

APPENDIX 9 WATER QUALITY OF THE RIVER CAMNANT

River name	River stretch	Years	Target	Water Quality
CAMNANT	Conf.R.Gwrangon - Penderyn Res.	2004 to 2006	1	Marginal
CAMNANT	Conf.R.Gwrangon - Penderyn Res.	2003 to 2005	1	Significant Failure
CAMNANT	Conf.R.Gwrangon - Penderyn Res.	2002 to 2004	1	Significant Failure
CAMNANT	Conf.R.Gwrangon - Penderyn Res.	2001 to 2003	1	Significant Failure
CAMNANT	Conf.R.Gwrangon - Penderyn Res.	2000 to 2002	1	Significant Failure
CAMNANT	Conf.R.Gwrangon - Penderyn Res.	1999 to 2001	1	Significant Failure
CAMNANT	Conf.R.Gwrangon - Penderyn Res.	1998 to 2000	1	Significant Failure
CAMNANT	Conf.R.Gwrangon - Penderyn Res.	1997 to 1999	1	Significant Failure
CAMNANT	Conf.R.Gwrangon - Penderyn Res.	1996 to 1998	1	Significant Failure
CAMNANT	Conf.R.Gwrangon - Penderyn Res.	1995 to 1997	1	Significant Failure
CAMNANT	Conf.R.Gwrangon - Penderyn Res.	1994 to 1996	1	Marginal
CAMNANT	Conf.R.Gwrangon - Penderyn Res.	1993 to 1995	1	Significant Failure
CAMNANT	Conf.R.Gwrangon - Penderyn Res.	1992 to 1994	1	Significant Failure
CAMNANT	Conf.R.Gwrangon - Penderyn Res.	1991 to 1993	1	Significant Failure

Nitrate levels in the Camnant range from 2 – 3 on the Environment Agency classification system, suggesting concentrations of between 10 and 20 mg / l), considered to be low or moderately low levels. Phosphates are considered to be high or very high however, ranging from 0.2 mg / l to 1 mg / l.

2004-2006	Average	Standard deviation	Percentile 95	Percentile 90	Percentile 10	Number of samples	Water Quality
Biochemical oxygen demand (mg/l)	1.2	1.05		1.85		36	Compliant
Ammonia (mgN/l)	0.123	0.231		0.187		36	Marginal
Dissolved oxygen (percentage saturation)	91.65	9.88			82.22	36	Marginal
Un-ionised ammonia (mgN/l)	0	0.00173	0.00261			36	Compliant
pH acid	7.81	0.216	7.53			36	Compliant
pH alkali	7.81	0.216	8.09			36	Compliant
Hardness (mg/l CaCO3)	102						
Dissolved copper (ug/l)	91.65	0.76	3.75			36	Compliant
Total zinc (ug/l)	24.24	10.56	37.42			30	Compliant
2003-2005	Average	Standard deviation	Percentile 95	Percentile 90	Percentile 10	Number of samples	Water Quality
Biochemical oxygen demand (mg/l)	1.54	1.12		2.32		36	Marginal
Ammonia (mgN/l)	0.214	0.403		0.324		36	Significant Failure
Dissolved oxygen (percentage saturation)	88.42	8.09			80.7	36	Marginal
Un-ionised ammonia (mgN/l)	0	0.00335	0.00374			36	Compliant
pH acid	7.74	0.268	7.39			36	Compliant
pH alkali	7.74	0.268	8.08			36	Compliant
Hardness (mg/l CaCO3)	102						
Dissolved copper (ug/l)	3.48	1.52	5.45			36	Compliant
Total zinc (ug/l)	37.8	20.69	62.88			30	Compliant
2002-2004	Average	Standard deviation	Percentile 95	Percentile 90	Percentile 10	Number of samples	Water Quality
Biochemical oxygen demand (mg/l)	2.26	1.72		3.41		34	Significant Failure
Ammonia (mgN/l)	0.561	0.871		0.866		34	Significant Failure
Dissolved oxygen (percentage saturation)	84.43	9.66			75.3	34	Significant Failure
Un-ionised ammonia (mgN/l)	0	0.007	0.00996			34	Compliant
pH acid	7.67	0.247	7.36			34	Compliant
pH alkali	7.67	0.247	7.99			34	Compliant
Hardness (mg/l CaCO3)	114						
Dissolved copper (ug/l)	4.07	1.59	6.13			34	Compliant
Total zinc (ug/l)	48.12	29.51	83.88			33	Compliant
2001-2003	Average	Standard deviation	Percentile 95	Percentile 90	Percentile 10	Number of samples	Water Quality
Biochemical oxygen demand (mg/l)	2.68	1.86		4.93		29	Significant Failure
Ammonia (mgN/l)	0.635	0.913		1.409		29	Significant Failure
Dissolved oxygen (percentage saturation)	81.8	11.54			67.01	29	Significant Failure
Un-ionised ammonia (mgN/l)	0.01	0.00817	0.01827			29	Compliant
pH acid	7.61	0.222	7.24			29	Compliant
pH alkali	7.61	0.222	7.97			29	Compliant
Hardness (mg/l CaCO3)	104						
Dissolved copper (ug/l)	5.12	2.49	9.84			29	Compliant
Total zinc (ug/l)	55.51	31.46	93.12			29	Compliant
200-2002	Average	Standard deviation	Percentile 95	Percentile 90	Percentile 10	Number of samples	Water Quality
Biochemical oxygen demand (mg/l)	3.13	1.95		5.54		28	Significant Failure
Ammonia (mgN/l)	0.808	1.034		1.759		28	Significant Failure
Dissolved oxygen (percentage saturation)	79.69	13.69			62.14	28	Significant Failure
Un-ionised ammonia (mgN/l)	0.01	0.00813	0.02046			27	Compliant
pH acid	7.57	0.162	7.3			28	Compliant
pH alkali	7.57	0.162	7.83			28	Compliant
Hardness (mg/l CaCO3)	93						
Dissolved copper (ug/l)	5.11	2.7	10.23			28	Compliant
Total zinc (ug/l)	48.2	31.08	106.86			28	Compliant