

APPENDIX “D”

➤ TABLES

Table 1:	Selected water quality data measured in the northwest basin of Sheardown Lake in May, 2007
Table 2:	Selected water quality data measured in the northwest basin of Sheardown Lake in August, 2007
Table 3:	Summary of selected trophic status classification schemes for lakes
Table 4:	Results of mass-balance modeling to predict the effect of discharge of treated sewage effluent on water quality in the northwest basin of Sheardown Lake

Table 1: Selected water quality data measured in the northwest basin of Sheardown Lake in May, 2007

		Sample Date:	2007-05-06	2007-05-06		2007-05-06		2007-05-06	2007-05-06		2007-05-08	2007-05-08	2007-05-08	2007-05-08			2007-05-08	2007-05-08		Lake-Wide Mean		
		Sample ID:	DLO-01-5-S	DLO-01-5-B		DLO-01-1-S		DLO-01-1-B	DLO-01-3-S	DLO-01-3-B		DLO-02-1-S	DLO-02-1-BA	DLO-02-1-BB	DLO-02-1-BC	DLO-02-1-B		DLO-02-6-S	DLO-02-6-B			
		Descriptor:	Surface	Bottom		Surface		Bottom	Surface	Bottom		Surface	Bottom: Rep 1	Bottom: Rep 2	Bottom: Rep 3	Bottom: Mean		Surface	Bottom			
PARAMETER	UNITS	MDL																				
Alkalinity (as CaCO ₃)	mg/L	5	64	60		62		61		67	63		77	77	78	77	77		77	78		77
pH			6.82	6.73		6.81		6.79		6.88	6.82		7.06	6.97	6.96	7.01	6.98		7.05	7.04		7.03
Conductivity	uS/cm	5	120	115		121		119		128	121		155	157	157	157	157		157	156		156
TDS (COND - CALC)	mg/L	5	78	75		79		77		83	79		101	102	102	102	102		102	101		102
Total Suspended Solids	mg/L	2	<2	<2		<2		<2		<2	<2		<2	<2	<2	<2	<2		<2	<2		<2
Turbidity	NTU	0.1	0.2	0.2		0.4		0.2		0.3	0.2		0.5	0.8	0.7	0.7	0.7		0.4	0.4		1
Total Organic Carbon	mg/L	0.5	1.7	1.7		1.9		1.8		2.0	2.0		2.1	1.8	2.0	1.9	1.9		2.1	2.1		2.0
Dissolved Organic Carbon	mg/L	0.5	2.0	1.8		1.8		1.8		2.0	1.9		2.0	1.9	2.0	1.9	1.9		2.0	2.0		2.1
Total Kjeldahl Nitrogen	mg/L N	0.05	0.07	<0.05		<0.05		<0.05		0.07	0.05		<0.05	0.13	0.11	<0.05	0.12		0.06	0.10		0.08
N-NH ₃ (Ammonia)	mg/L N	0.02	0.02	<0.02		<0.02		<0.02		<0.02	<0.02		0.04	<0.02	<0.02	<0.02	<0.02		<0.02	<0.02		<0.02
N-NO ₂ (Nitrite)	mg/L N	0.0020	<0.0020	<0.0020		<0.0020		<0.0020		<0.0020	<0.0020		<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002		<0.002
N-NO ₃ (Nitrate)	mg/L N	0.10	<0.10	<0.10		<0.10		<0.10		<0.10	<0.10		<0.10	<0.10	<0.10	<0.10	<0.10		<0.10	<0.10		<0.10
NO ₂ + NO ₃ as N	mg/L N	0.10	<0.10	<0.10		<0.10		<0.10		<0.10	<0.10		<0.10	<0.10	<0.10	<0.10	<0.10		<0.10	<0.10		<0.10
Total Nitrogen	mg/L	Calculated	0.12	0.08		0.08		0.08		0.12	0.10		0.08	0.18	0.16	0.08	0.14		0.11	0.15		0.13
Total Phosphorus	mg/L	0.003	<0.003	<0.003		<0.003		<0.003		<0.003	<0.003		<0.003	<0.003	<0.003	0.003	<0.003		<0.003	<0.003		<0.003
Chlorophyll <i>a</i>	µg/L	0.2	0.4	-		0.6		-		0.4	-		<0.2	-	-	-			<0.2	-		<0.2
Pheophytin <i>a</i>	µg/L	0.2	<0.2	-		<0.2		-		<0.2	-		1.1	-	-	-			0.5	-		1
Total Chlorophyll <i>a</i>	µg/L	Calculated	0.5			0.7				0.5			1.2						0.6			1

Table 2: **Selected water quality data measured in the northwest basin of Sheardown Lake in August, 2007**

		Sample Date:	2007-08-05	2007-08-05		2007-08-05	2007-08-05		2007-08-05	2007-08-05		2007-08-07	2007-08-07		2007-08-07	2007-08-07		Lake-Wide Mean
		Sample ID:	DLO-01-1-S	DLO-01-1-B		DLO-01-2-S	DLO-01-2-B		DLO-01-4-S	DLO-01-4-B		DLO-01-5-S	DLO-01-5-B		DLO-01-7-S	DLO-01-7-B		
		Descriptor:	Surface	Bottom		Surface	Bottom		Surface	Bottom		Surface	Bottom		Surface	Bottom		
PARAMETER	UNITS	MRL																
Alkalinity as CaCO ₃	mg/L	5	51	52		50	50		51	50		50	50		51	53		51
pH			8.29	8.36		8.32	8.30		8.30	8.34		8.19	8.15		8.14	8.19		8.26
Conductivity	uS/cm	5	104	105		103	103		104	103		103	103		104	110		104
TDS (COND - CALC)	mg/L	5	68	68		67	67		68	67		67	67		68	72		68
Total Suspended Solids	mg/L	2	<2	<2		<2	3		<2	<2		<2	<2		<2	<2		<2
Turbidity	NTU	0.1	0.4	0.5		0.3	1.4		0.4	0.3		0.2	0.2		0.3	0.3		0.4
Bromide	mg/L	0.25	<0.25	<0.25		<0.25	<0.25		<0.25	<0.25		<0.25	<0.25		<0.25	<0.25		<0.25
Chloride	mg/L	1	1	1		1	1		1	1		1	1		1	1		1
Sulphate	mg/L	1	1	1		1	1		1	1		3	3		3	3		2
Phenols	mg/L	0.001	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001
Total Organic Carbon	mg/L	0.5	2.1	2.0		2.0	2.0		2.0	2.2		1.6	1.5		1.7	1.6		1.9
Dissolved Organic Carbon	mg/L	0.5	2.1	2.3		2.0	2.0		1.9	2.0		1.7	1.8		1.8	1.7		1.9
Total Kjeldahl Nitrogen	mg/L	0.10	0.13	0.27		<0.10	0.18		0.14	<0.10		0.20	0.13		0.18	<0.10		0.14
N-NH3 (Ammonia)	mg/L	0.02	<0.02	<0.02		<0.02	<0.02		0.03	<0.02		0.06	0.03		<0.02	0.02		<0.02
N-NO2 (Nitrite)	mg/L	0.002	<0.002	<0.002		<0.002	<0.002		<0.002	<0.002		<0.002	<0.002		<0.002	<0.002		<0.002
N-NO3 (Nitrate)	mg/L	0.10	<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10
NO2 + NO3 as N	mg/L	0.10	<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10	<0.10		<0.10
Total Nitrogen	mg/L	Calculated	0.18	0.32		0.10	0.23		0.19	0.10		0.25	0.18		0.23	0.10		0.19
Total Phosphorus	mg/L	0.003	<0.003	<0.003		0.003	<0.003		<0.003	<0.003		<0.003	<0.003		<0.003	0.003		<0.003
Chlorophyll-a	mg/m3	0.2	<0.2	<0.2		0.2	1.3		0.9	<0.2		<0.2	<0.2		0.2	0.2		0.3
Pheophytin-a	mg/m3	0.2	<0.2	<0.2		<0.2	<0.2		0.4	4.9		2.0	1.6		2.4	1.4		1.3
Total Chlorophyll a	mg/m3	Calculated	<0.2	<0.2		0.3	1.4		1.0	5.0		2.1	1.7		2.6	1.6		1.6