PHYTOPLANKTON ANALYSIS REPORT

Sydney WATER

Report no:	***285312***	*Depth :*	**N/A**
Supercedes Report No:	***285179***	*Chlorophyll a:*	**NA**
		Microcystin equivalents:	**NA**
		Date analysed:	**24/05/2023**
Lims No: **L23038403**	***Date Sampled:***	**4/05/2023**	*Analyst:* [redacted]
Client ID: 232937	***Address:***	[redacted]	
Site:			

Client: **Department of Planning and Environment**

Method: **MA71CENT**

Issued By : [redacted]
Commercial Client Representative
Issued On : 29/05/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)				
Anabaenopsis	**815**	**Potentially toxic**	**56.23**	**0.096**
Anagnostidinema	**5162**		**155.89**	**0.091**
Aphanizomenonaceae	**104**	**Potentially toxic, taste & odour**	**6.96**	**0.010**
Coccoid Blue Green Picoplankton	**1279915**	**Filter clogging?**	**2,431.83**	**0.577**
Cuspidothrix issatschenkoi	**1665**		**84.91**	**0.090**
Dolichospermum	**624**	**Potentially toxic, taste & odour**	**57.03**	**0.101**
Dolichospermum affine	**590**		**24.01**	**0.027**
Merismopedia	**13274**		**13.27**	**0.111**
Microcystis	**2005**	**Potentially toxic, taste & odour**	**56.34**	**0.055**
Myxobaktron	**184**		**3.23**	**0.000**
Non toxic Aphanizomenonaceae	**243**	**Taste & Odour**	**9.96**	**0.010**
Planktolyngbya	**101396**	**Filter clogging**	**1,013.96**	**8.111**
Pseudanabaena	**96455**		**771.64**	**0.964**
Raphidiopsis	**1894**		**114.20**	**0.127**
Raphidiopsis raciborskii	**11750**	**Potentially toxic, taste & odour**	**444.15**	**0.344**
Sphaerospermopsis reniformis	**2700**	**Taste & Odour**	**108.27**	**0.125**
Spirulina	**62626**		**939.39**	**0.233**
Synechococcus cf	**1106**		**13.60**	**0.007**
Subtotal	**1582508**		**6,304.87**	**11.079**

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

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	**1583000**	**6305.00**	**11.080**
*** Potentially Toxic Blue Green**	**15300**	**620.70**	**0.606**

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], Supervisor ,
[redacted], Analyst

Where a result is required to meet a compliance limit or specification the associated uncertainty must be considered.
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Accreditation No.: 610 Biological testing
Accredited for compliance with ISO/IEC 17025

PHYTOPLANKTON ANALYSIS REPORT

Report no:	*285312*	*Depth :*	**N/A**
Supercedes Report No:	*285179*	*Chlorophyll a:*	**NA**
		Microcystin equivalents:	**NA**
		Date analysed:	**24/05/2023**
Lims No: **L23038404**	***Date Sampled:***	**4/05/2023**	*Analyst:* [redacted]
Client ID: 232938	***Address:***	[redacted]	
Site:			

Client: **Department of Planning and Environment**

Method: **MA71CENT**

Issued By : [redacted]
Commercial Client Representative
Issued On : 29/05/2023

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TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)				
Coccoid Blue Green Picoplankton	**1848802**	**Filter clogging?**	**3,512.72**	**0.834**
Planktolyngbya	**17698**	**Filter clogging**	**176.98**	**1.415**
Pseudanabaena galeata	**763**		**28.15**	**0.023**
Subtotal	**1867263**		**3,717.85**	**2.272**

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	**1867000**	**3718.00**	**2.270**
*** Potentially Toxic Blue Green**	**0**	**0.00**	**0.000**

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Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.
Coccoid Blue Green Picoplankton: *Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece ; Cyanodictyon*

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Phycology

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PHYTOPLANKTON ANALYSIS REPORT

Report no:	***285312***	*Depth :*	**N/A**
Supercedes Report No:	***285179***	*Chlorophyll a:*	**NA**
		Microcystin equivalents:	**NA**
		Date analysed:	**24/05/2023**
Lims No: **L23038405**	***Date Sampled:***	**4/05/2023**	*Analyst:* [redacted]
Client ID: 232939	***Address:***	[redacted]	
Site:			

Client: **Department of Planning and Environment**

Method: **MA71CENT**

Issued By : [redacted]
Commercial Client Representative
Issued On : 29/05/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)				
Anabaenopsis	**191**	**Potentially toxic**	**13.17**	**0.022**
Coccoid Blue Green Picoplankton	**3666854**	**Filter clogging?**	**6,967.02**	**1.655**
Dolichospermum affine	**225**		**9.15**	**0.010**
Dolichospermum flos-aquae	**416**	**Taste & Odour**	**45.17**	**0.096**
Planktolyngbya	**21201**	**Filter clogging**	**212.01**	**1.696**
Sphaerospermopsis reniformis	**711**	**Taste & Odour**	**28.51**	**0.033**
Spirulina	**1844**		**27.66**	**0.006**
Subtotal	**3691442**		**7,302.69**	**3.518**

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	**3691000**	**7303.00**	**3.520**
*** Potentially Toxic Blue Green**	**191**	**13.20**	**0.022**

Comment:
Debris present in the sample.

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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*

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PHYTOPLANKTON ANALYSIS REPORT

Report no:	*285312*	*Depth :*	**N/A**
Supercedes Report No:	*285179*	*Chlorophyll a:*	**NA**
		Microcystin equivalents:	**NA**
		Date analysed:	**25/05/2023**
Lims No: **L23038406**	***Date Sampled:***	**4/05/2023**	*Analyst:* [redacted]
Client ID: 232940	***Address:***	[redacted]	
Site:			

Client: **Department of Planning and Environment**

Method: **MA71CENT**

Issued By : [redacted]
Commercial Client Representative
Issued On : 29/05/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)				
Aphanizomenonaceae	**260**	**Potentially toxic, taste & odour**	**17.42**	**0.027**
Coccoid Blue Green Picoplankton	**871749**	**Filter clogging?**	**1,656.32**	**0.393**
Planktolyngbya	**27285**	**Filter clogging**	**272.85**	**2.182**
Pseudanabaena	**347**		**2.77**	**0.003**
Synechococcus cf	**737**		**9.06**	**0.004**
Subtotal	**900378**		**1,958.42**	**2.609**

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	**900400**	**1958.00**	**2.610**
*** Potentially Toxic Blue Green**	**260**	**17.40**	**0.027**

Comment:
Debris present in the sample.

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Biovolume : Biovolume is calculated from cell linear dimensions. Guidelines based on Biovolume.
Coccoid Blue Green Picoplankton: *Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece ; Cyanodictyon*

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PHYTOPLANKTON ANALYSIS REPORT

Report no:	*285312*	*Depth :*	**N/A**
Supercedes Report No:	*285179*	*Chlorophyll a:*	**NA**
		Microcystin equivalents:	**NA**
		Date analysed:	**25/05/2023**
Lims No: **L23038407**	***Date Sampled:***	**4/05/2023**	*Analyst:* [redacted]
Client ID: 232941	***Address:***	[redacted]	
Site:			

Client: **Department of Planning and Environment**

Method: **MA71CENT**

Issued By : [redacted]
Commercial Client Representative
Issued On : 29/05/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)				
Anabaenopsis	**416**	**Potentially toxic**	**28.70**	**0.049**
Coccoid Blue Green Picoplankton	**2091268**	**Filter clogging?**	**3,973.40**	**0.944**
Dolichospermum affine	**1301**		**52.95**	**0.060**
Pseudanabaena	**43361**		**346.88**	**0.433**
Raphidiopsis raciborskii	**2137**	**Potentially toxic, taste & odour**	**80.77**	**0.062**
Sphaerospermopsis aphanizomenoides	**3469**		**104.07**	**0.130**
Sphaerospermopsis reniformis	**278**	**Taste & Odour**	**11.14**	**0.012**
Spirulina	**1475**		**22.12**	**0.005**
Synechococcus cf	**5309**		**65.30**	**0.035**
Subtotal	**2149014**		**4,685.33**	**1.730**

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	**2149000**	**4685.00**	**1.730**
*** Potentially Toxic Blue Green**	**2550**	**109.50**	**0.111**

Comment:
Debris present in the sample.

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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

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PHYTOPLANKTON ANALYSIS REPORT

Report no:	***285312***	*Depth :*	**N/A**
Supercedes Report No:	***285179***	*Chlorophyll a:*	**NA**
		Microcystin equivalents:	**NA**
		Date analysed:	**25/05/2023**
Lims No: **L23038408**	***Date Sampled:***	**4/05/2023**	*Analyst:* [redacted]
Client ID: 232942	***Address:***	[redacted]	
Site:			

Client: **Department of Planning and Environment**

Method: **MA71CENT**

Issued By : [redacted]
Commercial Client Representative
Issued On : 29/05/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)				
Anabaena	**3330**	**Taste & Odour**	**489.51**	**0.352**
Coccoid Blue Green Picoplankton	**730937**	**Filter clogging?**	**1,388.78**	**0.330**
Cuspidothrix issatschenkoi	**5619**		**286.56**	**0.304**
Dolichospermum affine	**4509**		**183.51**	**0.209**
Planktolyngbya	**55418**	**Filter clogging**	**554.18**	**4.433**
Pseudanabaena	**123998**		**991.98**	**1.239**
Raphidiopsis raciborskii	**16150**	**Potentially toxic, taste & odour**	**610.47**	**0.473**
Sphaerospermopsis aphanizomenoides	**22727**		**681.81**	**0.856**
Subtotal	**962688**		**5,186.80**	**8.196**

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	**962700**	**5187.00**	**8.200**
*** Potentially Toxic Blue Green**	**16150**	**610.50**	**0.473**

Comment:
Debris present in the sample.

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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]
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PHYTOPLANKTON ANALYSIS REPORT

Report no:	***285312***	*Depth :*	**N/A**
Supercedes Report No:	***285179***	*Chlorophyll a:*	**NA**
		Microcystin equivalents:	**NA**
		Date analysed:	**25/05/2023**
Lims No: **L23038412**	***Date Sampled:***	**4/05/2023**	*Analyst:* [redacted]
Client ID: 232946	***Address:***	[redacted]	
Site:			

Client: **Department of Planning and Environment**

Method: **MA71CENT**

Issued By : [redacted]
Commercial Client Representative
Issued On : 29/05/2023

Disclaimer: Samples analysed as received.

TAXA

	Cells/ mL	Significance	ASU/ mL	Biovolum mm3/L
Cyanophyta (Blue green)				
Coccoid Blue Green Picoplankton	**852613**	**Filter clogging?**	**1,619.96**	**0.384**
Merismopedia	**8849**		**8.84**	**0.074**
Synechococcus cf	**1475**		**18.14**	**0.009**
Subtotal	**862937**		**1,646.94**	**0.467**

	Cells/ mL	ASU/ mL	Biovolume mm3/L
Total Blue Green	**862900**	**1647.00**	**0.467**
*** Potentially Toxic Blue Green**	**0**	**0.00**	**0.000**

Comment:
Debris present in the sample.

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Coccoid Blue Green Picoplankton: *Aphanocapsa; Aphanothece; Cyanogranis; Cyanonephron; Cyanocatena; Gloeocapsa; Gloeothece ; Cyanodictyon*

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