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

Ref: 18047 L10.2 17 April 2020

Re: Biannual Groundwater Monitoring Event 1 (2020)
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 letter report, *Biannual Groundwater Monitoring Event 1 (2020) – 240 Cormorant Road, Kooragang NSW 2304* prepared by Cavvanba Consulting Pty Ltd in April 2020.

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:	Link.
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 *Groundwater Monitoring Plan – 240 Cormorant Road, Kooragang NSW 2304* (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 March 2020. Groundwater monitoring report published in April 2020.
Upfront notes about apparent missing data:	Nil.

The results of biannual groundwater monitoring event 1 (2020) 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

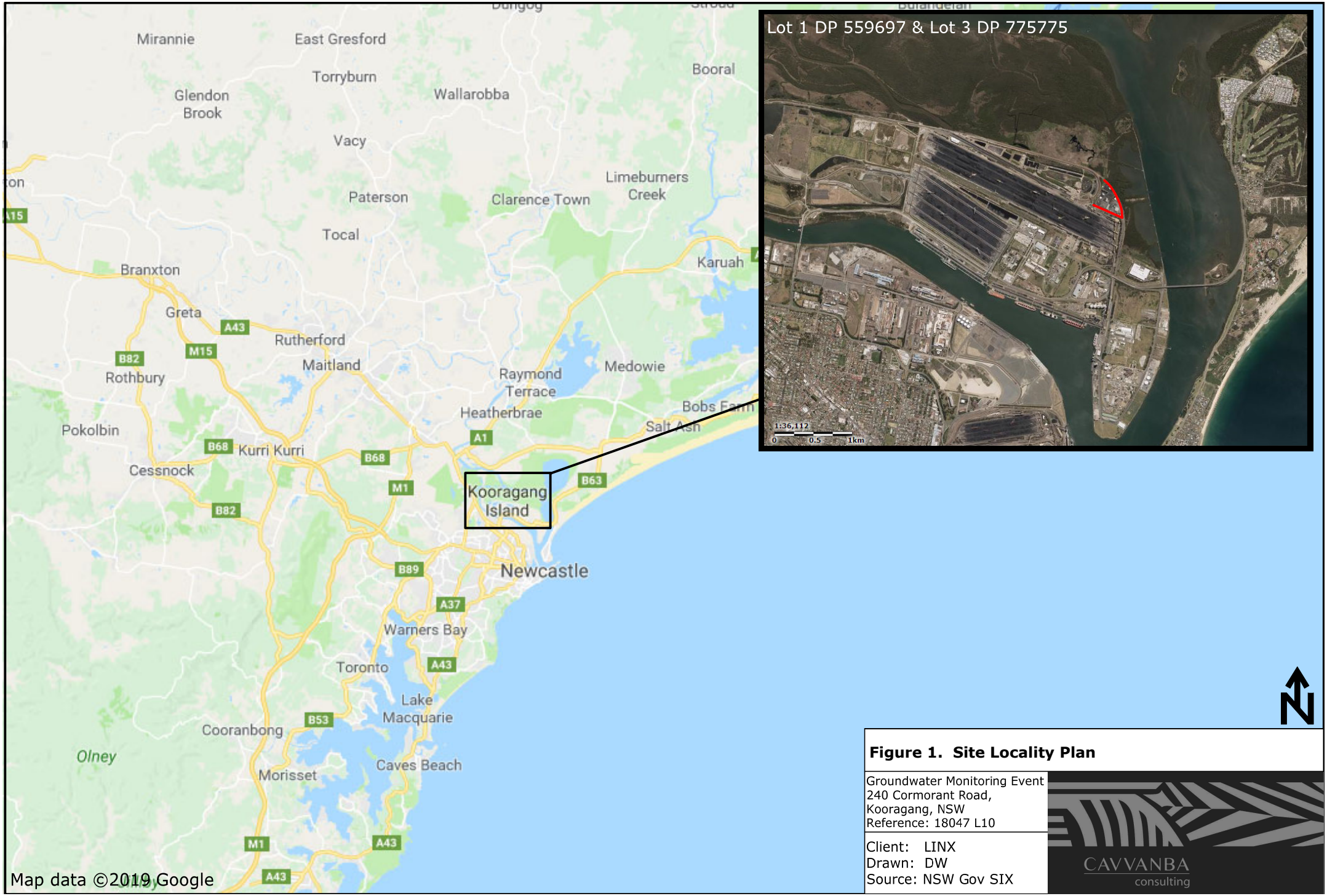

Figure 1. Site Locality Plan

Groundwater Monitoring Event
240 Cormorant Road,
Kooragang, NSW
Reference: 18047 L10

Client: LINX
Drawn: DW
Source: NSW Gov SIX

CAVVANBA consulting

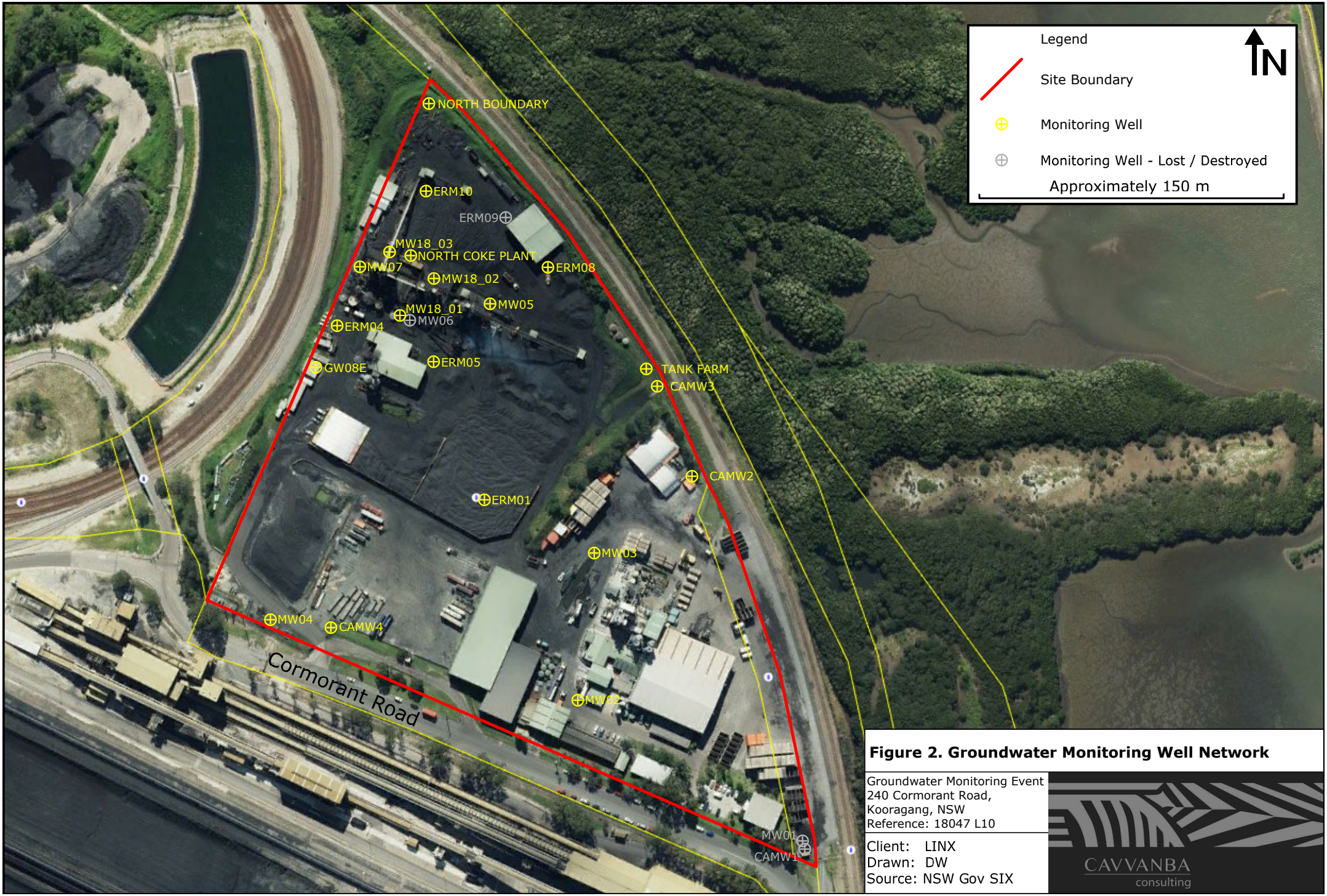

Figure 2. Groundwater Monitoring Well Network

Groundwater Monitoring Event
240 Cormorant Road,
Kooragang, NSW
Reference: 18047 L10

Client: LINX
Drawn: DW
Source: NSW Gov SIX

CAVVANBA consulting

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	25/03/2020	Pre	3.014	3.014	3.436	-	2.276	-	2.276	0.738	-
CAMW3	25/03/2020		3.365	3.365	3.930	-	2.623	-	2.623	0.742	-
CAMW4	24/03/2020		2.801	2.801	2.550	-	1.463	-	1.463	1.338	-
MW02	24/03/2020		2.309	2.309	2.928	-	1.065	-	1.065	1.244	-
MW03	24/03/2020		3.249	3.249	3.822	-	2.245	-	2.245	1.004	-
MW04	24/03/2020		-	-	2.930	-	1.184	-	-	-	-
Tank Farm	25/03/2020		3.736	3.13	5.690	-	2.953	-	2.347	0.783	-
ERM08	25/03/2020		3.087	3.14	3.724	-	1.737	-	1.79	1.350	-
MW05	27/03/2020		3.593	2.92	3.787	-	2.334	-	1.661	1.259	-
North Coke Plant	24/03/2020		3.795	3.02	3.630	-	2.198	-	1.423	1.597	-
MW07	24/03/2020		3.528	2.95	3.522	-	2.087	-	1.509	1.441	-
MW18_01	24/03/2020		3.925	3.184	4.397	-	2.485	-	1.744	1.440	-
MW18_02	24/03/2020		3.72	3.031	3.964	-	2.344	-	1.655	1.376	-
MW18_03	24/03/2020		3.664	2.899	4.116	-	2.273	-	1.508	1.391	-

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

Well ID	Date Sampled	DO (mg/L)	EC (µScm-¹)	Salinity (PPM)	pH	Eh (mV)	Turbidity (NTU)	TEMP (ºC)	Purge Volume (L)	Comments
Groundwater										
CAMW2	25/03/2020	0.90	3,330	2,131	9.40	-51	680	19.1	2.5	Cloudy, brown, strong organic odour, no sheen, roots cleared from well
CAMW3	25/03/2020	0.84	5,940	3,802	7.87	-59	53.2	23.5	2.5	Clear, slight organic odour, no sheen, well in good condition
CAMW4	24/03/2020	0.72	2,060	1,318	10.41	24	34.2	24.6	3.0	Slightly cloudy, no odour, no sheen, well in good condition
MW03	24/03/2020	1.92	1,580	1,011	7.94	-16	27.6	23.2	2.5	Clear, slight organic odour, no sheen, well in good condition
MW04	24/03/2020	0.39	2,620	1,677	7.85	21	13.5	22.9	2.5	Clear, slight organic odour, no sheen, well in good condition
Tank Farm	25/03/2020	0.34	21,700	13,888	7.72	-36	23.2	21.3	2.5	Clear, strong organic odour, no sheen, well in good condition
ERM08	25/03/2020	1.25	1,780	1,139	12.03	-72	25.8	18.5	2.5	Clear, strong organic odour, no sheen, well in good condition
MW05	27/03/2020	0.94	1,030	659	10.43	-121	29	18.7	2.4	Clear, slight organic odour, no sheen, well in good condition
North Coke Plant	24/03/2020	0.52	982	628	11.41	-19	20.6	22.9	2.5	Clear, slight organic odour, no sheen, well in good condition
MW07	24/03/2020	0.56	3,190	2,042	8.25	-78	32.3	23.7	2.5	Clear, slight organic odour, no sheen, well in good condition
MW18_01	24/03/2020	0.89	1,920	1,229	11.78	-21	29.4	23.8	2.5	Milky white, slightly cloudy, no odour, no sheen, well in good condition
MW18_02	24/03/2020	0.88	1,010	646	11.71	-33	23.1	22.2	3.0	Clear, no odour, no sheen, well in good condition
MW18_03	24/03/2020	1.15	1,050	672	9.68	-7	22.7	22.7	2.5	Clear, slight organic odour, no sheen, well in good condition

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*
Analytical - Groundwater							
CAMW2	CAMW2	25/03/2020	**2,700**	nd	3,400	3,400	340
CAMW3	CAMW3	25/03/2020	**1,160**	nd	1,500	1,500	290
CAMW4	CAMW4	24/03/2020	**4,230**	1,680	4,900	6,600	nd
MW03	MW03	24/03/2020	**9,670**	30	10,400	10,400	140
MW04	MW04	24/03/2020	160	150	300	400	230
Tank Farm	Tank Farm	25/03/2020	**14,300**	nd	17,200	17,200	2,940
ERM08	ERM08	25/03/2020	**3,840**	20	4,400	4,400	nd
MW05	MW05	27/03/2020	**5,670**	10	6,500	6,500	100
North Coke Plant	North Coke Plant	24/03/2020	**6,500**	50	7,800	7,800	nd
MW07	MW07	24/03/2020	540	50	900	1,000	320
MW18_01	MW18_01	24/03/2020	**1,870**	540	2,100	2,600	nd
MW18_02	MW18_02	24/03/2020	**1,750**	820	2,200	3,000	nd
MW18_03	MW18_03	24/03/2020	**4,100**	nd	4,500	4,500	nd
Statistics							
Samples analysed			13	13	13	13	13
Detects			13	9	13	13	6
% detect			100%	69%	100%	100%	46%
Maximum			**14,300**	1,680	17,200	17,200	2,940
Mean			4,035	335	4,721	4,950	545
Median			3,270	50	3,900	3,900	260
Minimum			160	10	300	400	100
Criteria							
Marine Waters [1]			**910**	-	-	-	-

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).