6.4 g Water Monitoring Results Golders

30 June 2009 Project No. 087673031 021 Rev0

Rod Lamb
Satori Resorts Pty Ltd
GPO Box 2760
BRISBANE QLD 4001

PRE-CONSTRUCTION WATER QUALITY MONITORING PROGRAM, PRELIMINARY DATA REVIEW PROPOSED ELLA BAY INTEGRATED RESORT

Dear Rod

BACKGROUND

Satori Resorts commissioned Golder Associates to undertake pre-construction water quality testing for the proposed Ella Bay Integrated Resort project located near Innisfail Queensland. The basis and scope of the water quality monitoring program was presented in the following document in consultation with Satori Resorts, THG Resource Strategists and the Commonwealth Department of Environment, Water, Heritage and Arts (DEWHA):

- '*Water Quality Monitoring Strategy*', Golder Associates Report 087673008-001-R2, May 2008.

The proposed development area and access road from Flying Fish Point traverses five relatively minor and separate coastal catchments that ultimately discharge to the coastal lagoon of the Great Barrier Reef. The '*Water Quality Monitoring Strategy*' report identified seven distinct sub-catchments and water ecosystem types that may be impacted by the proposed development works (refer to Attachment A):

- Development Site:
  - i) Catchment A1 to A4: Slightly to Moderately Disturbed Freshwater Upland
  - ii) Catchment A5: Slightly to Moderately Disturbed Middle Estuary
  - iii) Catchment B: Slightly to Moderately Disturbed Freshwater Wetland
- Road Reserve:
  - i) Catchment C1/D1/E1: High Value Freshwater Upland
  - ii) Catchment C2: Slightly to Moderately Disturbed Freshwater Upland
  - iii) Catchment D2: Slightly to Moderately Disturbed Freshwater Upland
  - iv) Catchment E2: Slightly to Moderately Disturbed Middle Estuary

At the time of completing this data review, water samples had been collected, tested and reported from 22 surface water and 6 groundwater locations across eleven separate events carried out between October 2008 and May 2009 as summarised in Attachment B.

This letter report provides a summary of the monitoring results obtained to date, with a brief overview of notable observations of the measured analyte concentrations compared against adopted published guideline values. A detailed statistical assessment of the collected data has not been carried out at this time.

ADOPTED PUBLISHED GUIDELINES

The section of published guideline values for comparison against monitoring results is discussed in the '*Water Quality Monitoring Strategy*' report. A summary of the adopted published guideline values is presented in Attachment C.

ORGANIC ANALYSIS

Organic analysis results (petroleum hydrocarbons, pesticides and herbicides) have not been included in this summary letter. We note the following:

- Petroleum Hydrocarbons

  All on-site sample location concentrations were less than the laboratory limit of reporting.

  Off-site sample location concentrations were also less then the laboratory limit of reporting except for one sample (D-SW16) collected within Flying Fish Point in November 2008. Concentrations present at that time exceed published guidelines for aquatic ecosystems and human health protection.

- Pesticides and Herbicides

  All on-site and off-site concentrations were at or less than the laboratory limit of reporting.

SAMPLE DATA

Laboratory analysis results for each sample location have been previously reported to Satori Resorts on a monthly basis that included field records and laboratory analysis certificates. This detailed information has not been repeated in this letter.

Key laboratory results obtained for each sample location have been summarised together as follows:

- Attachment D - Catchment A1 to A4 (A-SW4 to A-SW6)
- Attachment E – Catchment A5 (A-SW7 to A-SW9)
- Attachment F – Catchment B (B-SW1 to B-SW3, B-SW1A)
- Attachment G – Catchment C1/D1/E1 (CDE-SW10 to CDE-SW12, CDE-SW10A)
- Attachment H – Catchment C2/D2 (C-SW13 to C-SW15, D-SW16 to D-SW18)
- Attachment I – Catchment E3 (E-SW19, ES-W21)
- Attachment J – Groundwater (A-MW1 to A-MW6)

The summary sheet for each sampling location generally includes the following information for each analyte:

- Individual monitoring event concentrations.
- Minimum and maximum concentration.
- Average concentration and standard deviation (where one or more results exceed adopted published guidelines).

NOTABLE OBSERVATIONS

Parameter	Variations at Sample Locations	Catchment Area Variations
Development Site – Groundwater		
■ pH	■ Relatively consistent	■ Highly variable with some values less than the adopted criteria and some above.
■ Dissolved Oxygen	■ Highly Variable	■ Wetland and estuarine values were generally less than the adopted criteria.
■ Turbidity	■ Highly Variable	■ Values were generally above the adopted criteria.
■ Nitrogen (various)	■ Highly Variable	■ Most values above the adopted criteria.
■ Total Phosphorous	■ Highly Variable	■ Most values above the adopted criteria.
■ Zinc	■ Relatively consistent	■ Most values above the adopted criteria.
Development Site – Surface Water Catchment Areas		
■ pH	■ Relatively consistent	■ Wetland and estuarine values were generally less than the adopted criteria.
■ Dissolved Oxygen	■ Highly Variable	■ Wetland and estuarine values were generally less than the adopted criteria.
■ Turbidity	■ Highly Variable	■ Freshwater and estuarine values were generally well above the adopted criteria.
■ Nitrogen (various)	■ Highly Variable	■ Freshwater, wetland and estuarine values were generally well above the adopted criteria.
■ Total Phosphorous	■ Highly Variable	■ Freshwater, wetland and estuarine values were generally well above the adopted criteria.
■ Aluminium	■ Relatively consistent	■ Freshwater, wetland and estuarine values were generally well above the adopted criteria.
■ Chromium	■ Relatively consistent	■ Wetland values were generally well above the adopted criteria.
■ Copper	■ Relatively consistent	■ Wetland values were generally well above the adopted criteria.

Parameter	Variations at Sample Locations	Catchment Area Variations
Access Road Alignment – Surface Water Catchment Areas		
■ Dissolved Oxygen	■ Highly Variable	■ Highly variable with some values less than the adopted criteria and some above.
■ Turbidity	■ Variable	■ Values were generally well above the adopted criteria.
■ Nitrogen (various)	■ Highly Variable	■ Values were generally well above the adopted criteria.
■ Total Phosphorous	■ Highly Variable	■ Values were generally well above the adopted criteria.
■ Aluminium	■ Relatively consistent	■ Over 50% of locations with average values above the adopted criteria.
■ Chromium	■ Relatively consistent	■ Over 50% of locations with average values above the adopted criteria.
■ Zinc	■ Relatively consistent	■ Over 50% of locations with average values above the adopted criteria.

In summary, this preliminary information indicates existing variable turbid surface water conditions with elevated concentrations of nutrients and some metals both within the proposed development site and adjacent to the proposed access road alignment.

LIMITATIONS

Your attention is drawn to the document - “Limitations”, which is provided as Attachment K to this report. The statements presented in this document are intended to advise you of what your realistic expectations of this report should be. The document is not intended to reduce the level of responsibility accepted by Golder Associates, but rather to ensure that all parties who may rely on this report are aware of the responsibilities each assumes in so doing.

If you have any enquiries please do not hesitate to contact the undersigned.

GOLDER ASSOCIATES PTY LTD

James Begg
Senior Environmental Engineer

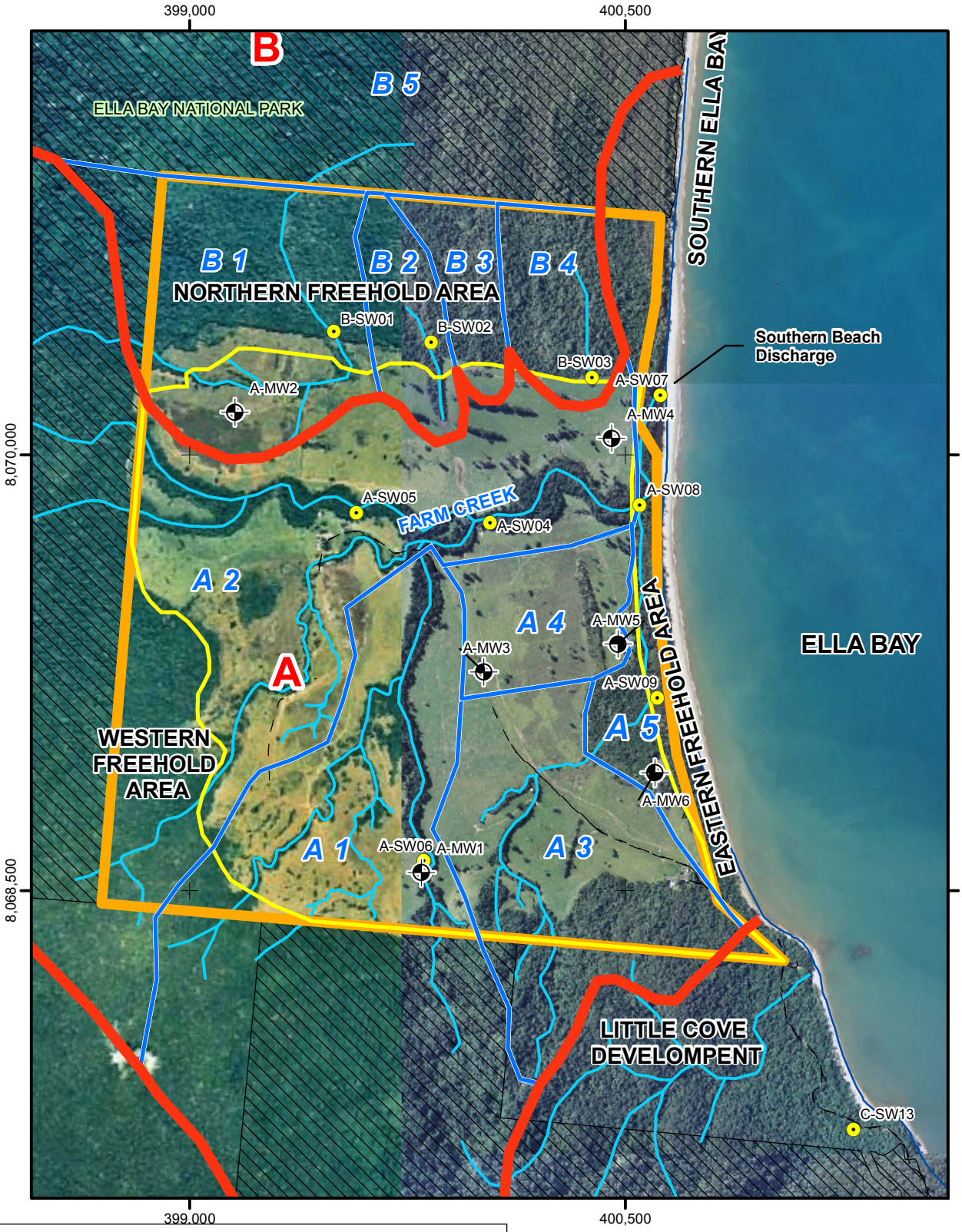
Paul Scells
Principal

JSB/PKS/mjm

Attachments: Attachment A – Attachment K

j:\env\2008\087673031 - wq and soils, ella bay resort\correspondence out\087673031 021 l rev0 monitoring results overview.doc

ATTACHMENT A



LEGEND

- Catchment Area
- A1 Sub-Catchment Boundary
- Property Boundary
- Site Boundary
- National Park
- Monitoring Well
- Surface Monitoring Location
- Drainage

0 200 400 600 800
metres

Note: Datum GDA94, Projection MGA, Zone 55

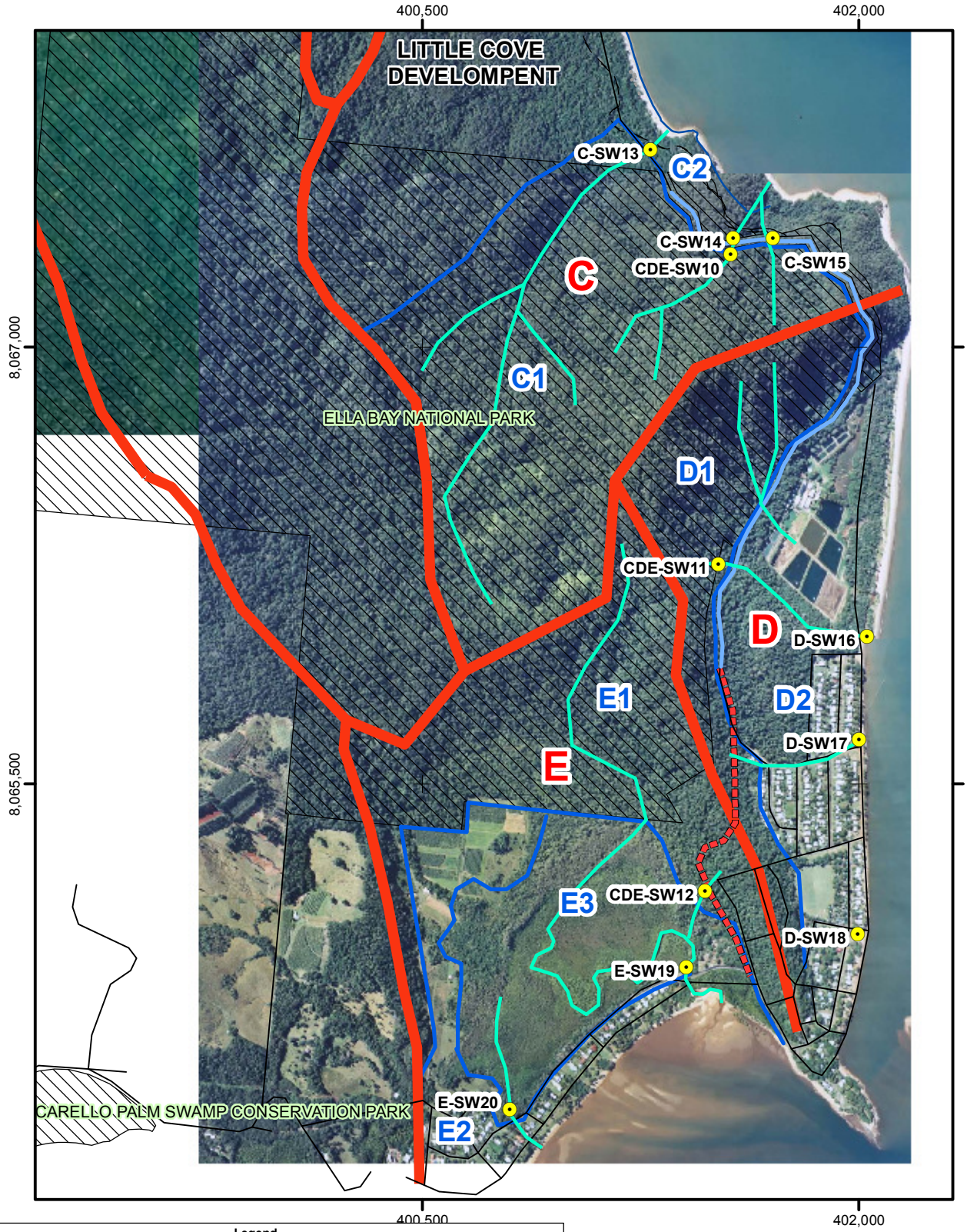
Note:
1. Base map data copyright Mapinfo Australia Pty Ltd.
2. Aerial photography copyright The State of Queensland (Department of Natural Resources and Mines) 2002.

Golder Associates

CLIENT: Satori Resorts Ella Bay Pty Ltd		PROJECT: Ella Bay Intergrated Resort Water Quality Monitoring Strategy	
DRAWN: BAG	DATE: 20/03/08	TITLE: DEVELOPMENT LOCATION PLAN	
CHECKED: JSB*	DATE: 20/03/08		
SCALE: 1:20,000		PROJECT No: 087673008-001	FIGURE No: 5 / REV No: R1 / A4

File Location: S:\GIS_Jobs\Cairns.08\3ENV08\087673008_EllaBay\GIS\Projects\087673008-001-SiteLocationPlan-Fig5Rev1-A4.mxd
Note: The * beside the typed initials denotes the original drawing issue was signed or initialled by that respective person.

Information contained on this drawing is the copyright of Golder Associates Pty Ltd. Unauthorised use or reproduction of this plan either wholly or in part without written permission infringes copyright. © Golder Associates Pty Ltd.



Legend

- Surface Monitoring Location
- UpgradedRoads
- Catchments
- Inferred Water Courses
- Street
- D1 Subcatchment Boundaries
- ProposedRoad

0 150 300 450 600 750
metres

Note: Datum GDA94, Projection MGA, Zone 55

Note:
1. Base map data copyright Mapinfo Australia Pty Ltd.
2. Aerial photography copyright The State of Queensland (Department of Natural Resources and Mines) 2002.

Golder Associates

CLIENT: Satori Resorts Ella Bay Pty Ltd		PROJECT: Ella Bay Integrated Resort Water Quality Monitoring Strategy	
DRAWN: JEH/BAG	DATE: 20/03/08	TITLE: ACCESS ROAD LOCATION PLAN	
CHECKED: JSB*	DATE: 20/03/08		
SCALE: 1:20,000		PROJECT No: 087673008-001	FIGURE No: 6 / REV No: R1 / A4

File Location: S:\GIS_Jobs\Cairns.08\3ENV08\087673008_EllaBay\GIS\Projects\087673008-001-SiteLocationPlan-Fig6Rev0-A4.mxd
Note: The * beside the typed initials denotes the original drawing issue was signed or initialled by that respective person.

Information contained on this drawing is the copyright of Golder Associates Pty Ltd. Unauthorised use or reproduction of this plan either wholly or in part without written permission infringes copyright. © Golder Associates Pty. Ltd.

ATTACHMENT B

Ella Bay Water Quality Monitoring Program Summary - To Wednesday 13 May 2009

Catchment	Sample Site	Required Data Points	Samples Collected											Current Total Data Points
			Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Extra 19-03	Extra 24/25-03	Extra 6-04	Apr-09	May-09	
Catchment A	A-SW4	12	1	1	1	1	1	1				1	1	8
	A-SW5	12	1	1	1	1	no access	1		1		1	1	8
	A-SW6	12	1	1	1	1	1	1				1	1	8
	A-SW7	12	1	1	1	1	no access	1		1		1	1	8
	A-SW8	12	1	1	1	1	no access	1		1		1	1	8
	A-SW9	12	1	1	1	1	1	1				1	1	8
Catchment B	B-SW1	12	no water	no water	no water	no access	no access	1	1	1	1	1	1	7
	B-SW1A	Alt B-SW1		1	1	no access	no access							
	B-SW2	12	no water	no water	no water	1	no access	1	1	1	1	1	1	7
	B-SW3	12	no water	no water	no water	1	no access	1	1	1	1	1	1	7
Catchment C	C-SW13	12	1	1	1	1	1	1				1	1	8
	C-SW14	12	1	1	1	1	1	1				1	1	8
	C-SW15	12	1	1	1	1	1	1				1	1	8
Catchment D	D-SW16	12	no water	no water	1	1	1	1	1	1	1	1	1	9
	D-SW17	12	no water	no water	no water	1	1	1	1	1	1	1	1	8
	D-SW18	12	no water	no water	no water	1	1	1	no water	no water	no water	no water	1	4
Catchment E	E-SW19	12	1	1	1	1	1	1	1	1	1	1	1	11
	E-SW21	12	no water	no water	no water	1	1	1	1	1	no water	1	1	7
Catchment CDE (above road)	CDE-SW10	12	1	1	1	1	1	1	1	1		1	1	10
	CDE-SW11	12	no water	no water	1	1	1	1	1	1		1	1	8
	CDE-SW12	12	no water	no water	no water	1	1	no water	no water	no water		no water	1	10
	CDE-SW10A	Alt SW12	1	1	1	1	1	1	1	1		1	1	
Groundwater	A-MW1	12	1	1	pump test	1	1	1		1		1	1	8
	A-MW2	12	1	1	pump test	no access	no access	1	1	1		1	1	7
	A-MW3	12	1	1	pump test	1	1	1		1		1	1	8
	A-MW4	12	1	1	pump test	1	no access	1	1	1		1	1	8
	A-MW5	12	1	1	pump test	1	1	1		1		1	1	8
	A-MW6	12	1	1	pump test	1	1	1		1		1	1	8

ATTACHMENT C

3.6 Interim Monitoring Criteria

In the absence of documented and approved local water quality guidelines, the following interim criteria are recommend for any disturbance undertaken within the Ella Bay Integrated Resort site and access road alignment.

Water Quality Parameter	Freshwater Upland		Wetland	Middle Estuary
	High Value	**Disturbed**	**Disturbed**	**Disturbed**
Catchments	C1, D1, E1	A1 to A4, C2, D2, E2	B1 to B4	A5, E3
Proposed Monitoring Locations	CDE-SW10 to CDE-SW12	A-SW01 to SW06 C-SW13 to SW15 D-SW16 to SW18 A-MW1 to MW3	B-SW01 to B-SW03	A-SW07 to SW09 E-SW19, E-SW20 A-MW4 to MW6
Physio-chemical – General				
pH	6.0 to 7.5(2)		6.0 to 8(2)	6.5 to 8.4(2)
Dissolved Oxygen	90 to 100 %(2)		90 to 120 %(2)	80 to 105 %(2)
Turbidity	6 NTU		200 NTU	10 NTU
Physio-chemical – Nutrients				
Ammonia	6 ug/L(2)		10 ug/L(2)	15 ug/L(2)
Oxidised Nitrogen	30 ug/L(2)		10 ug/L(2)	30 ug/L(2)
Organic Nitrogen	125 ug/L(2)		1180 ug/L(2)	200 ug/L(2)
Total Nitrogen	150 ug/L(2)		1200 ug/L(2)	250 ug/L(2)
Filtered Phosphorous	5 ug/L(2)		25 ug/L(2)	5 ug/L(2)
Total Phosphorous	10 ug/L(2)		50 ug/L(2)	20 ug/L(2)
Toxicant – Metals				
Arsenic	1.8 ug/L(1)	37 ug/L(1)	37 ug/L(1)	37 ug/L(1, 3)
Cadmium	0.06 ug/L(1)	0.2 ug/L(1)	0.2 ug/L(1)	5.5 ug/L(1)
Chromium	0.01 ug/L(1)	1.0 ug/L(1)	1.0 ug/L(1)	31.8 ug/L(1)
Copper	1.0 ug/L(1)	1.4 ug/L(1)	1.4 ug/L(1)	1.3 ug/L(1)
Lead	1.0 ug/L(1)	3.4 ug/L(1)	3.4 ug/L(1)	4.4 ug/L(1)
Mercury	0.06 ug/L(1)	0.6 ug/L(1)	0.6 ug/L(1)	0.4 ug/L(1)
Nickel	8 ug/L(1)	11 ug/L(1)	11 ug/L(1)	70 ug/L(1)
Zinc	2.4 ug/L(1)	8 ug/L(1)	8 ug/L(1)	15 ug/L(1)
Aluminium	27 ug/L(1)	55 ug/L(1)	55 ug/L(1)	55 ug/L(1, 3)
Toxicant – Fuels, Oils and Greases				
Oils and Greases	Not Greater than background sample from Catchment B5 ('*Ella Bay Wetlands*')			
Benzene	600 ug/L(1)	950 ug/L(1)	950 ug/L(1)	700 ug/L(1)
Xylene	340 ug/L(1)	550 ug/L(1)	550 ug/L(1)	550 ug/L(1, 3)
Toxicant – Pesticides and Herbicides (Development Site Ony)				
- Azinphos methyl	0.01 ug/L(1)	0.02 ug/L(1)	0.02 ug/L(1)	0.02 ug/L(1, 3)
- Clorpyrifos	0.00004 ug/L(1)	0.01 ug/L(1)	0.01 ug/L(1)	0.00005 ug/L(1)
- Diazinon	0.00003 ug/L(1)	0.01 ug/L(1)	0.01 ug/L(1)	0.00003 ug/L(1, 3)
- Dimethoate	0.1 ug/L(1)	0.15 ug/L(1)	0.15 ug/L(1)	0.15 ug/L(1, 3)
- Fenithrothion	0.1 ug/L(1)	0.2 ug/L(1)	0.2 ug/L(1)	0.2 ug/L(1, 3)
- Malathion	0.002 ug/L(1)	0.05 ug/L(1)	0.05 ug/L(1)	0.05 ug/L(1, 3)
- Parathion	0.0007 ug/L(1)	0.004 ug/L(1)	0.004 ug/L(1)	0.004 ug/L(1, 3)
- Temephos	0.05 ug/L(1, 3)	0.05 ug/L(1, 3)	0.05 ug/L(1, 3)	0.05 ug/L(1)
- Esfenvalerate	0.001 ug/L(1, 3)	0.001 ug/L(1)	0.001 ug/L(1)	0.001 ug/L(1, 3)
- 2,4-D	140 ug/L(1)	280 ug/L(1)	280 ug/L(1)	280 ug/L(1, 3)
- 2.4,5-T	3 ug/L(1)	36 ug/L(1)	36 ug/L(1)	36 ug/L(1, 3)
Gross Pollutants	No litter visible and vegetation less than background from Catchment C ('*Health Point*')			

Notes: (1) QWQG 2006,

(2) ANZECC 2000

(3) Lowest published guideline value for other water types with equivalent level of disturbance.

ATTACHMENT D

Field ID	ASW4	ASW4	ASW4	ASW4	ASW4	ASW4	ASW4	ASW4	ASW4
Sample Date	3/10/2008	11/11/2008	25/11/2008	17/12/2008	21/01/2009	24/02/2009	11/03/2009	21/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR										Minimum	Maximum	Average	Standard Deviation	Freshwater - Upland Disturbed Guidelines (1)
Field	pH_Field	pH_Units		6.04	**5.9**	6.39	6.72	**5.98**	6.4	6.7	6.5	6.4	**5.9**	6.72	6.34	0.30	**6-7.5**
	Dissolved Oxygen	mg/L		4.7	**3.7**	**3.4**	**3.1**	**20**	**14.4**	6.8	6.9	6.7	**3.1**	**20**	**7.74**	5.74	**6.4-7.2**
	Turbidity	NTU		91.4	**47.8**	**6.5**	**31.5**	**37.7**	**114.5**	**15.8**	**54.1**	**16.5**	**6.5**	**114.5**	**46.20**	36.13	**6**
	Electrolytic Conductivity	uS/cm		50	41	42	3	39	25.0	43.0	41	0	0	50	31.56	18.26	**-**
	Redox Potential	mV		293	395	355	491	568	572.0	182.0	367	761	182	761	442.67	173.97	**-**
	Temp	oC		26.3	26.39	29.14	27.24	25.69	27.5	26.3	24.9	23.5	23.45	29.14	26.32	1.61	**-**
Nutrients	Ammonia	mg/L	0.005	**0.15**	0.005	N/A	**0.009**	**0.013**	**0.017**	**0.016**	**0.027**	**0.014**	0.005	**0.15**	**0.03**	0.05	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**1.2**	**0.18**	N/A	0.1	0.05	**0.32**	0.025	0.07	0.025	0.025	**1.2**	**0.25**	0.40	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	**3.1**	0.025	N/A	**0.03**	**0.15**	**0.15**	**0.15**	**0.18**	**0.23**	0.025	**3.1**	**0.50**	1.05	**0.03**
	Nitrogen (Total)	mg/L	0.05	**1.4**	**0.2**	N/A	0.14	**0.21**	**0.49**	**0.21**	**0.28**	**0.29**	0.14	**1.4**	**0.40**	0.42	**0.15**
	TKN (as N)	mg/L	0.05	1.3	0.18	N/A	0.005	0.06	0.34	0.06	0.1	0.06	0.005	1.3	0.26	0.43	**-**
	Phosphorus	mg/L	0.02	**0.01**	0.005	N/A	0.11	**0.01**	**0.02**	0.005	0.005	0.005	0.005	**0.11**	**0.02**	0.04	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	0.005	0.0025	N/A	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	**0.005**	0.003	0.001	**0.005**
Inorganics	Aluminium	mg/L	0.005	NT	N/A	0.009	0.014	**0.103**	**0.249**	0.045	0.05	**0.3**	0.009	**0.3**	**0.11**	0.12	**0.055**
	Arsenic	mg/L	0.0002	0.001	N/A	0.0011	0.0016	0.0008	0.0003	0.0004	0.0004	0.0004	0.0003	0.0016	0.001	0.0005	**0.037**
	Cadmium	mg/L	0.00005	0.00005	N/A	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.00005	0.00003	0.00001	**0.0002**
	Chromium	mg/L	0.0002	0.0005	N/A	0.0001	0.0001	0.0007	**0.001**	0.0007	0.0004	**0.001**	0.0001	**0.001**	**0.001**	0.0004	**0.001**
	Copper	mg/L	0.0005	0.001	N/A	0.00025	0.00025	0.00025	0.0005	0.00025	0.00025	0.0008	0.00025	0.001	0.0004	0.0003	**0.0014**
	Iron	mg/L	0.002	NT	N/A	0.881	1.76	0.943	0.782	0.776	0.56	0.81	0.56	1.76	0.93	0.38	**-**
	Lead	mg/L	0.0001	0.0005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0002	0.00005	0.0005	0.0001	0.0002	**0.0034**
	Mercury	mg/L	0.0001	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0006**
	Nickel	mg/L	0.0005	0.0005	N/A	0.00025	0.00025	0.0007	0.00025	0.00025	0.00025	0.0006	0.00025	0.0007	0.0004	0.0002	**0.011**
	Zinc	mg/L	0.001	0.0025	N/A	0.001	0.001	0.005	0.0005	0.005	0.002	0.006	0.0005	0.006	0.003	0.002	**0.008**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	ASW5	ASW5	ASW5	ASW5	ASW5	ASW5	ASW5
Sample Date	3/10/2008	12/11/2008	25/11/2008	17/12/2008	20/01/2009	21/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR								Minimum	Maximum	Average	Standard Deviation	Freshwater - Upland Disturbed Guidelines (1)
Field	pH_Field	pH_Units		6.13	6.1	6.71	6.5	6.02	6.2	7.3	6.02	7.34	6.43	0.47	**6-7.5**
	Dissolved Oxygen	mg/L		4.6	**4.1**	**4.1**	**3.4**	**13.2**	**7.4**	6.9	**3.4**	**13.2**	**6.24**	3.42	**6.4-7.2**
	Turbidity	NTU		67.9	**32.6**	**26.5**	**56**	**26.3**	**42.8**	**25.3**	**25.3**	**67.9**	**39.63**	16.74	**6**
	Electrolytic Conductivity	uS/cm		53	47	46	3	42	45	-	3	53	39.33	18.16	**-**
	Redox Potential	mV		293	430	585	564	505	739	724	293	739	548.57	158.05	**-**
	Temp	oC		26.32	27.59	28.65	28.79	26.28	23.6	23.6	23.59	28.79	26.40	2.16	**-**
Nutrients	Ammonia	mg/L	0.005	**0.6**	0.005	N/A	0.005	**0.007**	**0.03**	**0.012**	0.005	**0.6**	**0.11**	0.24	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**1**	**0.18**	N/A	**0.17**	0.025	0.025	0.09	0.025	**1**	**0.25**	0.37	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	**1.1**	0.023	N/A	0.029	**0.082**	**0.22**	**0.2**	0.023	**1.1**	**0.28**	0.41	**0.03**
	Nitrogen (Total)	mg/L	0.05	**1.6**	**0.21**	N/A	**0.2**	0.08	**0.22**	**0.3**	0.08	**1.6**	**0.44**	0.58	**0.15**
	TKN (as N)	mg/L	0.05	1.6	0.19	N/A	0.005	0.025	0.025	0.1	0.005	1.6	0.32	0.63	**-**
	Phosphorus	mg/L	0.02	**0.06**	0.005	N/A	0.17	**0.01**	0.005	0.005	0.005	**0.17**	**0.04**	0.07	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.005**	0.0025	N/A	0.0025	0.0025	0.0025	0.0025	0.0025	**0.005**	0.003	0.001	**0.005**
Inorganics	Aluminium	mg/L	0.005	NT	N/A	0.006	0.019	**0.095**	0.04	**0.357**	0.006	**0.357**	**0.10**	0.15	**0.055**
	Arsenic	mg/L	0.0002	0.002	N/A	0.0008	0.0013	0.0007	0.0006	0.0005	0.0005	0.002	0.001	0.0006	**0.037**
	Cadmium	mg/L	0.00005	**0.0004**	N/A	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	**0.0004**	0.00009	0.00015	**0.0002**
	Chromium	mg/L	0.0002	0.0005	N/A	0.0002	0.0003	0.0009	0.0004	**0.0015**	0.0002	**0.0015**	0.001	0.0005	**0.001**
	Copper	mg/L	0.0005	0.001	N/A	0.00025	0.0006	0.00025	0.00025	**0.0015**	0.00025	**0.0015**	0.0006	0.0005	**0.0014**
	Iron	mg/L	0.002	NT	N/A	0.668	1.2	0.458	0.492	1.2	0.458	1.2	0.80	0.37	**-**
	Lead	mg/L	0.0001	0.0005	N/A	0.00005	0.00005	0.00005	0.00005	0.0004	0.00005	0.0005	0.0002	0.0002	**0.0034**
	Mercury	mg/L	0.0001	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0006**
	Nickel	mg/L	0.0005	0.001	N/A	0.00025	0.00025	0.001	0.00025	0.0011	0.00025	0.0011	0.0006	0.0004	**0.011**
	Zinc	mg/L	0.001	**0.027**	N/A	0.0005	0.003	**0.013**	0.001	**0.012**	0.0005	**0.027**	**0.009**	0.010	**0.008**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	ASW6	ASW6	ASW6	ASW6	ASW6	ASW6	ASW6	ASW6
Sample Date	3/10/2008	11/11/2008	25/11/2008	17/12/2008	21/01/2009	24/02/2009	21/04/2009	12/05/2009

Chemical Group	Chemical Name	Output Unit	LOR									Minimum	Maximum	Average	Standard Deviation	Freshwater - Upland Disturbed Guidelines (1)
Field	pH_Field	pH_Units		6.11	7.04	**5.92**	6.46	6.32	6.7	6.0	**8.8**	**5.92**	**8.75**	6.66	0.92	**6-7.5**
	Dissolved Oxygen	mg/L		2.5	**3.9**	**1.5**	**2**	**20**	**20.0**	**7.5**	6.8	**1.5**	**20**	**8.03**	7.70	**6.4-7.2**
	Turbidity	NTU		148.4	**41.1**	**44.6**	**48.5**	**41.6**	**104.1**	**55.1**	**6.9**	**6.9**	**148.4**	**61.29**	44.17	**6**
	Electrolytic Conductivity	uS/cm		60	49	45	4	47	36.0	48	-	4	60	41.29	17.89	**-**
	Redox Potential	mV		310	501	644	607	573	548.0	774	835	310	835	599.00	162.49	**-**
	Temp	oC		23.7	25.11	25.38	31.14	24.63	26.3	24.5	22.8	22.78	31.14	25.44	2.54	**-**
Nutrients	Ammonia	mg/L	0.005	**0.17**	**0.008**	N/A	0.0025	0.0025	0.005	**0.021**	0.0025	0.0025	**0.17**	**0.03**	0.06	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**1.5**	**0.18**	N/A	**0.29**	0.025	**0.14**	0.025	0.09	0.025	**1.5**	**0.32**	0.53	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.11**	**0.11**	N/A	0.012	**0.15**	**0.38**	**0.29**	**0.46**	0.012	**0.46**	**0.22**	0.16	**0.03**
	Nitrogen (Total)	mg/L	0.05	**1.8**	**0.3**	N/A	**0.3**	**0.15**	**0.52**	**0.34**	**0.55**	**0.15**	**1.8**	**0.57**	0.56	**0.15**
	TKN (as N)	mg/L	0.05	1.7	0.19	N/A	**0.02**	0.025	0.14	0.05	0.09	0.02	1.7	0.32	0.61	**-**
	Phosphorus	mg/L	0.02	**0.05**	0.005	N/A	0.29	**0.1**	0.005	**0.01**	0.005	0.005	**0.29**	**0.07**	0.10	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.005**	0.0025	N/A	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	**0.005**	0.003	0.001	**0.005**
Inorganics	Aluminium	mg/L	0.005	NT	N/A	0.006	0.016	**0.095**	**0.095**	0.018	0.05	0.006	**0.095**	0.05	0.04	**0.055**
	Arsenic	mg/L	0.0002	0.0005	N/A	0.0003	0.0006	0.0007	0.0001	0.0001	0.0001	0.0001	0.0007	0.0003	0.0003	**0.037**
	Cadmium	mg/L	0.00005	0.00005	N/A	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.00005	0.00003	0.00001	**0.0002**
	Chromium	mg/L	0.0002	0.0005	N/A	0.0001	0.0001	0.0009	0.0003	0.0002	0.0004	0.0001	0.0009	0.0004	0.0003	**0.001**
	Copper	mg/L	0.0005	**0.002**	N/A	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	**0.002**	0.0005	0.0007	**0.0014**
	Iron	mg/L	0.002	NT	N/A	0.27	0.51	0.458	0.139	0.053	0.1	0.053	0.51	0.26	0.19	**-**
	Lead	mg/L	0.0001	0.0005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0001	0.0002	**0.0034**
	Mercury	mg/L	0.0001	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0006**
	Nickel	mg/L	0.0005	0.001	N/A	0.00025	0.00025	0.001	0.00025	0.00025	0.00025	0.00025	0.001	0.0005	0.0004	**0.011**
	Zinc	mg/L	0.001	**0.026**	N/A	0.001	0.001	**0.013**	0.0005	0.0005	**0.008**	0.0005	**0.026**	0.007	0.010	**0.008**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

ATTACHMENT E

Field ID	ASW7	ASW7	ASW7	ASW7	ASW7	ASW7	ASW7	ASW7
Sample Date	2/10/2008	11/11/2008	16/12/2008	20/01/2009	11/03/2009	24/03/2009	21/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR									Minimum	Maximum	Average	Standard Deviation	Middle Estuary - Disturbed Guidelines (1)
Field	pH_Field	pH_Units		6.28	7.1	6.7	**5.29**	**6.0**	**5.7**	6.0	6.3	**5.29**	7.1	**6.17**	0.56	**6.5-8.4**
	Dissolved Oxygen	mg/L		4.4	**4.2**	**3.2**	**4**	**4.2**	**5.0**	5.5	**4.3**	**3.2**	5.5	**4.35**	0.68	**5.5-7.7**
	Turbidity	NTU		42.2	7.1	**33.1**	9.2	**54.5**	**15.8**	15.4	8.5	7.1	**54.5**	**23.23**	17.83	**10**
	Electrolytic Conductivity	uS/cm		349	679	32	2173	23180.0	7220	8250	91	32	23180	5246.75	7951.55	**-**
	Redox Potential	mV		435	470	538	542	351.0	333	621	751	333	751	505.13	139.31	**-**
	Temp	oC		29.04	29.17	33.63	29.23	29.5	29.3	26.3	23.1	23.07	33.63	28.66	3.01	**-**
Nutrients	Ammonia	mg/L	0.005	**0.08**	**0.013**	**0.67**	0.0025	**0.05**	0.0025	**0.022**	0.0025	**0.0025**	**0.67**	**0.11**	0.23	**0.0015**
	Nitrogen (Organic)	mg/L	0.05	**2.4**	**0.21**	0.025	**0.38**	**0.24**	**0.4**	**0.32**	**0.47**	0.025	**2.4**	**0.56**	0.76	**0.2**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.025**	**0.1**	0.018	0.0025	0.0025	0.01	**0.067**	0.016	0.0025	**0.1**	**0.03**	0.03	**0.03**
	Nitrogen (Total)	mg/L	0.05	**2.5**	**0.32**	**0.26**	**0.38**	**0.29**	**0.41**	**0.41**	**0.49**	**0.26**	**2.5**	**0.63**	0.76	**0.25**
	TKN (as N)	mg/L	0.05	2.5	0.22	**0.02**	0.38	0.29	0.4	0.34	0.47	0.02	2.5	0.58	0.79	**-**
	Phosphorus	mg/L	0.02	**0.07**	0.005	0.24	0.01	**0.02**	0.005	**0.02**	0.01	0.005	**0.24**	**0.05**	0.08	**0.02**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.005**	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	**0.005**	0.003	0.001	**0.005**
Inorganics	Aluminium	mg/L	0.005	NT	**0.056**	0.04	**0.411**	**1.66**	**0.113**	**0.146**	**0.257**	0.04	**1.66**	**0.38**	0.58	**0.055**
	Arsenic	mg/L	0.0002	0.002	0.0014	0.0015	0.0024	0.0024	0.0007	0.0008	0.0005	0.0005	0.0024	0.0015	0.0008	**0.037**
	Cadmium	mg/L	0.00005	0.0007	0.000025	0.000025	0.00008	0.000025	0.000025	0.000025	0.000025	0.000025	**0.0007**	0.00012	0.00024	**0.0055**
	Chromium	mg/L	0.0002	0.002	0.0005	0.0004	0.0022	0.005	0.0012	0.001	0.0015	0.0004	0.005	0.0017	0.0015	**0.0318**
	Copper	mg/L	0.0005	**0.002**	0.0006	0.00025	0.001	**0.0019**	0.00025	0.00025	0.0008	0.00025	**0.002**	0.0009	0.0007	**0.0013**
	Iron	mg/L	0.002	NT	1.02	0.919	3.18	3.23	0.76	0.788	1.82	0.76	3.23	1.67	1.11	**-**
	Lead	mg/L	0.0001	0.001	0.0002	0.00005	0.0014	0.0012	0.00005	0.00005	0.0001	0.00005	0.0014	0.0005	0.0006	**0.0044**
	Mercury	mg/L	0.0001	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0004**
	Nickel	mg/L	0.0005	0.002	0.00025	0.00025	0.0012	0.0032	0.00025	0.0005	0.00025	0.00025	0.0032	0.0010	0.0011	**0.07**
	Zinc	mg/L	0.001	0.007	0.002	**0.015**	0.008	0.004	0.002	0.01	0.008	0.002	**0.015**	0.007	0.004	**0.015**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	ASW8	ASW8	ASW8	ASW8	ASW8	ASW8	ASW8	ASW8
Sample Date	2/10/2008	11/11/2008	16/12/2008	20/01/2009	11/03/2009	24/03/2009	21/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR									Minimum	Maximum	Average	Standard Deviation	Middle Estuary - Disturbed Guidelines (1)
Field	pH_Field	pH_Units		6.65	6.57	6.66	**5.97**	6.5	**6.3**	5.9	7.1	**5.9**	7.05	**6.45**	0.38	**6.5-8.4**
	Dissolved Oxygen	mg/L		3.5	**2.5**	**3.1**	**20**	7.0	7.3	6.9	6.8	**2.5**	**20**	7.14	5.56	**5.5-7.7**
	Turbidity	NTU		53.4	**21.5**	**46.9**	**49.4**	**23.2**	**75.1**	71.0	**13.4**	**13.4**	**75.1**	**44.24**	22.98	**10**
	Electrolytic Conductivity	uS/cm		146	342	15	3	4315.0	2341	1696	122	3	4315	1122.50	1560.64	-
	Redox Potential	mV		431	467	504	542	299.0	372	657	709	299	709	497.63	137.68	-
	Temp	oC		26.03	27.64	31.27	26.55	26.9	26.8	26.0	23.4	23.38	31.27	26.82	2.19	-
Nutrients	Ammonia	mg/L	0.005	**0.04**	**0.024**	0.0025	**0.009**	**0.02**	**0.007**	**0.021**	**0.024**	**0.0025**	**0.04**	**0.02**	0.01	**0.0015**
	Nitrogen (Organic)	mg/L	0.05	**1.5**	0.15	**0.29**	0.16	0.025	0.06	0.13	**0.2**	0.025	**1.5**	**0.31**	0.49	**0.2**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.025**	**0.037**	0.023	**0.068**	**0.053**	**0.12**	**0.12**	**0.18**	0.023	**0.18**	**0.08**	0.06	**0.03**
	Nitrogen (Total)	mg/L	0.05	**1.6**	0.21	**0.31**	0.24	0.05	0.19	**0.27**	**0.4**	0.05	**1.6**	**0.41**	0.49	**0.25**
	TKN (as N)	mg/L	0.05	1.5	0.17	**0.02**	0.17	0.025	0.07	0.15	0.22	0.02	1.5	0.29	0.49	-
	Phosphorus	mg/L	0.02	**0.15**	**0.02**	0.29	0.005	0.005	0.005	0.005	0.005	0.005	**0.29**	**0.06**	0.11	**0.02**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.02**	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	**0.02**	**0.005**	0.006	**0.005**
Inorganics	Aluminium	mg/L	0.005	NT	0.013	0.014	**0.102**	**0.057**	**0.084**	0.052	**0.27**	0.013	**0.27**	**0.08**	0.09	**0.055**
	Arsenic	mg/L	0.0002	0.001	0.0012	0.0017	0.0011	0.0005	0.0005	0.0008	0.0005	0.0005	0.0017	0.0009	0.0004	**0.037**
	Cadmium	mg/L	0.00005	0.0005	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.0005	0.00008	0.00017	**0.0055**
	Chromium	mg/L	0.0002	0.0005	0.0003	0.0001	0.0007	0.0003	0.0005	0.0004	0.0009	0.0001	0.0009	0.0005	0.0003	**0.0318**
	Copper	mg/L	0.0005	**0.002**	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.0006	0.00025	**0.002**	0.0005	0.0006	**0.0013**
	Iron	mg/L	0.002	NT	1.1	1.4	0.76	0.636	0.52	0.679	0.883	0.52	1.4	0.85	0.30	-
	Lead	mg/L	0.0001	0.0005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0001	0.00005	0.0005	0.0001	0.0002	**0.0044**
	Mercury	mg/L	0.0001	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0004**
	Nickel	mg/L	0.0005	0.001	0.00025	0.00025	0.0008	0.00025	0.00025	0.00025	0.0006	0.00025	0.001	0.0005	0.0003	**0.07**
	Zinc	mg/L	0.001	0.005	0.001	**0.01**	0.004	0.003	0.003	0.002	0.003	0.001	0.01	0.004	0.003	**0.015**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	ASW9	ASW9	ASW9	ASW9	ASW9	ASW9	ASW9	ASW9
Sample Date	2/10/2008	11/11/2008	16/12/2008	21/01/2009	24/02/2009	10/03/2009	21/04/2009	12/05/2009

Chemical Group	Chemical Name	Output Unit	LOR									Minimum	Maximum	Average	Standard Deviation	Middle Estuary - Disturbed Guidelines (1)
Field	pH_Field	pH_Units		6.33	**6.41**	**6.42**	**5.59**	**5.6**	**5.9**	6.4	6.6	**5.59**	6.58	**6.15**	0.40	**6.5-8.4**
	Dissolved Oxygen	mg/L		0.5	**8.1**	**3.4**	7.4	**3.9**	**1.2**	3.2	**4.6**	**0.5**	**8.1**	**4.04**	2.67	**5.5-7.7**
	Turbidity	NTU		65.5	**93.8**	**75.2**	**63.9**	**88.3**	**63.2**	92.7	**30.4**	**30.4**	**93.8**	**71.63**	21.03	**10**
	Electrolytic Conductivity	uS/cm		154	3122	488	47	19.0	1842.0	49		19	3122	817.29	1206.30	-
	Redox Potential	mV		431	513	523	523	532.0	381.0	837	820	381	837	570.00	168.16	-
	Temp	oC		24.37	28.1	30.25	28.72	26.7	26.1	26.4	24.2	24.2	30.25	26.86	2.09	-
Nutrients	Ammonia	mg/L	0.005	**0.005**	**0.033**	**0.2**	0.0025	**0.029**	**0.1**	**0.007**	**0.008**	**0.0025**	**0.2**	**0.05**	0.07	**0.0015**
	Nitrogen (Organic)	mg/L	0.05	**1.7**	**5.2**	**2.3**	**0.89**	**0.78**	**0.46**	**0.3**	**0.34**	**0.3**	**5.2**	**1.50**	1.65	**0.2**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.025**	0.009	0.005	0.0025	**0.035**	0.0025	0.019	0.024	0.0025	**0.035**	0.02	0.01	**0.03**
	Nitrogen (Total)	mg/L	0.05	**1.7**	**5.2**	**2.5**	**0.89**	**0.85**	**0.56**	**0.33**	**0.37**	**0.33**	**5.2**	**1.55**	1.65	**0.25**
	TKN (as N)	mg/L	0.05	1.7	5.2	**0.26**	0.89	**0.012**	0.56	0.31	0.35	0.012	5.2	1.16	1.71	-
	Phosphorus	mg/L	0.02	**0.03**	**0.59**	2.5	**0.04**	**0.05**	**0.03**	0.005	0.005	0.005	**2.5**	**0.41**	0.87	**0.02**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.03**	0.0025	**0.024**	0.0025	0.81	0.0025	0.0025	0.0025	0.0025	**0.81**	**0.110**	0.283	**0.005**
Inorganics	Aluminium	mg/L	0.005	NT	**0.061**	**0.106**	**0.28**	**0.439**	**0.102**	**0.065**	**0.296**	**0.061**	**0.439**	**0.19**	0.15	**0.055**
	Arsenic	mg/L	0.0002	0.001	0.0022	0.0055	0.0021	0.0006	0.001	0.0006	0.0004	0.0004	0.0055	0.0017	0.0017	**0.037**
	Cadmium	mg/L	0.00005	0.0002	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.0002	0.00005	0.00006	**0.0055**
	Chromium	mg/L	0.0002	0.001	0.0016	0.0021	0.0019	0.001	0.0008	0.0005	0.0008	0.0005	0.0021	0.0012	0.0006	**0.0318**
	Copper	mg/L	0.0005	**0.002**	0.0006	0.0008	0.0009	0.0005	0.00025	0.00025	0.0006	0.00025	**0.002**	0.0007	0.0006	**0.0013**
	Iron	mg/L	0.002	NT	0.335	1.42	3.65	2.88	9.1	2.32	1.58	0.335	9.1	3.04	2.88	-
	Lead	mg/L	0.0001	0.0005	0.0002	0.0002	0.0005	0.0005	0.0003	0.00005	0.0002	0.00005	0.0005	0.0003	0.0002	**0.0044**
	Mercury	mg/L	0.0001	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00	**0.0004**
	Nickel	mg/L	0.0005	0.0005	0.00025	0.00025	0.001	0.00025	0.0007	0.00025	0.00025	0.00025	0.001	0.0004	0.0003	**0.07**
	Zinc	mg/L	0.001	0.009	0.0005	0.004	0.007	0.002	0.006	0.002	0.004	0.0005	0.009	0.004	0.003	**0.015**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

ATTACHMENT F

Field ID	BSW1	BSW1	BSW1	BSW1	BSW1	BSW1	BSW1
Sample Date	3/10/2008	10/03/2009	19/03/2009	24/03/2009	6/04/2009	21/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR								Minimum	Maximum	Average	Standard Deviation	Wetlands - Disturbed Guidelines (1)
Field	pH_Field	pH_Units		5.86	6.1	6.5	6.2	6.5	6.5	6.8	**5.86**	6.76	6.35	0.31	**6-8**
	Dissolved Oxygen	mg/L		2.3	**5.1**	**4.9**	**5.2**	**4.4**	**4.4**	**5.1**	**2.3**	**5.2**	**4.49**	1.02	**6.4-8.9**
	Turbidity	NTU		N/A	71.5	110.5	52.1	30.2	31.7	15.0	15	110.5	51.83	34.81	**200**
	Electrolytic Conductivity	uS/cm		63	44.0	39	55	71	45	0	0	71	45.29	22.95	**-**
	Redox Potential	mV		436	357.0	544	260	258	534	678	258	678	438.14	157.43	**-**
	Temp	oC		26.5	28.6	26.8	26.8	26.2	24.0	23.5	23.5	28.6	26.06	1.76	**-**
Nutrients	Ammonia	mg/L	0.005	**0.42**	**0.034**	0.009	**0.028**	**0.046**	**0.06**	**0.017**	0.009	**0.42**	**0.088**	0.148	**0.01**
	Nitrogen (Organic)	mg/L	0.05	**1.4**	0.096	0.26	0.17	1.1	0.2	0.43	0.096	**1.4**	0.522	0.515	**1.18**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.025**	**0.15**	**0.17**	**0.21**	**0.14**	**0.14**	**0.35**	**0.025**	**0.35**	**0.169**	0.098	**0.01**
	Nitrogen (Total)	mg/L	0.05	**1.8**	0.28	0.44	0.41	**1.3**	0.4	0.8	0.28	**1.8**	0.776	0.571	**1.2**
	TKN (as N)	mg/L	0.05	1.8	0.13	0.27	0.2	1.2	0.26	0.45	0.13	1.8	0.616	0.636	**-**
	Phosphorus	mg/L	0.02	**0.1**	0.01	0.04	0.02	**0.2**	**0.05**	0.04	0.01	**0.2**	**0.066**	0.066	**0.05**
	Reactive Phosphorus (as P)	mg/L	0.005	0.02	0.0025	0.0025	0.0025	0.0025	0.0025	0.006	0.0025	0.02	0.0055	0.0065	**0.25**
Inorganics	Aluminium	mg/L	0.005	NT	**0.081**	**0.276**	**0.115**	**0.133**	**0.23**	**0.219**	**0.081**	**0.276**	**0.1757**	0.0766	**0.055**
	Arsenic	mg/L	0.0002	0.001	0.0005	0.0007	0.0004	0.0002	0.0005	0.0007	0.0002	0.001	0.0006	0.0003	**0.037**
	Cadmium	mg/L	0.00005	0.0001	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.0001	0.000036	0.000028	**0.0002**
	Chromium	mg/L	0.0002	**0.004**	0.0006	**0.0011**	0.0005	0.0001	**0.001**	**0.001**	0.0001	**0.004**	**0.00119**	0.00129	**0.001**
	Copper	mg/L	0.0005	**0.004**	0.00025	0.0007	0.00025	0.00025	0.0005	**0.0019**	0.00025	**0.004**	0.0011	0.001398	**0.0014**
	Iron	mg/L	0.002	NT	2.1	2.32	1.3	1.18	1.89	1.77	1.18	2.32	1.760	0.446	**-**
	Lead	mg/L	0.0001	0.002	0.00005	0.0002	0.00005	0.00005	0.00005	0.0002	0.00005	0.002	0.0004	0.0007	**0.0034**
	Mercury	mg/L	0.0001	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0006**
	Nickel	mg/L	0.0005	0.002	0.00025	0.0007	0.00025	0.00025	0.0006	0.0008	0.00025	0.002	0.000693	0.0006	**0.011**
	Zinc	mg/L	0.001	**0.019**	0.0005	0.005	0.004	0.001	0.007	0.005	0.0005	**0.019**	0.006	0.006	**0.008**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	BSW1A	BSW1A	BSW1A
Sample Date	12/11/2008	26/11/2008	17/12/2008

Chemical Group	Chemical Name	Output Unit	LOR				Minimum	Maximum	Average	Standard Deviation	Wetlands - Disturbed Guidelines (1)
Field	pH_Field	pH_Units		6.05	**5.54**	6.32	**5.54**	6.32	**5.97**	0.40	**6-8**
	Dissolved Oxygen	mg/L		**2.6**	**2.1**	**2.4**	**2.1**	**2.6**	**2.37**	0.25	**6.4-8.9**
	Turbidity	NTU		48.1	52.4	64	48.1	64	54.83	8.22	**200**
	Electrolytic Conductivity	uS/cm		35	44	2	2	44	27.00	22.11	**-**
	Redox Potential	mV		565	611	521	521	611	565.67	45.00	**-**
	Temp	oC		25.1	25.91	27.6	25.1	27.6	26.20	1.28	**-**
Nutrients	Ammonia	mg/L	0.005	**0.036**	N/A	**0.025**	**0.025**	**0.036**	**0.03**	0.01	**0.01**
	Nitrogen (Organic)	mg/L	0.05	0.19	N/A	0.14	0.14	0.19	0.17	0.04	**1.18**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.083**	N/A	**0.21**	**0.083**	**0.21**	**0.15**	0.09	**0.01**
	Nitrogen (Total)	mg/L	0.05	0.31	N/A	0.35	0.31	0.35	0.33	0.03	**1.2**
	TKN (as N)	mg/L	0.05	0.23	N/A	0.14	0.14	0.23	0.19	0.06	**-**
	Phosphorus	mg/L	0.02	0.005	N/A	0.01	0.005	0.01	0.01	0.00	**0.05**
	Reactive Phosphorus (as P)	mg/L	0.005	0.0025	N/A	0.0025	0.0025	0.0025	0.003	0.000	**0.25**
Inorganics	Aluminium	mg/L	0.005	N/A	0.009	0.029	0.009	0.029	0.02	0.01	**0.055**
	Arsenic	mg/L	0.0002	N/A	0.0001	0.0001	0.0001	0.0001	0.0001	-	**0.037**
	Cadmium	mg/L	0.00005	N/A	0.000025	0.000025	0.000025	0.000025	0.000025	-	**0.0002**
	Chromium	mg/L	0.0002	N/A	0.0001	0.0001	0.0001	0.0001	0.0001	-	**0.001**
	Copper	mg/L	0.0005	N/A	0.0011	0.0006	0.0006	0.0011	0.0009	0.0004	**0.0014**
	Iron	mg/L	0.002	N/A	0.911	0.605	0.605	0.911	0.76	0.22	**-**
	Lead	mg/L	0.0001	N/A	0.0002	0.00005	0.00005	0.0002	0.0001	0.0001	**0.0034**
	Mercury	mg/L	0.0001	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0006**
	Nickel	mg/L	0.0005	N/A	0.0006	0.00025	0.00025	0.0006	0.0004	0.0002	**0.011**
	Zinc	mg/L	0.001	N/A	0.005	0.003	0.003	0.005	0.004	0.001	**0.008**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	BSW2	BSW2	BSW2	BSW2	BSW2	BSW2	BSW2
Sample Date	20/01/2009	10/03/2009	19/03/2009	24/03/2009	6/04/2009	21/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR								Minimum	Maximum	Average	Standard Deviation	Wetlands - Disturbed Guidelines (1)
Field	pH_Field	pH_Units		**5.41**	6.0	**5.9**	**5.4**	6.1	6.0	6.7	**5.4**	6.7	**5.93**	0.44	**6-8**
	Dissolved Oxygen	mg/L		**5.7**	**1.2**	**1.5**	**1.3**	**1.8**	**1.2**	**4.8**	**1.2**	**5.7**	**2.50**	1.91	**6.4-8.9**
	Turbidity	NTU		23.5	50.5	68.8	60.6	176.0	41.5	64.5	23.5	176	69.34	49.51	**200**
	Electrolytic Conductivity	uS/cm		48	56.0	43	51	89	47	0	0	89	47.71	26.09	**-**
	Redox Potential	mV		494	144.0	390	298	186	546	709	144	709	395.29	203.02	**-**
	Temp	oC		27.21	27.4	26.8	27.1	26.0	25.0	23.1	23.12	27.4	26.09	1.56	**-**
				0	0	0	0	0	0	0					
Nutrients	Ammonia	mg/L	0.005	**0.021**	**0.052**	**0.012**	**0.026**	**0.1**	**0.11**	**0.012**	**0.012**	**0.11**	**0.048**	0.042	**0.01**
	Nitrogen (Organic)	mg/L	0.05	0.84	0.41	0.61	0.51	0.61	0.38	0.34	0.34	0.84	0.529	0.174	**1.18**
	Nitrogen (Total Oxidised)	mg/L	0.005	0.0025	0.0025	0.0025	**0.14**	**6.3**	**0.021**	**0.032**	0.0025	**6.3**	**0.929**	2.369	**0.01**
	Nitrogen (Total)	mg/L	0.05	0.86	0.46	0.62	0.68	**7**	0.51	0.38	**0.38**	**7**	**1.501**	2.430	**1.2**
	TKN (as N)	mg/L	0.05	**0.14**	0.46	0.62	0.54	0.71	0.49	0.35	0.14	0.71	0.473	0.187	**-**
	Phosphorus	mg/L	0.02	0.0025	0.05	**0.09**	**0.09**	**0.11**	**0.1**	0.04	0.0025	**0.11**	**0.069**	0.039	**0.05**
	Reactive Phosphorus (as P)	mg/L	0.005	0.86	0.0025	0.0025	0.0025	0.013	0.0025	0.007	0.0025	**0.86**	0.1271	0.3232	**0.25**
				0	0	0	0	0	0	0					
Inorganics	Aluminium	mg/L	0.005	**0.45**	**0.213**	**0.658**	**0.473**	**0.416**	**0.431**	**3.35**	**0.213**	**3.35**	**0.86**	1.11	**0.055**
	Arsenic	mg/L	0.0002	0.0104	0.0036	0.0022	0.0016	0.0009	0.001	0.0013	0.0009	0.0104	0.0030	0.0034	**0.037**
	Cadmium	mg/L	0.00005	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	-	**0.0002**
	Chromium	mg/L	0.0002	**0.0044**	**0.0023**	**0.003**	**0.0027**	**0.0021**	**0.003**	**0.0091**	**0.0021**	**0.0091**	**0.004**	0.0025	**0.001**
	Copper	mg/L	0.0005	**0.0028**	0.0008	**0.0022**	0.001	0.0009	0.001	**0.0054**	0.0008	**0.0054**	**0.0020**	0.001678	**0.0014**
	Iron	mg/L	0.002	8.17	7.21	3.4	2.81	2.95	3.38	3.41	2.81	8.17	4.476	2.226	**-**
	Lead	mg/L	0.0001	0.0006	0.0002	0.0004	0.0004	0.0003	0.0002	0.0023	0.0002	0.0023	0.0006	0.0007	**0.0034**
	Mercury	mg/L	0.0001	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0006**
	Nickel	mg/L	0.0005	0.0017	0.0008	0.0012	0.001	0.0008	0.0009	0.003	0.0008	0.003	0.0013	0.0008	**0.011**
	Zinc	mg/L	0.001	**0.014**	0.003	0.005	**0.015**	**0.009**	0.006	**0.014**	0.003	0.015	0.009	0.005	**0.008**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	BSW3	BSW3	BSW3	BSW3	BSW3A	BSW3	BSW3
Sample Date	20/01/2009	11/03/2009	19/03/2009	24/03/2009	6/04/2009	21/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR								Minimum	Maximum	Average	Standard Deviation	Wetlands - Disturbed Guidelines (1)
Field	pH_Field	pH_Units		**5.19**	**5.2**	**4.9**	**4.8**	6.5	**5.7**	**5.3**	**4.8**	6.5	**5.36**	0.58	**6-8**
	Dissolved Oxygen	mg/L		**2.1**	**1.5**	**3.8**	7.4	**2.5**	**1.9**	**1.9**	**1.5**	7.4	**3.01**	2.07	**6.4-8.9**
	Turbidity	NTU		22.3	120.1	9.2	17.6	36.9	23.0	8.5	8.5	120.1	33.94	39.19	**200**
	Electrolytic Conductivity	uS/cm		51	28.0	23	22	70	22	0	0	70	30.86	22.79	**-**
	Redox Potential	mV		547	634.0	549	345	454	652	764	345	764	563.57	137.37	**-**
	Temp	oC		27.5	30.0	28.8	30.4	27.0	23.9	24.2	23.9	30.4	27.40	2.60	**-**
				0	0	0	0	0	0	0					
Nutrients	Ammonia	mg/L	0.005	**0.028**	0.0025	0.0025	0.0025	**2**	**0.063**	0.0025	0.0025	**2**	**0.300**	0.750	**0.01**
	Nitrogen (Organic)	mg/L	0.05	0.97	0.67	1	0.54	**2.1**	0.77	0.56	0.54	**2.1**	0.944	0.541	**1.18**
	Nitrogen (Total Oxidised)	mg/L	0.005	0.0025	**0.017**	0.0025	**0.086**	**1.7**	**0.071**	**0.014**	0.0025	**1.7**	**0.270**	0.631	**0.01**
	Nitrogen (Total)	mg/L	0.05	1	0.69	1	0.63	**5.8**	0.9	0.57	0.57	**5.8**	**1.513**	1.899	**1.2**
	TKN (as N)	mg/L	0.05	**0.05**	0.67	1	0.54	4.1	0.83	0.56	0.05	4.1	1.107	1.352	**-**
	Phosphorus	mg/L	0.02	0.0025	0.05	**0.07**	**0.06**	**0.23**	**0.13**	0.03	0.0025	**0.23**	**0.082**	0.076	**0.05**
	Reactive Phosphorus (as P)	mg/L	0.005	1	0.0025	0.0025	0.0025	0.019	0.0025	0.006	0.0025	**1**	0.1479	0.3758	**0.25**
				0	0	0	0	0	0	0					
Inorganics	Aluminium	mg/L	0.005	**0.939**	**0.347**	**0.256**	**0.163**	**1.4**	**0.404**	**0.386**	**0.163**	**1.4**	**0.5564**	0.4471	**0.055**
	Arsenic	mg/L	0.0002	0.002	0.001	0.0009	0.0007	0.002	0.0013	0.0005	0.0005	0.002	0.0012	0.0006	**0.037**
	Cadmium	mg/L	0.00005	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	-	**0.0002**
	Chromium	mg/L	0.0002	**0.003**	**0.0012**	**0.0014**	0.0008	**0.0034**	**0.0013**	**0.0015**	0.0008	**0.0034**	**0.00180**	0.00099	**0.001**
	Copper	mg/L	0.0005	**0.0068**	**0.0015**	0.0011	0.0008	**0.0058**	**0.0017**	**0.0018**	0.0008	**0.0068**	**0.0028**	0.002442	**0.0014**
	Iron	mg/L	0.002	2.58	2.76	1.79	2.82	3.46	3.5	1.07	1.07	3.5	2.569	0.877	**-**
	Lead	mg/L	0.0001	0.001	0.0004	0.0002	0.0002	0.002	0.0004	0.0003	0.0002	0.002	0.0006	0.0007	**0.0034**
	Mercury	mg/L	0.0001	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0006**
	Nickel	mg/L	0.0005	0.0016	0.0008	0.0009	0.00025	0.002	0.0007	0.0008	0.00025	0.002	0.001007	0.0006	**0.011**
	Zinc	mg/L	0.001	**0.008**	**0.009**	**0.008**	**0.008**	**0.011**	0.007	**0.008**	0.007	**0.011**	**0.008**	0.001	**0.008**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

ATTACHMENT G

Field ID	CDESW12	CDESW12	CDESW12	CDESW12
Sample Date	20/01/2009	24/02/09	19/03/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR					Minimum	Maximum	Average	Standard Deviation	Freshwater - High Value Guidelines (1)
Field	pH_Field	pH_Units		**5.58**	6.0	6.7	7.4	**5.58**	7.42	6.43	0.80	**6-7.5**
	Dissolved Oxygen	mg/L		**8.4**	5.5	6.2	6.5	**5.5**	**8.4**	6.65	1.24	**6.4-7.2**
	Turbidity	NTU		**132.8**	132.6	85.1	**37.7**	**37.7**	**132.8**	**97.05**	45.49	**6**
	Electrolytic Conductivity	uS/cm		39	18.0	40	-	18	40	32.33	12.42	**-**
	Redox Potential	mV		515	528.0	478	659	478	659	545.00	78.90	**-**
	Temp	oC		26.5	29.6	25.6	22.4	22.44	29.6	26.04	2.95	**-**
Nutrients	Ammonia	mg/L	0.005	**0.007**	**0.007**	0.0025	**0.032**	0.0025	**0.032**	**0.01**	0.01	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**0.76**	**0.81**	**0.89**	**0.41**	**0.41**	**0.89**	**0.72**	0.21	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	0.023	**0.097**	**0.058**	**0.077**	0.023	**0.097**	**0.06**	0.03	**0.03**
	Nitrogen (Total)	mg/L	0.05	**0.79**	**0.92**	**0.95**	**0.52**	**0.52**	**0.95**	**0.8**	0.2	**0.15**
	TKN (as N)	mg/L	0.05	0.77	0.82	0.89	0.44	0.44	0.89	0.7	0.2	**-**
	Phosphorus	mg/L	0.02	**0.02**	**0.04**	**0.06**	**0.01**	**0.01**	**0.06**	**0.03**	0.02	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	-	**0.005**
Inorganics	Aluminium	mg/L	0.005	**1.78**	**0.934**	**0.788**	**0.498**	**0.498**	**1.78**	**1.00**	0.55	**0.027**
	Arsenic	mg/L	0.0002	0.0004	0.0001	0.0002	0.0001	0.0001	0.0004	0.0002	0.0001	**0.0018**
	Cadmium	mg/L	0.00005	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	-	**0.00006**
	Chromium	mg/L	0.0002	**0.0027**	**0.0014**	**0.0012**	**0.0007**	**0.0007**	**0.0027**	**0.0015**	0.0009	**0.00001**
	Copper	mg/L	0.0005	**0.0023**	**0.001**	**0.0014**	0.0008	0.0008	**0.0023**	**0.0014**	0.0007	**0.001**
	Iron	mg/L	0.002	2.76	1.28	1.22	0.494	0.494	2.76	1.44	0.95	**-**
	Lead	mg/L	0.0001	**0.0021**	0.0006	0.0008	0.0003	0.0003	**0.0021**	**0.001**	0.0008	**0.001**
	Mercury	mg/L	0.0001	**0.00005**	**0.00005**	**0.00005**	**0.00005**	0.00005	0.00005	0.00005	-	**0.00006**
	Nickel	mg/L	0.0005	0.0014	0.0008	0.0007	0.00025	0.00025	0.0014	**0.0008**	0.0005	**0.008**
	Zinc	mg/L	0.001	**0.009**	0.001	**0.004**	**0.005**	0.001	**0.009**	**0.005**	**0.003**	**0.0024**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	CDESW11	CDESW11	CDESW11	CDESW11	CDESW11	CDESW11	CDESW11	CDESW11
Sample Date	17/12/2008	19/01/2009	16/02/09	9/03/2009	19/03/2009	24/03/2009	20/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR									Minimum	Maximum	Average	Standard Deviation	Freshwater - High Value Guidelines (1)
Field	pH_Field	pH_Units		6.67	6.88	**7.6**	7.6	6.0	6.8	7.4	**7.8**	6	**7.82**	7.10	0.61	**6-7.5**
	Dissolved Oxygen	mg/L		**2.9**	**7.9**	13.6	8.1	7.5	7.6	**7.7**	**7.7**	**2.9**	**13.6**	**7.88**	2.87	**6.4-7.2**
	Turbidity	NTU		**600**	**8.5**	57.3	51.3	25.4	32.4	**38.0**	**20.4**	**8.5**	**600**	**104.16**	200.98	**6**
	Electrolytic Conductivity	uS/cm		4	45	56.0	17.9	60	60	61.0	-	4	61	43.41	23.18	**-**
	Redox Potential	mV		542	545	503.0	231.0	613	546	752.0	586	231	752	539.75	146.04	**-**
	Temp	oC		29.19	26.69	28.0	27.2	25.0	24.7	23.6	22.5	22.54	29.19	25.87	2.28	**-**
Nutrients	Ammonia	mg/L	0.005	**0.1**	0.0025	0.0025	**0.006**	0.0025	0.0025	0.005	**0.021**	0.0025	**0.1**	**0.02**	0.03	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**1.9**	**0.14**	0.11	0.025	**0.22**	0.12	**0.27**	**0.42**	0.025	**1.9**	**0.40**	0.62	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.4**	**0.34**	**0.42**	**0.44**	**0.44**	**0.35**	**0.48**	**0.62**	**0.34**	**0.62**	**0.44**	0.09	**0.03**
	Nitrogen (Total)	mg/L	0.05	**2.4**	**0.48**	**0.53**	**0.44**	**0.66**	**0.47**	**0.75**	**1.1**	**0.44**	**2.4**	**0.9**	0.7	**0.15**
	TKN (as N)	mg/L	0.05	**0.81**	0.14	0.11	0.025	0.22	0.12	0.27	0.44	0.025	0.81	0.3	0.3	**-**
	Phosphorus	mg/L	0.02	2	0.005	0.005	0.005	0.005	**0.01**	0.005	0.005	0.005	**2**	**0.26**	0.71	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.089**	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	**0.089**	**0.0133**	0.03	**0.005**
Inorganics	Aluminium	mg/L	0.005	**7.52**	**1.78**	**0.118**	**0.217**	**0.203**	**0.168**	**0.248**	**0.181**	**0.118**	**7.52**	**1.30**	2.57	**0.027**
	Arsenic	mg/L	0.0002	0.001	0.0004	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.0003	0.0003	**0.0018**
	Cadmium	mg/L	0.00005	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	-	**0.00006**
	Chromium	mg/L	0.0002	**0.0113**	**0.0027**	**0.0002**	**0.0004**	**0.0003**	**0.0004**	**0.0004**	**0.0003**	**0.0002**	**0.0113**	**0.0020**	0.0038	**0.00001**
	Copper	mg/L	0.0005	**0.0237**	**0.0023**	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	**0.0237**	**0.0034**	0.0082	**0.001**
	Iron	mg/L	0.002	10.8	2.76	0.187	0.284	0.299	0.234	0.324	0.227	0.187	10.8	1.89	3.71	**-**
	Lead	mg/L	0.0001	**0.0076**	**0.0021**	0.0001	0.0002	0.0002	0.0001	0.00005	0.0002	0.00005	**0.0076**	**0.001**	0.0026	**0.001**
	Mercury	mg/L	0.0001	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.00006**
	Nickel	mg/L	0.0005	**0.0284**	0.0014	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	**0.0284**	0.0039	0.0099	**0.008**
	Zinc	mg/L	0.001	**0.027**	**0.009**	**0.003**	0.0005	**0.003**	0.002	0.002	**0.003**	0.0005	0.027	0.006	0.009	**0.0024**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	CDESW10A	CDESW10A	CDESW10A	CDESW10A	CDESW10A	CDESW10A	CDESW10A	CDESW10A	CDESW10A	CDESW10A	CDESW10A
Sample Date	1/10/2008	10/11/2008	24/11/2008	16/12/2008	19/01/2009	16/02/09	9/03/2009	19/03/2009	24/03/2009	20/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR												Minimum	Maximum	Average	Standard Deviation	Freshwater - High Value Guidelines (1)
Field	pH_Field	pH_Units		**7.52**	**7.56**	7.16	6.58	6.64	6.9	7.4	**5.7**	6.6	7.2	**8.5**	**5.7**	**8.52**	7.07	0.72	**6-7.5**
	Dissolved Oxygen	mg/L		5.4	**4.2**	**4.2**	**4.2**	**7.4**	11.7	7.4	7.9	8.1	**7.5**	**7.5**	**4.2**	**11.7**	6.86	2.25	**6.4-7.2**
	Turbidity	NTU		30.8	**15.2**	**32.8**	**51.7**	5.5	38.4	35.8	24.3	43.6	**13.3**	4.6	4.6	**51.7**	**26.91**	15.62	**6**
	Electrolytic Conductivity	uS/cm		54	42	44	6	36	38.0	44.0	41	41	45.0	-	6	54	39.10	12.59	**-**
	Redox Potential	mV		280	434	386	453	546	505.0	282.0	589	497	750.0	633	280	750	486.82	142.77	**-**
	Temp	oC		23.01	24.35	26.62	26.33	25.63	28.1	25.4	24.6	25.1	24.2	23.1	23.01	28.1	25.13	1.52	**-**
				0	0	0	0	0	0	0	0	0	0	0					
Nutrients	Ammonia	mg/L	0.005	**0.14**	0.0025	N/A	**0.015**	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	**0.012**	0.0025	**0.14**	**0.0185**	0.0430	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**1.8**	0.07	N/A	**0.16**	**0.14**	0.05	0.025	**0.16**	**0.16**	0.06	**0.13**	0.025	**1.8**	**0.2755**	0.5381	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.26**	**0.19**	N/A	**0.12**	**0.28**	**0.59**	**0.32**	**0.7**	**0.7**	**0.58**	**0.58**	**0.12**	**0.7**	**0.4320**	0.2195	**0.03**
	Nitrogen (Total)	mg/L	0.05	**2.2**	**0.26**	N/A	**0.3**	**0.42**	**0.64**	**0.39**	**0.86**	**0.86**	**0.64**	**0.72**	**0.26**	**2.2**	**0.7290**	0.5606	**0.15**
	TKN (as N)	mg/L	0.05	1.9	0.07	N/A	0.005	0.14	0.05	0.07	0.16	0.16	0.06	0.14	0.005	1.9	0.2755	0.5732	**-**
	Phosphorus	mg/L	0.02	**0.04**	0.005	N/A	0.18	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	**0.18**	**0.0260**	0.0552	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.01**	0.0025	N/A	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	**0.01**	0.0033	0.0024	**0.005**
				0	0	0	0	0	0	0	0	0	0	0					
Inorganics	Aluminium	mg/L	0.005	NT	N/A	0.0025	0.012	**0.029**	**0.028**	**0.03**	**0.036**	0.024	**0.032**	**0.042**	0.0025	**0.042**	0.026	0.012	**0.027**
	Arsenic	mg/L	0.0002	0.0005	N/A	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.00015	0.00013	**0.0018**
	Cadmium	mg/L	0.00005	**0.0002**	N/A	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	**0.0002**	0.000043	0.000055	**0.00006**
	Chromium	mg/L	0.0002	**0.0005**	N/A	0.0001	**0.0001**	**0.0002**	**0.0001**	**0.0001**	**0.0001**	**0.0001**	**0.0001**	**0.0001**	**0.0001**	**0.0005**	**0.00015**	0.00013	**0.00001**
	Copper	mg/L	0.0005	0.0005	N/A	0.00025	0.00025	0.0007	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.0007	0.00032	0.00015	**0.001**
	Iron	mg/L	0.002	NT	N/A	0.062	0.072	0.479	0.046	0.049	0.061	0.035	0.063	0.041	0.035	0.479	0.10	0.14	**-**
	Lead	mg/L	0.0001	0.0005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0001	0.0001	**0.001**
	Mercury	mg/L	0.0001	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0001	-	**0.00006**
	Nickel	mg/L	0.0005	0.0005	N/A	0.00025	0.00025	0.0038	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.0038	0.00063	0.00112	**0.008**
	Zinc	mg/L	0.001	**0.02**	N/A	**0.003**	**0.003**	**0.042**	0.002	0.002	**0.003**	**0.006**	0.002	**0.005**	0.002	**0.042**	**0.01**	0.01	**0.0024**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	CDESW10	CDESW10	CDESW10	CDESW10	CDESW10	CDESW10	CDESW10	CDESW10	CDESW10	CDESW10	CDESW10
Sample Date	2/10/2008	10/11/2008	24/11/2008	16/12/2008	19/01/2009	16/02/09	9/03/2009	19/03/2009	24/03/2009	20/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR												Minimum	Maximum	Average	Standard Deviation	Freshwater - High Value Guidelines (1)
Field	pH_Field	pH_Units		7.23	6.77	7.25	6.64	6.35	6.4	6.9	5.5	6.6	6.4	**8.9**	**5.5**	**8.93**	6.81	0.85	**6-7.5**
	Dissolved Oxygen	mg/L		5	**4**	**4.3**	**2.7**	**15.9**	10.3	7.7	7.7	7.9	**7.3**	7.2	**2.7**	**15.9**	7.27	3.61	**6.4-7.2**
	Turbidity	NTU		31.4	**42.3**	**11.5**	**41.5**	**23.2**	55.2	37.3	31.5	58.3	**13.2**	2.6	2.6	**58.3**	**31.64**	17.80	**6**
	Electrolytic Conductivity	uS/cm		49	38	40	3	32	38.0	40.0	38	40	42.0	-	3	49	36.00	12.34	**-**
	Redox Potential	mV		331	500	449	446	550	504.0	240.0	624	485	756.0	667	240	756	504.73	145.94	**-**
	Temp	oC		23.73	24.88	26.9	27.64	26.04	27.5	25.9	25.0	23.8	23.9	23.0	23.04	27.64	25.30	1.61	**-**
Nutrients	Ammonia	mg/L	0.005	**0.27**	0.0025	N/A	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	**0.017**	**0.016**	0.0025	**0.27**	**0.0321**	0.0838	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**0.3**	0.07	N/A	**0.13**	0.12	0.025	0.025	0.06	0.025	0.025	0.11	0.025	**0.3**	0.0890	0.0851	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.16**	**0.14**	N/A	**0.11**	**0.36**	**0.34**	**0.3**	**0.36**	**0.3**	**0.34**	**0.38**	**0.11**	**0.38**	**0.2790**	0.1020	**0.03**
	Nitrogen (Total)	mg/L	0.05	**0.7**	**0.21**	N/A	**0.24**	**0.48**	**0.34**	**0.3**	**0.42**	**0.3**	**0.34**	**0.51**	**0.21**	**0.7**	**0.3840**	0.1473	**0.15**
	TKN (as N)	mg/L	0.05	0.5	0.07	N/A	0.13	0.12	0.025	0.025	0.06	0.025	0.025	0.13	0.025	0.5	0.1110	0.1438	**-**
	Phosphorus	mg/L	0.02	**0.03**	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	**0.03**	0.0075	0.0079	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.005**	0.0025	N/A	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.005	0.0028	0.0008	**0.005**
Inorganics	Aluminium	mg/L	0.005	NT	N/A	0.0025	0.008	**0.046**	0.017	0.016	**0.029**	0.018	0.018	**0.072**	0.0025	**0.072**	0.025	0.022	**0.027**
	Arsenic	mg/L	0.0002	0.0005	N/A	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.00014	0.00013	**0.0018**
	Cadmium	mg/L	0.00005	**0.0001**	N/A	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	**0.0001**	0.000033	0.000024	**0.00006**
	Chromium	mg/L	0.0002	**0.0005**	N/A	0.0001	**0.0001**	**0.0001**	**0.0001**	**0.0001**	**0.0001**	**0.0001**	**0.0001**	**0.0001**	**0.0001**	**0.0005**	**0.00014**	0.00013	**0.00001**
	Copper	mg/L	0.0005	0.0005	N/A	0.0005	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	**0.001**	0.00025	**0.001**	0.00038	0.00024	**0.001**
	Iron	mg/L	0.002	NT	N/A	0.028	0.085	0.064	0.06	0.057	0.081	0.04	0.044	0.072	0.028	0.085	0.06	0.02	**-**
	Lead	mg/L	0.0001	0.0005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0001	0.00005	0.0005	0.0001	0.0001	**0.001**
	Mercury	mg/L	0.0001	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0001	-	**0.00006**
	Nickel	mg/L	0.0005	0.0005	N/A	0.00025	0.0008	0.00025	0.00025	0.00025	0.00025	0.001	0.0021	0.00025	0.00025	0.0021	0.00059	0.00060	**0.008**
	Zinc	mg/L	0.001	**0.0025**	N/A	**0.007**	0.002	0.002	0.002	**0.003**	**0.003**	**0.003**	0.002	**0.012**	0.002	**0.012**	**0.0039**	0.0032	**0.0024**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

ATTACHMENT H

	Field ID	CSW13	CSW13	CSW13	CSW13	CSW13	CSW13	CSW13	CSW13	CSW13
	Sample Date	2/10/2008	10/11/2008	24/11/2008	16/12/2008	19/01/2009	16/02/09	9/03/2009	20/04/2009	11/05/2009

Chemical Grou	Chemical Name	Output Unit	LOR										Minimum	Maximum	Average	Standard Deviation	Freshwater - Upland Disturbed Guidelines (1)
Field	pH_Field	pH_Units		7.19	6.72	6.58	6.62	6.62	6.5	7.1	7.0	7.9	6.5	7.88	6.91	0.44	**6-7.5**
	Dissolved Oxygen	mg/L		4.9	**3.4**	**3.3**	**2.8**	**15.6**	10.8	8.1	7.2	7.2	**2.8**	**15.6**	7.03	4.16	**6.4-7.2**
	Turbidity	NTU		29.8	-	**10.4**	**42.3**	**20.4**	63.7	31.9	17.2	5.4	5.4	**63.7**	**27.64**	18.87	**6**
	Electrolytic Conductivity	uS/cm		59	52	52	4	35	47.0	50.0	48	-	4	59	43.38	17.29	-
	Redox Potential	mV		397	469	508	526	547	501.0	233.0	700	673	233	700	506.00	139.38	-
	Temp	oC		24.45	24.99	28.73	27.04	26.71	28.1	25.7	23.6	23.2	23.15	28.73	25.83	1.96	-
Nutrients	Ammonia	mg/L	0.005	**0.01**	**0.012**	N/A	**0.029**	0.0025	0.0025	0.0025	**0.008**	0.0025	0.0025	**0.029**	**0.0086**	0.0091	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**1.4**	**0.24**	N/A	**0.15**	0.025	0.11	0.025	0.09	0.07	0.025	**1.4**	**0.26**	0.46	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.16**	**0.065**	N/A	0.02	**0.14**	**0.2**	**0.11**	**0.2**	**0.29**	0.02	**0.29**	**0.15**	0.08	**0.03**
	Nitrogen (Total)	mg/L	0.05	**1.4**	**0.31**	N/A	**0.2**	0.14	**0.31**	0.11	**0.3**	**0.36**	0.11	**1.4**	**0.39**	0.42	**0.15**
	TKN (as N)	mg/L	0.05	1.4	0.25	N/A	0.005	0.025	0.11	0.025	0.1	0.07	0.005	1.4	0.25	0.47	-
	Phosphorus	mg/L	0.02	**0.07**	0.005	N/A	0.18	0.005	0.005	0.005	0.005	0.005	0.005	**0.18**	**0.04**	0.06	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.04**	0.0025	N/A	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	**0.04**	0.0072	0.0133	**0.005**
Inorganics	Aluminium	mg/L	0.005	NT	N/A	0.0025	0.034	0.069	0.035	0.028	0.024	0.123	0.0025	0.123	0.05	0.04	**0.055**
	Arsenic	mg/L	0.0002	0.0005	N/A	0.0004	0.0005	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.00025	0.00019	**0.037**
	Cadmium	mg/L	0.00005	0.00005	N/A	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.00005	0.00003	0.00001	**0.0002**
	Chromium	mg/L	0.0002	0.0005	N/A	0.0002	0.0003	0.0003	0.0001	0.0001	0.0001	0.0003	0.0001	0.0005	0.0002	0.00014	**0.001**
	Copper	mg/L	0.0005	0.0005	N/A	0.0006	0.0006	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.0006	0.00037	0.0002	**0.0014**
	Iron	mg/L	0.002	NT	N/A	0.264	0.486	0.126	0.141	0.14	0.148	0.217	0.126	0.486	0.22	0.13	-
	Lead	mg/L	0.0001	0.0005	N/A	0.0002	0.00005	0.0001	0.00005	0.00005	0.00005	0.0001	0.00005	0.0005	0.00014	0.00016	**0.0034**
	Mercury	mg/L	0.0001	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0006**
	Nickel	mg/L	0.0005	0.0005	N/A	0.00025	0.0006	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.0006	0.00033	0.00014	**0.011**
	Zinc	mg/L	0.001	0.006	N/A	0.005	0.002	**0.008**	0.002	0.004	0.004	0.005	0.002	**0.008**	0.0045	0.002	**0.008**
Total Petroleum	TPH C 6 - C 9 Fraction	mg/L	0.02	0.01	N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	-
	TPH C10 - C14 Fraction	mg/L	0.05	0.025	N/A	0.025	0.025	0.025	0.025	0.025	0.025	NA	0.025	0.025	0.03	-	-
	TPH C15 - C28 Fraction	mg/L	0.1	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	NA	0.05	0.05	0.05	-	-
	TPH C29-C36 Fraction	mg/L	0.05	0.025	N/A	0.025	0.025	0.025	0.025	0.025	0.025	NA	0.025	0.025	0.03	-	-
	TPH+C10 - C36 (Sum of total)	mg/L		0.1	N/A	0.1	0.1	0.1	0.1	0.1	0.1	NA	0.1	0.1	0.1	-	-
MAH	Benzene	mg/L	0.001	N/A	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	**0.95**
	Ethylbenzene	mg/L	0.002	N/A	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
	Toluene	mg/L	0.002	N/A	N/A	0.001	0.001	0.0025	0.0025	0.0025	0.0025	0.0025	0.001	0.0025	0.002	0.0007	-
	Total BTEX (QLD EPA 1999 Draft)	mg/L		N/A	N/A	0.0045	0.0045	0.006	0.006	0.006	0.006	0.006	0.0045	0.006	0.01	0.0007	-
	MAH (Sum of Total) (Vic EPA 448.3)	mg/L		N/A	N/A	0.0045	0.0045	0.006	0.006	0.006	0.006	0.006	0.0045	0.006	0.01	0.0007	-
	Xylenes (m & p)	mg/L	0.002	N/A	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.00	-	-
	Xylene (o)	mg/L	0.002	N/A	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.00	-	-

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	CSW15	CSW15	CSW15	CSW15	CSW15	CSW15	CSW15	CSW15	CSW15
Sample Date	1/10/2008	10/11/2008	24/11/2008	16/12/2008	19/01/2009	16/02/09	9/03/2009	20/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR										Minimum	Maximum	Average	Standard Deviation	Freshwater - Upland Disturbed Guidelines (1)
Field	pH_Field	pH_Units		7.58	**7.52**	7.48	6.66	6.62	7.0	7.2	7.1	**8.8**	6.62	**8.76**	7.33	0.64	**6-7.5**
	Dissolved Oxygen	mg/L		5.6	**4**	**3.9**	**3.5**	**20**	12.4	7.7	7.4	7.5	**3.5**	**20**	**8.00**	5.28	**6.4-7.2**
	Turbidity	NTU		119.8	**6.2**	**52.7**	**51.4**	**11.9**	54.2	24.1	16.3	5.4	5.4	**119.8**	**38.00**	36.69	**6**
	Electrolytic Conductivity	uS/cm		64	49	44	4	36	38.0	43.0	45	-	4	64	40.38	17.00	-
	Redox Potential	mV		250	465	381	474	546	503.0	307.0	736	652	250	736	479.33	155.28	-
	Temp	oC		22.77	24.49	27.1	26.57	26.06	28.1	25.8	24.3	23.1	22.77	28.1	25.36	1.82	-
Nutrients	Ammonia	mg/L	0.005	**0.08**	0.0025	N/A	0.0025	0.0025	0.005	**0.041**	0.0025	**0.01**	0.0025	**0.08**	**0.02**	0.03	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**2.6**	**0.13**	N/A	**0.21**	**0.22**	0.1	**0.23**	**0.14**	0.11	0.1	**2.6**	**0.47**	0.86	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.23**	**0.14**	N/A	**0.089**	**0.37**	**0.53**	0.008	**0.58**	**0.52**	0.008	**0.58**	**0.31**	0.22	**0.03**
	Nitrogen (Total)	mg/L	0.05	**2.9**	**0.27**	N/A	**0.3**	**0.59**	**0.63**	**0.28**	**0.72**	**0.64**	**0.27**	**2.9**	**0.79**	0.87	**0.15**
	TKN (as N)	mg/L	0.05	2.7	0.13	N/A	**0.01**	0.22	0.1	0.27	0.14	0.12	0.01	2.7	0.46	0.91	-
	Phosphorus	mg/L	0.02	**0.18**	0.005	N/A	0.21	0.005	0.005	**0.04**	0.005	0.005	0.005	**0.21**	**0.06**	0.09	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.005**	0.0025	N/A	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	**0.005**	0.0028	0.0009	**0.005**
Inorganics	Aluminium	mg/L	0.005	NT	N/A	0.144	0.169	0.041	0.027	0.037	0.045	0.091	0.027	**0.169**	**0.08**	0.06	**0.055**
	Arsenic	mg/L	0.0002	0.0005	N/A	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.00015	0.00014	**0.037**
	Cadmium	mg/L	0.00005	**0.0002**	N/A	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	**0.0002**	0.00005	0.00006	**0.0002**
	Chromium	mg/L	0.0002	0.0005	N/A	0.0001	0.0001	0.0004	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.00019	0.00016	**0.001**
	Copper	mg/L	0.0005	0.0005	N/A	0.0008	0.0012	0.00025	0.00025	**0.0017**	0.00025	0.00025	0.00025	**0.0017**	0.00065	0.00055	**0.0014**
	Iron	mg/L	0.002	NT	N/A	0.591	0.436	0.067	0.058	0.087	0.103	0.131	0.058	0.591	0.21	0.21	-
	Lead	mg/L	0.0001	0.0005	N/A	0.0002	0.0001	0.00005	0.00005	0.00005	0.00005	0.0001	0.00005	0.0005	0.00014	0.00016	**0.0034**
	Mercury	mg/L	0.0001	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0006**
	Nickel	mg/L	0.0005	0.0005	N/A	0.0006	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.0006	0.00033	0.00014	**0.011**
	Zinc	mg/L	0.001	0.0025	N/A	0.004	**0.008**	0.002	0.002	0.006	0.002	0.003	0.002	**0.008**	0.0037	0.0022	**0.008**
Total Petroleum	TPH C 6 - C 9 Fraction	mg/L	0.02	0.01	N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	-
	TPH C10 - C14 Fraction	mg/L	0.05	0.025	N/A	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.03	-	-
	TPH C15 - C28 Fraction	mg/L	0.1	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-	-
	TPH C29-C36 Fraction	mg/L	0.05	0.025	N/A	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.03	-	-
	TPH+C10 - C36 (Sum of total)	mg/L		N/A	N/A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-	-
MAH	Benzene	mg/L	0.001	N/A	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	**0.95**
	Ethylbenzene	mg/L	0.002	N/A	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
	Toluene	mg/L	0.002	N/A	N/A	0.001	0.001	0.0025	0.0025	0.0025	0.0025	0.0025	0.001	0.0025	0.002	0.0007	-
	Total BTEX (QLD EPA 1999 Draft)	mg/L		N/A	N/A	0.0045	0.0045	0.006	0.006	0.006	0.006	0.006	0.0045	0.006	0.01	0.0007	-
	MAH (Sum of Total) (Vic EPA 448.3)	mg/L		N/A	N/A	0.0045	0.0045	0.006	0.006	0.006	0.006	0.006	0.0045	0.006	0.01	0.0007	-
	Xylenes (m & p)	mg/L	0.002	N/A	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.00	-	-
	Xylene (o)	mg/L	0.002	N/A	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.00	-	-

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

			Field ID	CSW14	CSW14	CSW14	CSW14	CSW14	CSW14	CSW14	CSW14	CSW14					
			Sample Date	2/10/2008	10/11/2008	24/11/2008	16/12/2008	19/01/2009	16/02/09	9/03/2009	20/04/2009	11/05/2009					
Chemical Group	**Chemical Name**	**Output Unit**	**LOR**										Minimum	Maximum	Average	Standard Deviation	Freshwater - Upland Disturbed Guidelines (1)
Field	pH_Field	pH_Units		7.55	7.02	6.52	6.59	**5.96**	6.2	7.1	6.8	**8.1**	**5.96**	**8.08**	6.87	0.66	**6-7.5**
	Dissolved Oxygen	mg/L		5.1	**3.7**	**4.3**	**3.7**	**20**	10.4	7.9	7.4	7.1	**3.7**	**20**	**7.73**	5.12	**6.4-7.2**
	Turbidity	NTU		33.8	-	**13.7**	**49.5**	**19.2**	37.2	42.3	13.0	1.5	**1.5**	**49.5**	**26.28**	16.78	**6**
	Electrolytic Conductivity	uS/cm		50	38	40	2	29	35.0	40.0	39	-	2	50	34.13	14.24	-
	Redox Potential	mV		343	506	446	503	555	506.0	231.0	746	680	231	746	501.78	156.49	-
	Temp	oC		23.39	25.02	28	26.43	25.82	27.3	25.8	23.8	23.1	23.08	28	25.40	1.73	-
Nutrients	Ammonia	mg/L	0.005	**0.04**	0.0025	N/A	**0.008**	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	**0.04**	0.01	0.01	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**2.3**	**0.23**	N/A	**0.18**	0.025	0.06	0.025	**0.13**	0.11	0.025	**2.3**	**0.38**	0.78	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.2**	**0.098**	N/A	**0.077**	**0.39**	**0.33**	**0.32**	**0.39**	**0.32**	**0.077**	**0.39**	**0.27**	0.12	**0.03**
	Nitrogen (Total)	mg/L	0.05	**2.6**	**0.33**	N/A	**0.27**	**0.39**	**0.39**	**0.32**	**0.52**	**0.43**	**0.27**	**2.6**	**0.66**	0.79	**0.15**
	TKN (as N)	mg/L	0.05	2.4	0.23	N/A	0.005	0.025	0.06	0.025	0.13	0.11	0.005	2.4	0.37	0.82	-
	Phosphorus	mg/L	0.02	**0.03**	0.005	N/A	0.19	0.005	0.005	0.005	0.005	0.005	0.005	**0.19**	**0.03**	0.06	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.005**	0.0025	N/A	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	**0.005**	0.0028	0.0009	**0.005**
Inorganics	Aluminium	mg/L	0.005	NT	N/A	0.0025	0.028	0.052	0.023	0.067	0.047	0.102	0.0025	**0.102**	0.05	0.03	**0.055**
	Arsenic	mg/L	0.0002	0.0005	N/A	0.0002	0.0004	0.0002	0.0003	0.0001	0.0001	0.0001	0.0001	0.0005	0.00024	0.00015	**0.037**
	Cadmium	mg/L	0.00005	0.0001	N/A	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.0001	0.00003	0.00003	**0.0002**
	Chromium	mg/L	0.0002	0.0005	N/A	0.0001	0.0002	0.0001	0.0001	0.0003	0.0001	0.0002	0.0001	0.0005	0.0002	0.00014	**0.001**
	Copper	mg/L	0.0005	0.0005	N/A	0.0008	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.0008	0.00035	0.0002	**0.0014**
	Iron	mg/L	0.002	NT	N/A	0.131	0.417	0.094	0.081	0.138	0.103	0.136	0.081	0.417	0.16	0.12	-
	Lead	mg/L	0.0001	0.0005	N/A	0.0001	0.00005	0.0001	0.0002	0.00005	0.00005	0.00005	0.00005	0.0005	0.00014	0.00016	**0.0034**
	Mercury	mg/L	0.0001	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0006**
	Nickel	mg/L	0.0005	0.0005	N/A	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.0005	0.00028	0.00009	**0.011**
	Zinc	mg/L	0.001	0.005	N/A	0.005	0.002	0.006	0.002	0.004	0.004	0.004	0.002	0.006	0.0040	0.0014	**0.008**
Total Petroleum Hydrocarbons	TPH C 6 - C 9 Fraction	mg/L	0.02	0.01	N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	-
	TPH C10 - C14 Fraction	mg/L	0.05	0.025	N/A	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.03	-	-
	TPH C15 - C28 Fraction	mg/L	0.1	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-	-
	TPH C29-C36 Fraction	mg/L	0.05	0.025	N/A	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.03	-	-
	TPH+C10 - C36 (Sum of total)	mg/L		N/A	N/A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-	-
MAH	Benzene	mg/L	0.001	N/A	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	**0.95**
	Ethylbenzene	mg/L	0.002	N/A	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
	Toluene	mg/L	0.002	N/A	N/A	0.001	0.001	0.0025	0.0025	0.0025	0.0025	0.0025	0.001	0.0025	0.002	0.0007	-
	Total BTEX (QLD EPA 1999 Draft)	mg/L		N/A	N/A	0.0045	0.0045	0.006	0.006	0.006	0.006	0.006	0.0045	0.006	0.01	0.0007	-
	MAH (Sum of Total) (Vic EPA 448.3)	mg/L		N/A	N/A	0.0045	0.0045	0.006	0.006	0.006	0.006	0.006	0.0045	0.006	0.01	0.0007	-
	Xylenes (m & p)	mg/L	0.002	N/A	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.00	-	-
	Xylene (o)	mg/L	0.002	N/A	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.00	-	-

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	DSW16	DSW16	DSW16	DSW16	DSW16	DSW16	DSW16	DSW16	DSW16	DSW16	DSW16
Sample Date	10/11/2008	24/11/2008	16/12/2008	19/01/2009	16/02/09	9/03/2009	19/03/2009	25/03/2009	6/04/2009	20/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR												Minimum	Maximum	Average	Standard Deviation	Freshwater - Upland Disturbed Guidelines (1)
Field	pH_Field	pH_Units		7.63	6.83	6.46	5.56	6.0	6.9	5.3	7.3	6.4	6.2	7.1	5.3	7.63	6.5154545	0.72155892	6-7.5
	Dissolved Oxygen	mg/L		1.5	0.2	1.4	7.1	11.6	6.5	5.9	5.1	6.7	7.3	5.6	0.2	11.6	5.35	3.26	6.4-7.2
	Turbidity	NTU		46	175.8	68.2	5.7	46.8	40.6	13.0	18.7	37.1	14.5	19.4	5.7	175.8	44.16	47.51	6
	Electrolytic Conductivity	uS/cm		347	507	59	61	78.0	2422.0	148	652	149	89	134	59	2422	422.36	692.07	-
	Redox Potential	mV		388	132	415	542	510.0	126.0	640	506	642	397	682	126	682	452.73	188.65	-
	Temp	oC		25.87	29.03	26.91	29.36	30.7	27.9	26.4	25.5	29.1	26.5	23.1	23.14	30.7	27.31	2.16	-
Nutrients	Ammonia	mg/L	0.005	1.4	N/A	0.55	0.0025	0.009	0.015	0.006	0.023	0.026	0.005	0.076	0.0025	1.4	0.21	0.45	0.006
	Nitrogen (Organic)	mg/L	0.05	4.6	N/A	1.6	0.61	0.52	2.2	0.4	0.33	0.27	0.17	0.26	0.17	4.6	1.10	1.40	0.125
	Nitrogen (Total Oxidised)	mg/L	0.005	0.11	N/A	0.014	0.17	0.32	0.006	0.36	0.099	0.025	0.11	0.24	0.006	0.36	0.15	0.13	0.03
	Nitrogen (Total)	mg/L	0.05	6.1	N/A	2.2	0.78	0.85	2.2	0.77	0.45	0.33	0.28	0.58	0.28	6.1	1.45	1.78	0.15
	TKN (as N)	mg/L	0.05	6	N/A	0.65	0.61	0.0025	2.2	0.41	0.35	0.3	0.17	0.34	0.0025	6	1.10	1.83	-
	Phosphorus	mg/L	0.02	0.82	N/A	2.2	0.02	0.01	1	0.02	0.03	0.04	0.02	0.04	0.01	2.2	0.42	0.73	0.01
	Reactive Phosphorus (as P)	mg/L	0.005	0.37	N/A	0.32	0.005	0.53	0.0025	0.0025	0.0025	0.005	0.0025	0.019	0.0025	0.53	0.13	0.20	0.005
Inorganics	Aluminium	mg/L	0.005	N/A	0.563	0.462	0.686	0.262	0.38	0.459	0.374	0.224	0.294	0.708	0.224	0.708	0.44	0.17	0.055
	Arsenic	mg/L	0.0002	N/A	0.002	0.0012	0.0006	0.0006	0.0005	0.0004	0.0009	0.0005	0.0004	0.0005	0.0004	0.002	0.00076	0.0005	0.037
	Cadmium	mg/L	0.00005	N/A	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	-	0.0002
	Chromium	mg/L	0.0002	N/A	0.001	0.0016	0.0014	0.0007	0.0007	0.0011	0.0011	0.0008	0.0006	0.0011	0.0006	0.0016	0.001	0.0003	0.001
	Copper	mg/L	0.0005	N/A	0.0259	0.0133	0.0012	0.00025	0.0005	0.0012	0.00025	0.00025	0.0013	0.0019	0.00025	0.0259	0.005	0.0085	0.0014
	Iron	mg/L	0.002	N/A	1.71	0.966	0.769	1.55	1.84	1.19	1.2	1.26	0.891	0.762	0.762	1.84	1.214	0.38	-
	Lead	mg/L	0.0001	N/A	0.0011	0.0005	0.0004	0.0002	0.0004	0.0004	0.0002	0.0002	0.00005	0.0004	0.00005	0.0011	0.0004	0.0003	0.0034
	Mercury	mg/L	0.0001	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	0.0006
	Nickel	mg/L	0.0005	N/A	0.0029	0.0008	0.0014	0.0008	0.0012	0.001	0.0011	0.0008	0.0006	0.001	0.0006	0.0029	0.00116	0.0007	0.011
	Zinc	mg/L	0.001	N/A	0.016	0.009	0.016	0.004	0.005	0.015	0.004	0.006	0.004	0.014	0.004	0.016	0.0093	0.00536	0.008
Total Petroleum Hydrocarbons	TPH C 6 - C 9 Fraction	mg/L	0.02	N/A	0.03	0.01	0.01	0.01	0.01	NT	0.01	0.01	0.01	0.01	0.01	0.03	0.01	0.01	-
	TPH C10 - C14 Fraction	mg/L	0.05	N/A	0.23	0.025	0.025	0.025	0.025	NT	0.025	0.025	0.025	0.025	0.025	0.23	0.05	0.07	-
	TPH C15 - C28 Fraction	mg/L	0.1	N/A	1.1	0.3	0.05	0.05	0.05	NT	0.05	0.05	0.05	0.05	0.05	1.1	0.19	0.35	-
	TPH C29-C36 Fraction	mg/L	0.05	N/A	0.18	0.13	0.025	0.025	0.025	NT	0.025	0.025	0.025	0.025	0.025	0.18	0.05	0.06	-
	TPH+C10 - C36 (Sum of total)	mg/L		N/A	1.51	0.455	0.1	0.1	0.1	NT	0.1	0.1	0.1	0.1	0.1	1.51	0.30	0.47	-
MAH	Benzene	mg/L	0.001	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	0.95
	Ethylbenzene	mg/L	0.002	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.0010	-	-
	Toluene	mg/L	0.002	N/A	0.006	0.001	0.0025	0.0025	0.0025	0.001	0.001	0.0025	0.0025	0.0025	0.001	0.006	0.002	0.0014	-
	Total BTEX (QLD EPA 1999 Draft)	mg/L		N/A	0.0095	0.0045	0.006	0.006	0.006	0.0045	0.0045	0.006	0.006	0.006	0.0045	0.0095	0.0059	0.0014	-
	MAH (Sum of Total) (Vic EPA 448.3)	mg/L		N/A	0.0095	0.0045	0.006	0.006	0.006	0.0045	0.0045	0.006	0.006	0.006	0.0045	0.0095	0.01	0.0014	-
	Xylenes (m & p)	mg/L	0.002	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
	Xylene (o)	mg/L	0.002	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	DSW17	DSW17	DSW17	DSW17	DSW17	DSW17A	DSW17	DSW17
Sample Date	20/01/2009	16/02/09	9/03/2009	19/03/2009	25/03/2009	6/04/2009	20/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR									Minimum	Maximum	Average	Standard Deviation	Freshwater - Upland Disturbed Guidelines (1)
Field	pH_Field	pH_Units		**5.8**	5.6	7.0	6.4	6.8	6.6	6.1	7.1	**5.6**	7.07	6.42	0.55	**6-7.5**
	Dissolved Oxygen	mg/L		**11.3**	8.1	3.4	3.0	3.6	4.5	1.2	**5.9**	**1.2**	**11.3**	**5.13**	3.23	**6.4-7.2**
	Turbidity	NTU		**15.8**	11.8	37.6	36.3	40.2	44.7	31.7	**47.7**	**11.8**	**47.7**	**33.23**	13.00	**6**
	Electrolytic Conductivity	uS/cm		190	121.0	591.0	101	202	102	182	23	23	591	189.00	172.92	**-**
	Redox Potential	mV		539	520.0	109.0	402	325	630	130	665	109	665	415.00	213.23	**-**
	Temp	oC		27.85	32.8	28.3	28.2	26.8	27.6	28.7	24.3	24.33	32.8	28.07	2.35	**-**
Nutrients	Ammonia	mg/L	0.005	**0.1**	**0.59**	**0.99**	**1**	**2.3**	**0.12**	**1.1**	**1.1**	**0.1**	**2.3**	**0.91**	0.70	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**0.48**	**0.61**	**0.91**	**0.6**	**0.5**	**0.32**	**1.4**	**0.4**	**0.32**	**1.4**	**0.65**	0.35	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	0.02	**1.8**	**1.2**	**0.73**	**1.6**	**0.15**	**0.66**	**1.2**	0.02	**1.8**	**0.92**	0.64	**0.03**
	Nitrogen (Total)	mg/L	0.05	**0.6**	**3**	**3.1**	**2.3**	**4.4**	**0.59**	**3.2**	**2.7**	**0.59**	**4.4**	**2.49**	1.31	**0.15**
	TKN (as N)	mg/L	0.05	0.58	**0.082**	1.9	1.6	2.8	0.44	2.5	1.5	0.082	2.8	1.43	0.99	**-**
	Phosphorus	mg/L	0.02	**0.03**	**0.28**	**0.53**	**0.24**	**0.47**	**0.08**	**1.3**	**0.23**	**0.03**	**1.3**	**0.40**	0.40	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.012**	1.2	**0.16**	**0.033**	**0.32**	**0.024**	**0.46**	**0.18**	**0.012**	**1.2**	**0.30**	0.40	**0.005**
Inorganics	Aluminium	mg/L	0.005	0.504	0.237	**0.702**	0.505	**0.723**	0.087	**0.973**	**0.57**	**0.087**	**0.973**	**0.54**	0.28	**0.055**
	Arsenic	mg/L	0.0002	0.0023	0.0028	0.0023	0.0021	0.004	0.0006	0.0043	0.002	0.0006	0.0043	0.00255	0.0012	**0.037**
	Cadmium	mg/L	0.00005	0.00008	0.000025	0.000025	0.000025	0.00006	0.000025	0.000025	0.000025	0.000025	0.00008	0.000036	0.000022	**0.0002**
	Chromium	mg/L	0.0002	**0.0013**	0.0007	**0.0013**	**0.0015**	**0.002**	0.0001	**0.0019**	**0.0019**	0.0001	**0.002**	**0.001**	0.0007	**0.001**
	Copper	mg/L	0.0005	**0.0056**	**0.0016**	**0.0021**	**0.0026**	**0.0061**	0.0006	**0.0034**	**0.0023**	0.0006	**0.0061**	**0.003**	0.0019	**0.0014**
	Iron	mg/L	0.002	0.824	2.44	3.68	3.28	5.61	1.06	9.34	1.53	0.824	9.34	3.47	2.85	**-**
	Lead	mg/L	0.0001	0.0014	0.0006	0.0009	0.0006	0.0013	0.0002	0.0011	0.0007	0.0002	0.0014	0.0009	0.0004	**0.0034**
	Mercury	mg/L	0.0001	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0006**
	Nickel	mg/L	0.0005	0.0022	0.0013	0.0015	0.0017	0.0018	0.0011	0.0029	0.0012	0.0011	0.0029	0.00171	0.0006	**0.011**
	Zinc	mg/L	0.001	**0.085**	**0.023**	**0.02**	**0.028**	**0.057**	**0.015**	**0.033**	**0.079**	**0.015**	**0.085**	**0.043**	0.027	**0.008**
Total Petroleum Hydrocarbons	TPH C 6 - C 9 Fraction	mg/L	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	**-**
	TPH C10 - C14 Fraction	mg/L	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.03	-	**-**
	TPH C15 - C28 Fraction	mg/L	0.1	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.1	0.06	0.02	**-**
	TPH C29-C36 Fraction	mg/L	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.03	-	**-**
	TPH+C10 - C36 (Sum of total)	mg/L		0.1	0.1	0.1	0.15	0.1	0.1	0.1	0.1	0.1	0.15	0.11	0.02	**-**
MAH	Benzene	mg/L	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	**0.95**
	Ethylbenzene	mg/L	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.0010	-	**-**
	Toluene	mg/L	0.002	0.0025	0.0025	0.0025	0.001	0.001	0.0025	0.0025	0.0025	0.001	0.0025	0.002	0.0007	**-**
	Total BTEX (QLD EPA 1999 Draft)	mg/L		0.006	0.006	0.006	0.0045	0.0045	0.006	0.006	0.006	0.0045	0.006	0.0056	0.0007	**-**
	MAH (Sum of Total) (Vic EPA 448.3)	mg/L		0.006	0.006	0.006	0.0045	0.0045	0.006	0.006	0.006	0.0045	0.006	0.01	0.0007	**-**
	Xylenes (m & p)	mg/L	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	**-**
	Xylene (o)	mg/L	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	**-**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	DSW18	DSW18	DSW18	DSW18
Sample Date	20/01/2009	24/02/09	9/03/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR					Minimum	Maximum	Average	Standard Deviation	Freshwater - Upland Disturbed Guidelines (1)
Field	pH_Field	pH_Units		6.56	6.2	7.3	7.2	6.2	7.3	6.82	0.53	**6-7.5**
	Dissolved Oxygen	mg/L		**13.5**	NT	5.0	**5.3**	**5**	**13.5**	**7.93**	4.82	**6.4-7.2**
	Turbidity	NTU		5.9	51.3	16.9	**10.9**	5.9	**51.3**	**21.25**	20.53	**6**
	Electrolytic Conductivity	uS/cm		108	38.0	40560.0	491	38	40560	10299.25	20174.82	-
	Redox Potential	mV		538	545.0	218.0	684	218	684	496.25	197.31	-
	Temp	oC		27.48	31.3	32.5	23.5	23.53	32.5	28.70	4.06	-
Nutrients	Ammonia	mg/L	0.005	**0.012**	0.0025	**0.041**	**0.017**	0.0025	**0.041**	0.02	0.02	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**0.43**	**0.49**	**0.23**	**0.19**	**0.19**	**0.49**	**0.34**	0.15	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	0.019	**0.19**	0.008	**0.26**	0.008	**0.26**	**0.12**	0.13	**0.03**
	Nitrogen (Total)	mg/L	0.05	**0.46**	**0.68**	**0.28**	**0.47**	**0.28**	**0.68**	**0.47**	0.16	**0.15**
	TKN (as N)	mg/L	0.05	0.44	0.49	0.27	0.21	0.21	0.49	0.35	0.13	-
	Phosphorus	mg/L	0.02	**0.05**	**0.05**	**0.04**	**0.06**	**0.04**	**0.06**	**0.05**	0.01	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.03**	**0.025**	0.0025	**0.036**	0.0025	**0.036**	**0.02**	0.01	**0.005**
Inorganics	Aluminium	mg/L	0.005	0.087	0.452	0.46	0.38	**0.087**	**0.46**	**0.34**	0.18	**0.055**
	Arsenic	mg/L	0.0002	0.0006	0.0004	0.0015	0.0004	0.0004	0.0015	0.00073	0.0005	**0.037**
	Cadmium	mg/L	0.00005	0.000025	0.000025	0.0001	0.000025	0.000025	0.0001	0.000044	0.000038	**0.0002**
	Chromium	mg/L	0.0002	0.0004	0.0007	0.0008	**0.001**	0.0004	**0.001**	**0.001**	0.0003	**0.001**
	Copper	mg/L	0.0005	0.0007	0.0009	0.0005	**0.002**	0.0005	**0.002**	0.001	0.0007	**0.0014**
	Iron	mg/L	0.002	0.048	0.631	1.1	0.358	0.048	1.1	0.53	0.45	-
	Lead	mg/L	0.0001	0.0002	0.0002	0.0001	0.0004	0.0001	0.0004	0.0002	0.0001	**0.0034**
	Mercury	mg/L	0.0001	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0006**
	Nickel	mg/L	0.0005	0.0005	0.0006	0.0021	0.0008	0.0005	0.0021	0.001	0.0007	**0.011**
	Zinc	mg/L	0.001	0.005	0.004	**0.015**	**0.02**	0.004	0.02	0.011	0.008	**0.008**
Total Petroleum Hydrocarbons	TPH C 6 - C 9 Fraction	mg/L	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	-
	TPH C10 - C14 Fraction	mg/L	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.03	-	-
	TPH C15 - C28 Fraction	mg/L	0.1	0.1	0.05	0.05	0.05	0.05	0.1	0.06	0.03	-
	TPH C29-C36 Fraction	mg/L	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.03	-	-
	TPH+C10 - C36 (Sum of total)	mg/L		0.15	0.1	0.1	0.1	0.1	0.15	0.11	0.03	-
MAH	Benzene	mg/L	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	**0.95**
	Ethylbenzene	mg/L	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.0010	-	-
	Toluene	mg/L	0.002	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.003	-	-
	Total BTEX (QLD EPA 1999 Draft)	mg/L		0.006	0.006	0.006	0.006	0.006	0.006	0.0060	-	-
	MAH (Sum of Total) (Vic EPA 448.3)	mg/L		0.006	0.006	0.006	0.006	0.006	0.006	0.01	-	-
	Xylenes (m & p)	mg/L	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
	Xylene (o)	mg/L	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

ATTACHMENT I

Field ID	ESW19	ESW19	ESW19	ESW19	ESW19	ESW19	ESW19	ESW19	ESW19
Sample Date	1/10/2008	16/12/2008	19/01/2009	16/02/2009	9/03/2009	25/03/2009	6/04/2009	20/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR										Minimum	Maximum	Average	Standard Deviation	Middle Estuary - Disturbed Guidelines (1)
Field	pH_Field	pH_Units		**5.66**	**5.85**	**6.13**	6.3	7.6	7.8	6.5	6.5	7.0	5.66	7.8	6.60	0.74	**6.5-8.4**
	Dissolved Oxygen	mg/L		**3**	**1.5**	**9**	10.0	5.5	5.5	4.8	4.8	6.4	1.5	10	5.61	2.66	**5.5-7.7**
	Turbidity	NTU		**37.2**	**33**	**25.6**	24.8	19.5	14.3	31.1	183.6	**18.7**	14.3	183.6	43.09	53.20	**10**
	Electrolytic Conductivity	uS/cm		8000	1640	2753	1805.0	43190.0	44130	31440	5765	1185	1185	44130	15545.33	18501.88	**-**
	Redox Potential	mV		277	527	550	538.0	153.0	678	655	590	697	153	697	518.33	185.20	**-**
	Temp	oC		27.32	29.34	30.11	29.3	29.1	27.4	29.9	25.8	22.6	22.63	30.11	27.88	2.43	**-**
Nutrients	Ammonia	mg/L	0.005	**1**	**0.033**	**0.008**	**0.0025**	**0.016**	**0.012**	**0.033**	**0.0025**	**0.009**	0.0025	1	0.12	0.33	**0.0015**
	Nitrogen (Organic)	mg/L	0.05	**1.8**	0.15	**0.4**	**0.36**	0.16	0.13	0.11	**0.2**	**0.38**	0.11	1.8	0.41	0.53	**0.2**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.2**	0.019	0.015	**0.042**	0.0025	0.0025	0.012	0.021	0.029	0.0025	0.2	0.04	0.06	**0.03**
	Nitrogen (Total)	mg/L	0.05	**2.8**	0.2	**0.42**	**0.4**	0.18	0.14	0.15	0.22	**0.42**	0.14	2.8	0.55	0.85	**0.25**
	TKN (as N)	mg/L	0.05	2.8	**0.02**	0.41	0.36	0.18	0.14	0.14	0.2	0.39	0.02	2.8	0.52	0.87	**-**
	Phosphorus	mg/L	0.02	**0.58**	0.18	0.01	0.01	**0.02**	**0.02**	**0.02**	0.005	**0.02**	0.005	0.58	0.10	0.19	**0.02**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.005**	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	**0.009**	0.0025	0.009	0.00	0.00	**0.005**
Inorganics	Aluminium	mg/L	0.005	NT	0.02	**0.522**	**0.121**	**0.83**	**0.28**	**0.08**	**0.101**	**0.574**	0.02	0.83	0.32	0.29	**0.055**
	Arsenic	mg/L	0.0002	0.001	0.00025	0.0012	0.0008	0.0018	0.0014	0.001	0.0006	0.0007	0.00025	0.0018	0.00097	0.00046	**0.037**
	Cadmium	mg/L	0.00005	0.0002	0.0001	0.000025	0.000025	0.0001	0.0001	0.0001	0.000025	0.000025	0.000025	0.0002	0.00008	0.00006	**0.0055**
	Chromium	mg/L	0.0002	0.004	0.0006	0.0015	0.0008	0.0015	0.0006	0.00025	0.0006	0.0014	0.00025	0.004	0.00125	0.00113	**0.0318**
	Copper	mg/L	0.0005	**0.003**	0.0005	0.0007	0.00025	0.0005	**0.002**	0.0005	0.00025	0.001	0.00025	0.003	0.00097	0.00093	**0.0013**
	Iron	mg/L	0.002	NT	0.63	1.43	0.783	0.983	0.413	0.531	0.555	0.0004	0.0004	1.43	0.67	0.42	**-**
	Lead	mg/L	0.0001	0.0005	0.0001	0.0004	0.0001	0.0001	0.0002	0.0001	0.00005	1.09	0.00005	1.09	0.12	0.36	**0.0044**
	Mercury	mg/L	0.0001	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0004**
	Nickel	mg/L	0.0005	0.0005	0.0006	0.0009	0.00025	0.0014	0.0008	0.00025	0.00025	0.0007	0.00025	0.0014	0.00063	0.00038	**0.07**
	Zinc	mg/L	0.001	0.0025	0.0025	0.004	0.001	0.0025	0.005	0.0025	0.0005	0.004	0.0005	0.005	0.00272	0.00144	**0.015**
Total Petroleum H	TPH C 6 - C 9 Fraction	mg/L	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	**-**
	TPH C10 - C14 Fraction	mg/L	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	-	**-**
	TPH C15 - C28 Fraction	mg/L	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-	**-**
	TPH C29-C36 Fraction	mg/L	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	-	**-**
	TPH+C10 - C36 (Sum of total)	mg/L		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-	**-**
MAH	Benzene	mg/L	0.001	NT	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00	-	**0.7**
	Ethylbenzene	mg/L	0.002	NT	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.00	-	**-**
	Toluene	mg/L	0.002	NT	0.001	0.0025	0.0025	0.0025	0.001	0.0025	0.0025	0.0025	0.001	0.0025	0.00	0.0007	**-**
	Total BTEX (QLD EPA 1999 Draft)	mg/L		NT	0.0045	0.006	0.006	0.006	0.0045	0.006	0.006	0.006	0.0045	0.006	0.01	0.0007	**-**
	MAH (Sum of Total) (Vic EPA 448.3)	mg/L		NT	0.0045	0.006	0.006	0.006	0.0045	0.006	0.006	0.006	0.0045	0.006	0.01	0.0007	**-**
	Xylenes (m & p)	mg/L	0.002	NT	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.00	-	**-**
	Xylene (o)	mg/L	0.002	NT	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.00	-	**-**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	ESW21	ESW21	ESW21	ESW21	ESW21	ESW21	ESW21
Sample Date	19/01/2009	16/02/2009	9/03/2009	19/03/2009	25/03/2009	20/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR								Minimum	Maximum	Average	Standard Deviation	Middle Estuary - Disturbed Guidelines (1)
Field	pH_Field	pH_Units		**6.09**	6.1	6.3	5.9	6.6	7.5	**5.8**	**5.79**	7.5	**6.33**	0.58	**6.5-8.4**
	Dissolved Oxygen	mg/L		**12.9**	6.3	3.9	4.3	2.5	10.1	**2.4**	**2.4**	**12.9**	6.06	4.02	**5.5-7.7**
	Turbidity	NTU		5.4	19.9	27.4	31.0	17.2	33.2	**38.4**	5.4	**38.4**	**24.64**	11.24	**10**
	Electrolytic Conductivity	uS/cm		149	116.0	>8000	668	889	181	282	116	889	380.83	320.71	-
	Redox Potential	mV		543	550.0	17.0	633	746	594	619	17	746	528.86	235.59	-
	Temp	oC		29.03	30.0	27.8	27.9	24.5	26.6	22.5	22.52	30	26.91	2.61	-
Nutrients	Ammonia	mg/L	0.005	**0.018**	**0.0025**	**0.063**	**0.0025**	**0.0025**	**0.0025**	**0.028**	**0.0025**	**0.063**	**0.02**	0.02	**0.0015**
	Nitrogen (Organic)	mg/L	0.05	**0.58**	**1.1**	**0.46**	**0.26**	**0.78**	**1.1**	**0.76**	**0.26**	**1.1**	**0.72**	0.31	**0.2**
	Nitrogen (Total Oxidised)	mg/L	0.005	0.0025	0.013	0.018	**0.12**	0.0025	0.025	0.012	0.0025	**0.12**	**0.03**	0.04	**0.03**
	Nitrogen (Total)	mg/L	0.05	**0.6**	**1.1**	**0.54**	**0.38**	**0.78**	**1.1**	**0.8**	**0.38**	**1.1**	**0.76**	0.27	**0.25**
	TKN (as N)	mg/L	0.05	0.6	0.0025	0.52	0.26	0.78	1.1	0.79	0.0025	1.1	0.58	0.36	-
	Phosphorus	mg/L	0.02	**0.03**	**0.08**	**0.05**	**0.02**	**0.09**	**0.14**	**0.05**	**0.02**	**0.14**	**0.07**	0.04	**0.02**
	Reactive Phosphorus (as P)	mg/L	0.005	0.0025	1.1	0.0025	0.0025	**0.008**	**0.041**	**0.005**	0.0025	**1.1**	**0.17**	0.41	**0.005**
Inorganics	Aluminium	mg/L	0.005	**0.617**	**0.293**	**0.143**	**0.583**	**0.071**	**0.158**	**1.86**	**0.071**	**1.86**	**0.53**	0.62	**0.055**
	Arsenic	mg/L	0.0002	0.0015	0.0028	0.0014	0.0009	0.0008	0.0013	0.001	0.0008	0.0028	0.0014	0.00	**0.037**
	Cadmium	mg/L	0.00005	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	-	**0.0055**
	Chromium	mg/L	0.0002	0.0044	0.0034	0.0014	0.0018	0.0008	0.0013	0.0079	0.0008	0.0079	0.003	0.0025	**0.0318**
	Copper	mg/L	0.0005	**0.0013**	0.0009	0.0006	0.0006	0.00025	0.001	**0.0026**	0.00025	**0.0026**	0.001	0.0008	**0.0013**
	Iron	mg/L	0.002	1.63	6.59	8.65	1.09	2.96	6.03	0.0011	0.0011	8.65	3.85	3.25	-
	Lead	mg/L	0.0001	0.0006	0.0007	0.0003	0.0003	0.0002	0.0006	2.09	0.0002	2.09	0.3	0.79	**0.0044**
	Mercury	mg/L	0.0001	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0004**
	Nickel	mg/L	0.0005	0.0016	0.0009	0.0021	0.0012	0.0007	0.0013	0.0021	0.0007	0.0021	0.0014	0.00055	**0.07**
	Zinc	mg/L	0.001	0.017	0.003	0.024	0.002	0.005	0.003	0.01	0.002	0.024	0.01	0.01	**0.015**
Total Petroleum Hydrocarbons	TPH C 6 - C 9 Fraction	mg/L	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	-	-
	TPH C10 - C14 Fraction	mg/L	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.03	-	-
	TPH C15 - C28 Fraction	mg/L	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	-	-
	TPH C29-C36 Fraction	mg/L	0.05	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.03	-	-
	TPH+C10 - C36 (Sum of total)	mg/L		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10	-	-
MAH	Benzene	mg/L	0.001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	-	**0.7**
	Ethylbenzene	mg/L	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
	Toluene	mg/L	0.002	0.0025	0.0025	0.0025	0.001	0.001	0.0025	0.0025	0.001	0.0025	0.0021	0.0007	-
	Total BTEX (QLD EPA 1999 Draft)	mg/L		0.006	0.006	0.006	0.0045	0.0045	0.006	0.006	0.0045	0.006	0.01	0.0007	-
	MAH (Sum of Total) (Vic EPA 448.3)	mg/L		0.006	0.006	0.006	0.0045	0.0045	0.006	0.006	0.0045	0.006	0.01	0.0007	-
	Xylenes (m & p)	mg/L	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-
	Xylene (o)	mg/L	0.002	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	-	-

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

ATTACHMENT J

Field ID	AMW1	AMW1	AMW1	AMW1	AMW1	AMW1	AMW1
Sample Date	3/10/2008	11/11/2008	25/11/2008	21/01/2009	10/03/2009	21/04/2009	12/05/2009

Chemical Group	Chemical Name	Output Unit	LOR								Minimum	Maximum	Average	Standard Deviation	Freshwater - Upland Disturbed Guidelines (1)
Field	pH_Field	pH_Units		5.45	**5.71**	**5.41**	**5.11**	6	6.1	5.69	**5.11**	6.1	5.64	0.35	**6-7.5**
	Dissolved Oxygen	mg/L		3	**2.2**	**3**	**15.3**	**3.2**	**6**	8.6	**2.2**	**15.3**	**5.90**	4.72	**6.4-7.2**
	Turbidity	NTU		600	**600**	**182**	**285.2**	**600**	**105.1**	8.6	**8.6**	**600**	**340.13**	256.83	**6**
	Electrolytic Conductivity	uS/cm		50	43	38	28	30	36	23	23	50	35.43	9.27	**-**
	Redox Potential	mV		305	505	660	585	520	875	516	305	875	566.57	173.75	**-**
	Temp	oC		23.3	24.18	24.48	27.89	26.7	26.7	25.53	23.3	27.89	25.54	1.64	**-**
Nutrients	Ammonia	mg/L	0.005	**0.02**	**0.023**	N/A	**0.043**	**0.023**	**0.033**	**0.022**	**0.02**	**0.043**	**0.027**	0.009	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**2.3**	**0.43**	N/A	0.05	**0.32**	0.025	0.06	0.025	**2.3**	**0.531**	0.882	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.06**	**0.064**	N/A	**0.034**	**0.033**	**0.042**	**0.05**	**0.033**	**0.064**	**0.047**	0.013	**0.03**
	Nitrogen (Total)	mg/L	0.05	**2.4**	**0.51**	N/A	0.12	**0.37**	0.025	0.13	0.025	**2.4**	**0.593**	0.904	**0.15**
	TKN (as N)	mg/L	0.05	2.3	0.45	N/A	0.09	0.34	0.025	0.08	0.025	2.3	0.548	0.875	**-**
	Phosphorus	mg/L	0.02	**0.23**	**0.54**	N/A	0.005	**0.43**	**0.05**	0.005	0.005	**0.54**	**0.210**	0.231	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.05**	0.0025	N/A	0.0025	0.0025	0.0025	0.0025	0.0025	**0.05**	**0.0104**	0.0194	**0.005**
Inorganics	Aluminium (Filtered)	mg/L	0.005	NT	N/A	0.0025	0.0025	**0.064**	0.006	0.012	0.0025	**0.064**	0.0174	0.0263	**0.055**
	Arsenic (Filtered)	mg/L	0.0002	0.002	N/A	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.002	0.0004	0.0008	**0.037**
	Cadmium (Filtered)	mg/L	0.00005	0.00005	N/A	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.00005	0.000029	0.000010	**0.0002**
	Chromium (Filtered)	mg/L	0.0002	0.002	N/A	0.0004	0.0001	0.0001	0.0001	0.0001	0.0001	**0.002**	0.00047	0.00076	**0.001**
	Copper (Filtered)	mg/L	0.0005	0.002	N/A	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	**0.002**	0.0005	0.000714	**0.0014**
	Iron (Filtered)	mg/L	0.002	NT	N/A	0.016	0.001	0.001	0.001	0.001	0.001	0.016	0.004	0.007	**-**
	Lead (Filtered)	mg/L	0.0001	0.002	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.002	0.0004	0.0008	**0.0034**
	Mercury (Filtered)	mg/L	0.0001	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0006**
	Nickel (Filtered)	mg/L	0.0005	0.002	N/A	0.00025	0.0006	0.0007	0.0009	0.0009	0.00025	0.002	0.000892	0.0006	**0.011**
	Zinc (Filtered)	mg/L	0.001	**0.059**	N/A	0.007	0.004	0.006	**0.012**	0.007	0.004	**0.059**	**0.016**	0.021	**0.008**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	AMW2	AMW2	AMW2	AMW2	AMW2	AMW2	AMW2	AMW2
Sample Date	3/10/2008	12/11/2008	26/11/2008	10/03/2009	19/03/2009	24/03/2009	21/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR									Minimum	Maximum	Average	Standard Deviation	Wetlands - Disturbed Guidelines (1)
Field	pH_Field	pH_Units		5.18	**5.16**	**4.96**	5.8	**5.3**	**5.2**	6.19	**6.0**	**4.96**	6.19	**5.47**	0.45	**6-8**
	Dissolved Oxygen	mg/L		2.6	**2.6**	**2.7**	1.8	**5.4**	**3.6**	8.1	**4.5**	**1.8**	8.1	**3.91**	2.06	**6.4-8.9**
	Turbidity	NTU		600	**600**	**600**	600.0	**600.0**	**600.0**	87.7	97.4	87.7	**600**	**473.14**	234.92	**200**
	Electrolytic Conductivity	uS/cm		56.0	42.0	45.0	54.0	51.0	49.0	46.0	N/A	42	56	49.00	5.03	**-**
	Redox Potential	mV		416.0	535.0	535.0	348.0	426.0	401.0	873.0	875	348	875	551.13	209.33	**-**
	Temp	oC		23.78	24.69	25.87	27.2	27.0	26.4	26.5	25.7	23.78	27.2	25.90	1.17	**-**
Nutrients	Ammonia	mg/L	0.005	**0.2**	**0.032**	N/A	**0.078**	**0.028**	**0.04**	**0.033**	**0.035**	**0.028**	**0.2**	**0.064**	0.062	**0.01**
	Nitrogen (Organic)	mg/L	0.05	**3.3**	**0.36**	N/A	0.92	0.55	0.47	0.025	0.14	0.025	**3.3**	0.824	1.130	**1.18**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.025**	0.017	N/A	**0.039**	**0.049**	**0.046**	**0.023**	**0.027**	**0.017**	**0.049**	**0.032**	0.012	**0.01**
	Nitrogen (Total)	mg/L	0.05	**3.5**	**0.41**	N/A	1	0.63	0.56	0.08	0.21	0.08	**3.5**	0.913	1.179	**1.2**
	TKN (as N)	mg/L	0.05	3.5	0.39	N/A	1	0.58	0.51	0.06	0.18	0.06	3.5	0.889	1.191	**-**
	Phosphorus	mg/L	0.02	**0.24**	**0.14**	N/A	0.36	**0.32**	**0.22**	0.005	0.005	0.005	**0.36**	**0.184**	0.141	**0.05**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.005**	0.0025	N/A	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.005	0.0029	0.0009	**0.25**
Inorganics	Aluminium (Filtered)	mg/L	0.005	NT	N/A	0.018	0.014	0.011	0.016	0.008	0.037	0.008	0.037	0.0173	0.0103	**0.055**
	Arsenic (Filtered)	mg/L	0.0002	0.002	N/A	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.002	0.000371	0.000718	**0.037**
	Cadmium (Filtered)	mg/L	0.00005	0.00005	N/A	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.00005	0.000029	0.000009	**0.0002**
	Chromium (Filtered)	mg/L	0.0002	0.002	N/A	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.002	0.00039	0.00071	**0.001**
	Copper (Filtered)	mg/L	0.0005	0.002	N/A	0.00025	0.00025	0.0006	0.00025	0.0008	0.00025	0.00025	**0.002**	0.000629	0.000643	**0.0014**
	Iron (Filtered)	mg/L	0.002	NT	N/A	0.055	0.191	0.024	0.071	0.003	0.041	0.003	0.191	0.064	0.066	**-**
	Lead (Filtered)	mg/L	0.0001	0.002	N/A	0.00005	0.00005	0.00005	0.00005	0.0002	0.00005	0.00005	0.002	0.000350	0.000730	**0.0034**
	Mercury (Filtered)	mg/L	0.0001	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.000000	**0.0006**
	Nickel (Filtered)	mg/L	0.0005	0.002	N/A	0.0006	0.00025	0.00025	0.00025	0.0006	0.00025	0.00025	0.002	0.000600	0.000639	**0.011**
	Zinc (Filtered)	mg/L	0.001	0.01	N/A	0.007	0.077	**0.026**	**0.015**	**0.017**	**0.012**	0.007	**0.077**	**0.023**	**0.024**	**0.008**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

			Field ID	AMW3	AMW3	AMW3	AMW3	AMW3	AMW3	AMW3					
			Sample Date	3/10/2008	11/11/2008	24/11/2008	21/01/2009	10/03/2009	21/04/2009	12/05/2009					
Chemical Group	**Chemical Name**	**Output Unit**	**LOR**								**Minimum**	**Maximum**	**Average**	**Standard Deviation**	**Freshwater - Upland Disturbed Guidelines (1)**
Field	pH_Field	pH_Units		4.93	**4.85**	**4.66**	**4.57**	**5.7**	**5.2**	**5.6**	**4.57**	**5.7**	**5.07**	0.44	**6-7.5**
	Dissolved Oxygen	mg/L		3.5	**3.9**	**3.9**	**20**	6.7	**8.7**	10.7	**3.5**	**20**	**8.20**	5.87	**6.4-7.2**
	Turbidity	NTU		600	**600**	**413.8**	**600**	**600.0**	**64.1**	**12.1**	**12.1**	**600**	**412.86**	265.31	**6**
	Electrolytic Conductivity	uS/cm		41	24	27	29	30.0	31	23	23	41	29.29	5.96	**-**
	Redox Potential	mV		447	587	629	599	619.0	889	525	447	889	613.57	137.01	**-**
	Temp	oC		25.39	25.26	26.42	26.65	26.7	26.5	26.3	25.26	26.7	26.17	0.60	**-**
Nutrients	Ammonia	mg/L	0.005	**0.04**	**0.0025**	N/A	0.005	**0.021**	**0.033**	**0.037**	0.0025	**0.04**	**0.023**	**0.016**	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**1.3**	0.19	N/A	0.025	**0.2**	0.025	0.025	0.025	**1.3**	**0.294**	**0.500**	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.09**	**0.1**	N/A	**0.092**	**0.19**	**0.44**	**0.32**	0.09	**0.44**	**0.205**	0.145	**0.03**
	Nitrogen (Total)	mg/L	0.05	**1.4**	**0.29**	N/A	0.09	**0.41**	**0.44**	**0.32**	0.09	**1.4**	**0.492**	0.462	**0.15**
	TKN (as N)	mg/L	0.05	1.3	0.19	N/A	0.025	0.22	0.025	0.025	0.025	1.3	0.298	0.499	**-**
	Phosphorus	mg/L	0.02	**0.19**	**0.33**	N/A	0.005	**0.14**	0.005	0.005	0.005	**0.33**	**0.113**	0.133	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.005**	0.0025	N/A	0.0025	0.0025	0.0025	0.0025	0.0025	0.005	0.0029	0.0010	**0.005**
Inorganics	Aluminium (Filtered)	mg/L	0.005	NT	N/A	0.012	0.013	0.044	0.018	0.019	0.012	0.044	0.0212	0.0131	**0.055**
	Arsenic (Filtered)	mg/L	0.0002	0.002	N/A	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.002	0.000417	0.000776	**0.037**
	Cadmium (Filtered)	mg/L	0.00005	0.0002	N/A	0.000025	0.00008	0.000025	0.000025	0.000025	0.000025	0.0002	0.000063	0.000070	**0.0002**
	Chromium (Filtered)	mg/L	0.0002	0.005	**N/A**	**0.0069**	**0.0046**	**0.0039**	**0.0043**	**0.0048**	**0.0039**	**0.0069**	**0.00492**	0.00105	**0.001**
	Copper (Filtered)	mg/L	0.0005	0.001	N/A	0.00025	0.00025	0.00025	**0.0023**	0.00025	0.00025	**0.0023**	0.000717	0.000832	**0.0014**
	Iron (Filtered)	mg/L	0.002	NT	N/A	0.001	0.001	0.001	0.002	0.001	0.001	0.002	0.001	0.000	**-**
	Lead (Filtered)	mg/L	0.0001	0.002	N/A	0.00005	0.00005	0.0001	0.0002	0.00005	0.00005	0.002	0.000408	0.000782	**0.0034**
	Mercury (Filtered)	mg/L	0.0001	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.000000	**0.0006**
	Nickel (Filtered)	mg/L	0.0005	0.002	N/A	0.0014	0.0009	0.0009	0.0012	0.0009	0.0009	0.002	0.001217	0.000436	**0.011**
	Zinc (Filtered)	mg/L	0.001	**0.016**	**N/A**	**0.008**	**0.01**	**0.009**	**0.01**	**0.012**	0.008	**0.016**	**0.011**	0.003	**0.008**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	AMW4	AMW4	AMW4	AMW4	AMW4	AMW4	AMW4
Sample Date	3/10/2008	12/11/2008	26/11/2008	20/01/2009	11/03/2009	21/04/2009	11/05/2009

Chemical Group	Chemical Name	Output Unit	LOR								Minimum	Maximum	Average	Standard Deviation	Freshwater - Upland Disturbed Guidelines (1)
Field	pH_Field	pH_Units		4.77	**4.37**	**4.39**	**4.56**	**5.1**	**4.2**	**5.5**	**4.2**	**5.5**	**4.70**	0.46	**6-7.5**
	Dissolved Oxygen	mg/L		4.1	**4.3**	**4.5**	**14.4**	**3.5**	**5.8**	7.1	**3.5**	**14.4**	**6.24**	3.79	**6.4-7.2**
	Turbidity	NTU		600	**600**	**315**	**415.6**	**600.0**	**66.9**	**53.8**	**53.8**	**600**	**378.76**	243.28	**6**
	Electrolytic Conductivity	uS/cm		22	13	13	18	26.0	23	0	0	26	16.43	8.77	**-**
	Redox Potential	mV		478	554	605	582	670.0	864	897	478	897	664.29	158.76	**-**
	Temp	oC		26.33	28.75	27.44	28.25	28.0	27.9	26.6	26.33	28.75	27.61	0.87	**-**
Nutrients	Ammonia	mg/L	0.005	**0.005**	**0.035**	N/A	**0.032**	**0.015**	**0.015**	**0.035**	0.005	**0.035**	**0.023**	0.013	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**83.2**	**0.2**	N/A	**0.19**	**0.35**	0.09	0.025	0.025	**83.2**	**14.009**	33.897	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.025**	0.016	N/A	0.021	0.011	0.015	**0.038**	0.011	**0.038**	0.021	0.010	**0.03**
	Nitrogen (Total)	mg/L	0.05	**83.2**	**0.25**	N/A	**0.24**	**0.37**	0.12	0.025	0.025	**83.2**	**14.034**	33.884	**0.15**
	TKN (as N)	mg/L	0.05	83.2	0.23	N/A	0.22	0.36	0.1	0.025	0.025	83.2	14.023	33.890	**-**
	Phosphorus	mg/L	0.02	**0.29**	**0.33**	N/A	0.005	**0.45**	**0.02**	**0.01**	0.005	**0.45**	**0.184**	0.196	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.005**	0.0025	N/A	**0.005**	0.0025	0.0025	0.0025	0.0025	0.005	0.0033	0.0013	**0.005**
Inorganics	Aluminium (Filtered)	mg/L	0.005	NT	N/A	**0.105**	**0.108**	**0.233**	**0.234**	**0.196**	**0.105**	**0.234**	**0.1752**	0.0646	**0.055**
	Arsenic (Filtered)	mg/L	0.0002	0.002	N/A	0.0002	0.0001	0.0001	0.0001	0.0003	0.0001	0.002	0.0005	0.0008	**0.037**
	Cadmium (Filtered)	mg/L	0.00005	0.00005	N/A	0.000025	0.000025	0.000025	0.000025	0.00006	0.000025	0.00006	0.00004	0.00002	**0.0002**
	Chromium (Filtered)	mg/L	0.0002	0.002	N/A	0.0004	0.0004	0.0003	0.0003	0.0003	0.0003	0.002	0.0006	0.0007	**0.001**
	Copper (Filtered)	mg/L	0.0005	0.002	N/A	0.00025	0.00025	0.00025	0.0011	0.001	0.00025	0.002	0.0008	0.0007	**0.0014**
	Iron (Filtered)	mg/L	0.002	NT	N/A	0.513	0.06	0.162	0.174	0.299	0.06	0.513	0.242	0.174	**-**
	Lead (Filtered)	mg/L	0.0001	0.002	N/A	0.00005	0.0002	0.0002	0.0002	0.0003	0.00005	0.002	0.0005	0.0007	**0.0034**
	Mercury (Filtered)	mg/L	0.0001	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0006**
	Nickel (Filtered)	mg/L	0.0005	0.002	N/A	0.00025	0.0005	0.00025	0.00025	0.0007	0.00025	0.002	0.0007	0.0007	**0.011**
	Zinc (Filtered)	mg/L	0.001	**0.033**	N/A	0.008	**0.18**	**0.022**	**0.019**	**0.026**	**0.008**	**0.18**	**0.048**	0.065	**0.008**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	AMW5	AMW5	AMW5	AMW5	AMW5	AMW5	AMW5	AMW5
Sample Date	3/10/2008	12/11/2008	26/11/2008	20/01/2009	24/02/2009	11/03/2009	21/04/2009	12/05/2009

Chemical Group	Chemical Name	Output Unit	LOR									Minimum	Maximum	Average	Standard Deviation	Freshwater - Upland Disturbed Guidelines (1)
Field	pH_Field	pH_Units		5.51	**5.15**	**4.93**	**5.05**	**5.0**	**5.8**	**4.4**	**5.9**	**4.4**	**5.94**	**5.22**	0.50	**6-7.5**
	Dissolved Oxygen	mg/L		4.2	**3.8**	**3**	**11.8**	**10.1**	**4.7**	**8.3**	7.7	**3**	**11.8**	6.70	3.24	**6.4-7.2**
	Turbidity	NTU		600	**600**	**600**	**600**	**600.0**	**600.0**	**190.5**	**600**	**190.5**	**600**	**548.81**	144.78	**6**
	Electrolytic Conductivity	uS/cm		46	30	26	47	28.0	30.0	19	36	19	47	32.75	9.72	**-**
	Redox Potential	mV		313	371	480	539	576.0	412.0	842	493	313	842	503.25	162.12	**-**
	Temp	oC		27.32	26.5	27.5	27.79	28.5	27.8	28.0	26.6	26.5	28.5	27.50	0.69	**-**
Nutrients	Ammonia	mg/L	0.005	**0.19**	**0.037**	N/A	**0.038**	**0.031**	**0.039**	**0.04**	**0.15**	**0.031**	**0.19**	**0.075**	0.066	**0.006**
	Nitrogen (Organic)	mg/L	0.05	**2.4**	**0.32**	N/A	0.025	**2.2**	**0.6**	**0.18**	**0.5**	0.025	**2.4**	**0.889**	0.984	**0.125**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.025**	0.012	N/A	0.013	**0.088**	**0.039**	**0.082**	**0.8**	0.012	**0.8**	**0.151**	0.288	**0.03**
	Nitrogen (Total)	mg/L	0.05	**2.6**	**0.37**	N/A	0.09	**2.3**	**0.71**	**0.3**	**1.4**	0.09	**2.6**	**1.110**	1.010	**0.15**
	TKN (as N)	mg/L	0.05	2.6	0.36	N/A	0.08	2.2	0.67	0.22	0.65	0.08	2.6	0.969	1.007	**-**
	Phosphorus	mg/L	0.02	**1.24**	**0.33**	N/A	0.005	**1.3**	**0.74**	**0.09**	**0.36**	0.005	**1.3**	**0.581**	0.526	**0.01**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.005**	0.0025	N/A	0.0025	0.0025	0.0025	0.0025	**0.01**	0.0025	**0.01**	0.0039	0.0028	**0.005**
Inorganics	Aluminium (Filtered)	mg/L	0.005	NT	N/A	0.014	**0.074**	**0.42**	**0.17**	0.025	**0.181**	0.014	**0.42**	**0.1473**	0.1511	**0.055**
	Arsenic (Filtered)	mg/L	0.0002	0.004	N/A	0.0033	0.0019	0.0005	0.0012	0.0004	0.0011	0.0004	0.004	0.0018	0.0014	**0.037**
	Cadmium (Filtered)	mg/L	0.00005	0.00005	N/A	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.00005	0.000029	0.000009	**0.0002**
	Chromium (Filtered)	mg/L	0.0002	0.002	N/A	0.0001	0.0004	0.0006	0.0002	0.0003	0.0004	0.0001	**0.002**	0.00057	0.00065	**0.001**
	Copper (Filtered)	mg/L	0.0005	0.002	N/A	0.00025	0.00025	0.00025	0.00025	0.0006	0.0007	0.00025	**0.002**	0.0006	0.0006	**0.0014**
	Iron (Filtered)	mg/L	0.002	NT	N/A	2.14	0.396	0.061	0.678	0.042	0.016	0.016	2.14	0.556	0.819	**-**
	Lead (Filtered)	mg/L	0.0001	0.002	N/A	0.00005	0.00005	0.00005	0.00005	0.0001	0.00005	0.00005	0.002	0.0003	0.0007	**0.0034**
	Mercury (Filtered)	mg/L	0.0001	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0006**
	Nickel (Filtered)	mg/L	0.0005	0.001	N/A	0.0009	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.001	0.0005	0.0003	**0.011**
	Zinc (Filtered)	mg/L	0.001	**0.021**	N/A	0.009	0.005	0.02	0.005	0.006	**0.008**	0.005	**0.021**	**0.011**	0.007	**0.008**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

Field ID	AMW6	AMW6	AMW6	AMW6	AMW6	AMW6	AMW6	AMW6	AMW6
Sample Date	2/10/2008	11/11/2008	25/11/2008	21/01/2009	24/02/2009	10/03/2009	24/03/2009	21/04/2009	12/05/2009

Chemical Group	Chemical Name	Output Unit	LOR										Minimum	Maximum	Average	Standard Deviation	Middle Estuary - Disturbed Guidelines (1)
Field	pH_Field	pH_Units		5.78	**6.09**	**5.39**	**5.4**	**5.3**	**5.7**	**5.6**	4.8	**5.7**	**4.8**	**6.09**	**5.53**	0.36	**6.5-8.4**
	Dissolved Oxygen	mg/L		4	**4.2**	**4.6**	**20**	**8.0**	5.7	**5.4**	9.2	**9.6**	**4**	**20**	**7.86**	5.02	**5.5-7.7**
	Turbidity	NTU		600	**600**	**396.2**	**600**	**348.2**	600.0	**600.0**	83.6	**30.6**	**30.6**	**600**	**428.73**	232.33	**10**
	Electrolytic Conductivity	uS/cm		51	52	49	50	47.0	37.0	23	20	14	14	52	38.11	15.15	**-**
	Redox Potential	mV		323	398	491	537	526.0	360.0	466	814	526	323	814	493.44	142.96	**-**
	Temp	oC		28.48	25.92	25.37	27.52	28.5	30.6	28.3	28.0	26.3	25.37	30.6	27.67	1.60	**-**
Nutrients	Ammonia	mg/L	0.005	**0.53**	**0.031**	N/A	**0.047**	**0.12**	**0.027**	**0.027**	**0.056**	**0.006**	**0.006**	**0.53**	**0.106**	0.175	**0.0015**
	Nitrogen (Organic)	mg/L	0.05	**1.8**	0.15	N/A	0.12	**2.4**	**1.2**	**1.2**	0.05	0.07	0.05	**2.4**	**0.874**	0.912	**0.2**
	Nitrogen (Total Oxidised)	mg/L	0.005	**0.025**	**0.39**	N/A	**0.19**	**0.19**	0.018	**0.078**	**0.041**	**0.039**	0.018	**0.39**	**0.121**	0.129	**0.03**
	Nitrogen (Total)	mg/L	0.05	**2.4**	**0.57**	N/A	**0.36**	**2.7**	**1.2**	**1.3**	0.15	0.12	0.12	**2.7**	**1.100**	0.999	**0.25**
	TKN (as N)	mg/L	0.05	2.4	0.18	N/A	0.17	0.0025	1.2	1.2	0.11	0.08	0.0025	2.4	0.668	0.858	**-**
	Phosphorus	mg/L	0.02	**0.06**	**0.3**	N/A	0.005	**2.1**	**1.2**	**0.98**	**0.03**	0.005	0.005	**2.1**	**0.585**	0.772	**0.02**
	Reactive Phosphorus (as P)	mg/L	0.005	**0.005**	0.0025	N/A	0.0025	2.5	0.0025	0.0025	0.0025	**0.007**	0.0025	**2.5**	**0.3156**	0.8826	**0.005**
Inorganics	Aluminium (Filtered)	mg/L	0.005	NT	N/A	0.007	0.01	0.012	0.051	0.023	0.009	0.008	0.007	0.051	0.0171	0.0159	**0.055**
	Arsenic (Filtered)	mg/L	0.0002	0.003	N/A	0.0003	0.0007	0.0011	0.0009	0.0011	0.0007	0.0004	0.0003	0.003	0.0010	0.0008	**0.037**
	Cadmium (Filtered)	mg/L	0.00005	0.00005	N/A	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.000025	0.00005	0.000028	0.000009	**0.0055**
	Chromium (Filtered)	mg/L	0.0002	**0.002**	N/A	0.0004	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	**0.002**	0.00039	0.00066	**0.0318**
	Copper (Filtered)	mg/L	0.0005	**0.002**	N/A	0.00025	0.00025	0.00025	0.00025	0.00025	0.0005	0.00025	0.00025	**0.002**	0.0005	0.0006	**0.0013**
	Iron (Filtered)	mg/L	0.002	NT	N/A	0.08	0.3	0.256	0.562	0.821	0.281	0.737	0.08	0.821	0.434	0.276	**-**
	Lead (Filtered)	mg/L	0.0001	0.002	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.002	0.0003	0.0007	**0.0044**
	Mercury (Filtered)	mg/L	0.0001	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	-	**0.0004**
	Nickel (Filtered)	mg/L	0.0005	0.002	N/A	0.0006	0.0006	0.00025	0.00025	0.00025	0.00025	0.00025	0.00025	0.002	0.0006	0.0006	**0.07**
	Zinc (Filtered)	mg/L	0.001	**0.021**	N/A	0.006	0.005	0.006	0.005	0.006	0.005	0.009	0.005	**0.021**	0.008	0.005	**0.015**

Input By: BAG
Date: 29 June 2009
Checked By: JSB
Date: 30 June 2009

ATTACHMENT K

LIMITATIONS

This Document has been provided by Golder Associates Pty Ltd ("Golder") subject to the following limitations:

This Document has been prepared for the particular purpose outlined in Golder's proposal and no responsibility is accepted for the use of this Document, in whole or in part, in other contexts or for any other purpose.

The scope and the period of Golder's Services are as described in Golder's proposal, and are subject to restrictions and limitations. Golder did not perform a complete assessment of all possible conditions or circumstances that may exist at the site referenced in the Document. If a service is not expressly indicated, do not assume it has been provided. If a matter is not addressed, do not assume that any determination has been made by Golder in regards to it.

Conditions may exist which were not detected given the limited nature of the enquiry Golder was retained to undertake with respect to the site. Variations in conditions may occur between assessment locations, and there may be special conditions pertaining to the site which have not been revealed by the investigation and which have not therefore been taken into account in the Document. Accordingly, additional studies and actions may be required.

In addition, it is recognised that the passage of time affects the information and assessment provided in this Document. Golder's opinions are based upon information that existed at the time the information is collected. It is understood that the Services provided allowed Golder to form no more than an opinion of the actual conditions of the site at the time the site was visited and cannot be used to assess the effect of any subsequent changes in the quality of the site, or its surroundings, or any laws or regulations.

Any assessments, designs, and advice provided in this Document are based on the conditions indicated from published sources and the investigation described. No warranty is included, either express or implied, that the actual conditions will conform exactly to the assessments contained in this Document.

Where data supplied by the client or other external sources, including previous site investigation data, have been used, it has been assumed that the information is correct unless otherwise stated. No responsibility is accepted by Golder for incomplete or inaccurate data supplied by others.

Golder may have retained subconsultants affiliated with Golder to provide Services for the benefit of Golder. To the maximum extent allowed by law, the Client acknowledges and agrees it will not have any direct legal recourse to, and waives any claim, demand, or cause of action against, Golder's affiliated companies, and their employees, officers and directors.

This Document is provided for sole use by the Client and is confidential to it and its professional advisers. No responsibility whatsoever for the contents of this Document will be accepted to any person other than the Client. Any use which a third party makes of this Document, or any reliance on or decisions to be made based on it, is the responsibility of such third parties. Golder accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this Document.