

Robyn Simpson  
Environment Manager  
LINX Cargo Care Group  
12/335 Hillsborough Road,  
Warners Bay NSW 2282

Via e-mail: R.Simpson@linxcc.com.au

Ref: 18047 L02.1

20 September 2019

**Re: Biannual Groundwater Monitoring Event 1 (2019)  
240 Cormorant Road, Kooragang NSW 2304**

This letter has been prepared on behalf of LINX Cargo Care Group to provide a summary of pollution monitoring data for the LINX facility located at 240 Cormorant Road, Kooragang Island, NSW 2304. A site locality plan is provided as Figure 1.

Under Section 66(6) of the *Protection of the Environment Operations Act 1997* (POEO Act), holders of an Environment Protection Licence (EPL) must publish or make pollution monitoring data available to members of the public. For this purpose, this letter is a summary of a more detailed report, *Biannual Groundwater Monitoring Event 1 (2019) – 240 Cormorant Road, Kooragang NSW 2304* prepared by Cavvanba Consulting Pty Ltd in March 2019.

This letter has been prepared in accordance with the guideline *Requirements for Publishing Monitoring Data* (NSW Environment Protection Authority (EPA), 2013), and Table 1 has been specifically designed to address Section 3.7 of the guideline.

**Table 1: Published monitoring data requirements (NSW EPA, 2013)**

Items requiring publishing	Response
EPL number:	12521.
Licensee's name:	LINX Logistics Pty Ltd.
Address of premises:	240 Cormorant Road, Kooragang NSW 2304
Link to the EPA's Public Register:	<a href="#">Link.</a>
Location of monitoring point / area:	Figure 2.
Pollutant:	Table 3.
Unit of measure:	Table 3.
Monitoring frequency required by the licence:	Every 6 months, in accordance with <i>Groundwater Monitoring Plan – 240 Cormorant Road, Kooragang NSW 2304</i> (Cavvanba, 2018).
Any other relevant requirements of the monitoring condition:	Nil.
Any relevant limit imposed by the licence:	Nil.

Items requiring publishing	Response
Relevant dates	Groundwater sampling completed in February 2019. Groundwater monitoring report published in March 2019.
Upfront notes about apparent missing data:	Groundwater monitoring well, CAMW2 <sup>1</sup> (EPA ID No. 1) was obstructed and could not be sampled.

Notes: <sup>1</sup> This will be further assessed during the next proposed groundwater monitoring event 2 (2019).

The results of biannual groundwater monitoring event 1 (2019) do not indicate that groundwater conditions have changed significantly, or adverse changes in environmental conditions have occurred.

◇ ◇ ◇ ◇

Please do not hesitate to contact the undersigned on (02) 6685-7811 should you require any additional information or clarification.

Yours sincerely  
Cavvanba Consulting Pty Ltd

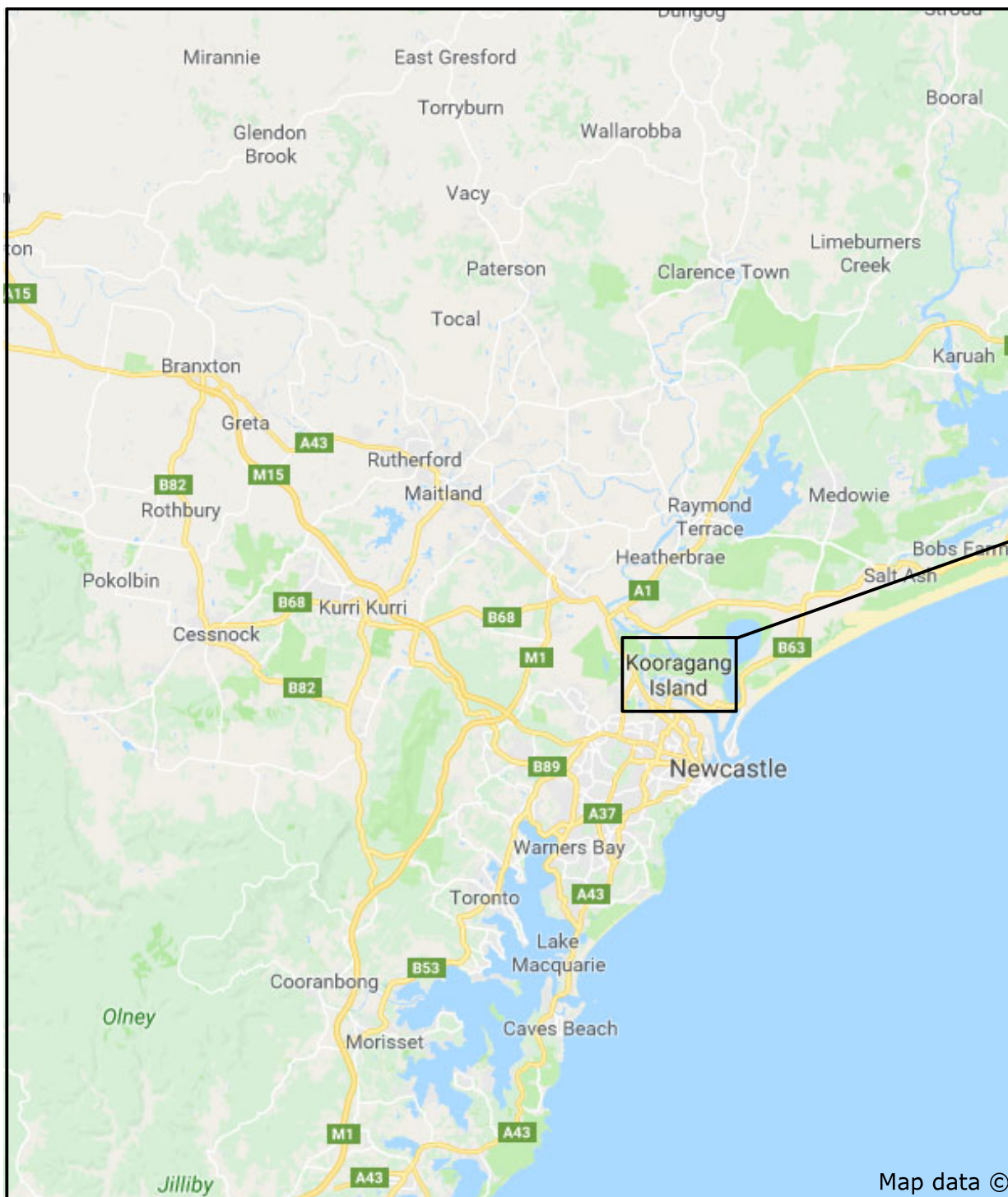


Ben Wackett  
Principal Environmental Scientist



Drew Wood  
Principal Environmental Scientist

## Figures



Lot 1 DP 559697 & Lot 3 DP 775775

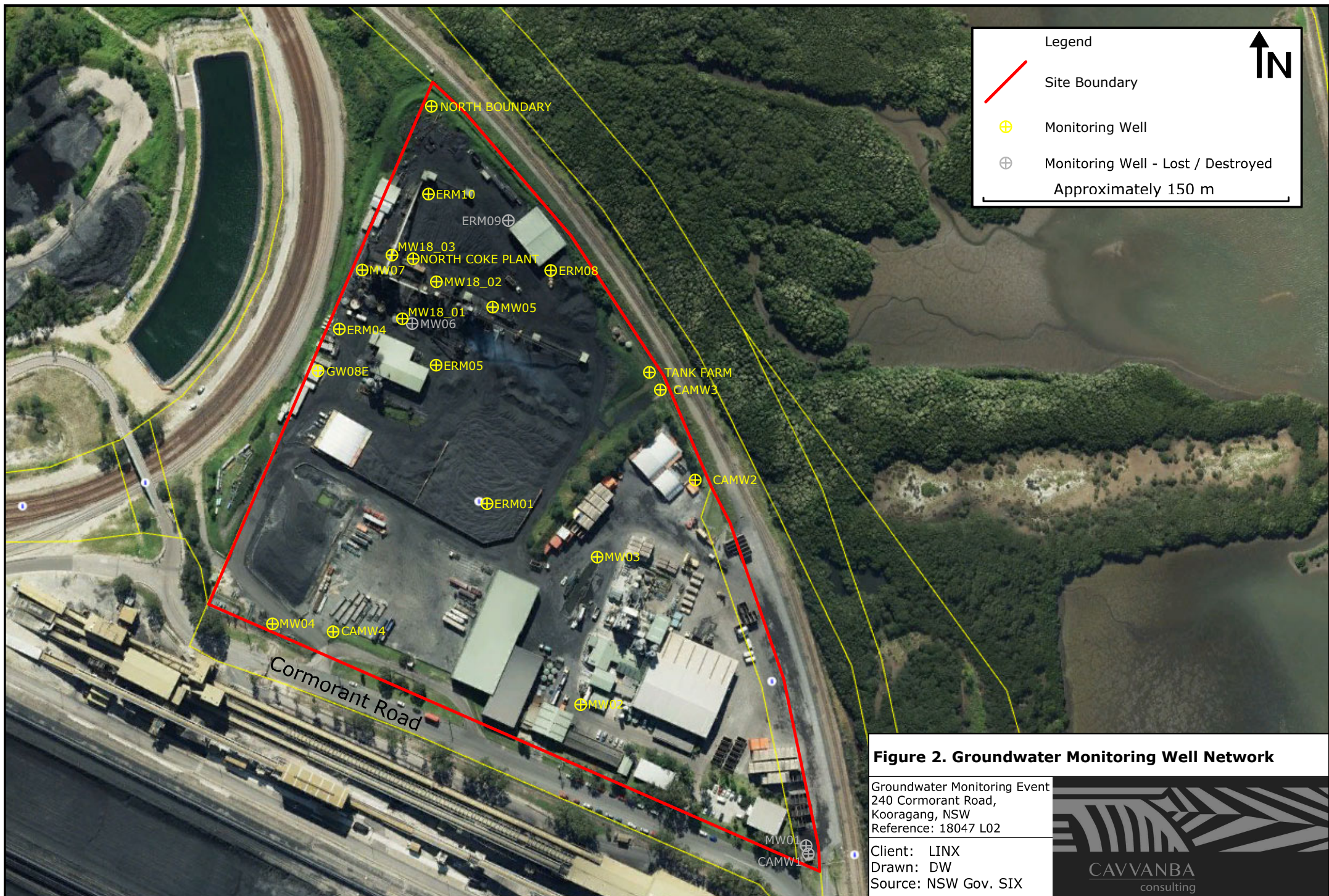
**Figure 1. Site Locality Plan**

Groundwater Monitoring Event  
240 Cormorant Road,  
Kooragang, NSW  
Reference: 18047 L02

Client: LINX  
Drawn: DW  
Source: NSW Gov. SIX









## Tables

Table 1: Groundwater Gauging Data

Well ID	Gauging Date	Event	TOC Elevation (mAHD)	Ground Surface Elevation (mAHD)	Depth of Well (mbTOC)	Depth to NAPL (mbTOC)	Depth to Water (mbTOC)	NAPL Thickness (m)	Corrected Depth to Water (mbgl)	Water Elevation (mAHD)	Comments
CAMW2	25/02/2019	Pre	3.014	3.014	2.467	-	2.459	-	2.459	0.555	Well obstructed - Could not be sampled
CAMW3	25/02/2019		3.365	3.365	3.925	-	2.893	-	2.893	0.472	-
CAMW4	25/02/2019		2.801	2.801	2.554	-	1.864	-	1.864	0.937	-
MW02	25/02/2019		2.309	2.309	2.918	-	1.356	-	1.356	0.953	-
MW03	25/02/2019		3.249	3.249	3.817	-	2.437	-	2.437	0.812	-
MW04	25/02/2019		-	-	2.9330	-	1.598	-	-	-	-
Tank Farm	26/02/2019		3.736	3.13	5.683	-	3.213	-	2.607	0.523	-
ERM08	26/02/2019		3.087	3.14	3.738	-	2.132	-	2.185	0.955	-
MW05	25/02/2019		3.593	2.92	3.787	-	2.898	-	2.225	0.695	-
North Coke Plant	26/02/2019		3.795	3.02	3.630	-	2.575	-	1.8	1.22	-
MW07	25/02/2019		3.528	2.95	3.520	-	2.888	-	2.31	0.64	-
MW18_01	25/02/2019		3.925	3.184	4.398	-	3.063	-	2.322	0.862	-
MW18_02	25/02/2019		3.72	3.031	3.973	-	2.723	-	2.034	0.997	-
MW18_03	25/02/2019		3.664	2.899	4.113	-	2.656	-	1.891	1.008	-

m AHD: metres Australian Height Datum  
mbTOC: metres below top of casing  
NAPL: non-aqueous phase liquid  
mbgl: metres below ground level

Table 2: Groundwater Quality Parameters

Location ID	Date Sampled	DO (mg/L)	EC ( $\mu\text{Scm}^{-1}$ )	Salinity (PPM)	pH	Eh (mV)	Turbidity (NTU)	TEMP ( $^{\circ}\text{C}$ )	Purge Volume (L)	Comments
<i>Groundwater</i>										
CAMW2	25/02/2019	-	-	-	-	-	-	-	-	Well obstructed - Could not be sampled
CAMW3	25/02/2019	1.55	11,500	7,360	7.75	-109	84	23.7	3.0	Grey, slightly cloudy, slight organic odour, no sheen
CAMW4	25/02/2019	1.37	1,900	1,216	9.45	20	20.2	25.3	5.0	Grey tinge, slightly cloudy then clear, no odour or sheen
MW03	25/02/2019	0.90	2,190	1,402	7.23	6	16.2	26.8	4.0	Grey, slightly cloudy, no odour or sheen
MW04	25/02/2019	3.33	2,930	1,875	6.40	-8	72.4	26.9	4.0	Clear, no odour or sheen
Tank Farm	26/02/2019	0.50	16,800	10,752	7.74	-115	8.4	22.6	8.0	Clear, strong organic odour, no sheen
ERM08	26/02/2019	1.95	2,000	1,280	11.58	-114	10.8	21.4	5.0	Clear, no odour or sheen
MW05	25/02/2019	0.67	1,420	909	8.66	-129	53.4	25.0	4.0	Green tinge, clear, slight organic odour, no sheen
North Coke Plant	26/02/2019	0.72	1,100	704	10.68	-90	1.5	21.3	5.0	Brown tinge, clear, no odour or sheen
MW07	25/02/2019	3.30	952	609	8.31	-35	32.6	24.8	3.0	Grey, clear, no odour or sheen
MW18_01	25/02/2019	1.00	1,670	1,069	11.20	-134	672	25.5	5.0	Grey, slightly cloudy, slight organic odour, no sheen
MW18_02	25/02/2019	1.89	1,400	896	10.89	-101	16.9	27.6	4.0	Clear, no odour or sheen
MW18_03	25/02/2019	0.92	981	628	10.75	-106	22.4	25.0	4.0	Brown tinge, clear, slight organic odour or sheen



**Table 3: Groundwater Analytical Summary - Nutrients (µg/L)**

Sample Identification	Sample Location	Date	Ammonia as N	Nitrate + Nitrite as N	Total Kjeldahl Nitrogen	Total Nitrogen as N	Total Phosphorus as P
LOR			10	10	100	100	10
<i>Analytical - Groundwater</i>							
CAMW3	CAMW3	25/02/2019	<b><u>4,930</u></b>	40	5,600	5,600	400
CAMW4	CAMW4	25/02/2019	580	70	600	700	120
MW03	MW03	25/02/2019	<b><u>16,600</u></b>	30	15,400	15,400	90
MW04	MW04	25/02/2019	<b><u>3,820</u></b>	40	3,800	3,800	640
Tank Farm	Tank Farm	26/02/2019	<b><u>16,400</u></b>	50	15,600	15,600	940
ERM08	ERM08	26/02/2019	<b><u>5,770</u></b>	40	5,600	5,600	30
MW05	MW05	25/02/2019	<b><u>10,200</u></b>	20	9,200	9,200	180
North Coke Plant	North Coke Plant	26/02/2019	<b><u>9,240</u></b>	30	8,800	8,800	20
MW07	MW07	25/02/2019	<b><u>7,660</u></b>	120	9,700	9,800	1,130
MW18_01	MW18_01	25/02/2019	<b><u>4,270</u></b>	20	4,400	4,400	410
MW18_02	MW18_02	25/02/2019	<b><u>4,470</u></b>	40	5,500	5,500	20
MW18_03	MW18_03	25/02/2019	<b><u>7,210</u></b>	60	7,500	7,600	10
<i>Statistics</i>							
Samples analysed			12	12	12	12	12
Detects			12	12	12	12	12
% detect			100%	100%	100%	100%	100%
Maximum			16,600	120	15,600	15,600	1,130
Mean			7,012	43	7,054	7,077	307
Median			5,770	40	5,600	5,600	120
Minimum			580	20	600	700	10
<i>Criteria</i>							
Marine Waters <sup>1</sup>			<b><u>910</u></b>	-	-	-	-

See tables notes at end of section

---

**Groundwater Analytical Summary Table Notes**

LOR - limit of reporting (standard LOR unless otherwise shown)

nd - not detected above the LOR

**Bold** - Exceeds criteria

^ - LOR raised

- denotes not analysed/not available

*Italics* - Exceeds adjusted criteria according to Table 8.3.7, ANZECC/ARMCANZ (2000) as total ammonia-N at differing pH (temperature not taken into consideration).

1. Aquatic ecosystem criteria from Australian New Zealand Environment and Conservation Council (ANZECC) / Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) (2000) *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, including Table 3.4.1 and Section 8.3.7.

The 95% species protection levels are to be applied for slightly to moderately-disturbed ecosystems (most urban catchments) and the 99% species protection levels for pristine or vulnerable ecosystems or where the contaminants are intractable (e.g. bioaccumulative).