

28 March 2022

Brad Begley  
Property Manager  
Dicker Data Limited  
238-258 Captain Cook Drive,  
Kurnell NSW 2231

email: [Brad.Begley@dickerdata.com.au](mailto:Brad.Begley@dickerdata.com.au)

**Stormwater Monitoring Program. Stormwater Sampling Event.  
238-258 Captain Cook Drive, Kurnell NSW**

Dear Brad,

## 1. Introduction

Reditus Consulting Pty Ltd (Reditus) was engaged by Dicker Data Limited (Dicker Data) to sample site stormwater at the warehousing and office facility at 238-258 Captain Cook Drive, Kurnell (the site). Reditus had previously prepared a Stormwater Monitoring Program (SMP) document (Reditus, 2022) to outline the stormwater monitoring procedure to document the extent and nature of potential impacts to surface water quality during storm events greater than the 1% Annual Exceedance Probability (i.e. 1:100 year storm event).

In the eight days prior to the sampling event (23<sup>rd</sup> February to 3<sup>rd</sup> March inclusive), 371 mm of rainfall was observed at Sydney Airport (the closest Bureau of Meteorology (BoM) rainfall measuring station). Due to the aforementioned heavy rainfall event, and the reports on site that the water within the eastern biofilter basin was approaching the level of the raised drain overflow, and consequently Reditus completed a stormwater sampling event on Thursday 3<sup>rd</sup> March 2022. A copy of daily rainfall data is provided in **Appendix C**.

Three stormwater samples were taken in accordance with the SMP. Sample "1" and Sample "2" were taken from on-site bioretention basins, whilst Sample "3" was taken from the stormwater discharge point in Towra Point Nature Reserve Ramsar Wetlands. Sample locations are depicted in **Figure 4, Appendix A**.

This letter outlines the results of this stormwater monitoring event, highlighting any exceedances of trigger values outlined within the SMP and reporting any additional findings.



## 2. Results

Physico-chemical results, including pH, Dissolved Oxygen (DO), temperature and redox, were collected using a water quality meter in the field. A copy of the field sheet is found in **Appendix D**.

A summary of all results in comparison to adopted trigger values (ATV) is found in **Table 1, Appendix B**. All measured analytes were below the ATV except for the following:

- pH at S2 (5.79) was recorded outside the ATV range of 6.0 to 8.5.
- DO at S1 (33.51 %Sat) and S3 (14.86 %Sat) was recorded outside of the ATV range of 37 -110 %Sat.
- Arsenic (filtered) at S2 (2 µg/L) was reported above the ATV of 0.8 µg/L.
- Copper (filtered) at S1 (1 µg/L) was reported above the ATV of 0.3 µg/L.

## 3. Conclusions

During the initial sampling event (12 November 2021), pH at S3 was reported to be 5.57. Although the pH recorded at S2 lies outside the ATV range of 6.0 to 8.5, it remains within the historical pH range.

Additionally, current ATVs are based on one prior monitoring event. Multiple sampling events are required to adequately assess background conditions and data trends. As a low DO reading was reported at S3, updating and amending the ATVs may be necessary prior to future monitoring events.

It must be noted that no surface water infiltrated into the overflow stormwater drains, as such, all exceedances of ATV on the sampling event completed on 3 March 2022 will not affect the discharge of water at S3.

## 4. Limitations

The findings of the report will be based on the Scope of Work outlined within Reditus SMP (February 2022). Reditus will perform services in a manner consistent with the normal level of care and expertise exercised by members of the environmental assessment profession. No warranties express or implied, are made.

Subject to the Scope of Work, Reditus's assessment will be limited strictly to identifying typical environmental conditions associated with the subject property area and does not include evaluation of any other issues.

The absence of any identified hazardous or toxic materials on the subject property should not be interpreted as a guarantee that such materials do not exist on the site.

Reditus will not investigate any waste materials from the property that may have been disposed of off the site, nor related waste management practices.

The results of this assessment will be based upon the site inspection and the sampling specified above conducted by Reditus personnel and information from the Client, regulatory agencies and Council. All conclusions and recommendations regarding the property area will be the professional opinions of the Reditus personnel involved with the project, subject to the qualifications made above.

While normal assessments of data reliability will be made, Reditus will not assume responsibility or liability for errors in any data obtained from regulatory agencies, statements from sources outside of Reditus, or developments resulting from situations outside the scope of this project.

-◇◇◇◇-



We trust that we have interpreted your requirements correctly and look forward to receiving your instruction to proceed in due course. In the meantime, should you have any queries or wish to discuss any points further, please do not hesitate to contact the undersigned.

Yours sincerely,

**Ross Kingswell**  
**0426 992 391**  
Environmental Scientist

**Dean Stafford**  
**0434 657 155**  
Principal Environmental Scientist

**Appendices**

**Appendix A** – Figures

**Appendix B** – Results Summary Tables

**Appendix C** – Rainfall Data

**Appendix D** – Field Forms



## APPENDIX A – Figures



<b>Map</b> 21310_rp01_f01_siteloc_v01	
<b>Date of Export</b> 27/01/2022	
<b>Author</b> MB	<b>Approver</b> DS
<b>Data Source</b> Metromap, Google Maps, Open Street Map, NSW Government	

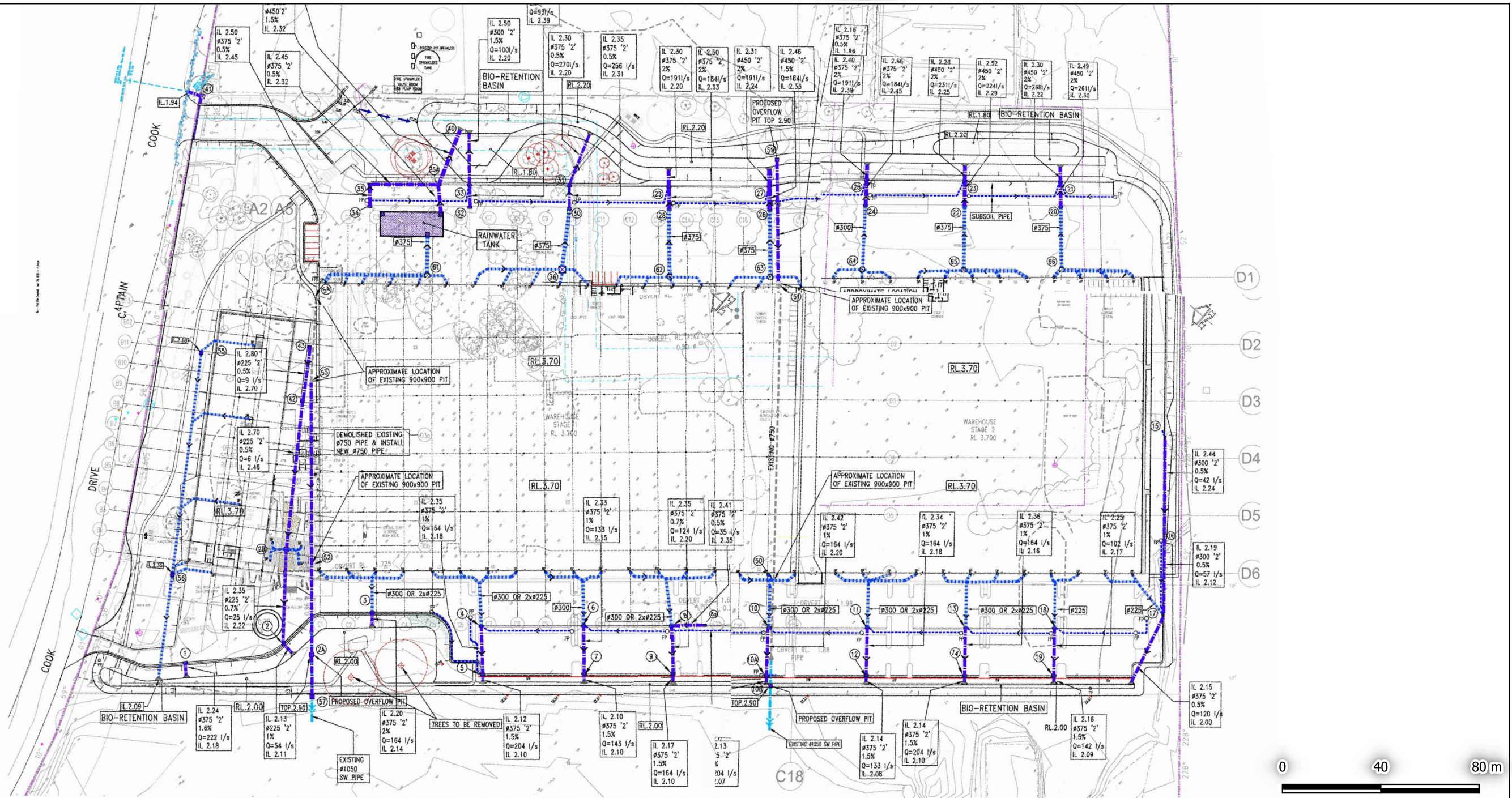
<b>Legend</b>	
Site Boundary	Rivers
	Streams
	Minor Channels

**Figure 1 - Site Location**




238-258 Captain Cook Drive, Kurnell NSW


21310 - Stormwater Monitoring Program

Dicker Data Ltd

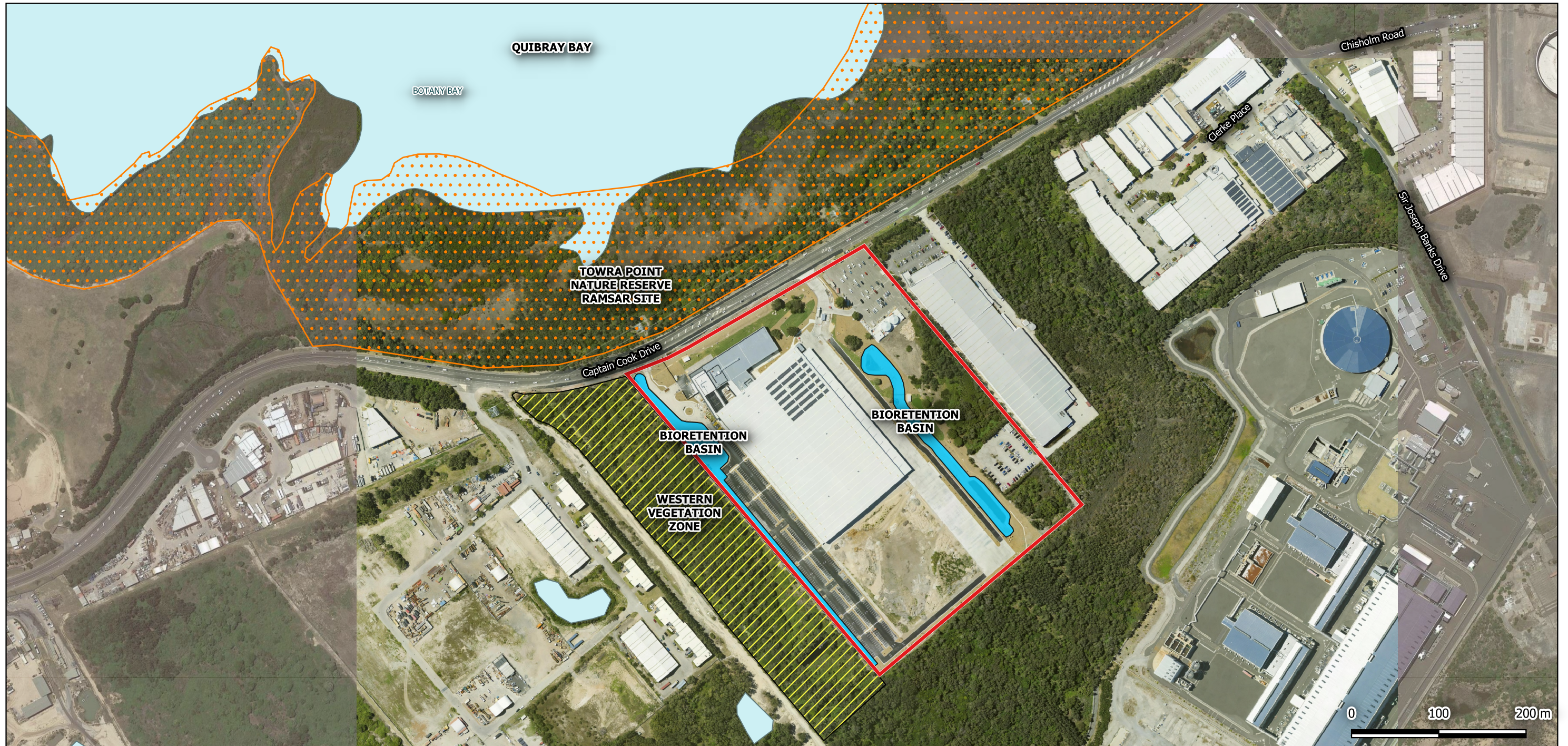


<b>Map</b> 21310_rp01_f02_stormwater_v01	
<b>Date of Export</b> 27/01/2022	
<b>Author</b> MB	<b>Approver</b> DS
<b>Data Source</b> Metromap, Google Maps, NSW Government	

<b>Legend</b>	
	Existing Stormwater Pipe
	New Stormwater Pipe
	Rainwater Tank

  
 1:2,100  
 Approximate Scale  
 at A3

**Figure 2 - Onsite Stormwater Network**  
 238-258 Captain Cook Drive, Kurnell, NSW  
 21310 - Stormwater Monitoring Program  
 Dicker Data Ltd



<b>Map</b>	
21310_rp01_f03_Ecological Receptors_v01	
<b>Date of Export</b>	
27/01/2022	
<b>Author</b>	<b>Approver</b>
MB	DS
<b>Data Source</b>	
Metromap, Google Maps, NSW Government	

<b>Legend</b>	
	Site Boundary
	Bio-Retention Basins
	Western Vegetation Zone
	Towra Point Nature Reserve Ramsar Site
	Quibray Bay (Botany Bay)

N  
  
 1:5,500  
 Approximate Scale at A3


**Figure 3 - Ecological Receptors**  
 238-258 Captain Cook Drive, Kurnell, NSW  
 21310 - Stormwater Monitoring Program  
 Dicker Data Ltd



<b>Map</b>	
21310_rp01_f04_samplelocs_v01	
<b>Date of Export</b>	<b>Map Scale (approx. at A3)</b>
27/01/2022	1:2,801
<b>Author</b>	<b>Approver</b>
MB	DS
<b>Data Source</b>	
Metromap, Google Maps, Open Street Map	

**Legend**

- Site Boundary
- Stormwater Sample Locations



N

**Figure 4 - Stormwater Sample Locations**  
 238-258 Captain Cook Drive, Kurnell, NSW  
 21310 - Stormwater Monitoring Program  
 Dicker Data Ltd





## **APPENDIX B** – Results Summary Tables

Table 1 - Stormwater Monitoring Event (3 March 2022) Results Table

	Physico-Chemical Parameters		BTEX						TRH						TPH							
	pH	DO	Naphthalene (BTEX)	Benzene	Toluene	Ethylbenzene	Xylene (m & p)	Xylene (o)	C6-C10 Fraction (F1)	C6-C10 (F1 minus BTEX)	>C10-C16 Fraction (F2)	>C10-C16 Fraction (F2 minus Naphthalene)	>C16-C34 Fraction (F3)	>C34-C40 Fraction (F4)	>C10-C40 Fraction (Sum)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	C10-C36 Fraction (Sum)		
EQL	pH units	% Sat	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
			1	1	1	1	2	1	10	10	50	50	100	100	50	10	50	100	100	50		
<b>Adopted Trigger Values</b>	<b>6.0 - 8.5</b>	<b>37 - 110</b>	<b>50<sup>#1</sup></b>	<b>500<sup>#1</sup></b>	<b>ND</b>	<b>ND</b>								<b>ND</b>								
Field ID	Date	Matrix Type																				
S1	3/03/2022	Water	7.16	33.51	<1	<1	<1	<1	<2	<1	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
S2	3/03/2022	Water	5.79	39.96	<1	<1	<1	<1	<2	<1	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50
S3	3/03/2022	Water	6.77	14.86	<1	<1	<1	<1	<2	<1	<10	<10	<50	<50	<100	<100	<50	<10	<50	<100	<100	<50

Comments

- #1 Moderate reliability. DGV may not protect key test species from chronic toxicity (this refers to experimental chronic values or geometric mean for species). Check toxicant DGV technical brief for spread of data and its significance.
- #2 Unknown reliability
- #3 Unknown reliability. To account for the bioaccumulating nature of this toxicant, it is recommended that the 99% species protection level DGV is used for slightly to moderately disturbed systems. Also see General comments.
- #4 Moderate reliability. Ammonia as total ammonia, measured as [NH3-N] at pH 8.
- #5 High reliability
- #6 Very high reliability
- #7 Low reliability
- #8 Moderate reliability
- #9 NIL (+)VE

Table 1 - Stormwater Monitoring Event (3 March 2022) Results Table



	PAH																Inorganics		Metals								
	Benzo(b+j+k)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	Benzo(a)pyrene TEQ	PAHs (Sum of positives)	Ammonia as N	Nitrate (as N)	Arsenic (filtered)	Cadmium (filtered)	Chromium (III+VI) (filtered)	Copper (filtered)	Lead (filtered)	Mercury (filtered)	Nickel (filtered)	Zinc (filtered)
ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	mg/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
EQL	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0.005	0.005	1	0.1	0.001	1	1	0.05	1	1	
Adopted Trigger Values						ND						50 <sup>#1</sup>					0.5 <sup>#4</sup>	1.2	0.8	0.7 <sup>#5</sup>	0.0077	0.3 <sup>#6</sup>	2.2 <sup>#7</sup>	0.1 <sup>#8</sup>	7 <sup>#5</sup>	15	
Field ID	Date	Matrix Type	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	0 <sup>#9</sup>	<0.005	<0.005	<1	<0.1	<0.001	1	<1	<0.05	<1	12
S1	3/03/2022	Water	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	0 <sup>#9</sup>	<0.005	0.063	2	<0.1	<0.001	<1	<1	<0.05	<1	4
S2	3/03/2022	Water	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	0 <sup>#9</sup>	0.23	0.04	<1	<0.1	<0.001	<1	<1	<0.05	<1	6
S3	3/03/2022	Water	<2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	0 <sup>#9</sup>										

Comments

- #1 Moderate reliability. DGV may not protect
- #2 Unknown reliability
- #3 Unknown reliability. To account for the bio
- #4 Moderate reliability. Ammonia as total am
- #5 High reliability
- #6 Very high reliability
- #7 Low reliability
- #8 Moderate reliability
- #9 NIL (+)VE

Table 1 - Stormwater Monitoring Event (3 March 2022) Results Table

		Organochlorine Pesticides																			
		4,4-DDE	α-BHC	Aldrin	Dieldrin	β-BHC	Chlordane (cis)	Chlordane (trans)	δ-BHC	DDD	DDT	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	γ-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
<b>Adopted Trigger Values</b>												ND			ND						
Field ID	Date	Matrix Type	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
S1	3/03/2022	Water	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
S2	3/03/2022	Water	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
S3	3/03/2022	Water	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

**Comments**

- #1 Moderate reliability. DGV may not protect
- #2 Unknown reliability
- #3 Unknown reliability. To account for the bio
- #4 Moderate reliability. Ammonia as total amn
- #5 High reliability
- #6 Very high reliability
- #7 Low reliability
- #8 Moderate reliability
- #9 NIL (+)VE

Table 1 - Stormwater Monitoring Event (3 March 2022) Results Table

	Organophosphorous Pesticides											PCBs								
	Azinophos methyl	Bromophos-ethyl	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenitrothion	Malathion	Parathion	Ronnel	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	
EQI	µg/L	µg/L	µg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
<b>Adopted Trigger Values</b>			ND									2	2	2	2	2	2	2	2	
<b>Field ID</b>	<b>Date</b>	<b>Matrix Type</b>																		
S1	3/03/2022	Water	<0.2	<0.2	<0.2	<0.0002	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
S2	3/03/2022	Water	<0.2	<0.2	<0.2	<0.0002	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
S3	3/03/2022	Water	<0.2	<0.2	<0.2	<0.0002	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

**Comments**  
 #1 Moderate reliability. DGV may not protect  
 #2 Unknown reliability  
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 #4 Moderate reliability. Ammonia as total amn  
 #5 High reliability  
 #6 Very high reliability  
 #7 Low reliability  
 #8 Moderate reliability  
 #9 NIL (+)VE



## **APPENDIX C** – Rainfall Data

# Daily Rainfall (millimetres)

## SYDNEY AIRPORT AMO

Station Number: 066037 · State: NSW · Opened: 1929 · Status: Open · Latitude: 33.95°S · Longitude: 151.17°E · Elevation: 6 m

2022	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1st	0	0	11.2									
2nd	0	17.0	18.4									
3rd	0	3.0	52.4									
4th	0	0.6	23.2									
5th	2.8	8.6	9.4									
6th	13.4	1.4	11.2									
7th	0.8	2.4	40.6									
8th	24.6	11.8	80.2									
9th	0.4	4.8	44.8									
10th	0	0	0									
11th	0	4.6	0									
12th	0	5.2	0									
13th	13.8	15.6	0									
14th	38.0	0	6.6									
15th	0.6	0										
16th	0	0.2										
17th	0	0										
18th	0	1.0										
19th	7.0	0.2										
20th	2.6	0										
21st	0.8	0										
22nd	1.6	3.0										
23rd	3.4	137.2										
24th	0.4	53.4										
25th	0	22.6										
26th	0	44.8										
27th	0	23.0										
28th	0	7.8										
29th	0											
30th	0											
31st	0											
<b>Highest daily</b>	<b>38.0</b>	<b>137.2</b>	<b>80.2</b>									
<b>Monthly Total</b>	<b>110.2</b>	<b>368.2</b>										

↓ This day is part of an accumulated total  
 Quality control: 12.3 Done & acceptable, 12.3 Not completed or unknown

~~XXXX~~ - Subject Dates

Product code: IDCJAC0009 reference: 83770359



## Daily Rainfall (millimetres)

### SYDNEY AIRPORT AMO

Station Number: 066037 · State: NSW · Opened: 1929 · Status: Open · Latitude: 33.95°S · Longitude: 151.17°E · Elevation: 6 m

#### Statistics for this station calculated over all years of data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Mean</b>	93.9	117.0	120.7	105.0	95.2	124.5	68.9	75.7	59.6	70.1	80.2	72.9
<b>Median</b>	71.7	86.1	90.6	80.5	77.7	100.5	50.5	45.2	46.8	47.6	66.8	65.2
<b>Highest daily</b>	157.0	216.2	202.0	174.0	165.9	151.2	132.6	207.0	115.4	112.3	143.3	182.1
<b>Date of highest daily</b>	8th 1973	3rd 1990	11th 1975	30th 1988	1st 1955	11th 1991	10th 1957	6th 1986	25th 1995	30th 1959	14th 1969	13th 1963

#### 1) Calculation of statistics

Summary statistics, other than the Highest and Lowest values, are only calculated if there are at least 20 years of data available.

#### 2) Gaps and missing data

Gaps may be caused by a damaged instrument, a temporary change to the site operation, or due to the absence or illness of an observer.

#### 3) Further information

<http://www.bom.gov.au/climate/cdo/about/about-rain-data.shtml>.

Product code: IDCJAC0009 reference: 83770359 Created on Mon 14 Mar 2022 14:35:51 PM AEDT

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## **APPENDIX D** – Field Forms

# WATER FIELD RECORD SHEET



PROJECT : Dicker Data SMP

JOB No: 21310

LOCATION : 238-258 Captain Cook Drive, Kurnell NSW

DATE : 3-Mar-22

TIME:

OPERATOR : Meg Ensor

WATER QUALITY METER: HANNA

SAMPLE	TIME	FLOW CONDITIONS	pH	EC	DO	Redox	Temp	Turbidity	DTW	COMMENTS
Sample 1			7.16	-	2.86	75.10	23.24	-		
Sample 2			5.79	-	3.40	138.00	23.40	-		
Sample 3			6.77	-	1.32	20.30	21.16	-		

Notes: