thallium (soluble) data – Kyneton WRP

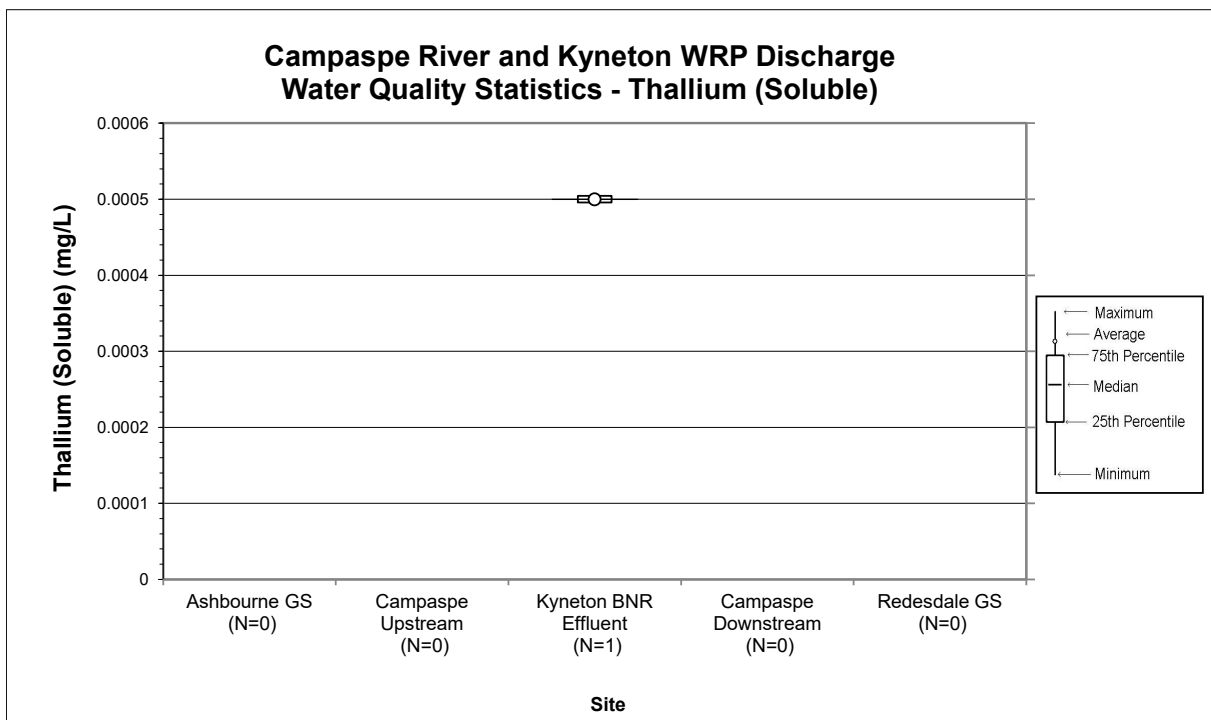


Figure 226 Thallium (soluble) statistics – Campaspe River and Kyneton WRP

## 5.40 Tin

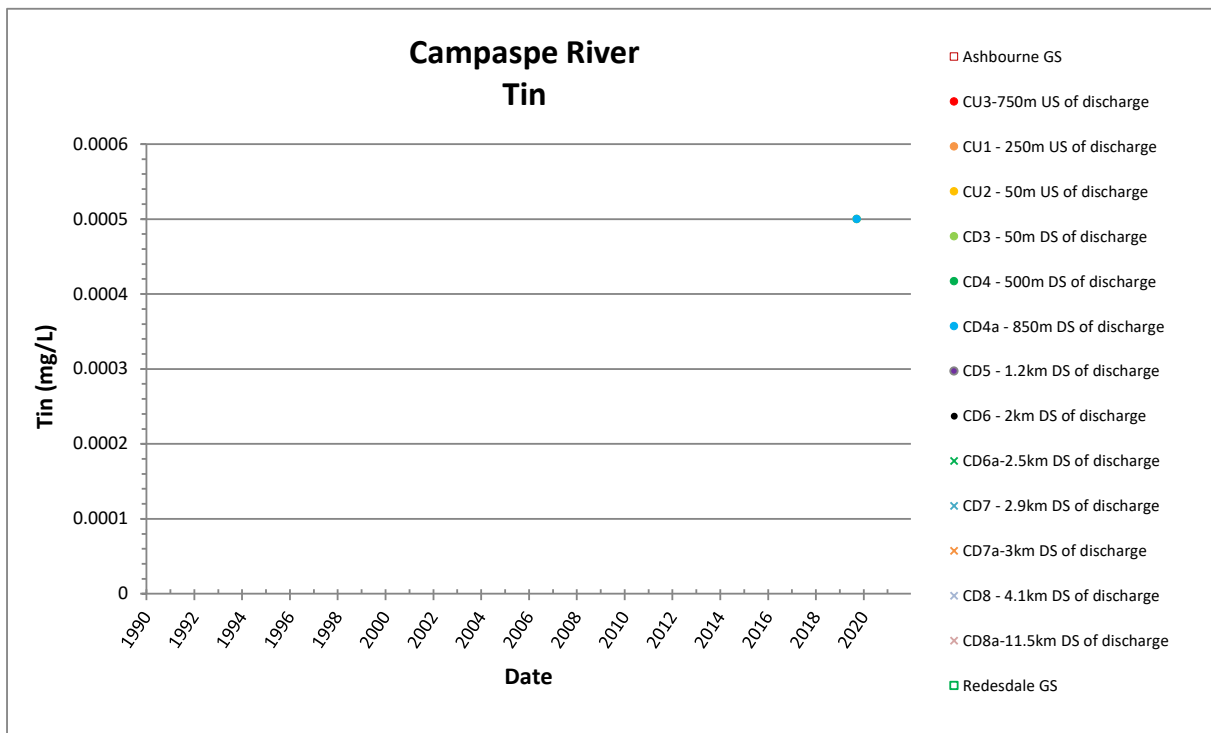


Figure 227 Tin data – Campaspe River

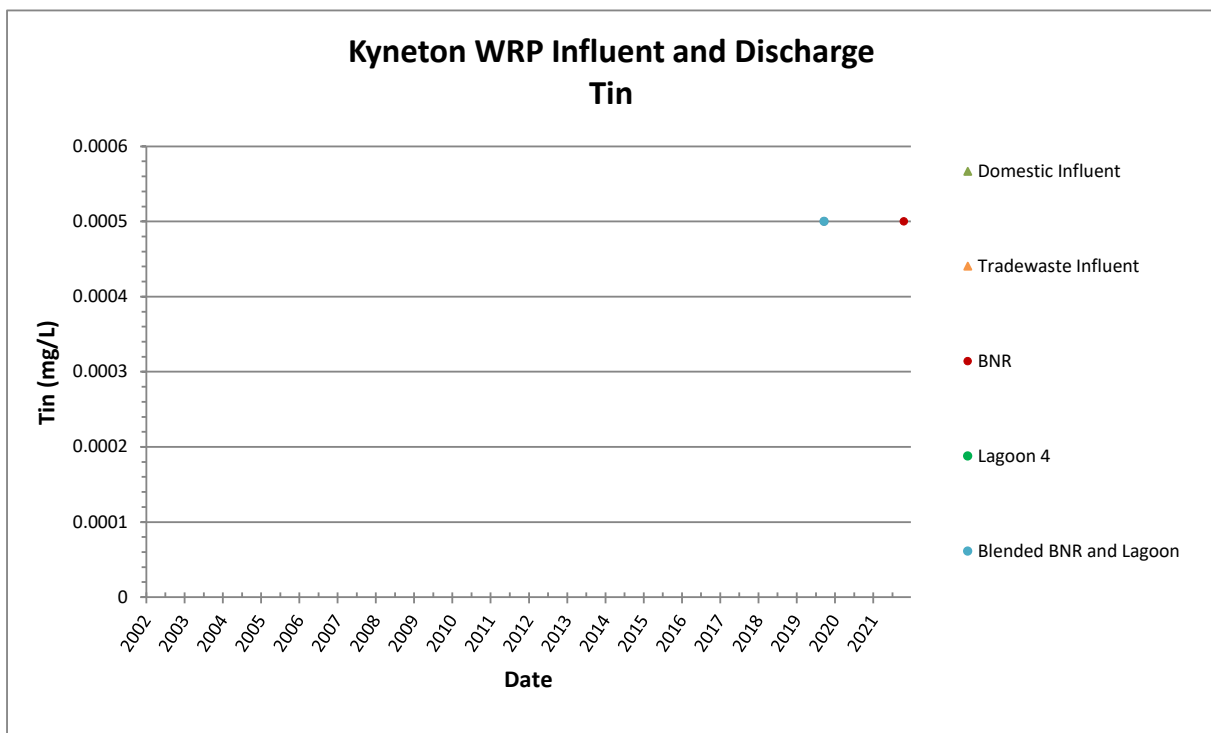


Figure 228 Tin data – Kyneton WRP

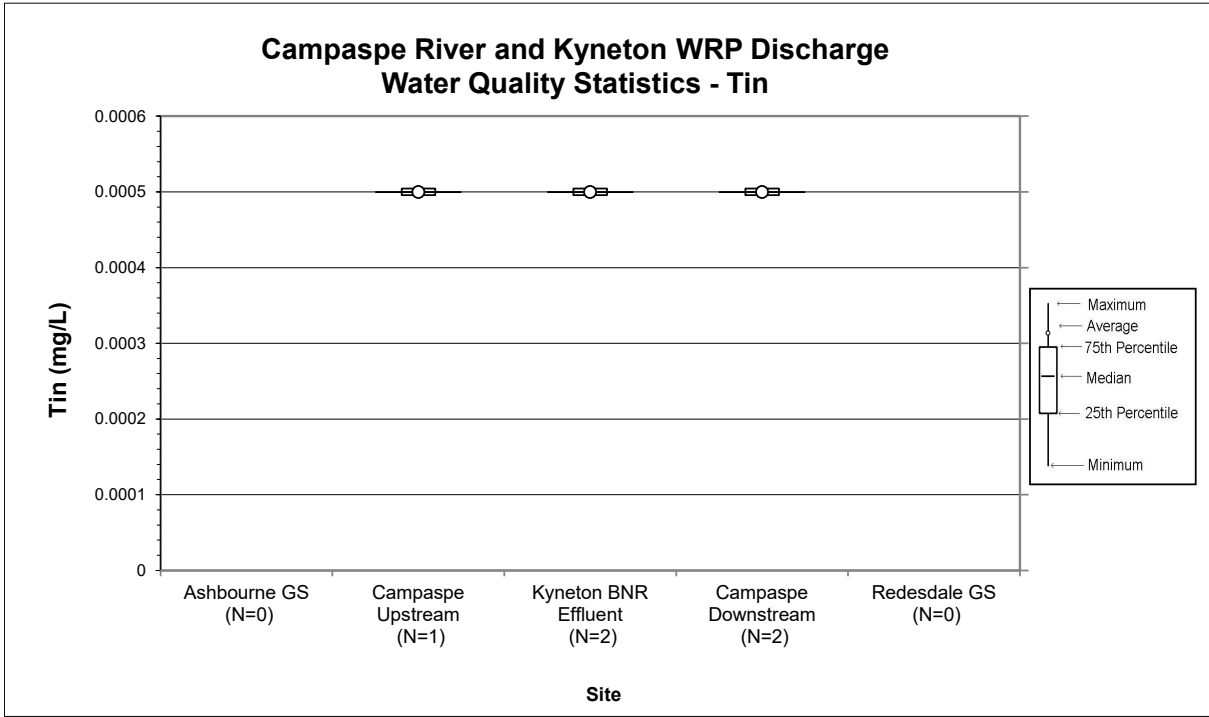


Figure 229 Tin statistics – Campaspe River and Kyneton WRP

## 5.41 Tin (Soluble)

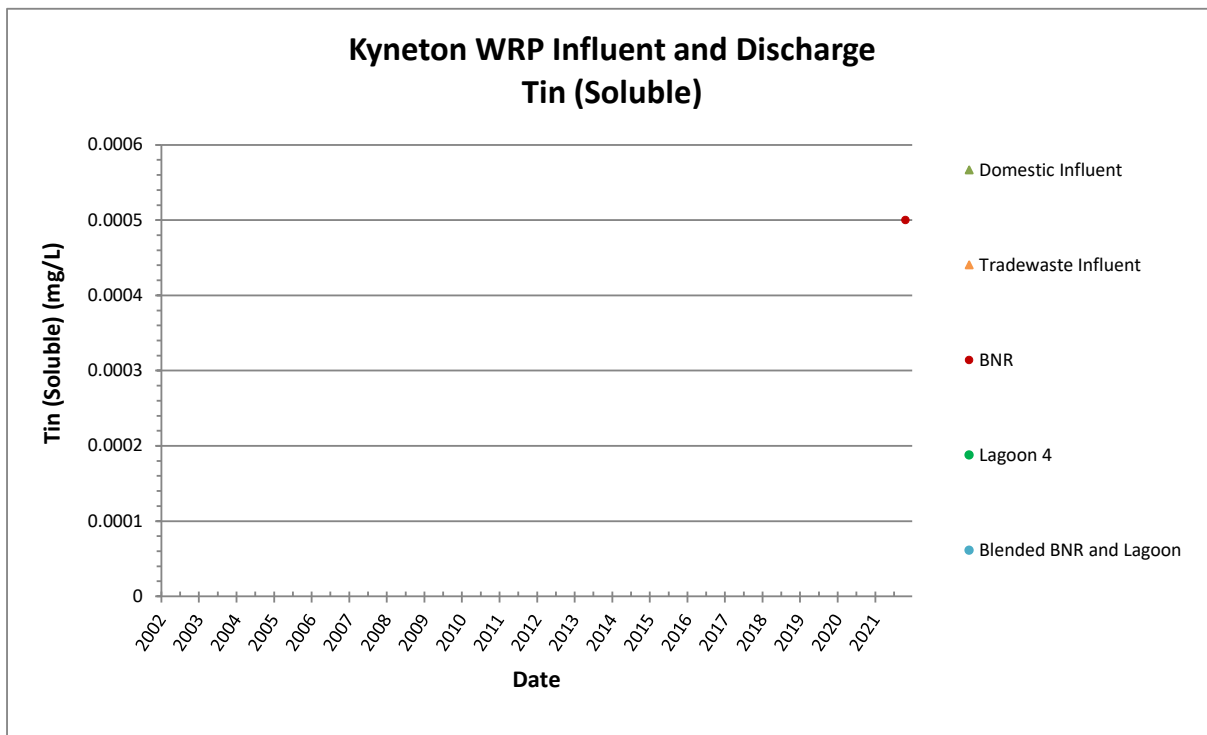


Figure 230 Tin (soluble) data – Kyneton WRP

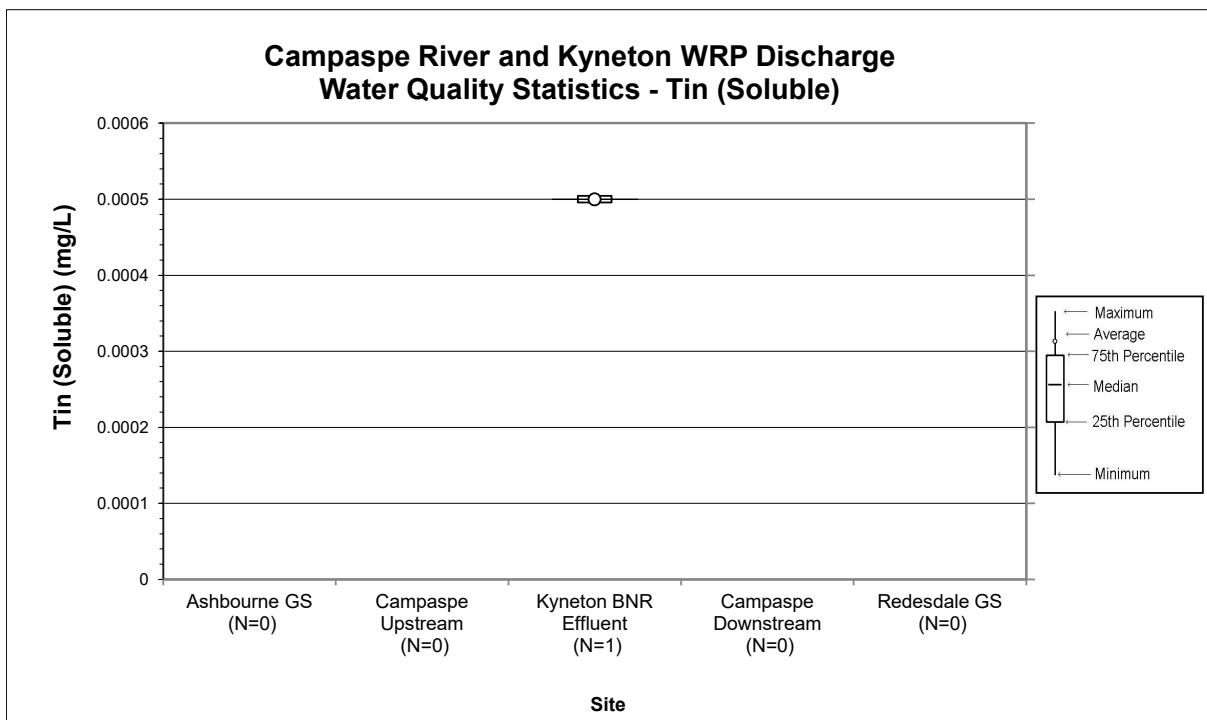


Figure 231 Tin (soluble) statistics – Campaspe River and Kyneton WRP

## 5.42 Titanium

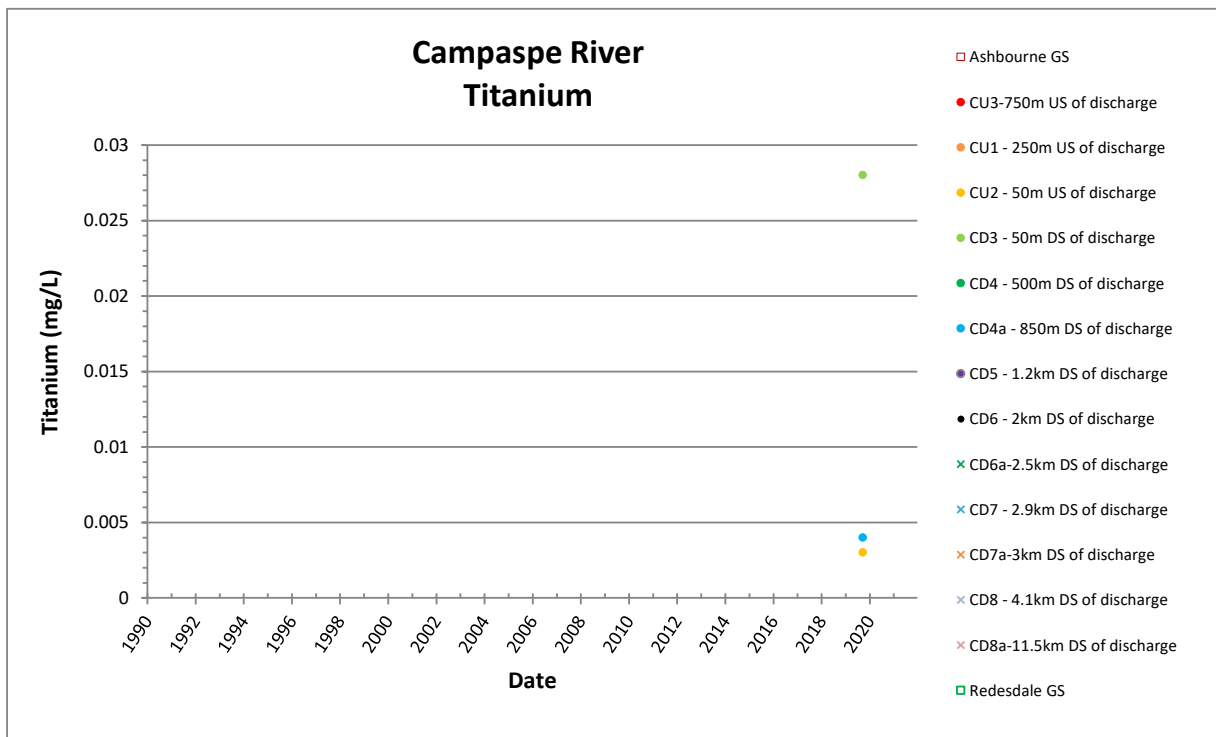


Figure 232 Titanium data – Campaspe River

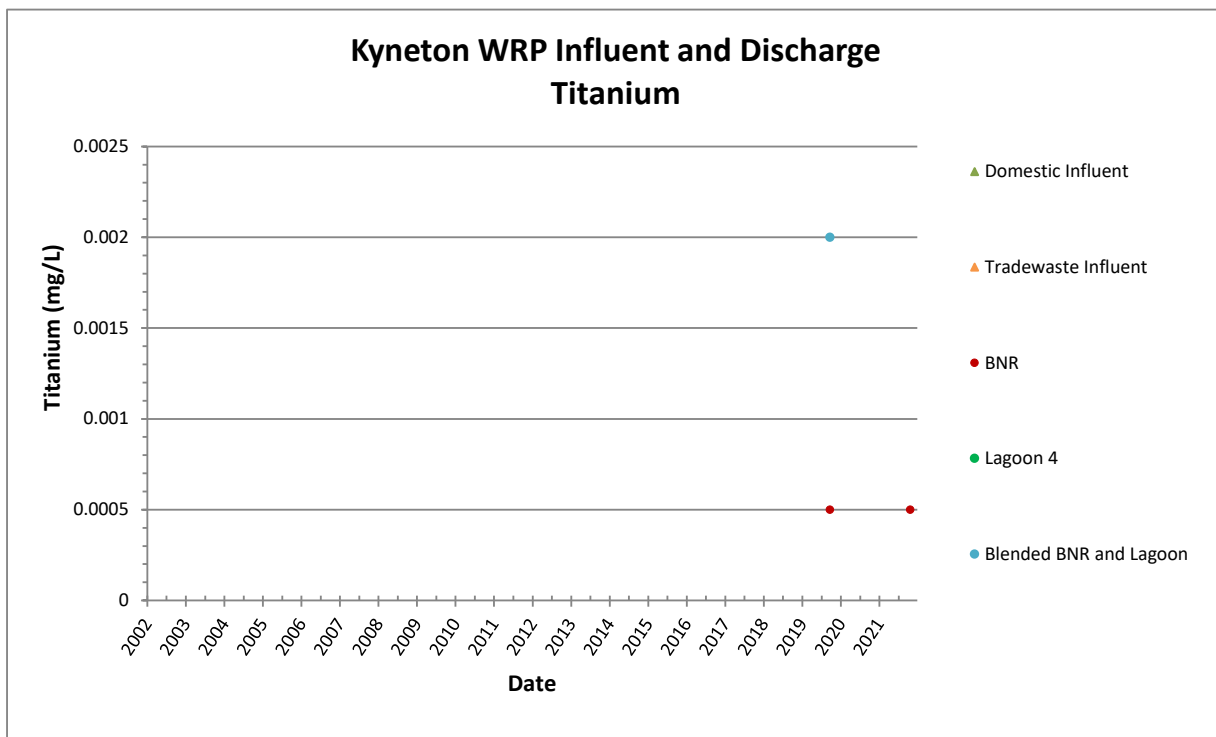


Figure 233 Titanium data – Kyneton WRP

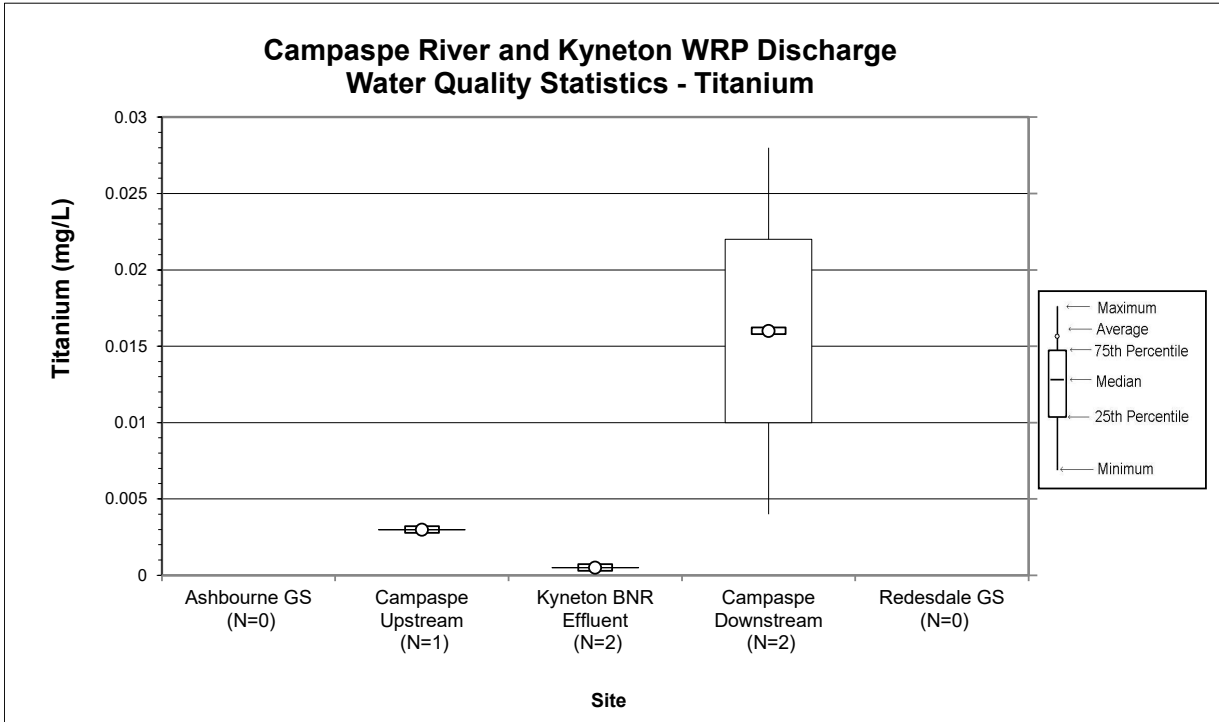


Figure 234 Titanium statistics – Campaspe River and Kyneton WRP



## 5.43 Titanium (Soluble)

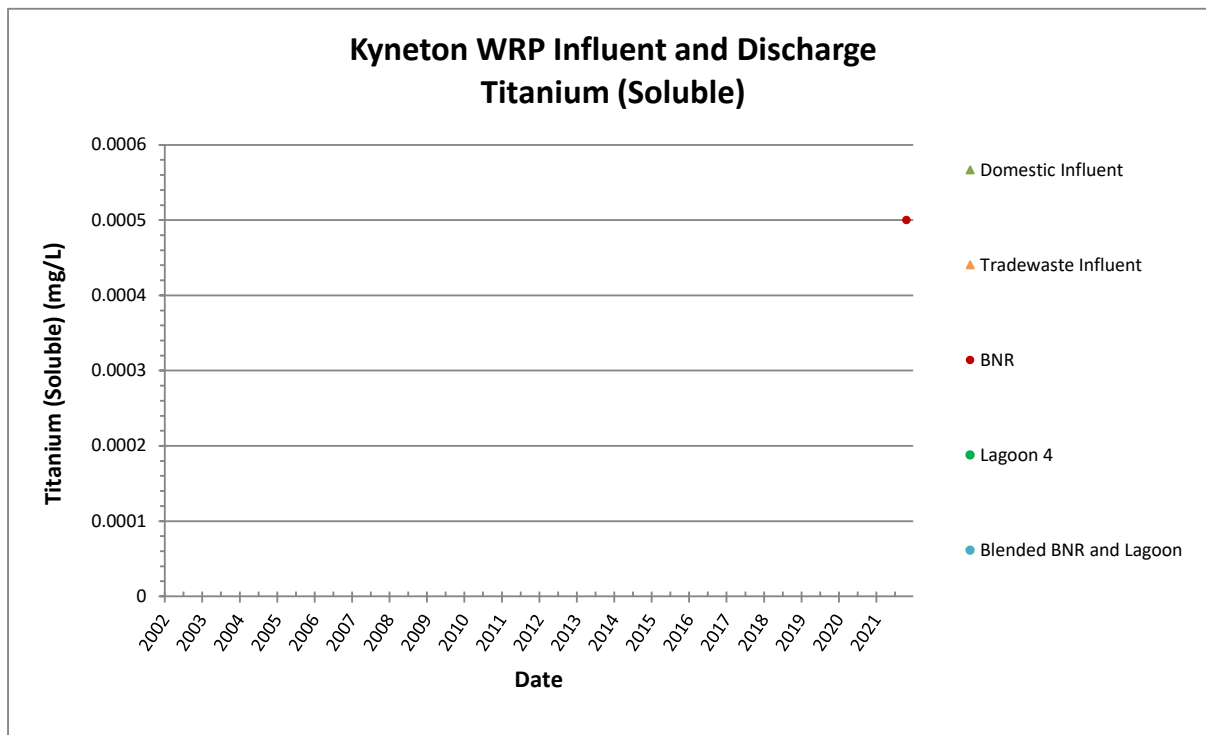


Figure 235 Titanium (soluble) data – Kyneton WRP

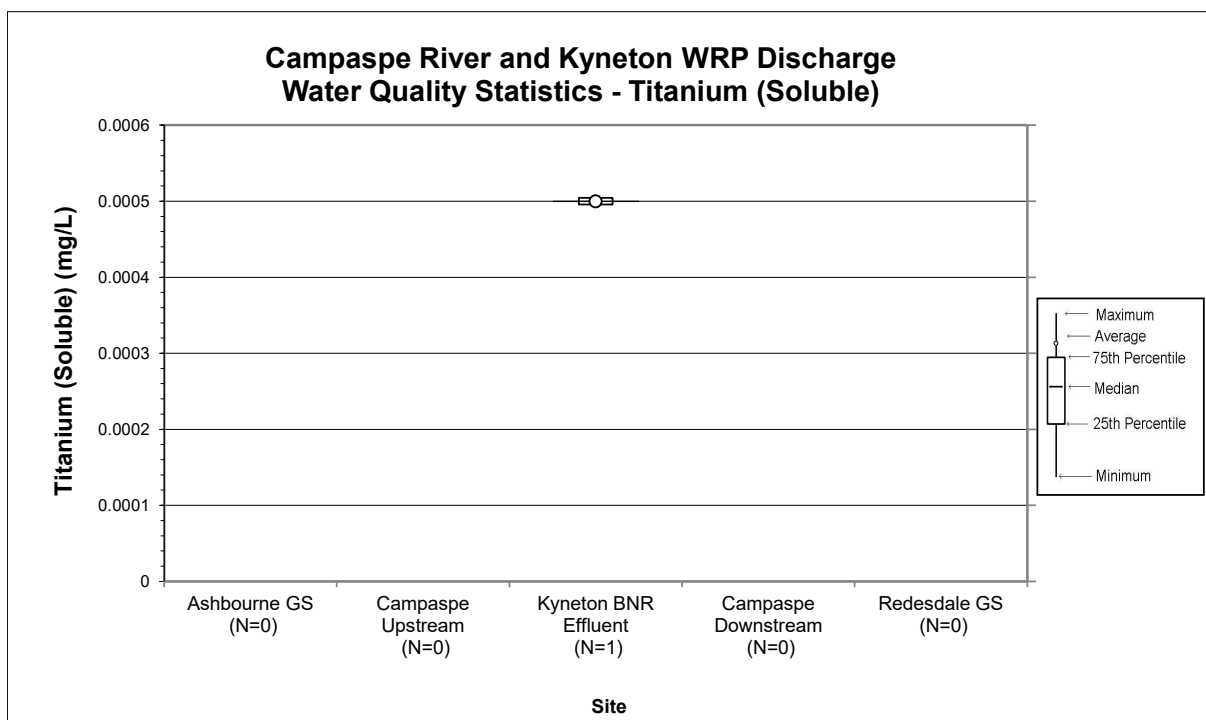


Figure 236 Titanium (soluble) statistics – Campaspe River and Kyneton WRP

## 5.44 Vanadium

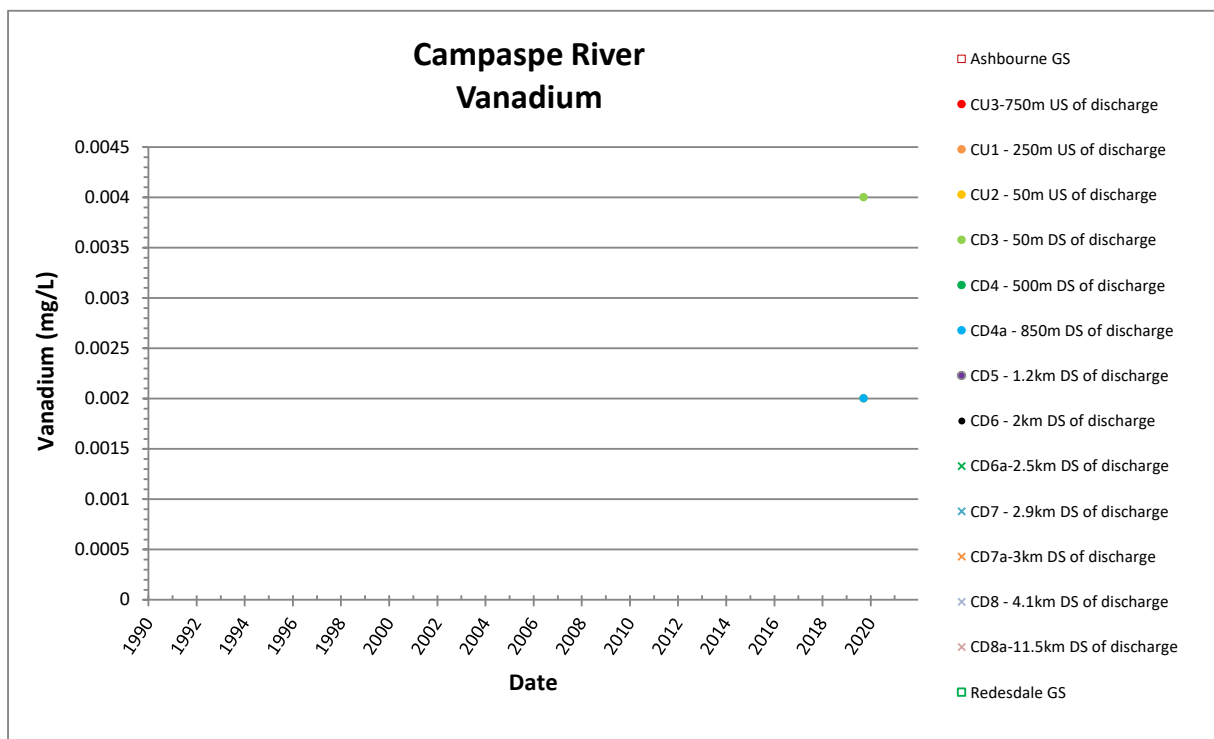


Figure 237 Vanadium data – Campaspe River

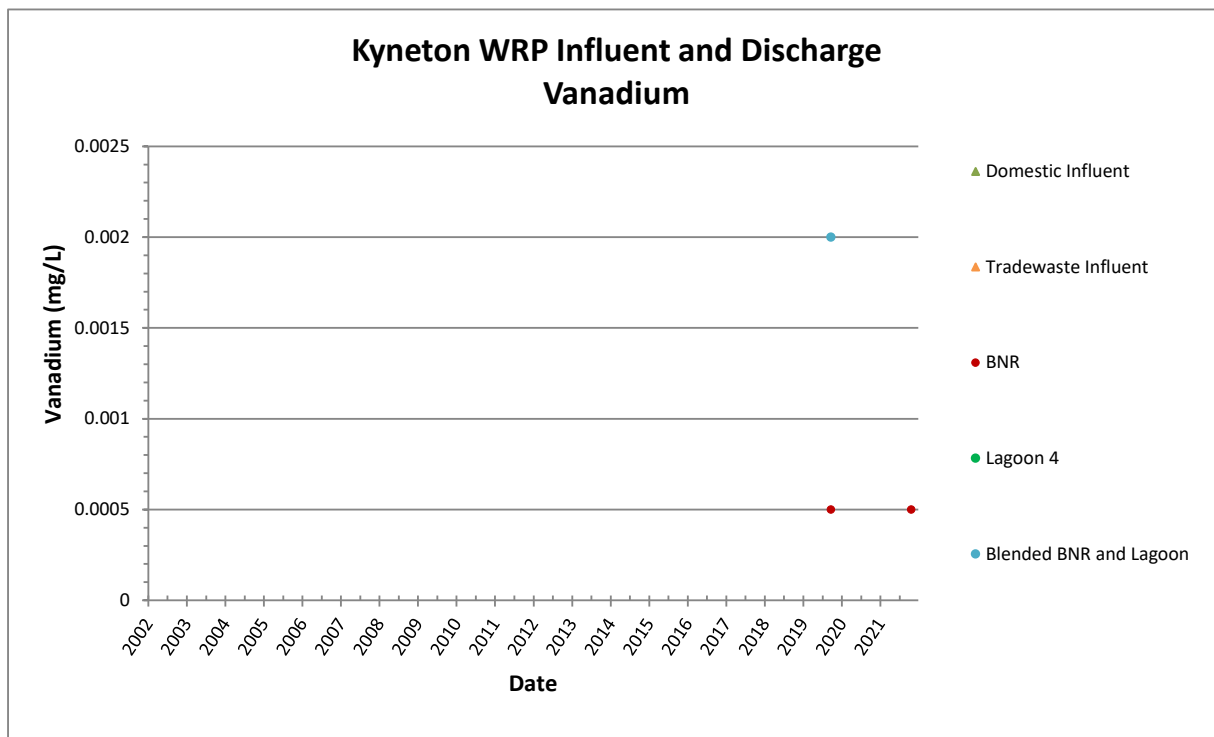


Figure 238 Vanadium data – Kyneton WRP

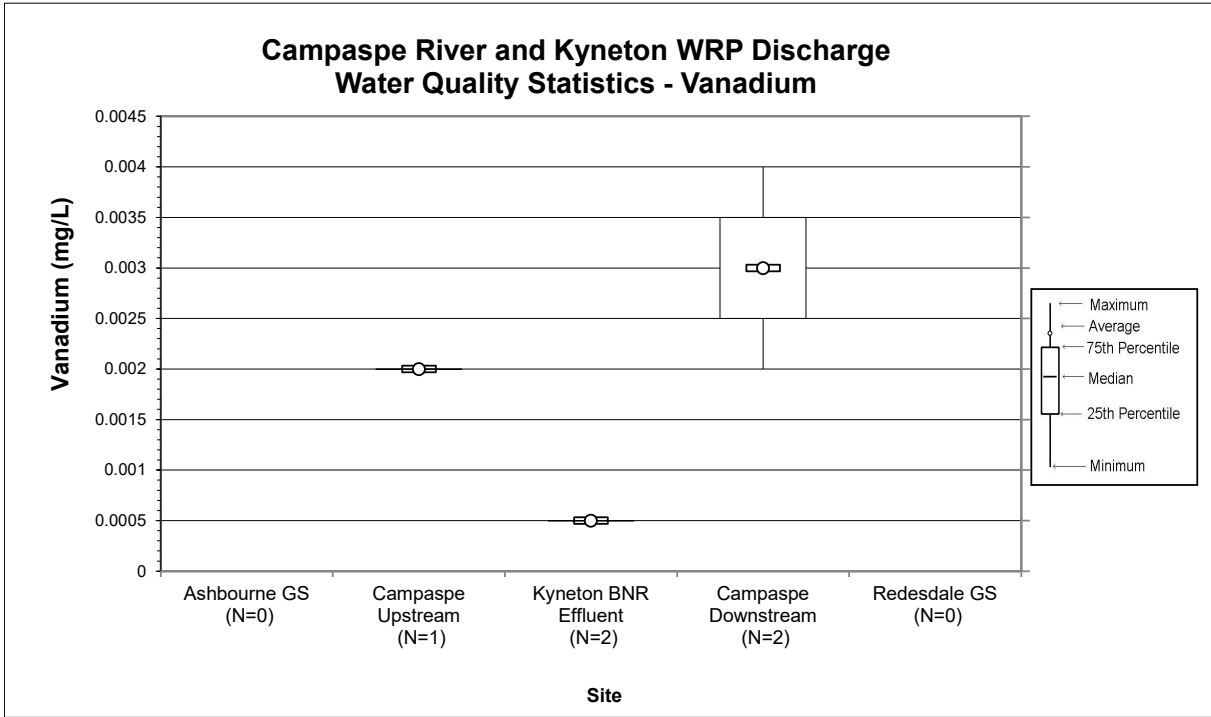


Figure 239 Vanadium statistics – Campaspe River and Kyneton WRP

## 5.45 Vanadium (Soluble)

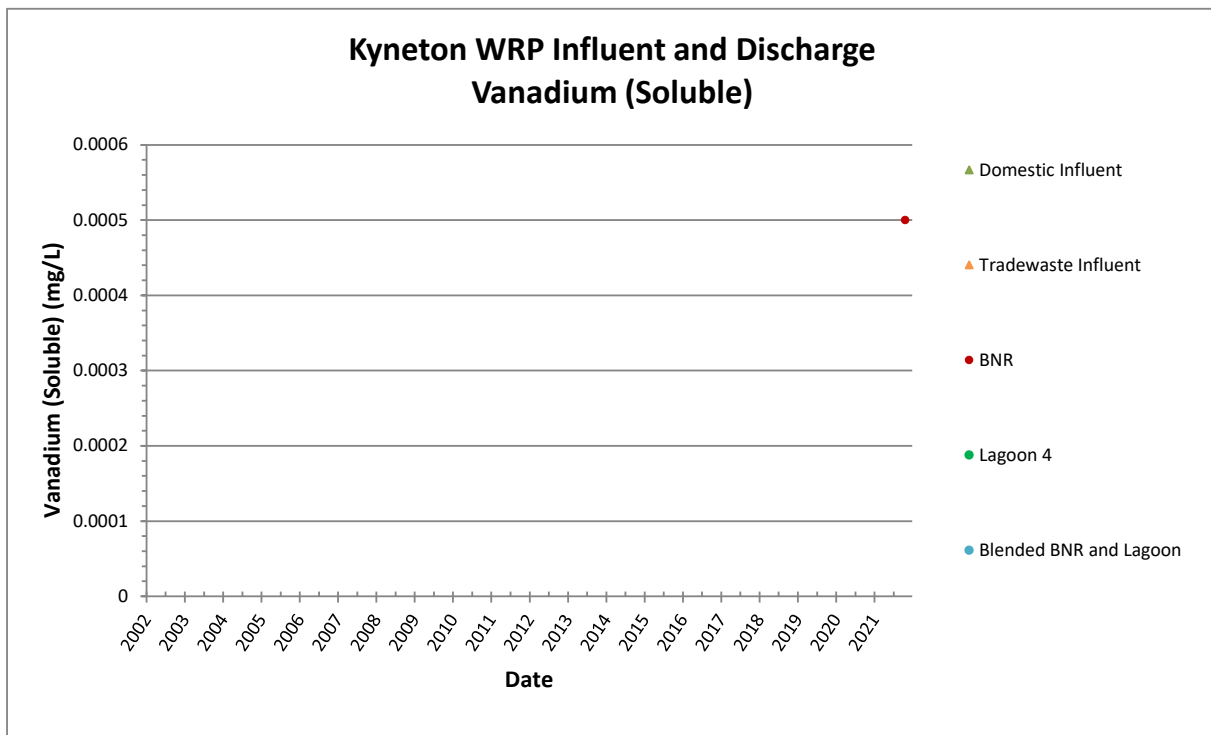


Figure 240 Vanadium (soluble) data – Kyneton WRP

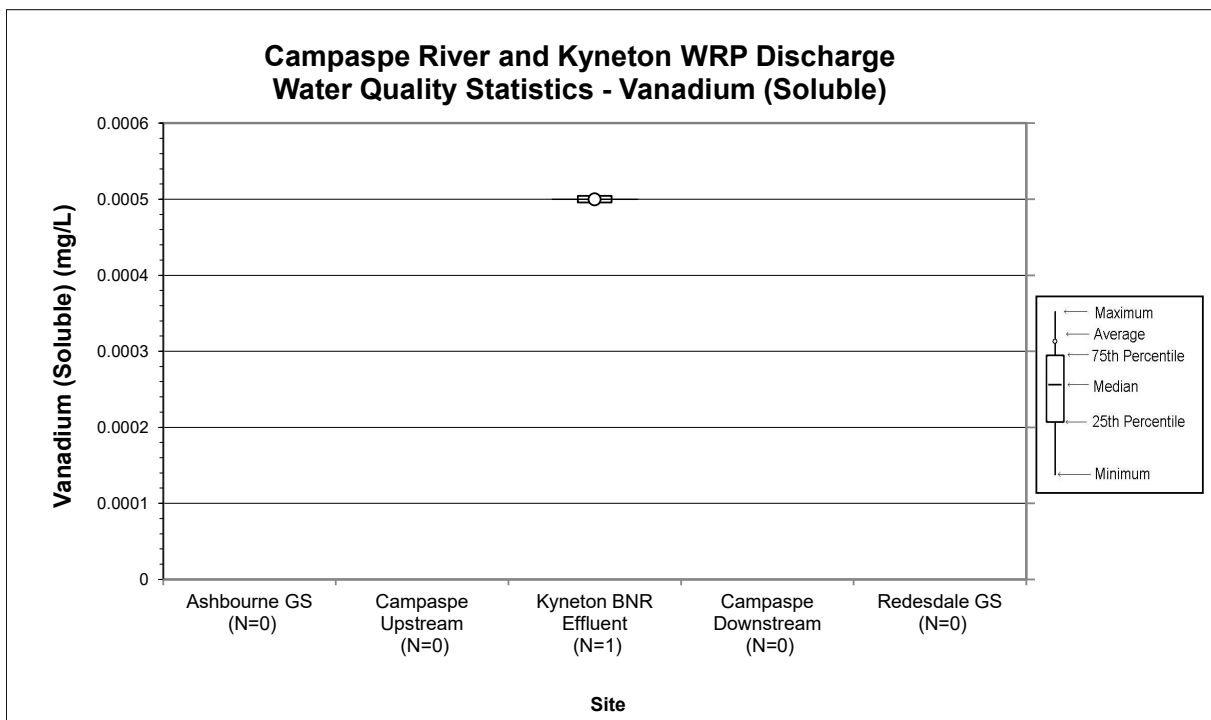


Figure 241 Vanadium (soluble) statistics – Campaspe River and Kyneton WRP

## 5.46 Zinc

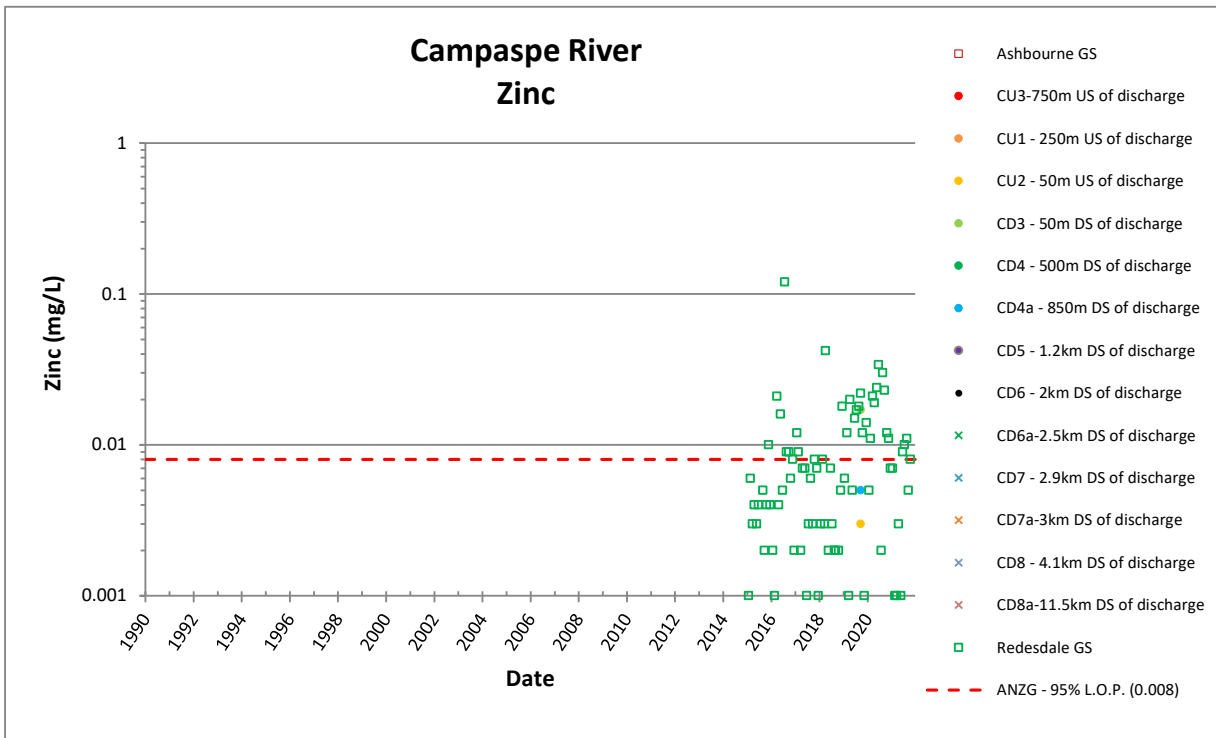


Figure 242 Zinc data – Campaspe River

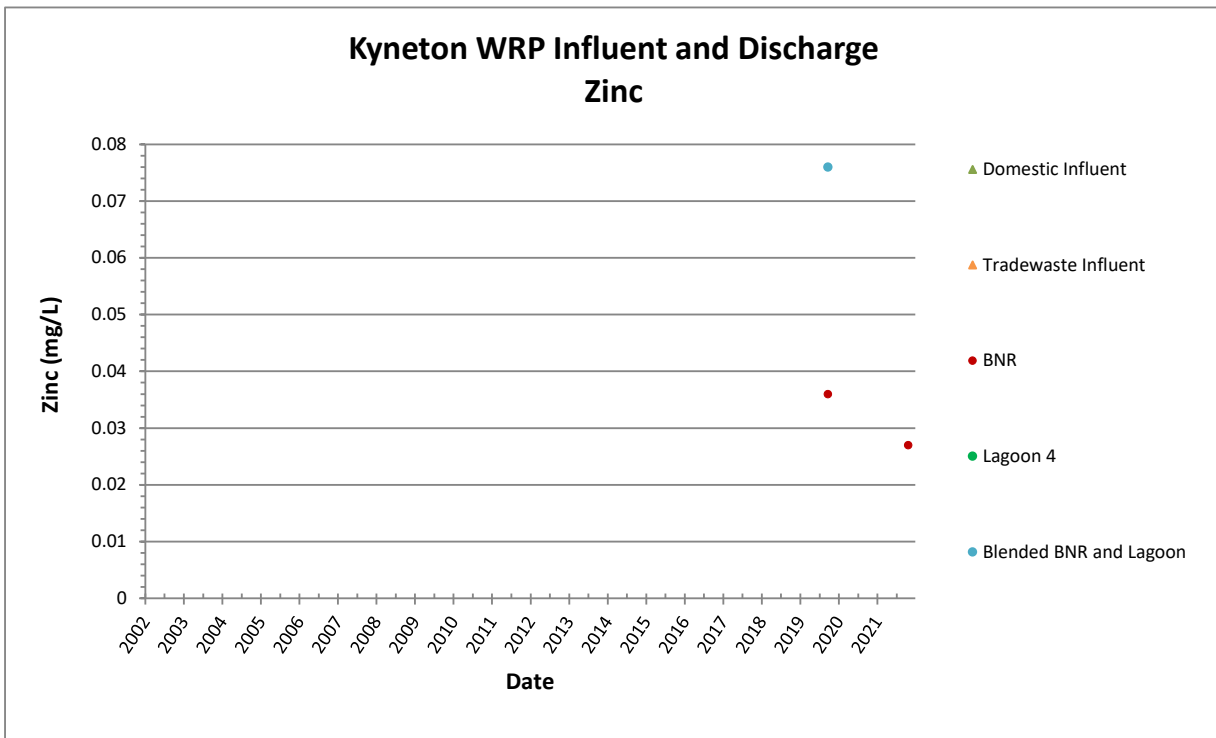


Figure 243 Zinc data – Kyneton WRP

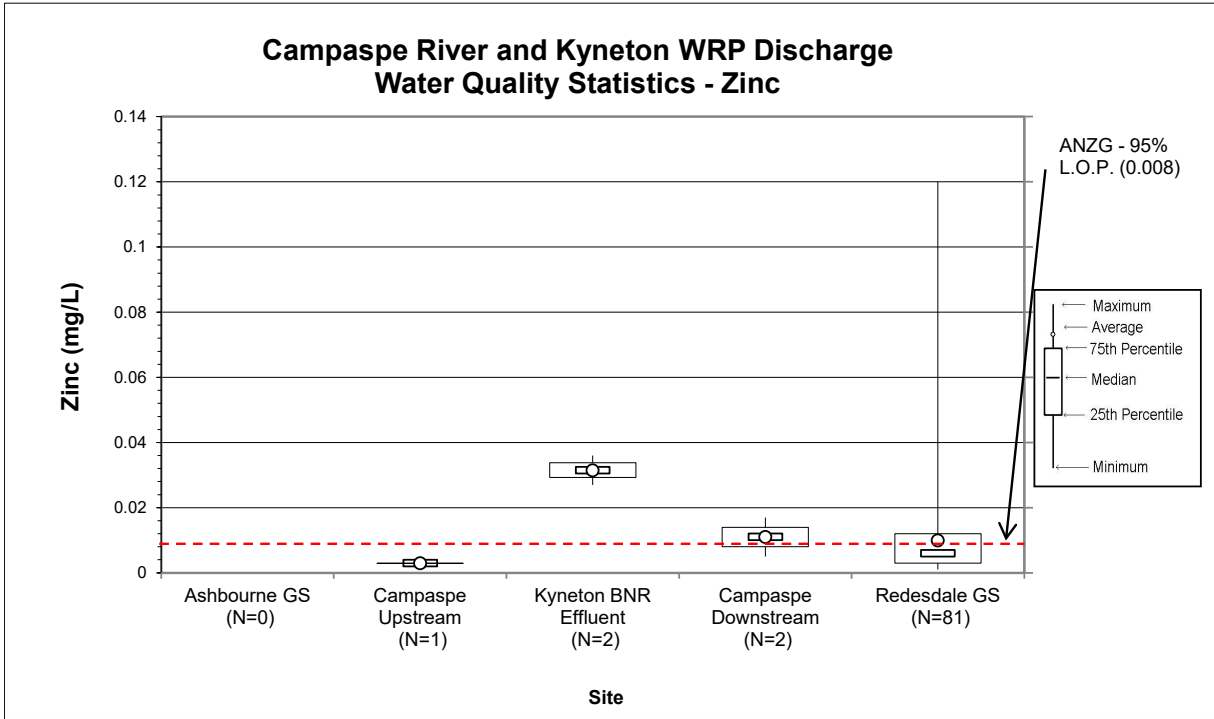


Figure 244 Zinc statistics – Campaspe River and Kyneton WRP

## 5.47 Zinc (Soluble)

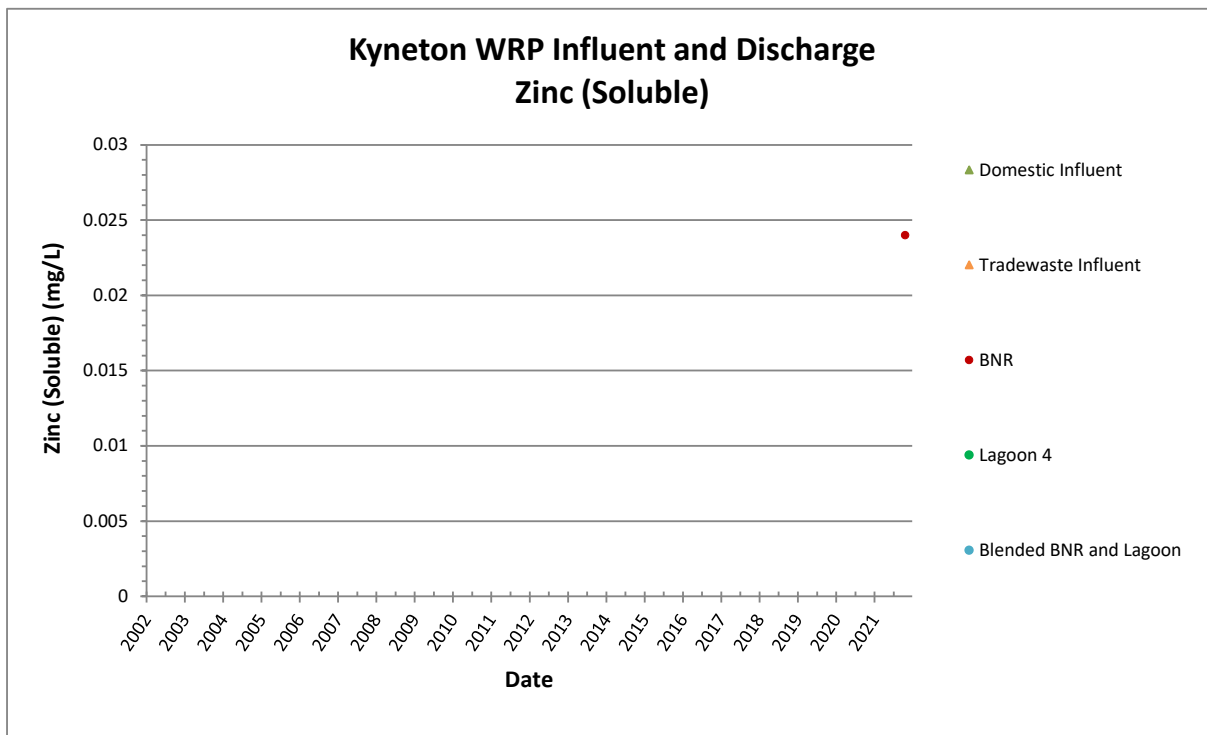


Figure 245 Zinc (soluble) data – Kyneton WRP

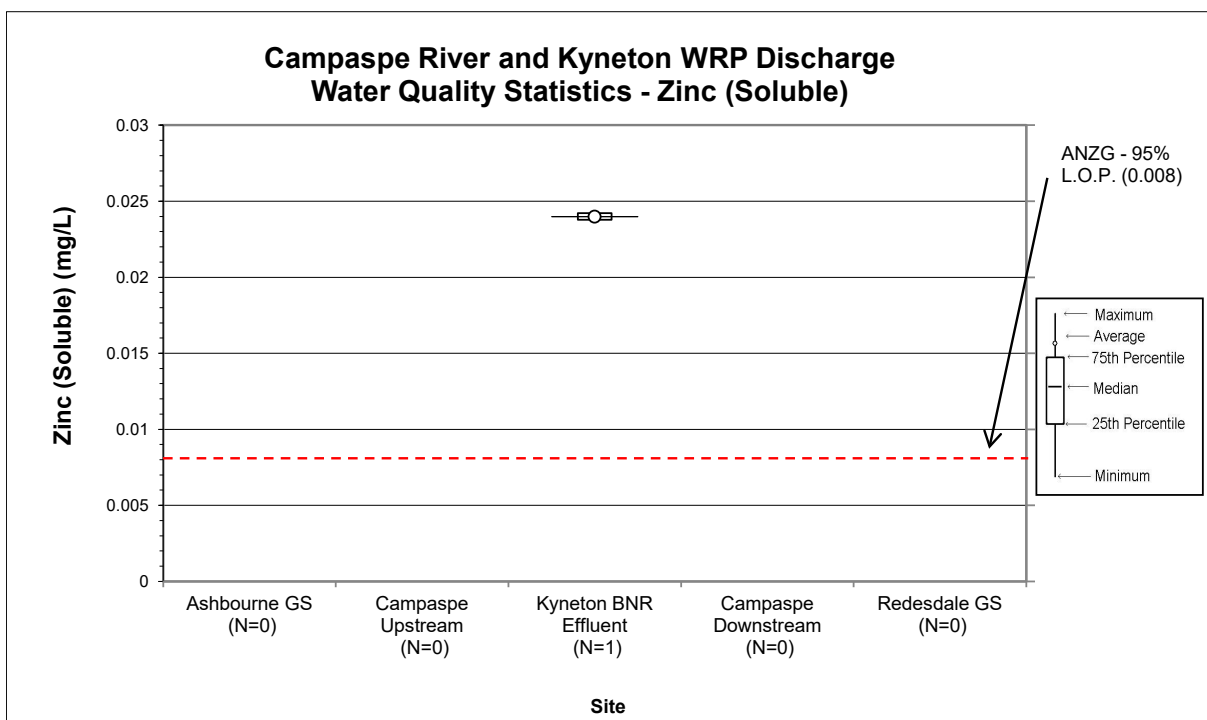


Figure 246 Zinc (soluble) statistics – Campaspe River and Kyneton WRP

## 6. Microbiology

### 6.1 Ascaris Ova

Table 83 *Ascaris Ova (ova/L)– Kyneton WRP*

Date	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
18/06/2019	0		0		
4/07/2019	0		0		
18/07/2019	0		0		
1/08/2019	0		0		
15/08/2019	0	0	0		
29/08/2019	0		0		
12/09/2019		0			0
19/09/2019	0				
26/09/2019	0	0	0		
10/10/2019	0	0	0		0
24/10/2019	0		0		
7/11/2019	0		0		
21/11/2019	0		0		
28/11/2019			0		
5/12/2019	0		0		
19/12/2019	0		0		
2/01/2020	0		0		
16/01/2020	0		0		
30/01/2020	0		0		
13/02/2020	0		0		
12/03/2020	0		0		
9/04/2020	0		0		
7/05/2020			0		
4/06/2020	0		0		
2/07/2020	0		0		
6/08/2020	0		0		
3/09/2020	0		0		
1/10/2020	0		0		
5/11/2020	0		0		
3/12/2020	0		0		



Date	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
7/01/2021	0		0		
4/02/2021	0		0		
4/03/2021	0		0		
6/05/2021	0		0		
3/06/2021	0		0		
1/07/2021	0		0		
5/08/2021	0		0		
2/09/2021	0		0		
7/10/2021			0		
14/10/2021	0				
4/11/2021	0		0		
8/05/2020	0				
1/04/2021	0				

## 6.2 E. Coli

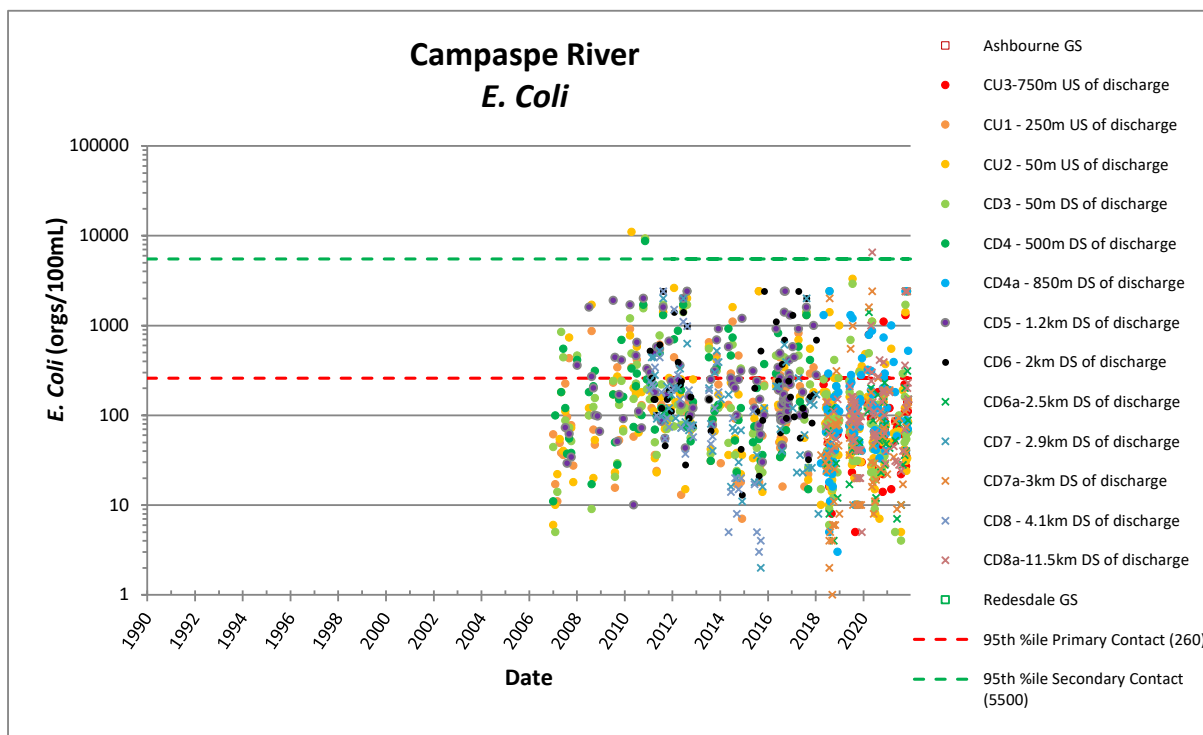


Figure 247 E. coli data – Campaspe River

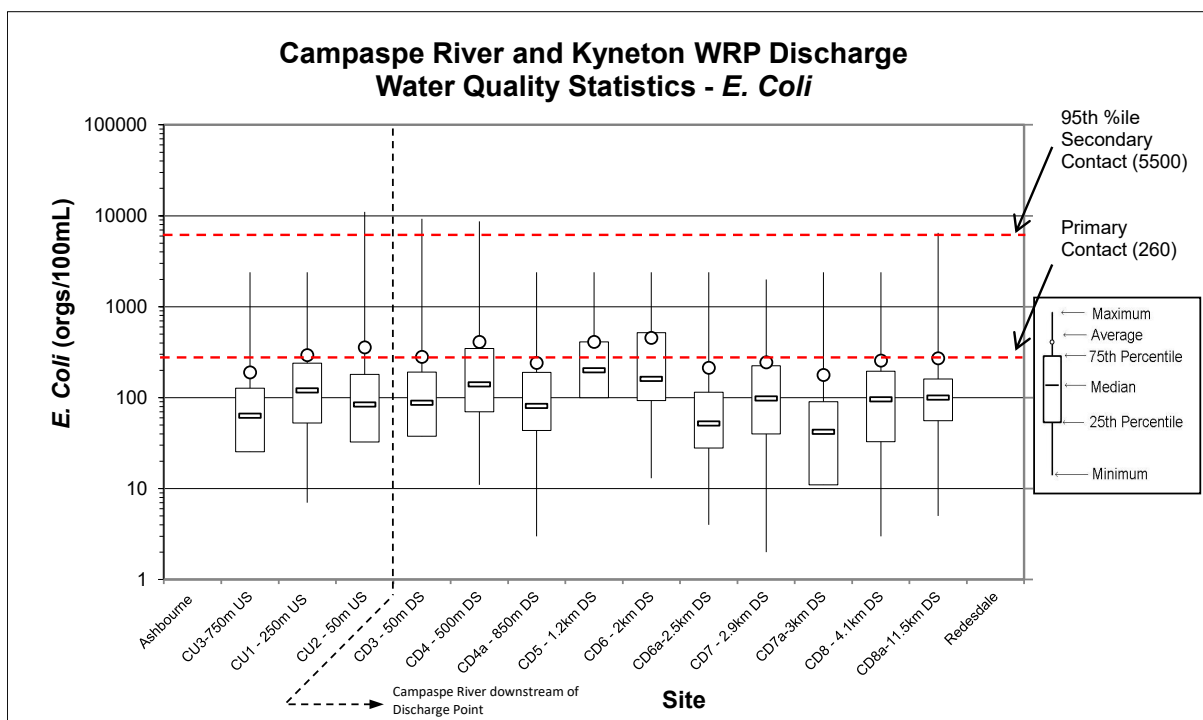
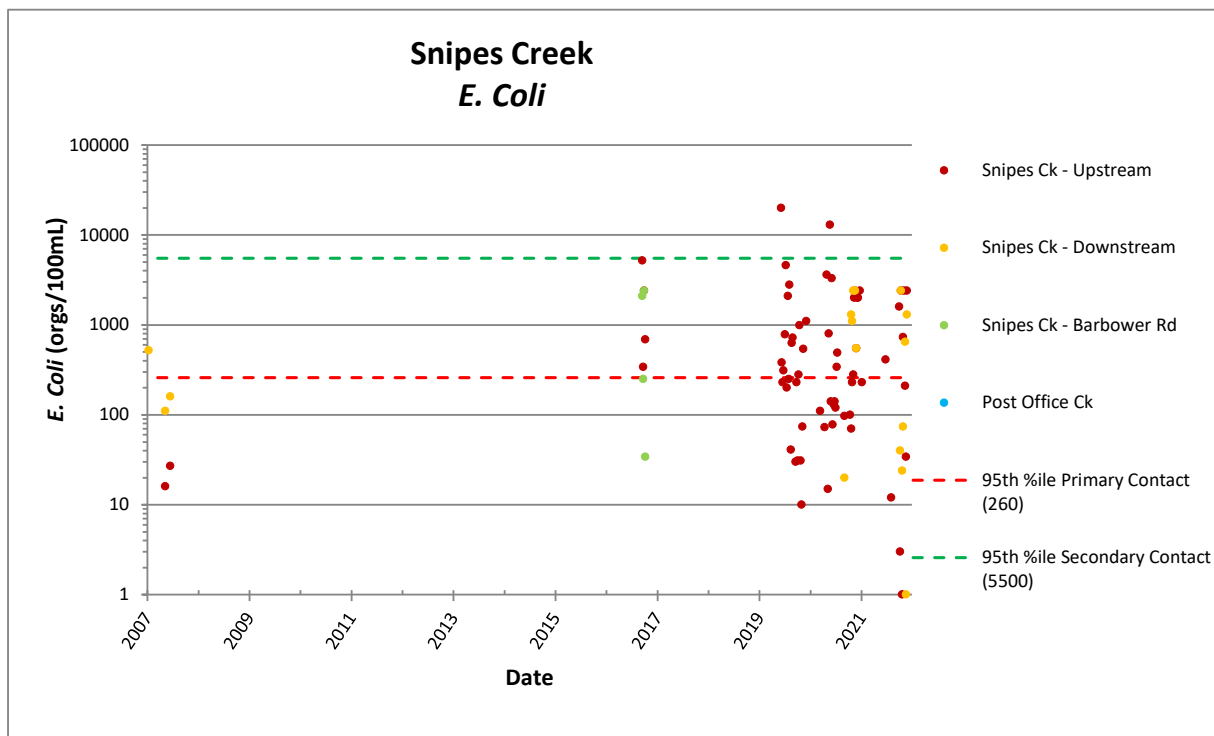


Figure 248 E. coli statistics – Campaspe River

**Table 84 E. coli statistics – Campaspe River**

	Ashbourne	CU3 - 750m US	CU1 - 250m US	CU2 - 50m US	CD3 - 50m DS	CD4 - 500m DS	CD4a - 850m DS	CD5 - 1.2km DS	CD6 - 2km DS	CD6a - 2.5km DS	CD7 - 2.9km DS	CD7a - 3km DS	CD8 - 4.1km DS	CD8a - 11.5km DS	Redesdale
Maximum		2400	2400	11000	9250	8700	2400	2400	2400	2400	2000	2400	2400	6500	
90th percentile		240	786	690	487	825	541	1240	1390	224	504	190	494	308	
75th percentile		128	240	180	191	348	190	410	520	115	225	90	195	160	
Median		63	120	84	88	140	81	200	160	52	98	42	96	100	
25th percentile		26	53	33	38	70	44	100	93	28	40	11	33	56	
10th percentile		15	22	16	20	36	28	59	47	12	18	5	8	31	
Minimum		0	7	0	0	11	3	0	13	4	2	0	3	5	
Average		190	293	358	282	410	242	410	453	213	245	178	256	270	
Number	0	46	103	191	178	80	100	117	52	43	63	98	40	77	0



**Figure 249 E. coli data – Snipes Creek and Post Office Creek**

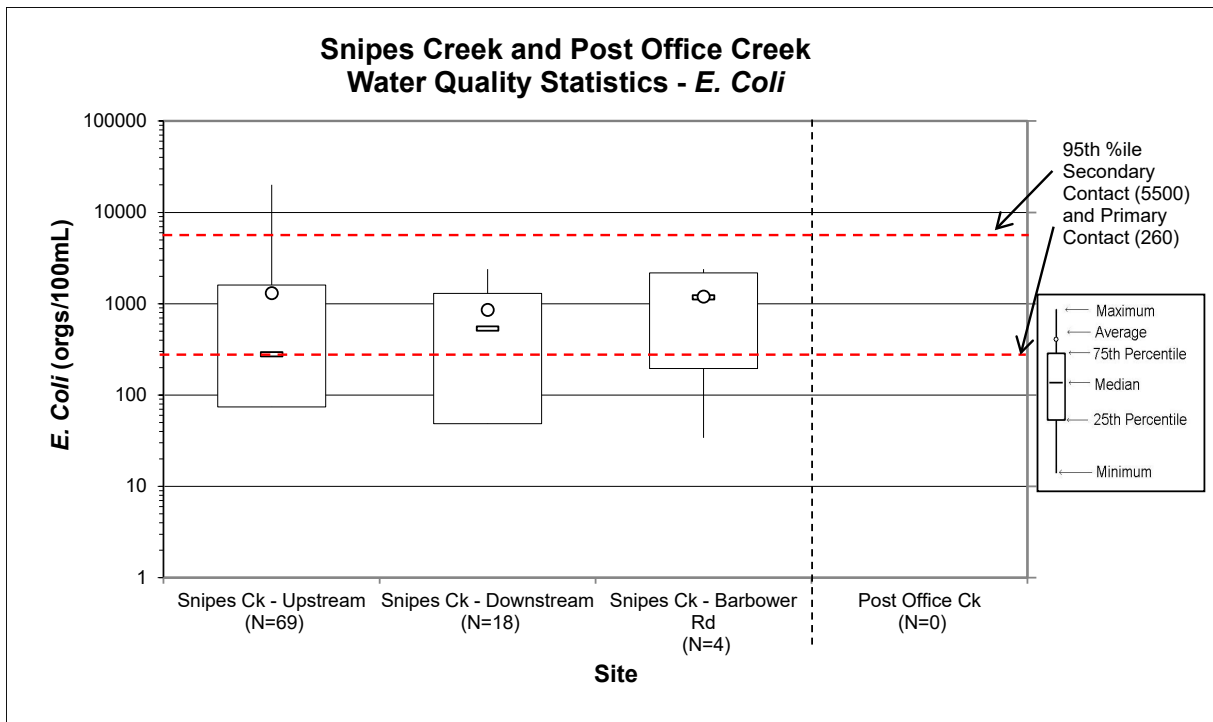


Figure 250 E. coli statistics – Snipes Creek and Post Office Creek

Table 85 E. coli statistics – – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	20000	2400	2400	
90th percentile	2480	2400	2310	
75th percentile	1600	1300	2175	
Median	280	535	1175	
25th percentile	74	49	196	
10th percentile	14	14	99	
Minimum	0	0	34	
Average	1303	858	1196	
Number	69	18	4	0

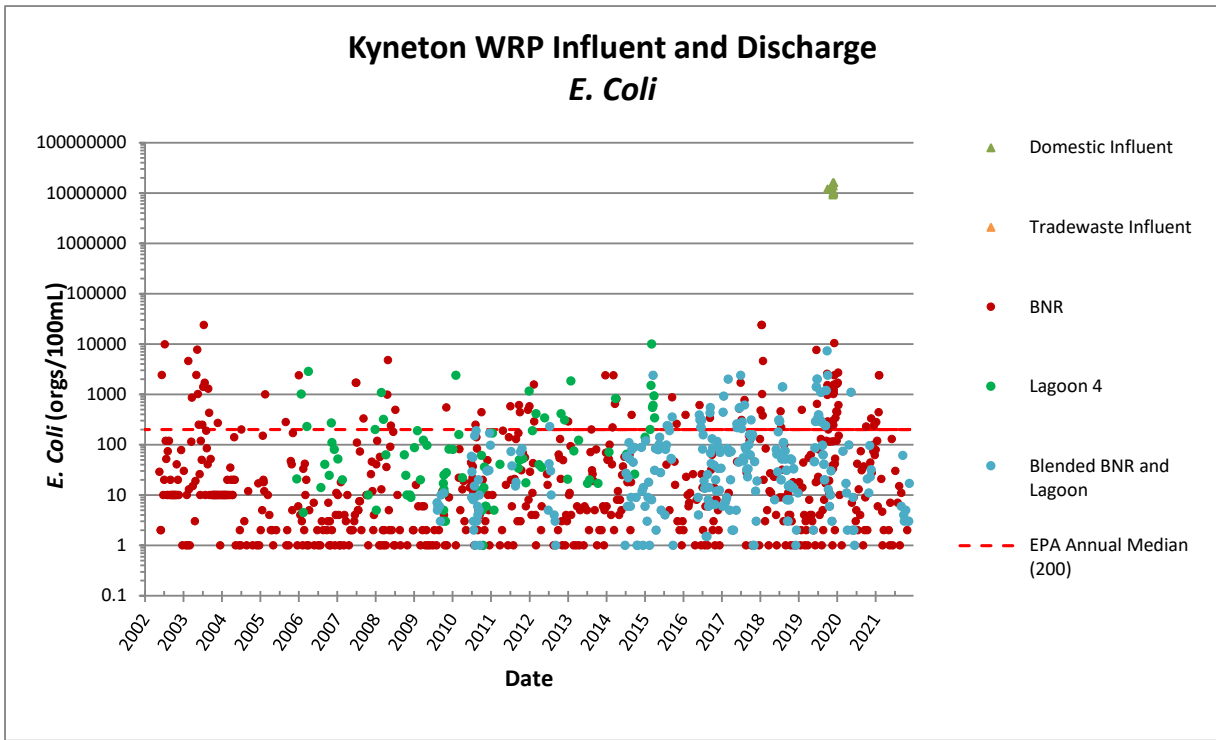


Figure 251 *E. coli* data – Kyneton WRP

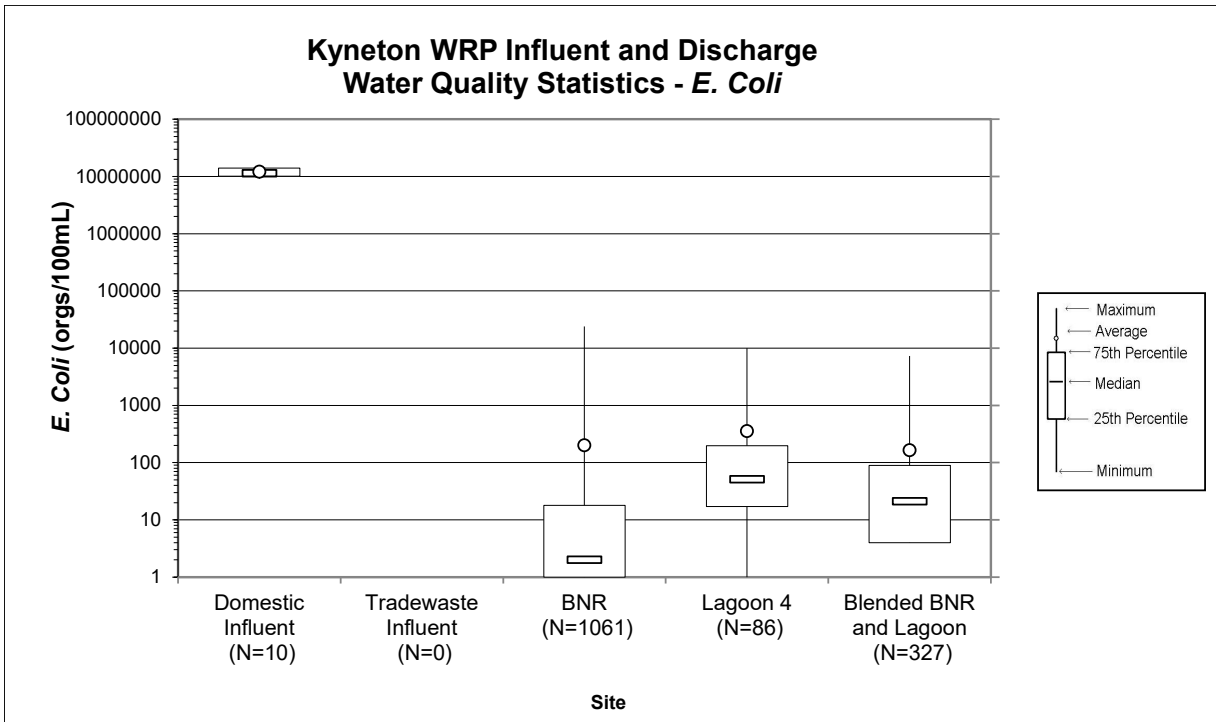
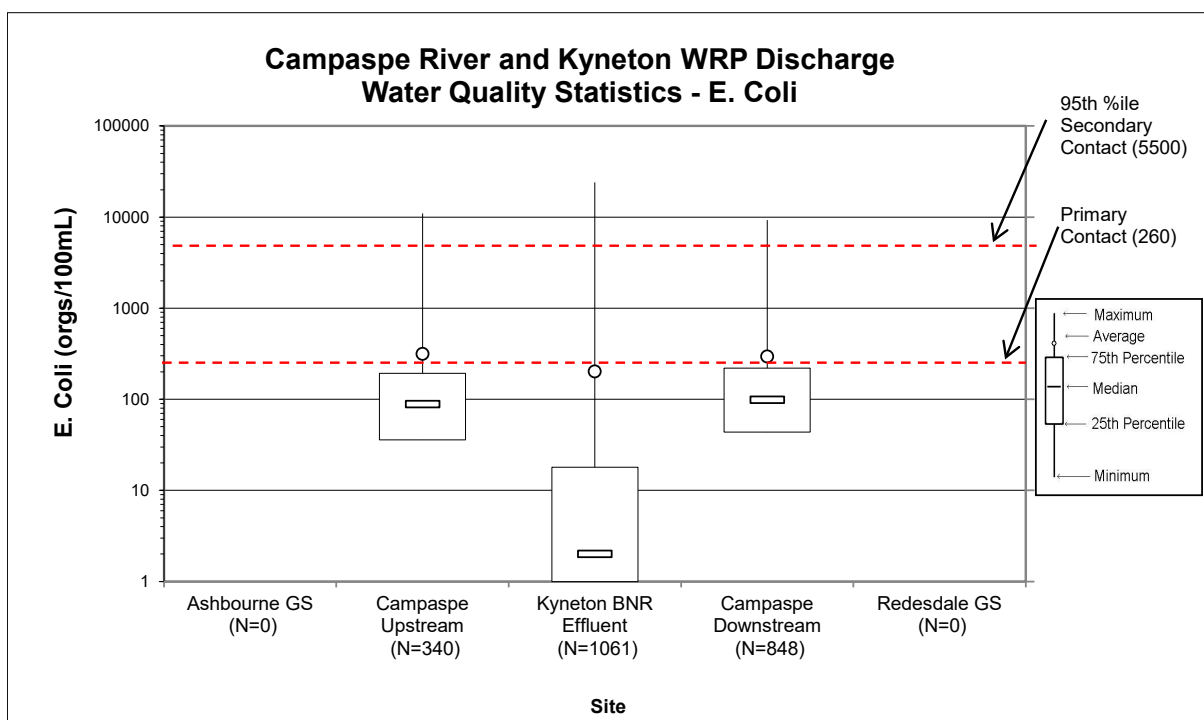


Figure 252 *E. coli* statistics – Kyneton WRP

**Table 86 E. coli statistics – Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	16000000		24000	10000	7300
90th percentile	16000000		150	880	310
75th percentile	13966667		18	198	90
Median	11350000		2	51	21
25th percentile	10087500		1	17	4
10th percentile	9600000		0	6	0
Minimum	9150000		0	1	0
Average	12161667		203	357	166
Number	10	0	1061	86	327



**Figure 253 E. coli statistics – Campaspe River and Kyneton WRP**

**Table 87 E. coli statistics – Campaspe River and Kyneton WRP**

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum		11000	24000	9250	
90th percentile		694	150	690	
75th percentile		193	18	220	
Median		89	2	99	
25th percentile		36	1	44	
10th percentile		17	0	20	
Minimum		0	0	0	
Average		315	203	297	
Number	0	340	1061	848	0

## 6.3 Helminth Ova

Table 88 Helminth Ova (ova/L)– Kyneton WRP

Date	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
18/06/2019	0		0		
4/07/2019	0		0		
18/07/2019	0		0		
1/08/2019	0		0		
15/08/2019	0	1	0		
29/08/2019	0		0		
12/09/2019		0			0
19/09/2019	0				
26/09/2019	0	0	0		
10/10/2019	0	0	0		0
24/10/2019	0		0		
7/11/2019	0		0		
21/11/2019	0		0		
28/11/2019			0		
5/12/2019	0		0		
19/12/2019	0		0		
2/01/2020	0		0		
16/01/2020	0		0		
30/01/2020	0		0		
13/02/2020	0		0		
12/03/2020	0		0		
9/04/2020	0		0		
7/05/2020			0		
4/06/2020	0		0		
2/07/2020	0		0		
6/08/2020	0		0		
3/09/2020	0		0		
1/10/2020	0		0		
5/11/2020	0		0		
3/12/2020	0		0		
7/01/2021	0		0		
4/02/2021	0		0		
4/03/2021	0		0		
6/05/2021	0		0		
3/06/2021	0		0		

Date	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
1/07/2021	1		0		
5/08/2021	1		0		
2/09/2021	0		0		
7/10/2021			0		
14/10/2021	0				
4/11/2021	0		0		
8/05/2020	0				
1/04/2021	0				



## 6.4 Taenia Ova

Table 89 Taenia Ova (ova/L)– Kyneton WRP

Date	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
18/06/2019	0		0		
4/07/2019	0		0		
18/07/2019	0		0		
1/08/2019	0		0		
15/08/2019	0	0	0		
29/08/2019	0		0		
12/09/2019		0			0
19/09/2019	0				
26/09/2019	0	0	0		
10/10/2019	0	0	0		0
24/10/2019	0		0		
7/11/2019	0		0		
21/11/2019	0		0		
28/11/2019			0		
5/12/2019	0		0		
19/12/2019	0		0		
2/01/2020	0		0		
16/01/2020	0		0		
30/01/2020	0		0		
13/02/2020	0		0		
12/03/2020	0		0		
9/04/2020	0		0		
7/05/2020			0		
4/06/2020	0		0		
2/07/2020	0		0		
6/08/2020	0		0		
3/09/2020	0		0		
1/10/2020	0		0		
5/11/2020	0		0		
3/12/2020	0		0		
7/01/2021	0		0		
4/02/2021	0		0		
4/03/2021	0		0		

Date	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
6/05/2021	0		0		
3/06/2021	0		0		
1/07/2021	0		0		
5/08/2021	0		0		
2/09/2021	0		0		
7/10/2021			0		
14/10/2021	0				
4/11/2021	0		0		
8/05/2020	0				
1/04/2021	0				

# 6.5 Thermotolerant Coliforms

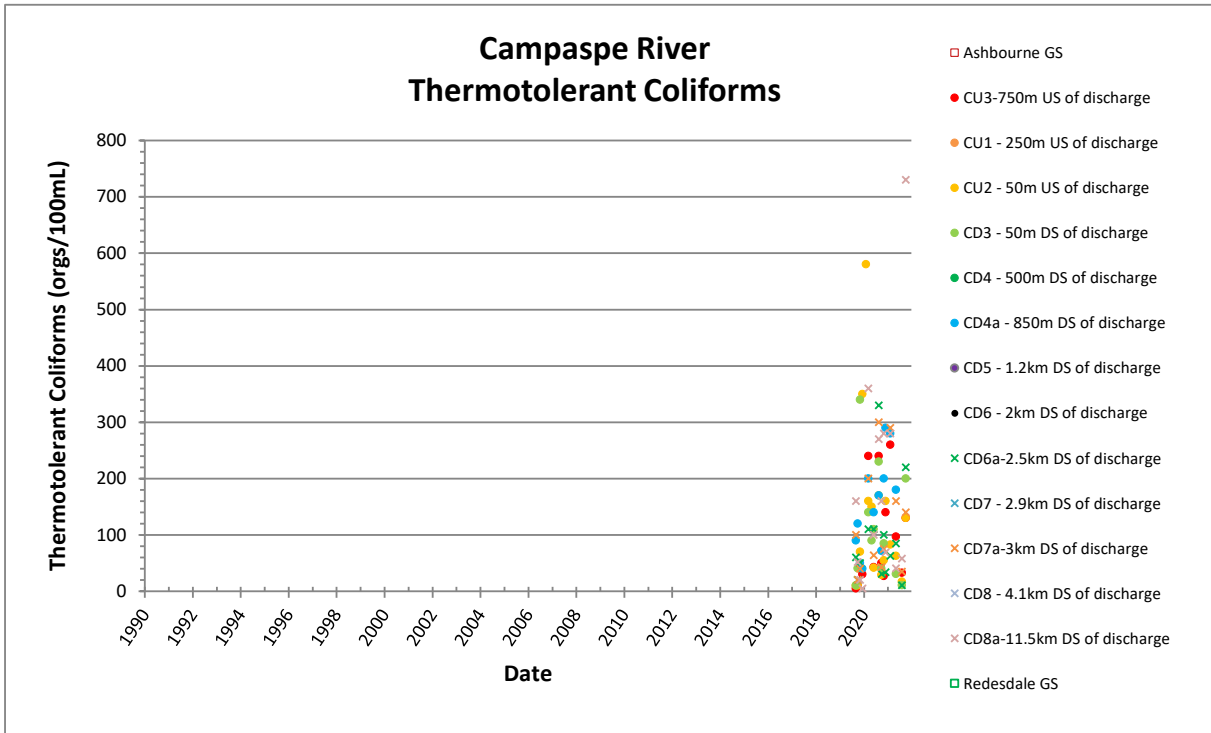


Figure 254 Thermotolerant Coliforms data – Campaspe River

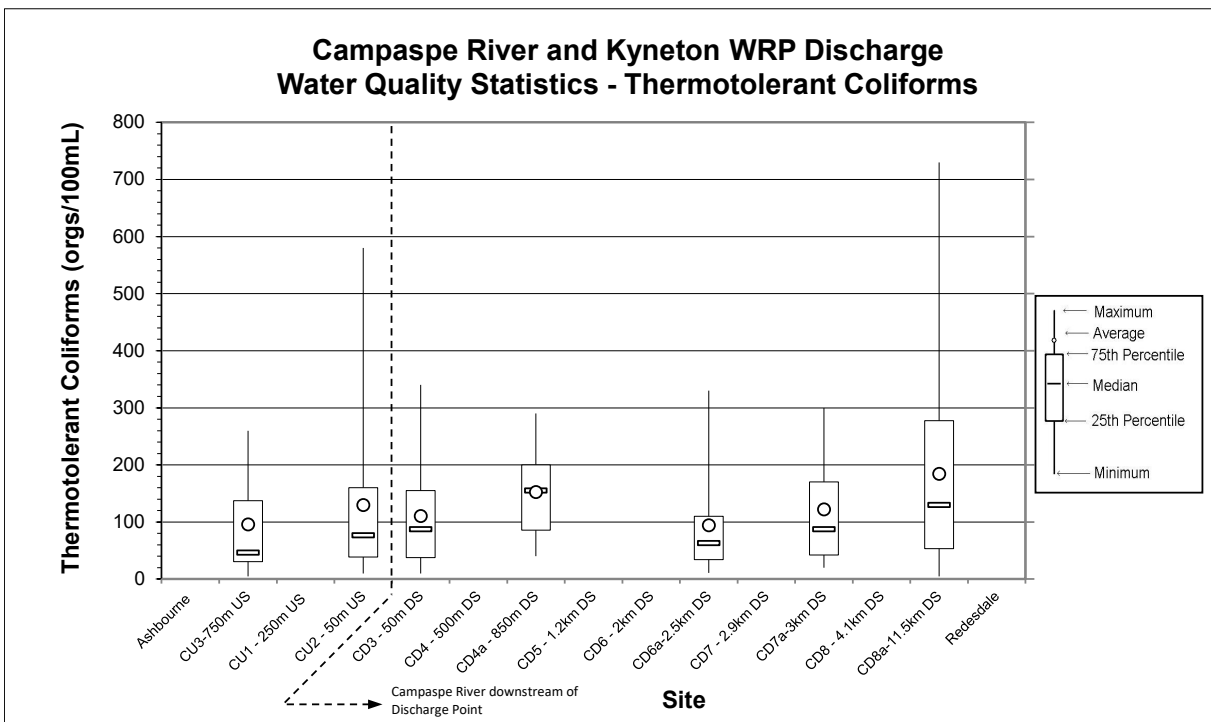


Figure 255 Thermotolerant Coliforms statistics – Campaspe River

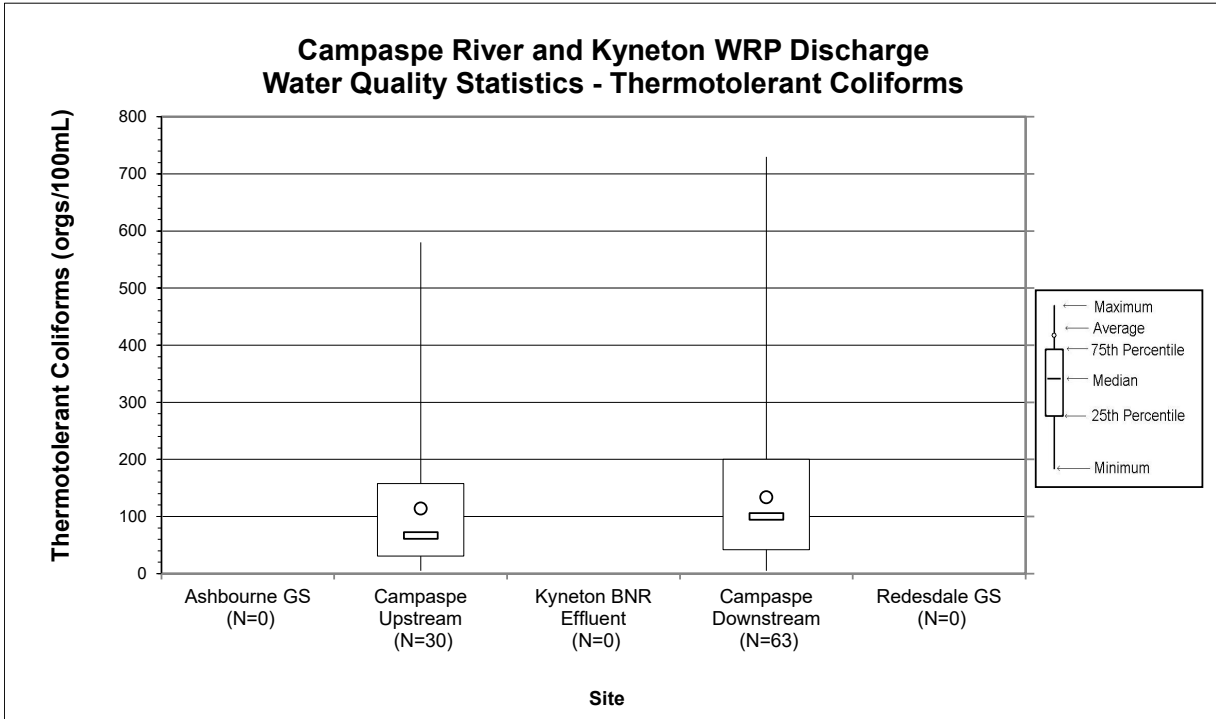


Figure 256 Thermotolerant Coliforms statistics – Campaspe River and Kyneton WRP

# 6.6 Total Coliforms

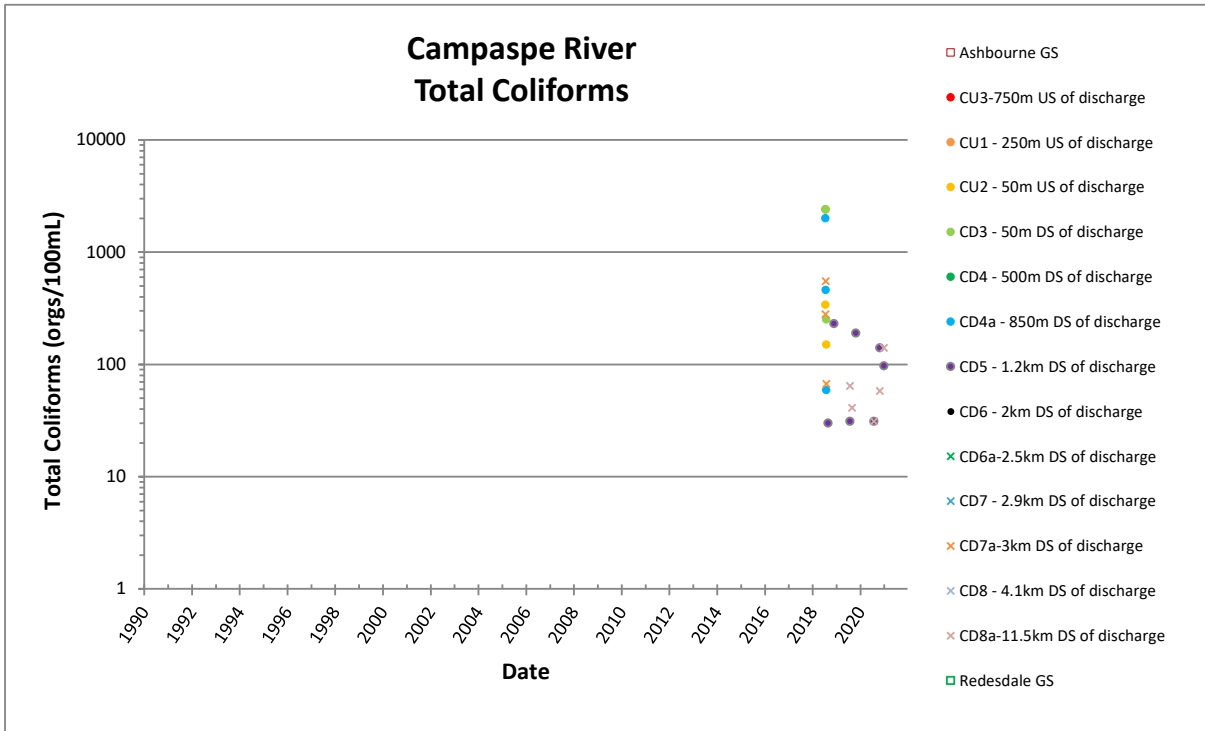


Figure 257 Total coliform data – Campaspe River

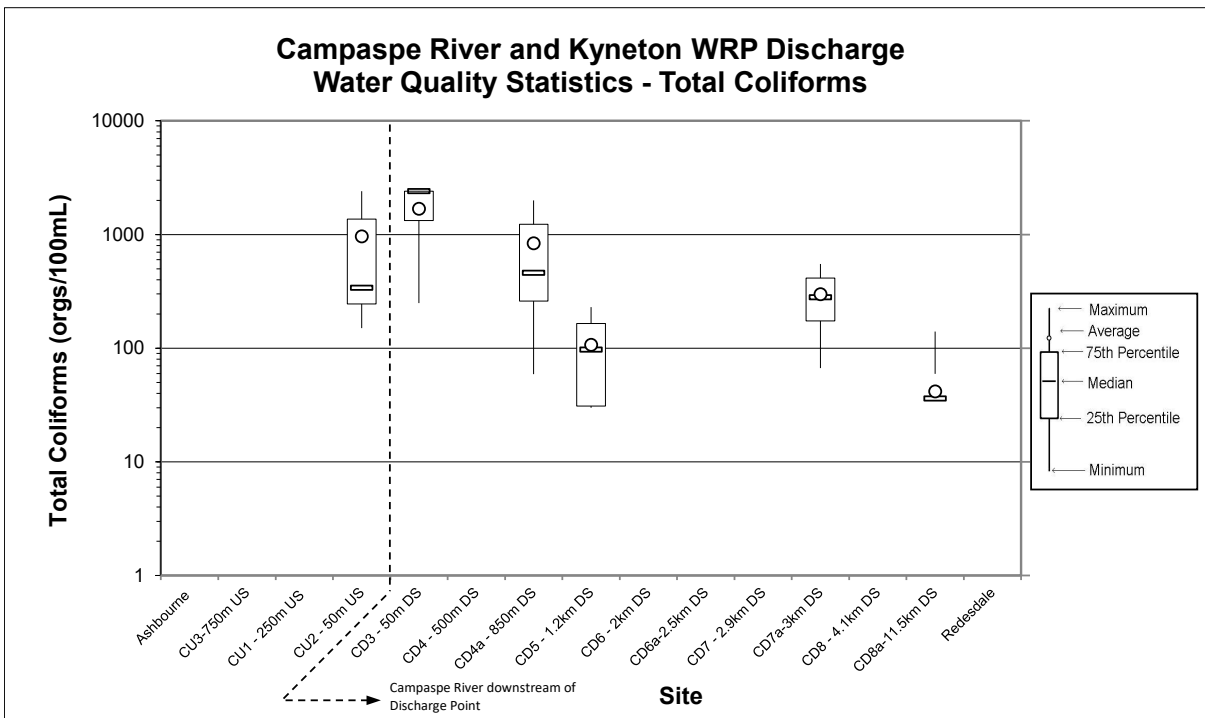
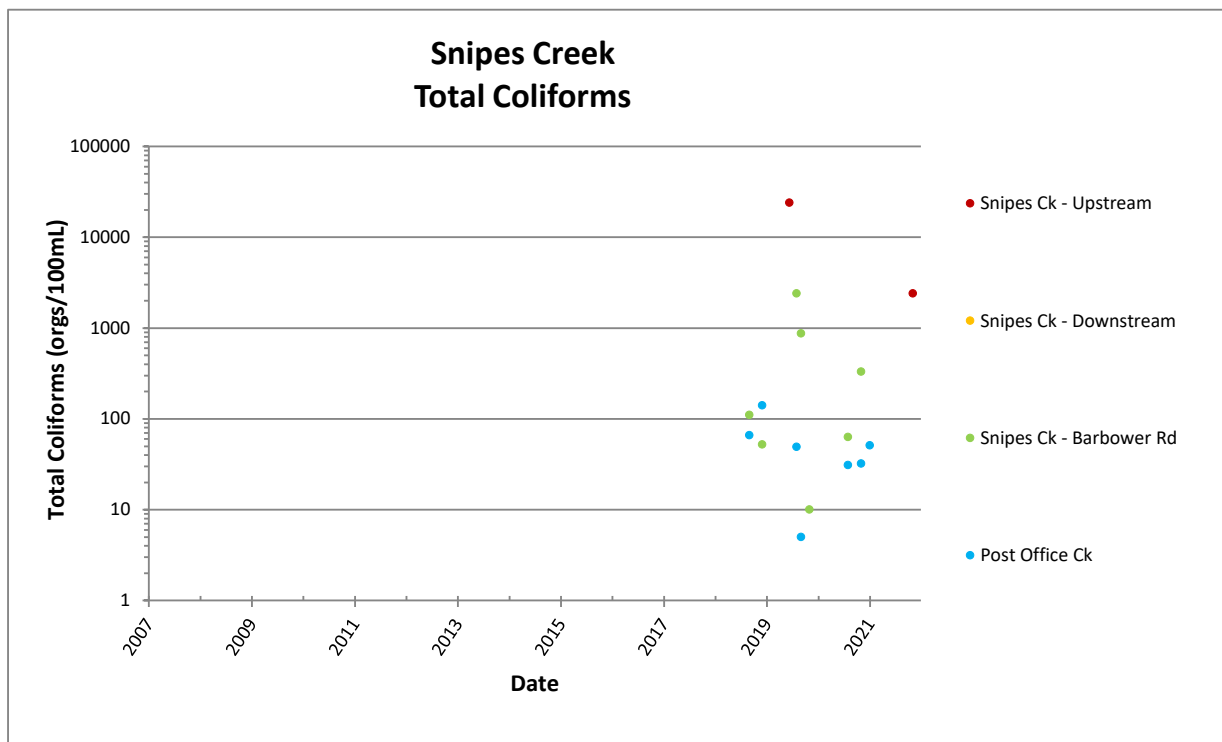


Figure 258 Total coliform statistics – Campaspe River

**Table 90 Total coliform statistics – Campaspe River**

	Ashbourne	CU3-750m US	CU1-250m US	CU2-50m US	CD3-50m DS	CD4-500m DS	CD4a-850m DS	CD5-1.2km DS	CD6-2km DS	CD6a-2.5km DS	CD7-2.9km DS	CD7a-3km DS	CD8-4.1km DS	CD8a-11.5km DS	Redesdale
Maximum				2400	2400		2000	230				550		140	
90th percentile				1988	2400		1692	206				496		87	
75th percentile				1370	2400		1230	165				415		60	
Median				340	2400		460	97				280		36	
25th percentile				245	1325		260	31				174		0	
10th percentile				188	680		139	31				110		0	
Minimum				150	250		59	30				67		0	
Average				963	1683		840	107				299		42	
Number	0	0	0	3	3	0	3	7	0	0	0	3	0	8	0



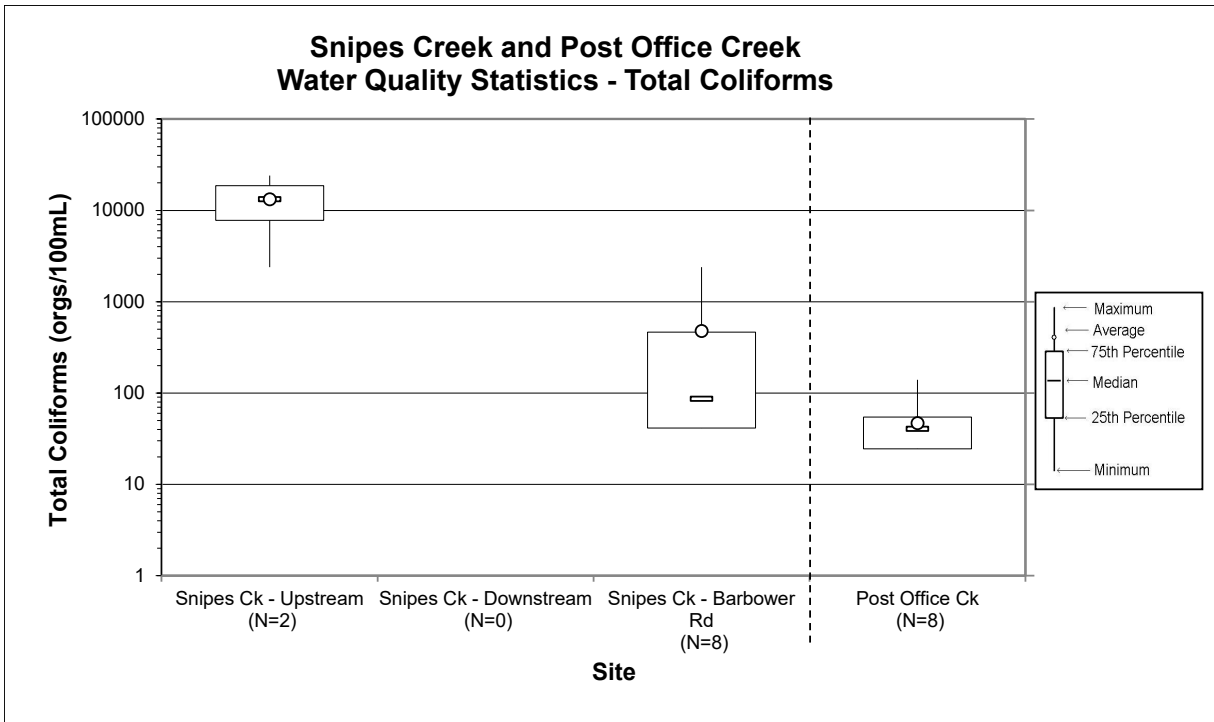


Figure 260 Total coliform statistics – Snipes Creek and Post Office Creek

Table 91 Total coliform statistics – – Snipes Creek and Post Office Creek

	Snipes Ck - Upstream	Snipes Ck - Downstream	Snipes Ck - Barbower Rd	Post Office Ck
Maximum	24000		2400	140
90th percentile	21840		1329	88
75th percentile	18600		465	55
Median	13200		87	41
25th percentile	7800		42	25
10th percentile	4560		7	4
Minimum	2400		0	0
Average	13200		479	47
Number	2	0	8	8

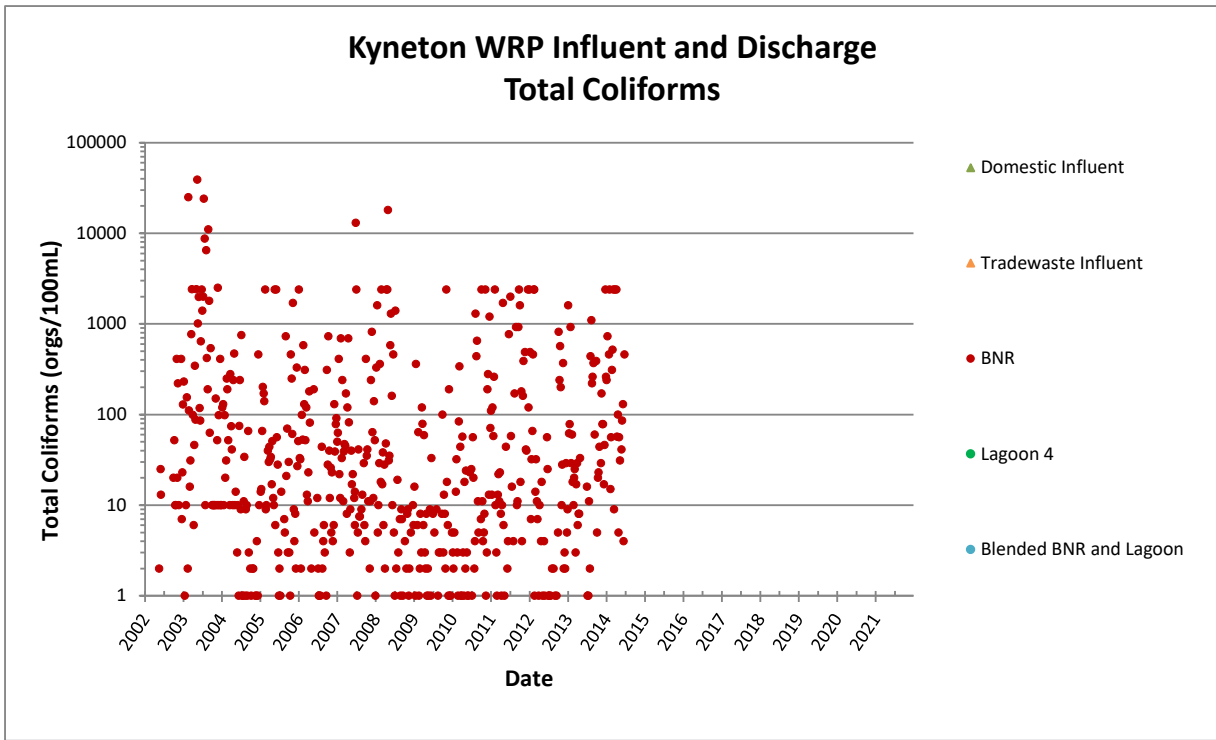


Figure 261 Total coliform data – Kyneton WRP

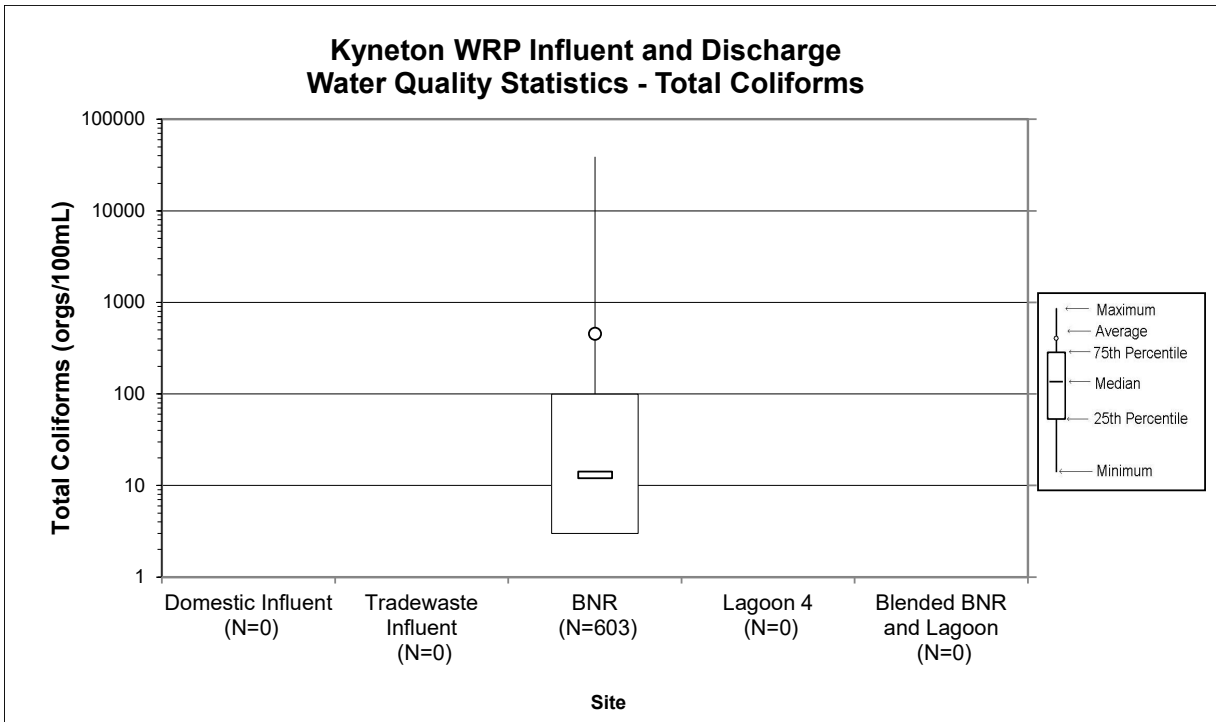
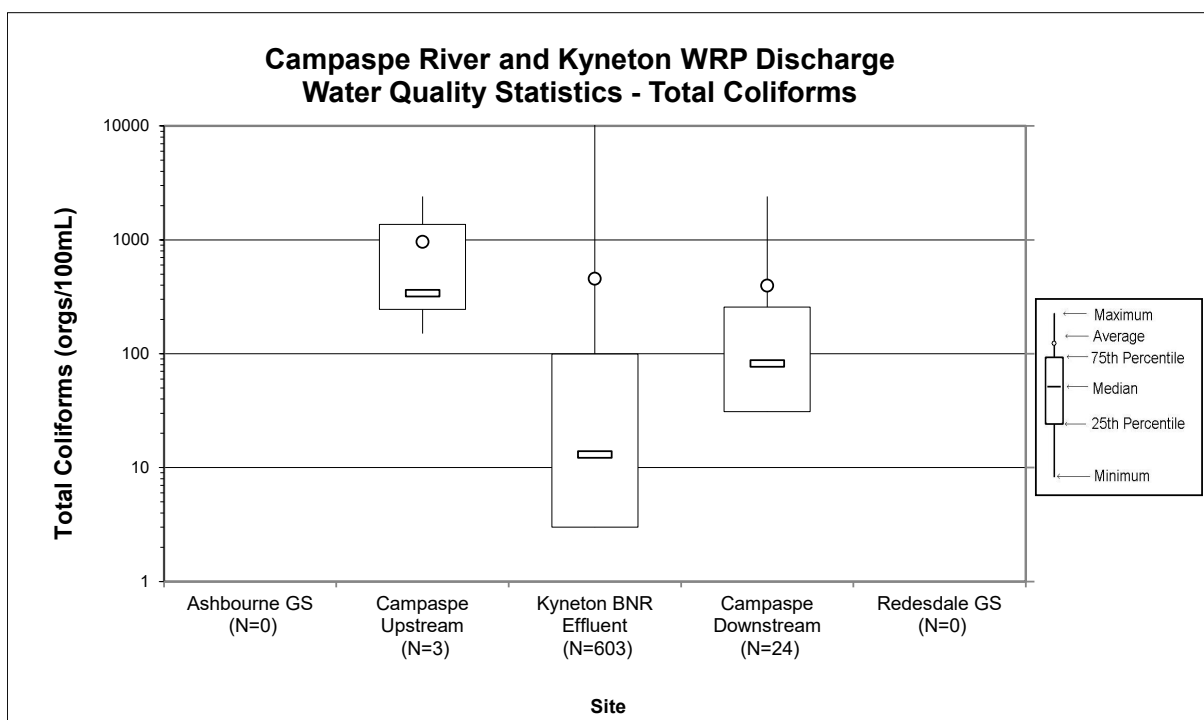


Figure 262 Total coliform statistics – Kyneton WRP



**Table 92 Total coliform statistics – Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum			39000		
90th percentile			722		
75th percentile			100		
Median			13		
25th percentile			3		
10th percentile			0		
Minimum			0		
Average			457		
Number	0	0	603	0	0



**Figure 263 Total coliform statistics – Campaspe River and Kyneton WRP**

**Table 93 Total coliform statistics – Campaspe River and Kyneton WRP**

	Ashbourne GS	Campaspe Upstream	Kyneton BNR Effluent	Campaspe Downstream	Redesdale GS
Maximum		2400	39000	2400	
90th percentile		1988	722	1565	
75th percentile		1370	100	258	
Median		340	13	82	
25th percentile		245	3	31	
10th percentile		188	0	9	
Minimum		150	0	0	
Average		963	457	398	
Number	0	3	603	24	0

# 7. Cations / Salts

## 7.1 Alkalinity

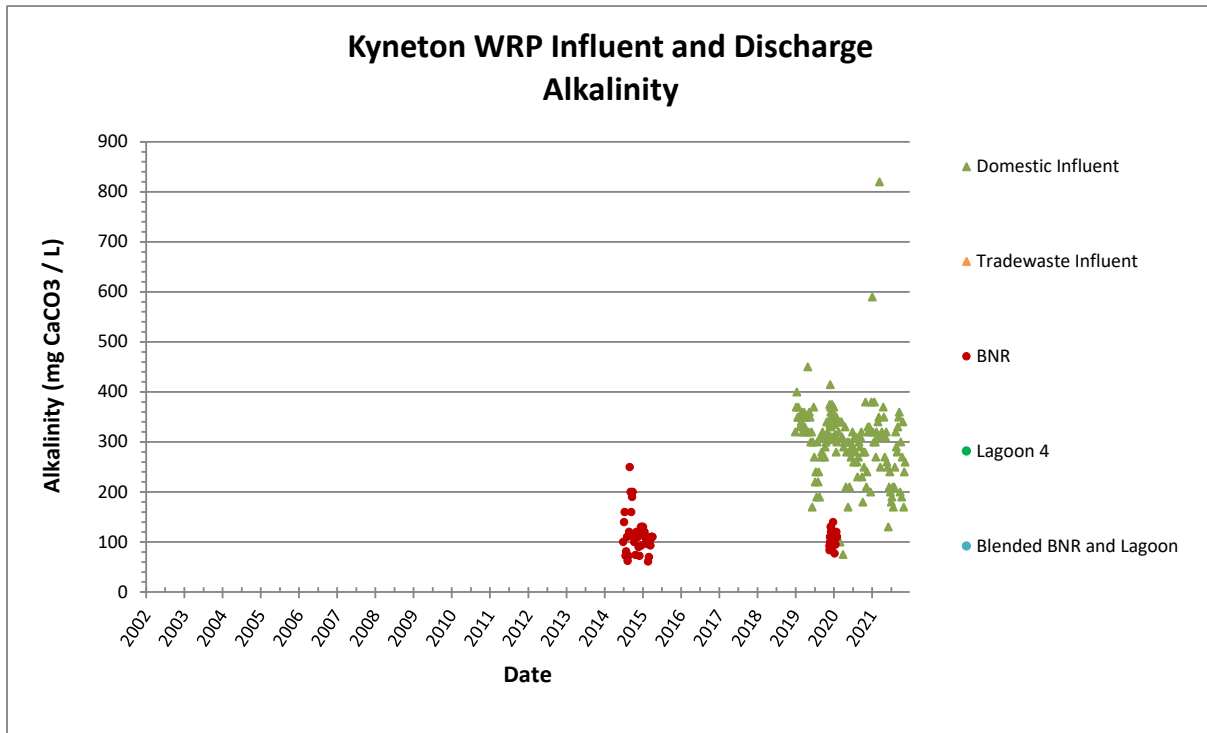


Figure 264 Alkalinity data – Kyneton WRP

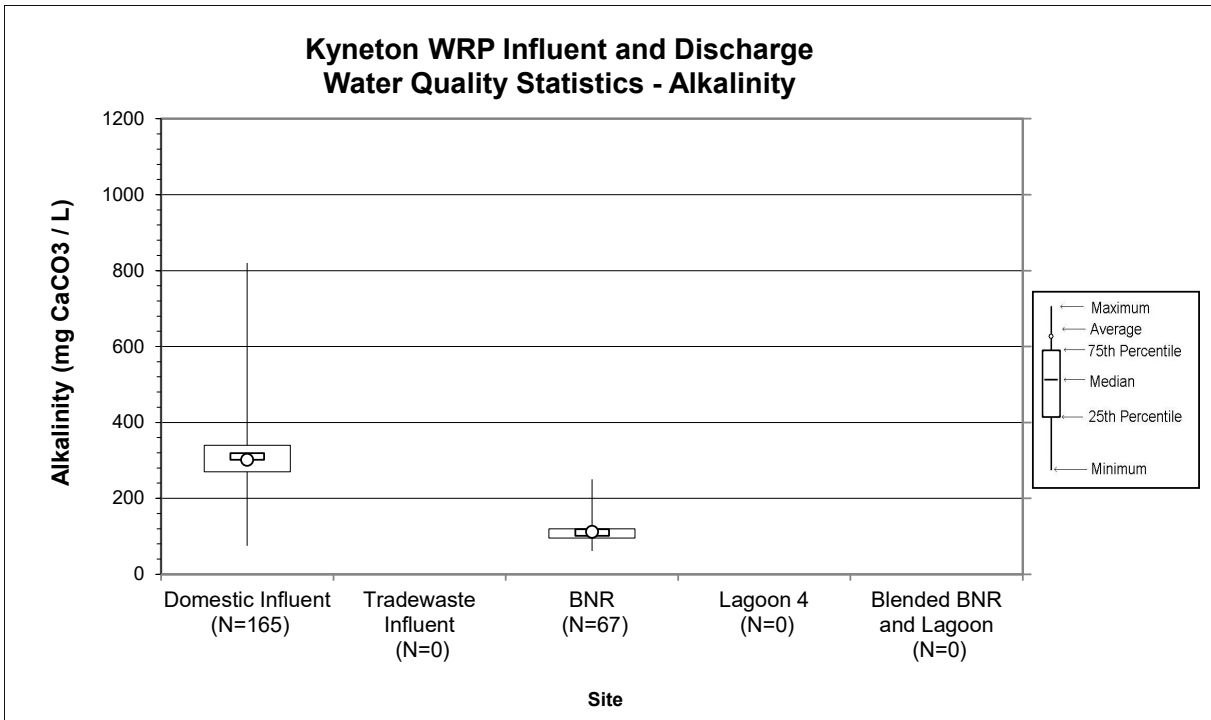


Figure 265 Alkalinity statistics – Kyneton WRP

Table 94 Alkalinity statistics – Kyneton WRP

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum	820		250		
90th percentile	360		140		
75th percentile	340		120		
Median	310		110		
25th percentile	270		95		
10th percentile	210		76		
Minimum	75		61		
Average	302		112		
Number	165	0	67	0	0

## 7.2 Calcium

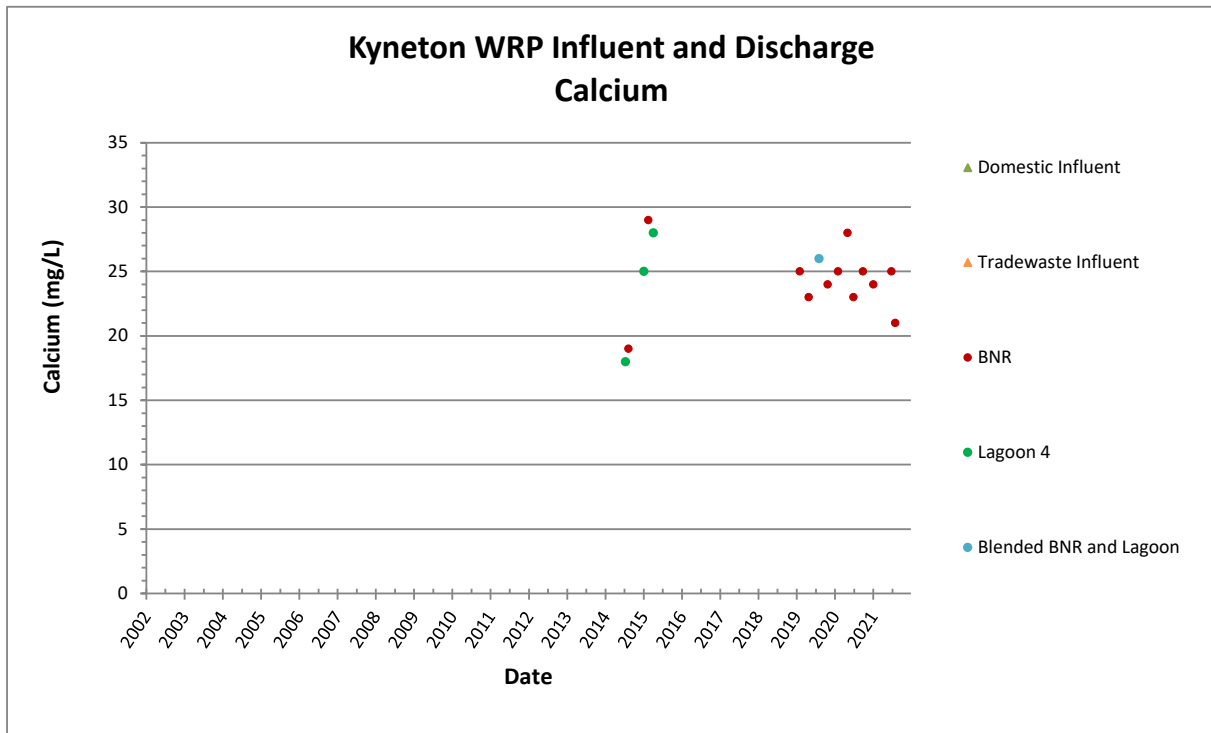


Figure 266 Calcium data – Kyneton WRP

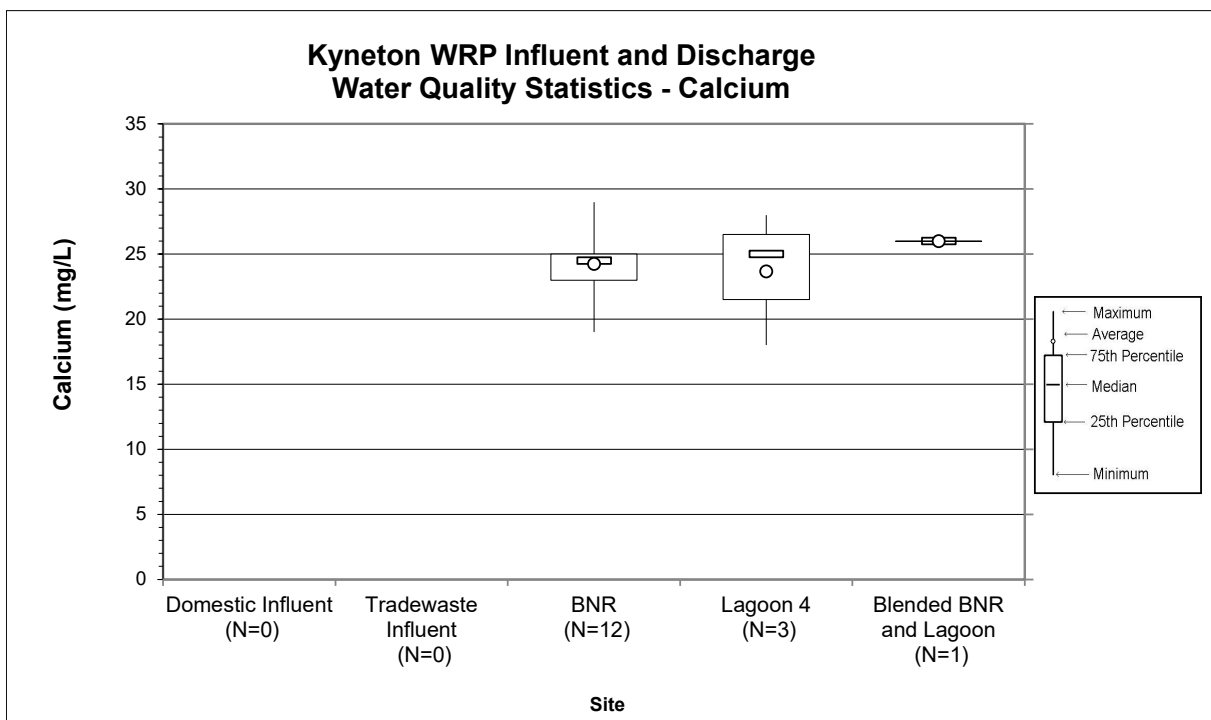


Figure 267 Calcium statistics – Kyneton WRP

**Table 95**      **Calcium statistics – Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum			29	28	26
90th percentile			28	27	26
75th percentile			25	27	26
Median			25	25	26
25th percentile			23	22	26
10th percentile			21	19	26
Minimum			19	18	26
Average			24	24	26
Number	0	0	12	3	1

## 7.3 Chloride

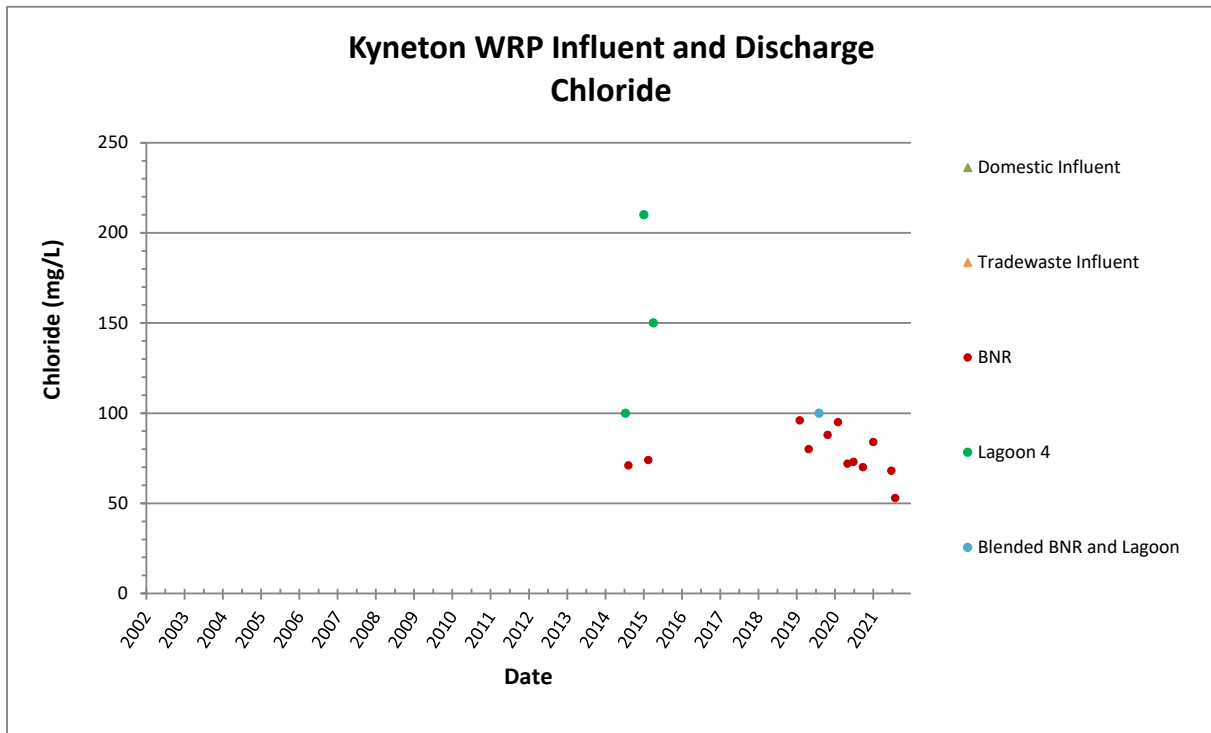


Figure 268 Chloride data – Kyneton WRP

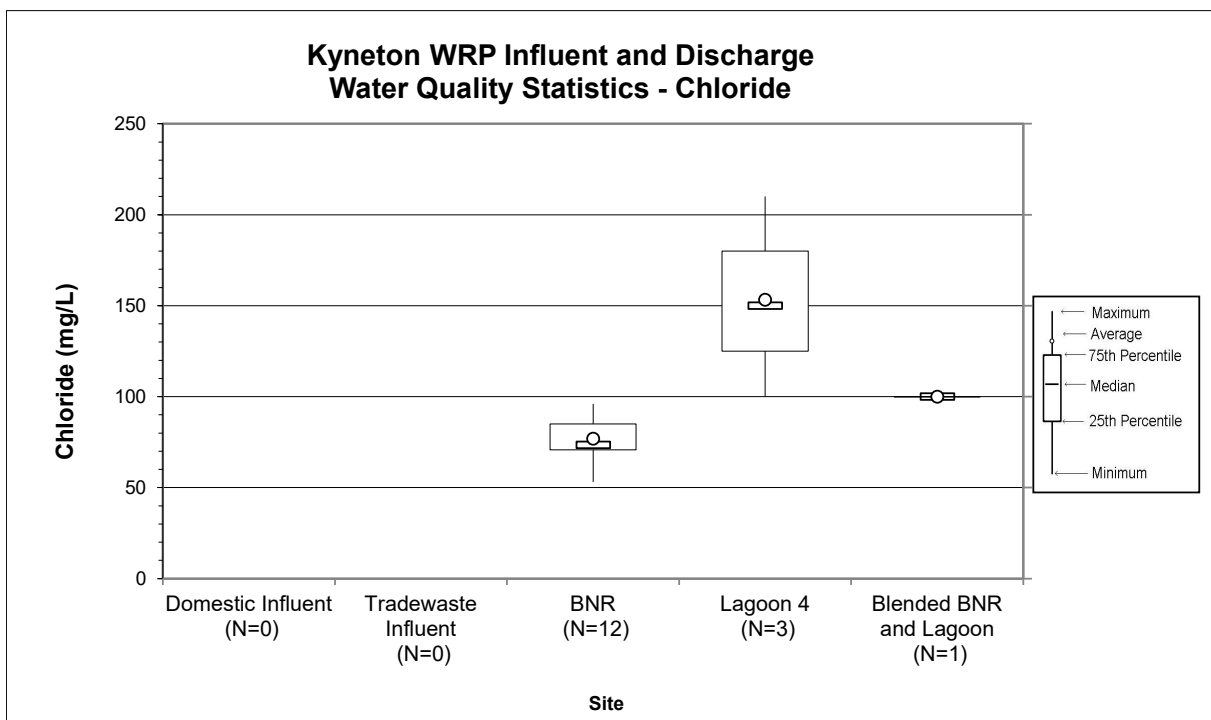


Figure 269 Chloride statistics – Kyneton WRP

**Table 96 Chloride statistics – Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum			96	210	100
90th percentile			94	198	100
75th percentile			85	180	100
Median			74	150	100
25th percentile			71	125	100
10th percentile			68	110	100
Minimum			53	100	100
Average			77	153	100
Number	0	0	12	3	1

# 7.4 Magnesium

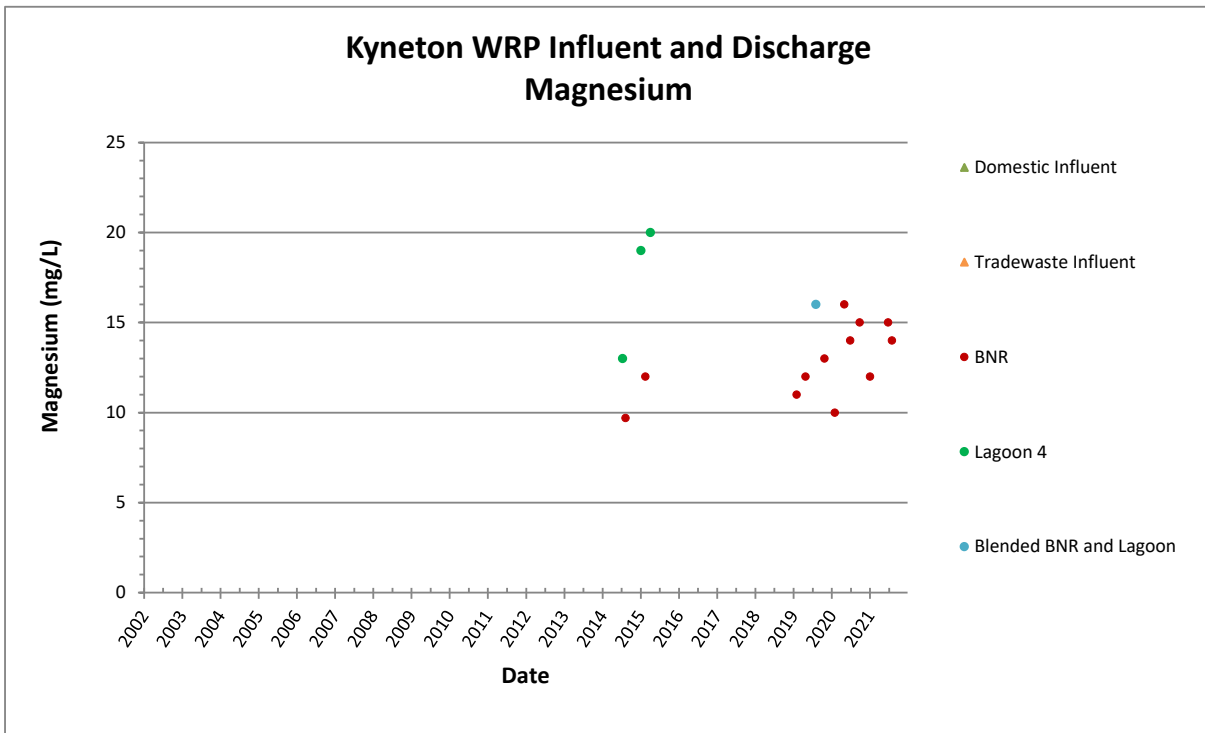


Figure 270 Magnesium data – Kyneton WRP

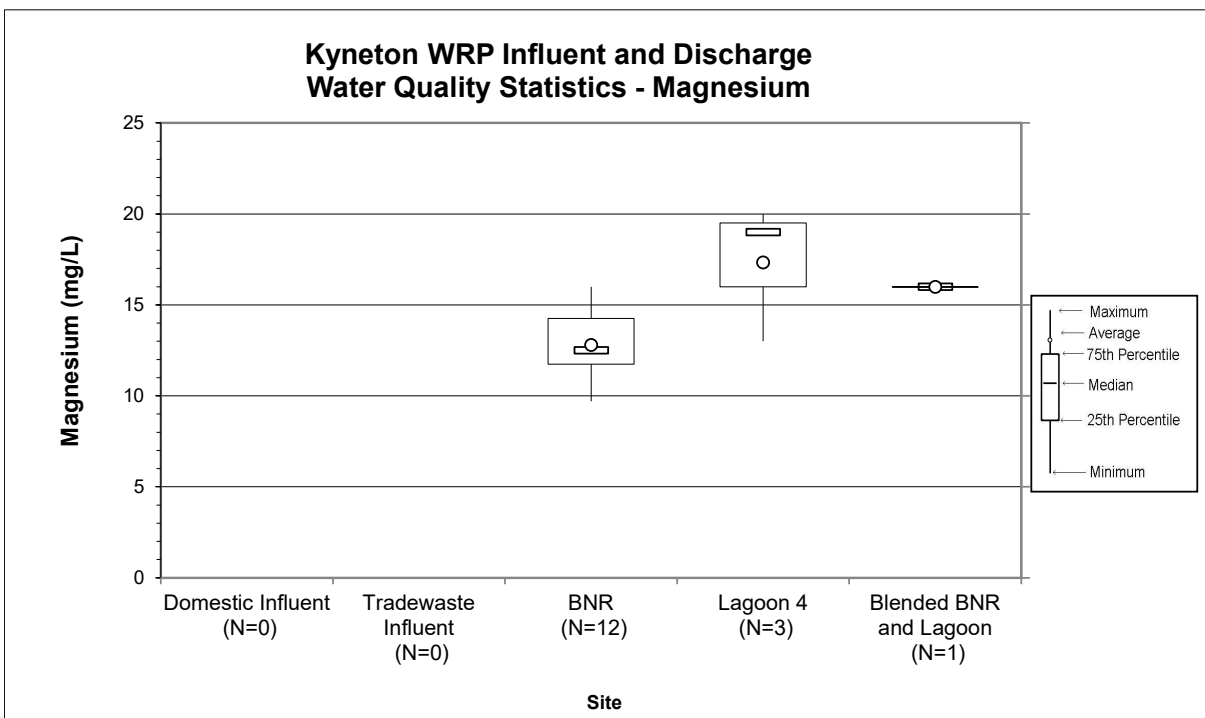


Figure 271 Magnesium statistics – Kyneton WRP



**Table 97**      **Magnesium statistics – Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum			16.0	20.0	16.0
90th percentile			15.0	19.8	16.0
75th percentile			14.3	19.5	16.0
Median			12.5	19.0	16.0
25th percentile			11.8	16.0	16.0
10th percentile			10.1	14.2	16.0
Minimum			9.7	13.0	16.0
Average			12.8	17.3	16.0
Number	0	0	12	3	1



**Table 98 SAR statistics – Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum			2.9	7.0	4.5
90th percentile			2.9	6.3	4.5
75th percentile			2.9	5.6	4.5
Median			2.6	5.2	4.5
25th percentile			2.3	4.8	4.5
10th percentile			2.1	4.3	4.5
Minimum			1.8	3.5	4.5
Average			2.5	5.2	4.5
Number	0	0	10	15	1

## 7.6 Sodium

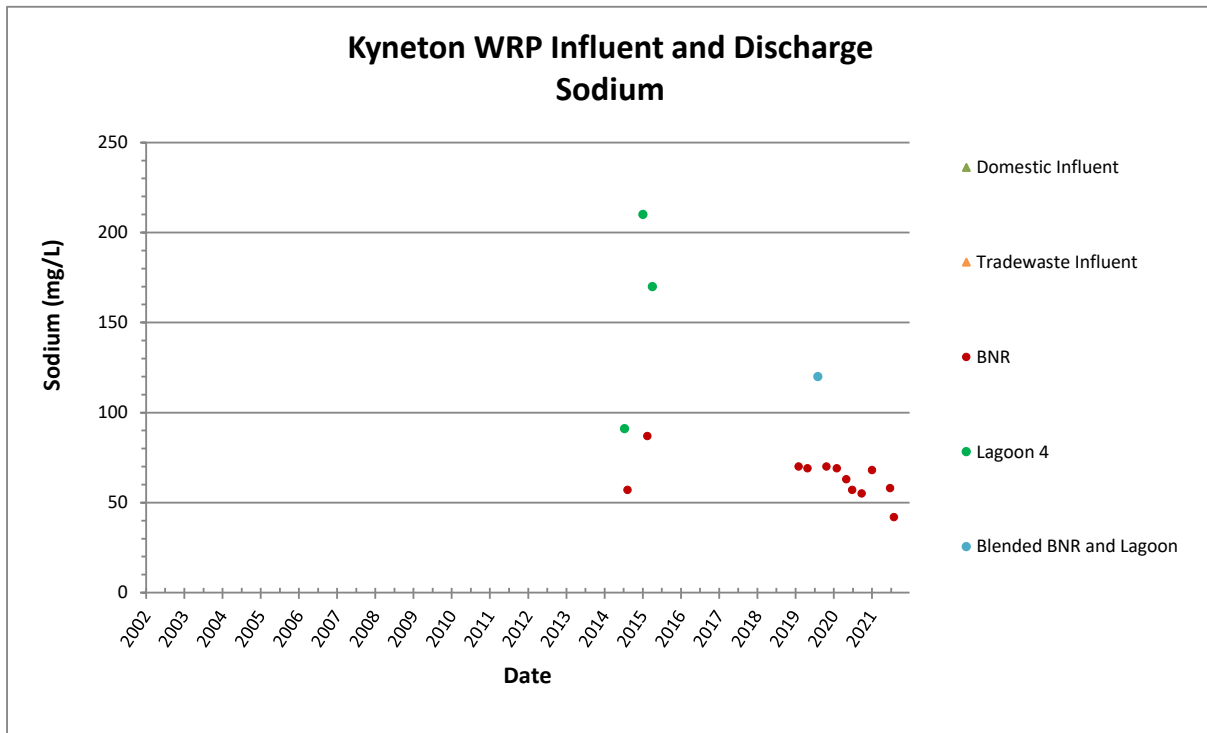


Figure 274 Sodium data – Kyneton WRP

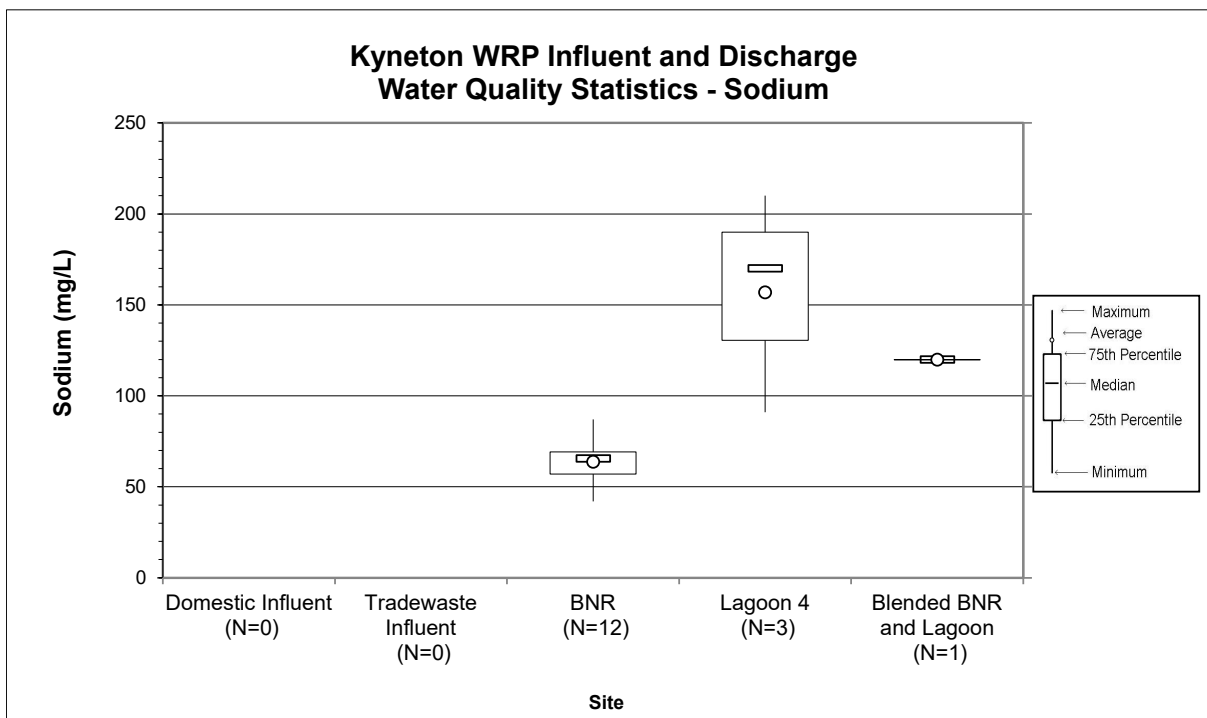


Figure 275 Sodium statistics – Kyneton WRP

**Table 99 Sodium statistics – Kyneton WRP**

	Domestic Influent	Tradewaste Influent	BNR	Lagoon 4	Blended BNR and Lagoon
Maximum			87	210	120
90th percentile			70	202	120
75th percentile			69	190	120
Median			66	170	120
25th percentile			57	131	120
10th percentile			55	107	120
Minimum			42	91	120
Average			64	157	120
Number	0	0	12	3	1



