PHYTOPLANKTON ANALYSIS REPORT

Report no: 287426
Supercedes Report No:

Depth : N/A
Chlorophyll a: NA
Microcystin equivalents: NA
Date analysed: 4/07/2023
Analyst: [redacted]

Lims No: L23051822
Date Sampled: 20/06/2023
Client ID: 235448
Address: [redacted]
Site:

Client: Department of Planning and Environment

Method: MA70CENT

Issued By : Sydney Water Laboratory Services
Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)				
Anabaenopsis	208	Potentially toxic	14.35	0.024
Coccoid Blue Green Picoplankton	1530123	Filter clogging?	2,907.23	0.690
Merismopedia	11799		11.79	0.099
Planktolyngbya	4425	Filter clogging	44.25	0.354
Spirulina	3761		56.41	0.014
Synechococcus cf	2212		27.20	0.014
Subtotal	1552528		3,061.23	1.195
Bacillariophyta (Diatom)				
Aulacoseira	245	Filter clogging	99.71	0.147
Cyclotella	19468	Filter clogging	1,323.82	1.518
Cyclotella species 4	17	Filter clogging	26.53	0.239
Cyclotella/Stephanodiscus	14159	Filter clogging	757.50	1.122
Cylindrotheca closterium	35		11.54	0.008
Navicula	17		22.86	0.028
Nitzschia	361		77.97	0.036
Subtotal	34302		2,319.93	3.098
Euglenophyta (Euglenoid)				
Euglena	156	Discolouration of water	275.80	0.360
Phacus	52		329.57	0.180
Trachelomonas	17	Common after flood	47.70	0.038
Subtotal	225		653.07	0.578
Chlorophyta (Green)				
Actinastrum	69		4.34	0.001

SWC, [redacted]
(PO Box 73) West Ryde NSW 2114

PHYTOPLANKTON ANALYSIS REPORT

Report no: 287426
Supercedes Report No:

Depth : N/A
Chlorophyll a: NA
Microcystin equivalents: NA
Date analysed: 4/07/2023
Analyst: [redacted]

Lims No: L23051822
Date Sampled: 20/06/2023
Client ID: 235448
Address: [redacted]
Site:

Client: Department of Planning and Environment

Method: MA70CENT

Issued By : Sydney Water Laboratory Services
Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Ankistrodesmus	11061		4,158.93	1.493
Crucigenia	11873		94.98	0.225
Dictyosphaerium	5899		424.72	0.088
Kirchneriella	11209		560.45	0.212
Monoraphidium cf	5162		138.34	0.100
Oocystis	4425		420.37	0.451
Pediastrum	520		62.40	0.024
Scenedesmus species 1	23745		1,852.11	1.302
Scenedesmus species 2	17		8.47	0.015
Schroederia	1475		299.42	0.202
Selenastrum	1475		1,001.52	0.964
Staurastrum	17		89.94	0.035
Tetrastrum	2950		404.15	0.507
Subtotal	79897		9,520.14	5.619
Cryptophyta (Monad)				
Chroomonas	2212	Common after flood	530.88	0.548
Subtotal	2212		530.88	0.548

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	1553000	3061.00	1.200
*** Potentially Toxic Blue Green**	208	14.40	0.024
*** Potentially Toxic Algae**	208	14.40	0.024
Total Algae	1669000	16090.00	11.040

SWC, [redacted]
(PO Box 73) West Ryde NSW 2114

Comment:

Debris present in the sample.

*Taxa with potential to produce toxins.
ASU : One ASU (Area Standard Unit) equals 400µm² of algal cells (as cross sectional area)
Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.
Coccoid Blue Green Picoplankton: *Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece ; Cyanodictyon*

Phycology

Sydney Water Approved Signatory:

[redacted], Analyst [redacted], Analyst ,

Where a result is required to meet a compliance limit or specification the associated uncertainty must be considered.
Uncertainty estimates are available for all accredited test results.

Accreditation No.: 610 Biological testing
Accredited for compliance with ISO/IEC 17025

PHYTOPLANKTON ANALYSIS REPORT

Report no: 287426
Supercedes Report No:

Depth : N/A
Chlorophyll a: NA
Microcystin equivalents: NA
Date analysed: 5/07/2023
Analyst: [redacted]

Lims No: L23051823
Date Sampled: 20/06/2023
Client ID: 235449
Address: [redacted]
Site:

Client: Department of Planning and Environment

Method: MA70CENT

Issued By : Sydney Water Laboratory Services
Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)				
Anabaenopsis	208	Potentially toxic	14.35	0.024
Coccoid Blue Green Picoplankton	1080478	Filter clogging?	2,052.90	0.487
Merismopedia	55971		55.97	0.471
Synechococcus cf	4425		54.42	0.029
Subtotal	1141082		2,177.64	1.011
Bacillariophyta (Diatom)				
Aulacoseira	656	Filter clogging	266.99	0.394
Cyclotella	16223	Filter clogging	1,103.16	1.265
Cyclotella species 4	17	Filter clogging	26.53	0.239
Cyclotella/Stephanodiscus	10619	Filter clogging	568.11	0.841
Cylindrotheca closterium	35		11.54	0.008
Navicula	737		991.26	1.244
Nitzschia	250		54.00	0.025
Synedra	737		437.77	0.404
Subtotal	29274		3,459.36	4.420
Dinophyta (Dinoflagellate)				
Peridinium species 2	35		152.35	1.809
Subtotal	35		152.35	1.809
Euglenophyta (Euglenoid)				
Euglena	69	Discolouration of water	121.99	0.159
Subtotal	69		121.99	0.159
Chlorophyta (Green)				
Actinastrum	382		24.06	0.008

SWC, [redacted]
(PO Box 73) West Ryde NSW 2114

PHYTOPLANKTON ANALYSIS REPORT

Sydney WATER

Report no:	*287426*	*Depth :*	**N/A**
Supercedes Report No:		*Chlorophyll a:*	**NA**
		Microcystin equivalents:	**NA**
		Date analysed:	**5/07/2023**
Lims No: **L23051823**	***Date Sampled:***	**20/06/2023**	*Analyst:* [redacted]
Client ID: 235449	***Address:***	[redacted]	
Site:			

Client: **Department of Planning and Environment**

Method: **MA70CENT**

Issued By : Sydney Water Laboratory Services
Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Ankistrodesmus	**12536**		**4,713.53**	**1.692**
Crucigenia	**5973**		**47.78**	**0.113**
Dictyosphaerium	**5899**		**424.72**	**0.088**
Kirchneriella	**24778**		**1,238.90**	**0.470**
Monoraphidium cf	**10324**		**276.68**	**0.201**
Oocystis	**3761**		**357.29**	**0.383**
Pediastrum	**590**		**70.80**	**0.027**
Scenedesmus species 1	**9808**		**765.02**	**0.538**
Schroederia	**2950**		**598.85**	**0.404**
Tetraedron	**737**		**313.22**	**0.073**
Tetrastrum	**2212**		**303.04**	**0.380**
Subtotal	**79950**		**9,133.89**	**4.377**
Cryptophyta (Monad)				
Chroomonas	**2950**	**Common after flood**	**708.00**	**0.731**
Cryptomonas	**737**	**Common after flood, Taste & Odour**	**397.98**	**0.700**
Subtotal	**3687**		**1,105.98**	**1.431**

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	**1141000**	**2178.00**	**1.010**
*** Potentially Toxic Blue Green**	**208**	**14.40**	**0.024**
*** Potentially Toxic Algae**	**208**	**14.40**	**0.024**
Total Algae	**1254000**	**16150.00**	**13.210**

Comment:

Debris present in the sample.

*Taxa with potential to produce toxins.
ASU : One ASU (Area Standard Unit) equals 400µm² of algal cells (as cross sectional area)
Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.
Coccoid Blue Green Picoplankton: *Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece ; Cyanodictyon*

Phycology

Sydney Water Approved Signatory:

[redacted], Analyst [redacted], Analyst ,

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Accreditation No.: 610 Biological testing
Accredited for compliance with ISO/IEC 17025

PHYTOPLANKTON ANALYSIS REPORT

Sydney WATER

Report no:	*287426*	*Depth :*	**N/A**
Supercedes Report No:		*Chlorophyll a:*	**NA**
		Microcystin equivalents:	**NA**
		Date analysed:	**5/07/2023**
Lims No: **L23051824**	***Date Sampled:***	**20/06/2023**	*Analyst:* [redacted]
Client ID: 235450	***Address:***	[redacted]	
Site:			

Client: **Department of Planning and Environment**

Method: **MA70CENT**

Issued By : Sydney Water Laboratory Services
Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Cols/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)					
Coccoid Blue Green Picoplankton	**719581**		**Filter clogging?**	**1,367.20**	**0.324**
Subtotal	**719581**			**1,367.20**	**0.324**
Bacillariophyta (Diatom)					
Aulacoseira	**35**		**Filter clogging**	**14.24**	**0.021**
Cyclotella/Stephanodiscus	**737**		**Filter clogging**	**39.42**	**0.058**
Nitzschia	**17**			**3.67**	**0.001**
Subtotal	**789**			**57.33**	**0.080**
Chlorophyta (Green)					
Botryococcus Species 3		**17.00**	**Filter clogging**	**310.88**	**5.803**
Kirchneriella	**1475**			**73.75**	**0.028**
Monoraphidium arcuatum	**35**			**9.49**	**0.007**
Monoraphidium cf	**6637**			**177.87**	**0.129**
Oocystis	**737**			**70.01**	**0.075**
Planctonema	**9808**			**814.06**	**1.108**
Scenedesmus species 1	**4425**			**345.15**	**0.242**
Subtotal	**23117**	**17.00**		**1,801.21**	**7.392**
Cryptophyta (Monad)					
Chroomonas	**2950**		**Common after flood**	**708.00**	**0.731**
Subtotal	**2950**			**708.00**	**0.731**

SWC, [redacted]
(PO Box 73) West Ryde NSW 2114

	Cells/ mL	Cols/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	**719600**		**1367.00**	**0.324**
*** Potentially Toxic Blue Green**	**0**		**0.00**	**0.000**
*** Potentially Toxic Algae**	**0**		**0.00**	**0.000**
Total Algae	**746400**		**3934.00**	**8.530**

Comment:

Debris present in the sample.

*Taxa with potential to produce toxins.
ASU : One ASU (Area Standard Unit) equals 400µm² of algal cells (as cross sectional area)
Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.
Coccoid Blue Green Picoplankton: *Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece ; Cyanodictyon*

Phycology

Sydney Water Approved Signatory:

[redacted], Analyst [redacted], Analyst ,

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Accreditation No.: 610 Biological testing
Accredited for compliance with ISO/IEC 17025

PHYTOPLANKTON ANALYSIS REPORT

Sydney WATER

Report no:	*287426*	*Depth :*	**N/A**
Supercedes Report No:		*Chlorophyll a:*	**NA**
		Microcystin equivalents:	**NA**
		Date analysed:	**4/07/2023**
Lims No: **L23051825**	***Date Sampled:***	**20/06/2023**	*Analyst:* [redacted]
Client ID: 235451	***Address:***	[redacted]	
Site:			

Client: **Department of Planning and Environment**

Method: **MA70CENT**

Issued By : Sydney Water Laboratory Services
Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Cols/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)					
Anabaenopsis	**278**		**Potentially toxic**	**19.18**	**0.032**
Coccoid Blue Green Picoplankton	**1387100**		**Filter clogging?**	**2,635.49**	**0.626**
Merismopedia	**47195**			**47.19**	**0.397**
Planktolyngbya	**8849**		**Filter clogging**	**88.49**	**0.707**
Spirulina	**4425**			**66.37**	**0.016**
Synechococcus cf	**2212**			**27.20**	**0.014**
Subtotal	**1450059**			**2,883.92**	**1.792**
Chrysophyta (Golden brown)					
Synura	**17**		**Taste & Odour**	**0.73**	**0.000**
Subtotal	**17**			**0.73**	**0.000**
Bacillariophyta (Diatom)					
Aulacoseira	**1433**		**Filter clogging**	**583.23**	**0.861**
Cyclotella	**6637**		**Filter clogging**	**451.31**	**0.517**
Cyclotella/Stephanodiscus	**3687**		**Filter clogging**	**197.25**	**0.292**
Cylindrotheca closterium	**121**			**39.91**	**0.029**
Gyrosigma	**17**			**61.20**	**0.076**
Nitzschia	**428**			**92.44**	**0.043**
Synedra	**35**			**20.79**	**0.019**
Urosolenia	**17**		**Filter clogging**	**11.98**	**0.015**
Subtotal	**12375**			**1,458.11**	**1.852**
Dinophyta (Dinoflagellate)					
Peridinium species 1	**17**			**17.00**	**0.071**
Peridinium species 2	**104**			**452.71**	**5.377**

SWC, [redacted]
(PO Box 73) West Ryde NSW 2114

PHYTOPLANKTON ANALYSIS REPORT

Report no: 287426
Supercedes Report No:

Depth : N/A
Chlorophyll a: NA
Microcystin equivalents: NA
Date analysed: 4/07/2023
Analyst: [redacted]

Lims No: L23051825
Date Sampled: 20/06/2023
Client ID: 235451
Address: [redacted]
Site:

Client: Department of Planning and Environment

Method: MA70CENT

Issued By : Sydney Water Laboratory Services
Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Cols/ mL	Significance	ASU/ mL	Biovolum mm3/L
Subtotal	121			469.71	5.448
Euglenophyta (Euglenoid)					
Euglena	69		Discolouration of water	121.99	0.159
Subtotal	69			121.99	0.159
Chlorophyta (Green)					
Actinastrum	243			15.30	0.005
Ankistrodesmus	5678			2,134.92	0.766
Botryococcus Species 1		737.00	Filter clogging	1,347.82	10.063
Chlamydomonas	1475		Taste & Odour	118.00	0.125
Crucigenia	11209			89.67	0.212
Dictyosphaerium	1475			106.20	0.022
Kirchneriella	17035			851.75	0.323
Koliella	1475		Filter clogging	22.12	0.002
Lagerheimia	737			142.24	0.177
Monoraphidium cf	12979			347.83	0.253
Oocystis	3687			350.26	0.376
Pediastrum	1027			123.24	0.048
Planctonema	819			67.97	0.092
Scenedesmus species 1	12389			966.34	0.679
Scenedesmus species 2	69			34.41	0.061
Schroederia	17			3.45	0.002
Staurastrum	737			3,899.46	1.527
Subtotal	71051	737.00		10,620.98	14.733
Cryptophyta (Monad)					
Chroomonas	7374		Common after flood	1,769.76	1.828

SWC, [redacted]
(PO Box 73) West Ryde NSW 2114

PHYTOPLANKTON ANALYSIS REPORT

Sydney WATER

Report no: 287426 | *Depth :* N/A

Supercedes Report No: | *Chlorophyll a:* NA

Microcystin equivalents: NA

Date analysed: 4/07/2023

Lims No: L23051825 | *Date Sampled:* 20/06/2023 | *Analyst:* [redacted]

Client ID: 235451 | *Address:* [redacted]

Site:

Client: **Department of Planning and Environment**

Method: **MA70CENT**

Issued By : Sydney Water Laboratory Services

Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Cols/ mL	Significance	ASU/ mL	Biovolum mm3/L
Subtotal	7374			1,769.76	1.828

	Cells/ mL	Cols/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	1450000		2884.00	1.790
*** Potentially Toxic Blue Green**	278		19.20	0.032
*** Potentially Toxic Algae**	278		19.20	0.032
Total Algae	1541000		17330.00	25.810

Comment:

Debris present in the sample.

*Taxa with potential to produce toxins.
ASU : One ASU (Area Standard Unit) equals 400µm² of algal cells (as cross sectional area)
Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.
Coccoid Blue Green Picoplankton: *Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece ; Cyanodictyon*

Phycology

Sydney Water Approved Signatory:

[redacted], Analyst [redacted], Analyst ,

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Accredited for compliance with ISO/IEC 17025

NATA WORLD RECOGNISED ACCREDITATION

SWC, [redacted]
(PO Box 73) West Ryde NSW 2114

PHYTOPLANKTON ANALYSIS REPORT

Sydney WATER

Report no:	*287426*	*Depth :*	**N/A**
Supercedes Report No:		*Chlorophyll a:*	**NA**
		Microcystin equivalents:	**NA**
		Date analysed:	**4/07/2023**
Lims No: **L23051826**	***Date Sampled:***	**20/06/2023**	*Analyst:* [redacted]
Client ID: 235452	***Address:***	[redacted]	
Site:			

Client: **Department of Planning and Environment**

Method: **MA70CENT**

Issued By : Sydney Water Laboratory Services
Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Cols/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)					
Coccoid Blue Green Picoplankton	**2564033**		**Filter clogging?**	**4,871.66**	**1.157**
Spirulina	**5088**			**76.32**	**0.018**
Subtotal	**2569121**			**4,947.98**	**1.175**
Bacillariophyta (Diatom)					
Aulacoseira	**278**		**Filter clogging**	**113.14**	**0.167**
Cyclotella	**8849**		**Filter clogging**	**601.73**	**0.690**
Cyclotella/Stephanodiscus	**9587**		**Filter clogging**	**512.90**	**0.759**
Navicula	**17**			**22.86**	**0.028**
Nitzschia	**69**			**14.90**	**0.006**
Synedra	**17**			**10.09**	**0.009**
Subtotal	**18817**			**1,275.62**	**1.659**
Euglenophyta (Euglenoid)					
Euglena	**156**		**Discolouration of water**	**275.80**	**0.360**
Phacus	**52**			**329.57**	**0.180**
Trachelomonas	**35**		**Common after flood**	**98.21**	**0.079**
Subtotal	**243**			**703.58**	**0.619**
Chlorophyta (Green)					
Actinastrum	**139**			**8.75**	**0.002**
Ankistrodesmus	**8849**			**3,327.22**	**1.194**
Ankyra	**737**			**149.61**	**0.184**
Botryococcus Species 2		**17.00**	**Filter clogging**	**153.39**	**2.147**
Chlamydomonas	**737**		**Taste & Odour**	**58.96**	**0.062**
Dictyosphaerium	**7374**			**530.92**	**0.110**

SWC, [redacted]
(PO Box 73) West Ryde NSW 2114

PHYTOPLANKTON ANALYSIS REPORT

Report no: 287426
Supercedes Report No:

Depth : N/A
Chlorophyll a: NA
Microcystin equivalents: NA
Date analysed: 4/07/2023
Analyst: [redacted]

Lims No: L23051826
Date Sampled: 20/06/2023
Client ID: 235452
Address: [redacted]
Site:

Client: Department of Planning and Environment

Method: MA70CENT

Issued By : Sydney Water Laboratory Services
Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Cols/ mL	Significance	ASU/ mL	Biovolum mm3/L
Kirchneriella	11946			597.30	0.226
Monoraphidium arcuatum	52			14.11	0.011
Monoraphidium cf	6637			177.87	0.129
Oocystis	5899			560.40	0.601
Pediastrum	139			16.68	0.006
Planctonema	3625			300.87	0.409
Scenedesmus species 1	2212			172.53	0.121
Scenedesmus species 2	35			17.45	0.030
Schroederia	17			3.45	0.002
Selenastrum	1475			1,001.52	0.964
Tetraedron	737			313.22	0.073
Subtotal	50610	17.00		7,404.25	6.271
Cryptophyta (Monad)					
Chroomonas	737		Common after flood	176.88	0.182
Subtotal	737			176.88	0.182

	Cells/ mL	Cols/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	2569000		4948.00	1.180
*** Potentially Toxic Blue Green**	0		0.00	0.000
*** Potentially Toxic Algae**	0		0.00	0.000
Total Algae	2640000		14510.00	9.910

Comment:
Debris present in the sample.

SWC, [redacted]
(PO Box 73) West Ryde NSW 2114

*Taxa with potential to produce toxins.
ASU : One ASU (Area Standard Unit) equals 400µm² of algal cells (as cross sectional area)
Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.
Coccoid Blue Green Picoplankton: *Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece ; Cyanodictyon*

Phycology

Sydney Water Approved Signatory:

[redacted], Analyst [redacted], Analyst ,

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Accreditation No.: 610 Biological testing
Accredited for compliance with ISO/IEC 17025

PHYTOPLANKTON ANALYSIS REPORT

Sydney WATER

Report no:	*287426*	*Depth :*	**N/A**
Supercedes Report No:		*Chlorophyll a:*	**NA**
		Microcystin equivalents:	**NA**
		Date analysed:	**5/07/2023**
Lims No: **L23051827**	***Date Sampled:***	**20/06/2023**	*Analyst:* [redacted]
Client ID: 235453	***Address:***	[redacted]	
Site:			

Client: **Department of Planning and Environment**

Method: **MA70CENT**

Issued By : Sydney Water Laboratory Services
Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)				
Coccoid Blue Green Picoplankton	**636031**	**Filter clogging?**	**1,208.45**	**0.287**
Merismopedia	**8849**		**8.84**	**0.074**
Romeria	**2950**		**47.20**	**0.019**
Subtotal	**647830**		**1,264.49**	**0.380**
Bacillariophyta (Diatom)				
Aulacoseira	**777**	**Filter clogging**	**316.23**	**0.466**
Cyclotella	**25810**	**Filter clogging**	**1,755.08**	**2.013**
Cyclotella species 4	**17**	**Filter clogging**	**26.53**	**0.239**
Cyclotella/Stephanodiscus	**9587**	**Filter clogging**	**512.90**	**0.759**
Nitzschia	**17**		**3.67**	**0.001**
Subtotal	**36208**		**2,614.41**	**3.478**
Euglenophyta (Euglenoid)				
Euglena	**87**	**Discolouration of water**	**153.81**	**0.201**
Strombomonas	**17**		**13.68**	**0.003**
Trachelomonas	**69**	**Common after flood**	**193.61**	**0.156**
Subtotal	**173**		**361.10**	**0.360**
Chlorophyta (Green)				
Ankistrodesmus	**2950**		**1,109.20**	**0.398**
Crucigenia	**4425**		**35.40**	**0.084**
Kirchneriella	**6489**		**324.45**	**0.123**
Monoraphidium arcuatum	**52**		**14.11**	**0.011**
Monoraphidium cf	**6637**		**177.87**	**0.129**
Oocystis	**5162**		**490.39**	**0.526**

SWC, [redacted]
(PO Box 73) West Ryde NSW 2114

PHYTOPLANKTON ANALYSIS REPORT

Report no: 287426 | *Depth :* N/A

Supercedes Report No: | *Chlorophyll a:* NA

Microcystin equivalents: NA

Date analysed: 5/07/2023

Lims No: L23051827 | *Date Sampled:* 20/06/2023 | *Analyst:* [redacted]

Client ID: 235453 | *Address:* [redacted]

Site:

Client: **Department of Planning and Environment**

Method: **MA70CENT**

Issued By : Sydney Water Laboratory Services
Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Pediastrum	121		14.52	0.005
Planctonema	6410		532.03	0.724
Scenedesmus species 1	8849		690.22	0.485
Staurastrum	35		185.18	0.072
Subtotal	41130		3,573.37	2.557
Cryptophyta (Monad)				
Chroomonas	16223	Common after flood	3,893.52	4.023
Subtotal	16223		3,893.52	4.023

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	647800	1264.00	0.380
*** Potentially Toxic Blue Green**	0	0.00	0.000
*** Potentially Toxic Algae**	0	0.00	0.000
Total Algae	741600	11710.00	10.800

Comment:

Debris present in the sample.

*Taxa with potential to produce toxins.
ASU : One ASU (Area Standard Unit) equals 400µm² of algal cells (as cross sectional area)
Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.
Coccoid Blue Green Picoplankton: *Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece ; Cyanodictyon*

SWC, [redacted]
(PO Box 73) West Ryde NSW 2114

Phycology

Sydney Water Approved Signatory:

[redacted], Analyst [redacted], Analyst ,

Where a result is required to meet a compliance limit or specification the associated uncertainty must be considered.
Uncertainty estimates are available for all accredited test results.

Accreditation No.: 610 Biological testing
Accredited for compliance with ISO/IEC 17025

PHYTOPLANKTON ANALYSIS REPORT

Sydney WATER

Report no:	*287426*	*Depth :*	**N/A**
Supercedes Report No:		*Chlorophyll a:*	**NA**
		Microcystin equivalents:	**NA**
		Date analysed:	**5/07/2023**
Lims No: **L23051828**	***Date Sampled:***	**20/06/2023**	*Analyst:* [redacted]
Client ID: 235454	***Address:***	[redacted]	
Site:			

Client: **Department of Planning and Environment**

Method: **MA70CENT**

Issued By : Sydney Water Laboratory Services
Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Cols/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)					
Coccoid Blue Green Picoplankton	**638022**		**Filter clogging?**	**1,212.24**	**0.288**
Subtotal	**638022**			**1,212.24**	**0.288**
Chrysophyta (Golden brown)					
Dichotomococcus	**2212**			**27.65**	**0.018**
Subtotal	**2212**			**27.65**	**0.018**
Bacillariophyta (Diatom)					
Aulacoseira	**229**		**Filter clogging**	**93.20**	**0.137**
Cyclotella	**7301**		**Filter clogging**	**496.46**	**0.569**
Cyclotella/Stephanodiscus	**1106**		**Filter clogging**	**59.17**	**0.087**
Navicula	**17**			**22.86**	**0.028**
Nitzschia	**52**			**11.23**	**0.005**
Subtotal	**8705**			**682.92**	**0.826**
Euglenophyta (Euglenoid)					
Euglena	**17**		**Discolouration of water**	**30.05**	**0.039**
Strombomonas	**553**			**445.16**	**0.110**
Subtotal	**570**			**475.21**	**0.149**
Chlorophyta (Green)					
Actinastrum	**4425**			**278.77**	**0.092**
Ankistrodesmus	**3318**			**1,247.56**	**0.447**
Botryococcus Species 2		**17.00**	**Filter clogging**	**153.39**	**2.147**
Chlamydomonas	**3871**		**Taste & Odour**	**309.68**	**0.329**
Dictyosphaerium	**1106**			**79.63**	**0.016**
Kirchneriella	**18583**			**929.15**	**0.353**

SWC, [redacted]
(PO Box 73) West Ryde NSW 2114

PHYTOPLANKTON ANALYSIS REPORT

Sydney WATER

Report no: ***287426***

Supercedes Report No:

Depth : **N/A**

Chlorophyll a: **NA**

Microcystin equivalents: **NA**

Date analysed: **5/07/2023**

Lims No: **L23051828** ***Date Sampled:*** **20/06/2023** *Analyst:* [redacted]

Client ID: 235454 ***Address:*** [redacted]

Site:

Client: **Department of Planning and Environment**

Method: **MA70CENT**

Issued By : Sydney Water Laboratory Services
Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Cols/ mL	Significance	ASU/ mL	Biovolum mm3/L
Monoraphidium arcuatum	69			18.72	0.014
Monoraphidium cf	11061			296.43	0.216
Oocystis	6637			630.51	0.676
Pediastrum	224			26.88	0.010
Planctonema	9099			755.21	1.028
Scenedesmus species 1	8904			694.51	0.488
Tetraedron	553			235.02	0.055
Subtotal	67850	17.00		5,655.46	5.871
Cryptophyta (Monad)					
Chroomonas	9402		Common after flood	2,256.48	2.331
Cryptomonas	3318		Common after flood, Taste & Odour	1,791.72	3.152
Subtotal	12720			4,048.20	5.483

	Cells/ mL	Cols/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	638000		1212.00	0.288
*** Potentially Toxic Blue Green**	0		0.00	0.000
*** Potentially Toxic Algae**	0		0.00	0.000
Total Algae	730100		12100.00	12.640

Comment:
Debris present in the sample.

SWC, [redacted]
(PO Box 73) West Ryde NSW 2114

*Taxa with potential to produce toxins.
ASU : One ASU (Area Standard Unit) equals 400µm² of algal cells (as cross sectional area)
Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.
Coccoid Blue Green Picoplankton: *Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece ; Cyanodictyon*

Phycology

Sydney Water Approved Signatory:

[redacted], Analyst [redacted], Analyst ,

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Uncertainty estimates are available for all accredited test results.

Accreditation No.: 610 Biological testing
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PHYTOPLANKTON ANALYSIS REPORT

Sydney WATER

Report no:	*287426*	*Depth :*	**N/A**
Supercedes Report No:		*Chlorophyll a:*	**NA**
		Microcystin equivalents:	**NA**
		Date analysed:	**4/07/2023**
Lims No: **L23051829**	***Date Sampled:***	**20/06/2023**	*Analyst:* [redacted]
Client ID: 235455	***Address:***	[redacted]	
Site:			

Client: **Department of Planning and Environment**

Method: **MA70CENT**

Issued By : Sydney Water Laboratory Services
Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)				
Coccoid Blue Green Picoplankton	**492232**	**Filter clogging?**	**935.24**	**0.222**
Merismopedia	**5899**		**5.89**	**0.049**
Subtotal	**498131**		**941.13**	**0.271**
Chrysophyta (Golden brown)				
Chrysochromulina	**737**	**potentially ichthyotoxic - (?) toxic to fish**	**21.52**	**0.018**
Subtotal	**737**		**21.52**	**0.018**
Bacillariophyta (Diatom)				
Aulacoseira	**402**	**Filter clogging**	**163.61**	**0.241**
Cyclotella	**6637**	**Filter clogging**	**451.31**	**0.517**
Cyclotella/Stephanodiscus	**8849**	**Filter clogging**	**473.42**	**0.701**
Nitzschia	**35**		**7.56**	**0.003**
Subtotal	**15923**		**1,095.90**	**1.462**
Euglenophyta (Euglenoid)				
Euglena	**87**	**Discolouration of water**	**153.81**	**0.201**
Phacus	**17**		**107.74**	**0.059**
Trachelomonas	**17**	**Common after flood**	**47.70**	**0.038**
Subtotal	**121**		**309.25**	**0.298**
Chlorophyta (Green)				
Ankistrodesmus	**2212**		**831.71**	**0.298**
Chlamydomonas	**3687**	**Taste & Odour**	**294.96**	**0.313**
Coelastrum	**11799**		**389.36**	**0.802**
Crucigenia	**1475**		**11.80**	**0.028**
Dictyosphaerium	**2950**		**212.40**	**0.044**

SWC, [redacted]
(PO Box 73) West Ryde NSW 2114

PHYTOPLANKTON ANALYSIS REPORT

Sydney WATER

Report no: 287426
Supercedes Report No:

Depth : N/A
Chlorophyll a: NA
Microcystin equivalents: NA
Date analysed: 4/07/2023
Analyst: [redacted]

Lims No: L23051829
Date Sampled: 20/06/2023
Client ID: 235455
Address: [redacted]
Site:

Client: Department of Planning and Environment

Method: MA70CENT

Issued By : Sydney Water Laboratory Services
Issued On : 06/07/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Kirchneriella	2950		147.50	0.056
Monoraphidium arcuatum	52		14.11	0.011
Monoraphidium cf	7374		197.62	0.144
Oocystis	2950		280.25	0.300
Planctonema	9081		753.72	1.026
Scenedesmus species 1	3761		293.35	0.206
Tetraedron	737		313.22	0.073
Subtotal	49028		3,740.00	3.301
Cryptophyta (Monad)				
Chroomonas	83329	Common after flood	19,998.96	20.665
Cryptomonas	4425	Common after flood, Taste & Odour	2,389.50	4.203
Subtotal	87754		22,388.46	24.868
Xanthophyta				
Centritractus	17		20.40	0.080
Subtotal	17		20.40	0.080

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	498100	941.10	0.271
*** Potentially Toxic Blue Green**	0	0.00	0.000
*** Potentially Toxic Algae**	737	21.50	0.018
Total Algae	651700	28520.00	30.300

Comment:
Debris present in the sample.

SWC, [redacted]
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*Taxa with potential to produce toxins.
ASU : One ASU (Area Standard Unit) equals 400µm² of algal cells (as cross sectional area)
Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.
Coccoid Blue Green Picoplankton: *Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece ; Cyanodictyon*

Phycology

Sydney Water Approved Signatory:

[redacted], Analyst [redacted], Analyst ,

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