Regional Infrastructure Pty Ltd
Inverell Regional Livestock Exchange (IRLX)
Bannockburn Rd, Inverell NSW 2360
EPL 10802
Livestock Intensive Activities

Point 1 (Effluent)

Sampling Frequency			Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually
Date Sampled	**Date Obtained**	**Date Published**	**pH (pH units)**	**Sodium Adsorption Ratio**	**Electrical Conductivity (µS/cm)**	**Total Suspended Solids (mg/L)**	**Calcium (mg/L)**	**Magnesium (mg/L)**	**Sodium (mg/L)**	**Potassium (mg/L)**	**Ammonia (mgN/L)**	**Nitrate as N (mgN/L)**	**Total Kjeldahl Nitrogen (mg/L)**	**Total Phosphorus (mg/L)**	**Biochemical Oxygen Demand (mg/L)**
20-Sep-12	7-Dec-13		7.85	3.31	2970	808	65	36	134	280	122	<0.10	143	33.6	172
16-Jan-13	30-Mar-13		7.67	5.4	3150	1060	70	43	233	596	105	0.04	398	113	56
24-Apr-13 (re-sample)	3-May-13		7.91	3.04	2830	332	69.0	42	130	344	130	<0.01	140	36.5	61
8-Jul-13	6-Sep-13		7.91	3.02	2930	207	89	56	148	325	95.2	<0.10	145	37	78
29-Jan-14	21-Feb-14		7.99	3.69	4330	337	120	86	217	425	125	<0.10	160	42	80
16-Jul-14	3-Sep-14		8.01	3.24	3770	397	109	76	180	360	146	<0.05	204	36.3	173
28-Jan-15	25-Feb-15		7.82	4.12	3130	601	69	55	189	392	98.7	<0.1	169	32.2	76
14-Jul-15	7-Aug-15		7.78	3.12	3320	394	86	54	150	366	156	< 0.1	195	40.2	183
7-Mar-16	14-Mar-16		8.02	3.78	3720	314	91	66	194	481	108	0.02	129	38.2	55
23-Jun-16	26-Sep-16		7.91	3.36	2830	188	67	42	143	336	96	< 0.1	127	32.6	< 2
2-Feb-17	17-Feb-17	22-Jul-17	8.04	3.8	2500	203	55	44	136	316	67	< 0.1	99.3	31.4	80

Point 2 (Spillway of Wet Weather Storage)

Sampling Frequency (each overflow event)											
Date Sampled	**Date Obtained**	**Date Published**	**pH (pH units)**	**Electrical Conductivity (µS/cm)**	**Total Suspended Solids (mg/L)**	**Ammonia (mgN/L)**	**Nitrate as N (mgN/L)**	**Total Kjeldahl Nitrogen (mg/L)**	**Total Nitrogen (mg/L)**	**Total Phosphorus (mg/L)**	**Reactive Phosphorus (mgP/L)**

Point 3 (Soils -average of topsoil and subsoil from two management units)

Sampling Frequency			Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	Yearly	3 Yearly	3 Yearly	3 Yearly	3 Yearly	3 Yearly	3 Yearly
Date Sampled	**Date Obtained**	**Date Published**	**pH (pH units)**	**Sodium Adsorption Ratio**	**Electrical Conductivity (µS/cm)**	**Exchangeable Calcium (mg/kg)**	**Exchangeable Magnesium (mg/kg)**	**Exchangeable Sodium (mg/kg)**	**Exchangeable Potassium (mg/kg)**	**Cation Exchange Capacity (meq/100g)**	**Chloride (mg/kg)**	**Nitrate (mgN/kg)**	**Available Phosphorus (mgP/L)**	**Organic Carbon (%)**	**Aggregate Stability (AET)**	**Bulk Density (kg/m^3)**	**Saturated Hydraulic Conductivity (mm/wk)**	**Total Nitrogen (mg/kg)**	**Total Phosphorus (mg/kg)**	**Phosphorus Sorption Capacity (mg/kg)**
20-Sep-12			7.75	3.53	123	51.9	23.4	0.9	1.1	77.3	<100	<5.8	3.5	1.49	4.5	1553	2953	1068	191	1680
8-Jul-13			7.05	3.23	96	44.3	24.6	1.0	1.8	71.7	60	11.7	5.7	1.88						
16-Jul-14	3-Sep-14		6.7	2.53	203	53.9	25.5	1.3	3.1	83.7	175	56.2	6.9	1.63						
14-Jul-15	7-Aug-15		8.025	4.00	157.5	48.8	24.8	1.6	1.4	76.5	98	23.3	6.0	1.25	4	1515	< 84	1272.5	223	1715
23-Jun-16	26-Sep-16		7.9	4.32	130.0	50.2	18.7	1.4	2.5	72.8	65	28.4	20.3	1.43						

Point 4 (Tailwater Pond)

Sampling Frequency (each overflow event)										
Date Sampled	**Date Obtained**	**Date Published**	**pH (pH units)**	**Electrical Conductivity (µS/cm)**	**Total Suspended Solids (mg/L)**	**Ammonia (mgN/L)**	**Nitrate as N (mgN/L)**	**Total Nitrogen (mg/L)**	**Total Phosphorus (mg/L)**	**Reactive Phosphorus (mgP/L)**
21-Mar-17	28-Mar-17	22-Jul-17	7.52	655	480	0.27	7.96	17.7	5.04	-
30-Mar-17	26-Apr-17	22-Jul-17	7.34	442	602	0.11	23.2	31.4	5.55	-

Point 5 (Groundwater- BH1)

Sampling Frequency			Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually
Date Sampled	**Date Obtained**		**pH (pH units)**	**Electrical Conductivity (µS/cm)**	**Total Dissolved Solids (mg/L)**	**Ammonia (mgN/L)**	**Nitrate (mgN/L)**	**Total Nitrogen (mg/L)**	**Total Phosphorus (mg/L)**	**Reactive Phosphorus (mgP/L)**	**Standing Water Level (measured)**
20-Sep-12	7-Dec-13		7.98	1390	892	0.5	0.07	0.90	0.05	0.07	16.34
16-Jan-13	30-Mar-13		7.76	1350	866	0.67	0.07	1.00	0.18	0.16	16.11
8-Jul-13	6-Sep-13		7.84	1330	819	0.64	0.05	0.80	0.13	0.15	16.08
29-Jan-14	21-Feb-14		7.89	1400	849	0.62	0.01	0.60	0.22	0.09	16.01
16-Jul-14	3-Sep-14		7.75	1340	842	0.58	<0.01	0.60	0.04	0.04	16.25
28-Jan-15	25-Feb-15		7.89	1360	854	0.63	0.03	1.10	0.22	0.12	16.54
14-Jul-15	7-Aug-15		7.89	1340	807	0.68	0.02	0.90	0.12	0.04	16.99
26-Jan-16	14-Mar-16		8.02	1340	749	0.45	0.14	1.20	0.23	0.17	16.92
22-Jun-16	26-Sep-16		7.8	1350	758	0.54	0.03	0.60	0.08	0.05	16.4
2-Feb-17	17-Feb-17	22-Jul-17	7.88	1350	883	0.64	< 0.01	0.60	0.08	0.07	16.59

Point 7 (Creek Upstream)

Sampling Frequency (after every overflow from Point 2 or 4)																	
Date Sampled	**Date Obtained**	**Date Published**	**pH (pH units)**	**Sodium Adsorption Ratio**	**Electrical Conductivity (µS/cm)**	**Total Suspended Solids (mg/L)**	**Calcium (mg/L)**	**Magnesium (mg/L)**	**Sodium (mg/L)**	**Potassium (mg/L)**	**Ammonia (mgN/L)**	**Nitrate as N (mgN/L)**	**Total Kjeldahl Nitrogen (mg/L)**	**Total Nitrogen (mg/L)**	**Total Phosphorus (mg/L)**	**Reactive Phosphorus (mgP/L)**
21-Mar-17	28-Mar-17	22-Jul-17	7.79	0.65	273	6	21	12	15	8	0.22	< 0.01	1.5	1.5	0.51	-
30-Mar-17	26-Apr-17	22-Jul-17	7.65	0.61	146	109	8	5	9	4	0.07	0.22	1.8	2	0.74	-

Point 8 (Creek Downstream)

Sampling Frequency (after every overflow from Point 2 or 4)															
Date Sampled	**Date Obtained**	**Date Published**	**pH (pH units)**	**Sodium Adsorption Ratio**	**Electrical Conductivity (µS/cm)**	**Total Suspended Solids (mg/L)**	**Calcium (mg/L)**	**Magnesium (mg/L)**	**Sodium (mg/L)**	**Potassium (mg/L)**	**Ammonia (mgN/L)**	**Nitrate as N (mgN/L)**	**Total Kjeldahl Nitrogen (mg/L)**	**Total Nitrogen (mg/L)**	**Total Phosphorus (mg/L)**
21-Mar-17	28-Mar-17	22-Jul-17	8.29	1.85	544	132	21	11	42	71	0.29	0.9	7.3	9.0	3.13
30-Mar-17	26-Apr-17	22-Jul-17	7.47	0.6	179	60	9	5	9	13	0.09	0.39	2.4	2.8	1.29

Point 13 (Groundwater- average of BH2 and BH2A)

Sampling Frequency			Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually
Date Sampled	**Date Obtained**	**Date Published**	**pH (pH units)**	**Electrical Conductivity (µS/cm)**	**Total Dissolved Solids (mg/L)**	**Ammonia (mgN/L)**	**Nitrate (mgN/L)**	**Total Nitrogen (mg/L)**	**Total Phosphorus (mg/L)**	**Reactive Phosphorus (mgP/L)**	**Standing Water Level (measured)**
20-Sep-12	7-Dec-13		8.39	985	748	0.09	0.07	0.35	0.86	0.34	4.37
16-Jan-13	30-Mar-13		8.34	922	558	0.05	0.14	0.55	0.64	0.62	5.82
8-Jul-13	6-Sep-13		8.47	911	1018	0.18	0.05	0.55	1.71	0.48	5.22
29-Jan-14	21-Feb-14		8.38	954	581	0.08	0.08	0.35	0.66	0.49	5.36
16-Jul-14	3-Sep-14		8.35	967	821	0.12	<0.01	<0.6	4.74	0.47	6.13
28-Jan-15	25-Feb-15		8.34	970	592	2.0	0.02	5.90	0.90	0.7	6.04
14-Jul-15	7-Aug-15		8.43	973.5	1164	0.295	0.025	1.10	4.755	0.455	6.02
26-Jan-16	14-Mar-16		8.075	626	474	1.705	0.05	2.65	1.02	0.895	5.545
22-Jun-16	26-Sep-16		8.245	926.5	579	0.495	0.05	1.15	1.31	0.67	5.815
2-Feb-17	17-Feb-17	22-Jul-17	8.405	881.5	630.5	0.27	< 0.01	0.70	1.895	0.36	5.295

Point 15 (Groundwater- BH3)

Sampling Frequency			Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually
Date Sampled	**Date Obtained**	**Date Published**	**pH (pH units)**	**Electrical Conductivity (µS/cm)**	**Total Dissolved Solids (mg/L)**	**Ammonia (mgN/L)**	**Nitrate (mgN/L)**	**Total Nitrogen (mg/L)**	**Total Phosphorus (mg/L)**	**Reactive Phosphorus (mgP/L)**	**Standing Water Level (measured)**
20-Sep-12	7-Dec-13		8.28	439	288	0.03	0.04	0.30	0.30	0.07	5.13
16-Jan-13	30-Mar-13		8.07	434	276	0.05	0.21	1.00	0.50	0.10	5.65
8-Jul-13	6-Sep-13		8.18	427	301	0.03	0.04	0.40	0.26	0.11	6.45
29-Jan-14	21-Feb-14		8.06	456	275	0.11	0.17	0.80	0.26	0.1	7.09
16-Jul-14	3-Sep-14		8.12	452	270	0.05	0.06	0.20	0.23	0.13	7.4
28-Jan-15	25-Feb-15		8.11	436	255	0.18	0.24	1.10	0.21	0.15	7.71
14-Jul-15	7-Aug-15		7.91	430	233	0.11	0.06	0.40	0.17	0.15	7.61
26-Jan-16	14-Mar-16		8.15	431	233	0.16	0.01	0.40	0.11	0.09	6.95
22-Jun-16	26-Sep-16		8.05	413	260	0.04	0.05	0.20	0.16	0.13	7.42
2-Feb-17	17-Feb-17	22-Jul-17	8.13	397	302	0.08	< 0.01	0.30	0.09	0.07	6.23

Point 16 (Groundwater- BH4)

Sampling Frequency			Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually
Date Sampled	**Date Obtained**	**Date Published**	**pH (pH units)**	**Electrical Conductivity (µS/cm)**	**Total Dissolved Solids (mg/L)**	**Ammonia (mgN/L)**	**Nitrate (mgN/L)**	**Total Nitrogen (mg/L)**	**Total Phosphorus (mg/L)**	**Reactive Phosphorus (mgP/L)**	**Standing Water Level (measured)**
20-Sep-12	7-Dec-13		7.71	2100	1360	1.68	0.27	7.40	1.3	0.13	8.11
16-Jan-13	30-Mar-13		7.17	2290	1430	2.88	0.12	14.40	4.26	0.59	8.88
8-Jul-13	6-Sep-13		7.04	2450	2120	7.76	0.03	38.50	9.34	0.48	8.62
29-Jan-14	21-Feb-14		7.43	2400	1440	4.88	0.04	11.80	4.02	0.26	9.56
16-Jul-14	3-Sep-14		7.08	2470	1430	3.42	0.01	12.10	4.12	0.08	9.89
28-Jan-15	25-Feb-15		7.76	2200	1270	5.41	0.03	7.70	3.92	0.12	10.25
14-Jul-15	7-Aug-15		7.05	2830	1760	7	0.02	23.90	9.67	0.14	6.69
26-Jan-16	14-Mar-16		7.52	2420	1370	5.8	0.07	13.00	8.2	0.68	9.36
22-Jun-16	26-Sep-16		7.28	2280	1230	4.02	0.05	24.40	6.66	0.11	10.02
2-Feb-17	17-Feb-17	22-Jul-17	7.6	1700	1010	3.76	< 0.01	7.30	4.09	0.42	8.41

Point 17 (Groundwater- BH5)

Sampling Frequency			Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually
Date Sampled	**Date Obtained**	**Date Published**	**pH (pH units)**	**Electrical Conductivity (µS/cm)**	**Total Dissolved Solids (mg/L)**	**Ammonia (mgN/L)**	**Nitrate (mgN/L)**	**Total Nitrogen (mg/L)**	**Total Phosphorus (mg/L)**	**Reactive Phosphorus (mgP/L)**	**Standing Water Level (measured)**
20-Sep-12	7-Dec-13		7.83	1860	1160	<0.01	4.5	5.80	0.02	0.02	1.75
16-Jan-13	30-Mar-13		7.58	1770	1050	0.03	4.25	7.30	<0.02	0.02	2.53
8-Jul-13	6-Sep-13		7.66	1690	933	<0.01	4.04	5.40	0.04	0.02	2.82
29-Jan-14	21-Feb-14		7.78	1750	927	0.02	4.61	5.40	0.04	0.01	3.62
16-Jul-14	3-Sep-14		7.60	1660	952	<0.01	5.36	6.10	0.04	0.02	4.24
28-Jan-15	25-Feb-15		7.91	1540	806	0.02	6.01	7.40	0.04	<0.01	4.36
14-Jul-15	7-Aug-15		7.85	1470	800	0.06	4.42	5.20	0.08	0.02	4.55
26-Jan-16	14-Mar-16		7.93	1450	856	< 0.01	3.35	3.90	0.04	0.02	3.78
22-Jun-16	26-Sep-16		7.71	1470	844	0.01	3.73	4.50	0.06	< 0.01	4.4
2-Feb-17	17-Feb-17	22-Jul-17	7.79	1390	922	< 0.01	1.84	2.40	0.02	0.01	2.69

Point 19 (Average of stormwater collection points below cattleyards)

Sampling Frequency (each overflow event)											
Date Sampled	**Date Obtained**	**Date Published**	**pH (pH units)**	**Electrical Conductivity (µS/cm)**	**Total Suspended Solids (mg/L)**	**Ammonia (mgN/L)**	**Nitrate as N (mgN/L)**	**Total Kjeldahl Nitrogen (mg/L)**	**Total Nitrogen (mg/L)**	**Total Phosphorus (mg/L)**	**Reactive Phosphorus (mgP/L)**

Point 20 (Blue metal filter below first flush collection pit for sheep pens)

Sampling Frequency (each overflow event)											
Date Sampled	**Date Obtained**	**Date Published**	**pH (pH units)**	**Electrical Conductivity (µS/cm)**	**Total Suspended Solids (mg/L)**	**Ammonia (mgN/L)**	**Nitrate as N (mgN/L)**	**Total Kjeldahl Nitrogen (mg/L)**	**Total Nitrogen (mg/L)**	**Total Phosphorus (mg/L)**	**Reactive Phosphorus (mgP/L)**
28-Jan-15	25-Feb-15		7.50	388	215	0.61	4.41	6.70	11.50	9.69	9.61

Point 21 (Groundwater- BH6)

Sampling Frequency			Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually	Biannually
Date Sampled	**Date Obtained**	**Date Published**	**pH (pH units)**	**Electrical Conductivity (µS/cm)**	**Total Dissolved Solids (mg/L)**	**Ammonia (mgN/L)**	**Nitrate (mgN/L)**	**Total Nitrogen (mg/L)**	**Total Phosphorus (mg/L)**	**Reactive Phosphorus (mgP/L)**	**Standing Water Level (measured)**
20-Sep-12	7-Dec-13		8.01	1120	714	0.04	0.08	<0.1	0.10	0.02	20.77
16-Jan-13	30-Mar-13		7.82	1080	636	0.02	0.33	0.90	0.17	0.02	21.12
8-Jul-13	6-Sep-13		7.89	1090	602	<0.01	0.24	0.15	0.03	0.03	21.55
29-Jan-14	21-Feb-14		7.90	1120	641	0.14	0.08	0.50	0.12	0.03	23.49
16-Jul-14	Blocked										24.10
28-Jan-15	25-Feb-15		7.93	1050	570	0.1	0.03	1.60	0.31	<0.01	24.71
14-Jul-15	7-Aug-15		7.71	1030	542	0.06	0.06	1.60	0.28	0.03	24.61
26-Jan-16	14-Mar-16										NMWL
22-Jun-16	26-Sep-16										NMWL
2-Feb-17	17-Feb-17	22-Jul-17	7.59	1090	730	0.03	0.14	11.80	1.58	0.15	23