



ANALYTICAL SERVICES TASMANIA

18 St Johns Avenue, New Town, Tasmania, Australia, 7008
New Town Laboratory

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To: Aquatic Environment Hydro Tasmania Address GPO Box 355 HOBART TAS 7001 Fax No: 62304555 Phone: Mobile:	Date: 12-Aug-08 Pages: 18 (including this one) From: Amanda Freeman Fax No (03) 6230 7001 Phone: (03) 6230 7000
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Order No 40751

Please find enclosed report number 36522 : issue number 1.

The original was sent to:

Accounts Payable Hydro Tasmania, Hydro Tasmania, GPO Box 355 HOBART TAS 7001.

The invoice for this report will follow.

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Laboratory Report

Report No: 36522

Issue No: 1

Report Date 12-Aug-2008 16:28

Status: Full Report

Site Description: GL CHARA

Received: 04-Aug-08

Submitted to: New Town Laboratory

Submitted By: Kevin Macfarlane (Inland Fisheries Service)

Client Order No: 40751

Report To: Simon Gartenstein

Client: Hydro Tasmania

Address: 38 Montpelier Retreat, Battery Point, TAS 7004

The tests, calibrations or measurements covered by this document have been performed in accordance with NATA requirements which include the requirements of ISO/IEC 17025 and are traceable to national standards of measurement.

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Samples analysed as received.



ANALYTICAL SERVICES TASMANIA

Report No: 36522 **Issue No:** 1 **Report Date:** 12-Aug-2008 16:28

		Method: 1206-Water		1206-Water
		Analyte: Nitrogen, Total		Phosphorus, Total
Lab.No.	Sample Id.	Sampled On	mg-N/L	mg-P/L
132709	Eliz Bay 1	01/08/2008	0.24	0.008
132710	Eliz Bay 2	01/08/2008	0.21	0.008
132711	Reyn Bay 1	01/08/2008	0.15	0.007
132712	Reyn Bay 2	01/08/2008	0.18	0.006
132713	Cana Bay 1	01/08/2008	0.16	0.005
132714	Cana Bay 2	01/08/2008	0.10	<0.005
132715	Swan Bay 1	01/08/2008	0.17	0.006
132716	Swan Bay 2	01/08/2008	0.18	0.008

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Report No: 36522 **Issue No:** 1 **Report Date:** 12-Aug-2008 16:28

Lab. No. 132717	Analyte Algal Count	Method Used: Algal Count in Fresh Water by Optical Microscopy	Client Sample ID. Eliz Bay 1
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Date/Time Sampled 01-Aug-2008 00:00	Date/Time Received 04-Aug-2008 00:00
Site Eliz Bay 1	Estimate Collection Method N/A
Count Collection Method Grab	Preservative Lugols
Date of Analysis '08/08/08	

<u>Species</u>	<u>Density</u>
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Group: Cyanobacteria (Blue-green)

Order: Chroococcales

Aphanothece sp.	cells/mL	12000
Aphanothece sp. 1	cells/mL	3300

Order: Nostocales

Anabaena sp.	cells/mL	1
Anabaena sp.	filaments/mL	0

Group: Dinophyta (Dinoflagellates)

Order: Gymnodiniales

Gymnodinium sp.	cells/mL	100
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Group: Bacillariophyta (Diatoms)

Order: Centrales

Cyclotella sp.	cells/mL	16
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Order: Fragilariales

Fragilaria sp.	cells/mL	80
Tabellaria sp.	cells/mL	60

Order: Rhizosoleniales

Urosolenia sp.	cells/mL	32
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Group: Chlorophyta (Green)

Order: Chlorococcales

Ankistrodesmus sp.	cells/mL	52
Crucigenia sp.	cells/mL	64
Dictyosphaerium sp.	cells/mL	32
Elaktothrix sp.	cells/mL	16
Oocystis sp.	cells/mL	72
Sphaerocystis sp.	cells/mL	68

Order: Zygnematales

Mougeotia sp.	cells/mL	8
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Group: Chrysophyta (Golden-Brown)

Order: Ochromonadales

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<i>Synura sp.</i>	cells/mL	24
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Report No: 36522 Issue No: 1 Report Date: 12-Aug-2008 16:28

Lab. No.	Analyte	Method Used:	Client Sample ID.
132718	Algal Count	Algal Count in Fresh Water by Optical Microscopy	Eliz Bay 2

Date/Time Sampled 01-Aug-2008 00:00
Site Eliz Bay 2
Count Collection Method Grab
Date of Analysis '08/08/08

Date/Time Received 04-Aug-2008 00:00
Estimate Collection Method N/A
Preservative Lugols

<u>Species</u>	<u>Density</u>
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Group: Cyanobacteria (Blue-green)

Order: Chroococcales

<i>Aphanothece</i> sp.	cells/mL	10000
<i>Aphanothece</i> sp. 1	cells/mL	4900
<i>Rhabdogloea</i> sp.	cells/mL	32
<i>Snowella</i> sp.	cells/mL	220

Order: Nostocales

<i>Anabaena</i> sp.	cells/mL	6
<i>Anabaena</i> sp.	filaments/mL	0

Group: Dinophyta (Dinoflagellates)

Order: Gymnodiniales

<i>Gymnodinium</i> sp.	cells/mL	120
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Group: Bacillariophyta (Diatoms)

Order: Bacillariales

<i>Diatom species (unidentified)</i>	cells/mL	28
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Order: Centrales

<i>Cyclotella</i> sp.	cells/mL	20
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Order: Fragilariales

<i>Fragilaria</i> sp.	cells/mL	92
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Order: Rhizosoleniales

<i>Urosolenia</i> sp.	cells/mL	32
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Group: Chlorophyta (Green)

Order: Chlorococcales

<i>Ankistrodesmus</i> sp.	cells/mL	120
<i>Dictyosphaerium</i> sp.	cells/mL	88
<i>Elaktothrix</i> sp.	cells/mL	44
<i>Oocystis</i> sp.	cells/mL	96
<i>Sphaerocystis</i> sp.	cells/mL	64

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Report No: 36522 **Issue No:** 1 **Report Date:** 12-Aug-2008 16:28

Lab. No. Analyte	Method Used:	Client Sample ID.
132719 Algal Count	Algal Count in Fresh Water by Optical Microscopy	Reyn Bay 1

Date/Time Sampled 01-Aug-2008 00:00	Date/Time Received 04-Aug-2008 00:00
Site Reyn Bay 1	Estimate Collection Method N/A
Count Collection Method Grab	Preservative Lugols
Date of Analysis '08/08/08	

<u>Species</u>	<u>Density</u>
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Group: Cyanobacteria (Blue-green)

Order: Chroococcales

Aphanothece sp.	cells/mL	10000
Aphanothece sp. 1	cells/mL	1600
Rhabdogloea sp.	cells/mL	20
Snowella sp.	cells/mL	280

Order: Nostocales

Anabaena sp.	cells/mL	9
Anabaena sp.	filaments/mL	1

Group: Dinophyta (Dinoflagellates)

Order: Gymnodiniales

Gymnodinium sp.	cells/mL	130
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Group: Bacillariophyta (Diatoms)

Order: Bacillariales

Diatom species (unidentified)	cells/mL	4
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Order: Centrales

Cyclotella sp.	cells/mL	4
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Order: Fragilariales

Fragilaria sp.	cells/mL	64
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Order: Naviculales

Navicula sp	cells/mL	32
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Order: Rhizosoleniales

Urosolenia sp.	cells/mL	36
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Group: Chlorophyta (Green)

Order: Chlorococcales

Ankistrodesmus sp.	cells/mL	64
Crucigenia sp.	cells/mL	16
Elaktothrix sp.	cells/mL	60
Kirchneriella sp.	cells/mL	64
Oocystis sp.	cells/mL	100
Sphaerocystis sp.	cells/mL	200

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Order: Zygnematales

Cosmarium sp. cells/mL 8

Mougeotia sp. cells/mL 8

Group: Cryptophyta

Order: Cryptomonadales

Cryptomonas sp. cells/mL 4

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Report No: 36522 **Issue No:** 1 **Report Date:** 12-Aug-2008 16:28

Lab. No. 132720	Analyte Algal Count	Method Used: Algal Count in Fresh Water by Optical Microscopy	Client Sample ID. Reyn Bay 2
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Date/Time Sampled 01-Aug-2008 00:00	Date/Time Received 04-Aug-2008 00:00
Site Reyn Bay 2	Estimate Collection Method N/A
Count Collection Method Grab	Preservative Lugols
Date of Analysis '11/08/08	

<u>Species</u>	<u>Density</u>
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Group: Cyanobacteria (Blue-green)

Order: Chroococcales

Aphanothece sp.	cells/mL	16000
Aphanothece sp. 1	cells/mL	2100
Snowella sp.	cells/mL	140

Order: Nostocales

Anabaena sp.	cells/mL	2
Anabaena sp.	filaments/mL	0

Group: Dinophyta (Dinoflagellates)

Order: Gymnodiniales

Gymnodinium sp.	cells/mL	96
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Group: Bacillariophyta (Diatoms)

Order: Bacillariales

Diatom species (unidentified)	cells/mL	4
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Order: Centrales

Cyclotella sp.	cells/mL	8
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Order: Fragilariales

Fragilaria sp.	cells/mL	76
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Order: Naviculales

Navicula sp	cells/mL	16
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Order: Rhizosoleniales

Urosolenia sp.	cells/mL	48
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Group: Chlorophyta (Green)

Order: Chlorococcales

Ankistrodesmus sp.	cells/mL	64
Crucigenia sp.	cells/mL	24
Dictyosphaerium sp.	cells/mL	84
Elaktothrix sp.	cells/mL	60
Oocystis sp.	cells/mL	130
Sphaerocystis sp.	cells/mL	110

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Report No: 36522 **Issue No:** 1 **Report Date:** 12-Aug-2008 16:28

Order: Zygnematales

Staurostrum sp. cells/mL 4

Group: Cryptophyta

Order: Cryptomonadales

Cryptomonas sp. cells/mL 8

Group: Chrysophyta (Golden-Brown)

Order: Ochromonadales

Synura sp. cells/mL 12

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Report No: 36522	Issue No: 1	Report Date: 12-Aug-2008 16:28
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Lab. No. 132721	Analyte Algal Count	Method Used: Algal Count in Fresh Water by Optical Microscopy	Client Sample ID. Cana Bay 1
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Date/Time Sampled 01-Aug-2008 00:00	Date/Time Received 04-Aug-2008 00:00
Site Cana Bay 1	Estimate Collection Method N/A
Count Collection Method Grab	Preservative Lugols
Date of Analysis '11/08/08	

<u>Species</u>	<u>Density</u>
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Group: Cyanobacteria (Blue-green)

Order: Chroococcales

Aphanothece sp.	cells/mL	6200
Aphanothece sp. 1	cells/mL	760
Rhabdogloea sp.	cells/mL	32
Snowella sp.	cells/mL	72

Group: Dinophyta (Dinoflagellates)

Order: Gymnodiniales

Gymnodinium sp.	cells/mL	64
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Group: Bacillariophyta (Diatoms)

Order: Bacillariales

Diatom species (unidentified)	cells/mL	12
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Order: Centrales

Cyclotella sp.	cells/mL	8
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Order: Fragilariales

Fragilaria sp.	cells/mL	20
Tabellaria sp.	cells/mL	20

Order: Naviculales

Navicula sp	cells/mL	4
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Order: Rhizosoleniales

Urosolenia sp.	cells/mL	8
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Group: Chlorophyta (Green)

Order: Chlorococcales

Ankistrodesmus sp.	cells/mL	12
Crucigenia sp.	cells/mL	24
Dictyosphaerium sp.	cells/mL	150
Elaktothrix sp.	cells/mL	4
Oocystis sp.	cells/mL	56
Sphaerocystis sp.	cells/mL	140

Order: Zygnematales

Staurostrum sp.	cells/mL	4
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Report No: 36522 **Issue No:** 1 **Report Date:** 12-Aug-2008 16:28

Group: Chrysophyta (Golden-Brown)

Order: Ochromonadales

<i>Synura</i> sp.	cells/mL	8
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Report No: 36522 Issue No: 1 Report Date: 12-Aug-2008 16:28

Lab. No.	Analyte	Method Used:	Client Sample ID.
132722	Algal Count	Algal Count in Fresh Water by Optical Microscopy	Cana Bay 2

Date/Time Sampled 01-Aug-2008 00:00
Site Cana Bay 2
Count Collection Method Grab
Date of Analysis '11/08/08

Date/Time Received 04-Aug-2008 00:00
Estimate Collection Method N/A
Preservative Lugols

<u>Species</u>	<u>Density</u>
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Group: Cyanobacteria (Blue-green)

Order: Chroococcales

<i>Rhabdogloea sp.</i>	cells/mL	8
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Group: Dinophyta (Dinoflagellates)

Order: Gymnodiniales

<i>Gymnodinium sp.</i>	cells/mL	26
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Order: Peridinales

<i>Peridinium sp.</i>	cells/mL	2
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Group: Bacillariophyta (Diatoms)

Order: Bacillariales

<i>Diatom species (unidentified)</i>	cells/mL	8
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Order: Fragilariales

<i>Fragilaria sp.</i>	cells/mL	10
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Group: Chlorophyta (Green)

Order: Chlorococcales

<i>Elaktothrix sp.</i>	cells/mL	2
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<i>Oocystis sp.</i>	cells/mL	4
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<i>Sphaerocystis sp.</i>	cells/mL	8
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Order: Zygnematales

<i>Staurodesmus sp.</i>	cells/mL	2
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Report No: 36522 **Issue No:** 1 **Report Date:** 12-Aug-2008 16:28

Lab. No. 132723	Analyte Algal Count	Method Used: Algal Count in Fresh Water by Optical Microscopy	Client Sample ID. Swan Bay 1
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Date/Time Sampled 01-Aug-2008 00:00	Date/Time Received 04-Aug-2008 00:00
Site Swan Bay 1	Estimate Collection Method N/A
Count Collection Method Grab	Preservative Lugols
Date of Analysis '12/08/08	

<u>Species</u>	<u>Density</u>
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Group: Cyanobacteria (Blue-green)

Order: Chroococcales

Aphanothece sp.	cells/mL	17000
Aphanothece sp. 1	cells/mL	2400
Rhabdogloea sp.	cells/mL	32
Snowella sp.	cells/mL	130

Order: Nostocales

Anabaena sp.	cells/mL	14
Anabaena sp.	filaments/mL	1

Group: Dinophyta (Dinoflagellates)

Order: Gymnodiniales

Gymnodinium sp.	cells/mL	120
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Group: Bacillariophyta (Diatoms)

Order: Centrales

Cyclotella sp.	cells/mL	12
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Order: Fragilariales

Fragilaria sp.	cells/mL	68
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Order: Naviculales

Navicula sp	cells/mL	4
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Order: Rhizosoleniales

Urosolenia sp.	cells/mL	44
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Group: Chlorophyta (Green)

Order: Chlorococcales

Ankistrodesmus sp.	cells/mL	52
Crucigenia sp.	cells/mL	16
Dictyosphaerium sp.	cells/mL	32
Elaktothrix sp.	cells/mL	28
Nephrocytium sp.	cells/mL	16
Oocystis sp.	cells/mL	76
Sphaerocystis sp.	cells/mL	140

Order: Zygnematales

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Report No: 36522 **Issue No:** 1 **Report Date:** 12-Aug-2008 16:28

<i>Cosmarium sp.</i>	cells/mL	8
<i>Mougeotia sp.</i>	cells/mL	4
<i>Spondylosium sp.</i>	cells/mL	8

Group: Chrysophyta (Golden-Brown)

Order: Ochromonadales

<i>Dinobryon sp.</i>	cells/mL	4
<i>Synura sp.</i>	cells/mL	44

ANALYTICAL SERVICES TASMANIA

Report No: 36522 **Issue No:** 1 **Report Date:** 12-Aug-2008 16:28

Lab. No. 132724	Analyte Algal Count	Method Used: Algal Count in Fresh Water by Optical Microscopy	Client Sample ID. Swan Bay 2
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Date/Time Sampled 01-Aug-2008 00:00	Date/Time Received 04-Aug-2008 00:00
Site Swan Bay 2	Estimate Collection Method N/A
Count Collection Method Grab	Preservative Lugols
Date of Analysis '12/08/08	

<u>Species</u>	<u>Density</u>
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Group: Cyanobacteria (Blue-green)

Order: Chroococcales

Aphanothece sp.	cells/mL	18000
Aphanothece sp. 1	cells/mL	4200
Rhabdogloea sp.	cells/mL	16
Snowella sp.	cells/mL	780

Order: Nostocales

Anabaena sp.	cells/mL	5
Anabaena sp.	filaments/mL	0

Group: Dinophyta (Dinoflagellates)

Order: Gymnodiniales

Gymnodinium sp.	cells/mL	120
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Group: Bacillariophyta (Diatoms)

Order: Fragilariales

Fragilaria sp.	cells/mL	84
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Order: Rhizosoleniales

Urosolenia sp.	cells/mL	48
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Group: Chlorophyta (Green)

Order: Chlorococcales

Ankistrodesmus sp.	cells/mL	48
Elaktothrix sp.	cells/mL	72
Oocystis sp.	cells/mL	52
Sphaerocystis sp.	cells/mL	120

Order: Zygnematales

Cosmarium sp.	cells/mL	4
Mougeotia sp.	cells/mL	4
Staurastrum sp.	cells/mL	4

Group: Cryptophyta

Order: Cryptomonadales

Cryptomonas sp.	cells/mL	20
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Report No: 36522 **Issue No:** 1 **Report Date:** 12-Aug-2008 16:28

Group: Chrysophyta (Golden-Brown)

Order: Chromulinales

Chrysostephanosphaera globulifera cells/mL 8

Order: Ochromonadales

Synura sp. cells/mL 36

ANALYTICAL SERVICES TASMANIA

Report No: 36522 Issue No: 1 Report Date: 12-Aug-2008 16:28

Test Method(s) :

Test Date

Biological Testing

1612-Water: Algal Count in Fresh Water by Optical Microscopy
Work Conducted at: New Town

07-Aug-2008

Authorised By:



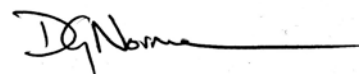
Ling Hau
Phycologist

Organic and Nutrient Testing

1206-Water: Total Nutrients by APHA Method 4500
Work Conducted at: New Town

05-Aug-2008

Authorised By:



Damien Norman
Section Head - Inorganic



Accreditation No. 5589

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