ALS Water
22 Dalmore Drive Scoresby 3179
Tel. 03 8756 8183 Fax. 03 9763 1862

# ALGAL REPORT

| | |
|---|---|
| **CLIENT :** | Australian Laboratory Services Pty Ltd SA |
| **LABORATORY NO./BATCH NO. :** | 7328746 22-06265 |
| **LOCALITY :** | EM2201088-017 |
| **SITE :** | DS Tauwitchere |
| **SAMPLE :** | Surface |
| **DATE SAMPLED :** | 21/01/2022 |
| **DATE ANALYSED :** | 1/02/2022 |
| **SAMPLED BY :** | Sample analysed as received |

**COMMENTS: +** A highly diverse and abundant algal community was observed. Water quality is likely to be impaired.

| **Sedgewick-Rafter Vol.(ml)** 1.032<br>**Concentration** 1 : 1<br>**Magnification**<br>**Fields** | **Toxigenic (T) or Potentially toxic (P)** * | - 200x<br>20 | - 100x<br>500 | **Total Cell Count (cells/mL)** | **Individual Algal Unit Volume (um3)** | **Total Biovolume (mm3/L)** |
|---|---|---|---|---|---|---|
| ***BACILLARIOPHYCEAE*** | | | | | | |
| *Centrales* | | 200 | 0 | 9690 | 200 | 1.93798 |
| *Pennales* | | 4 | 0 | 194 | 300 | 0.05814 |
| ***CHLOROPHYCEAE*** | | | | | | |
| *Botryococcus* | | 0 | 160 | 310 | 98 | 0.03039 |
| *Chlorococcoids (<10um)* | | 92 | 0 | 4457 | 60 | 0.26744 |
| *Colonial green (cells)* | | 24 | 0 | 1163 | 100 | 0.11628 |
| *Crucigenia* | | 144 | 0 | 6977 | 30 | 0.20930 |
| *Dictyosphaerium* | | 112 | 0 | 5426 | 20 | 0.10853 |
| *Eremosphaera* | | 0 | 6 | 12 | 700 | 0.00814 |
| *Lagerheimia* | | 8 | 0 | 388 | 500 | 0.19380 |
| *Monoraphidium (small)* | | 28 | 0 | 1357 | 16 | 0.02171 |
| *Monoraphidium (large)* | | 1 | 0 | 48 | 400 | 0.01938 |
| *Nephrocytium* | | 24 | 0 | 1163 | 200 | 0.23256 |
| *Oocystis* | | 152 | 0 | 7364 | 300 | 2.20930 |
| *Pediastrum* | | 20 | 0 | 969 | 60 | 0.05814 |
| *Planctonema* | | 128 | 0 | 6202 | 800 | 4.96124 |
| *Scenedesmus* | | 80 | 0 | 3876 | 250 | 0.96899 |
| *Staurastrum* | | 1 | 0 | 48 | 2000 | 0.09690 |
| *Tetraedron* | | 8 | 0 | 388 | 150 | 0.05814 |
| *Tetrastrum* | | 48 | 0 | 2326 | 40 | 0.09302 |
| ***CRYPTOPHYCEAE*** | | | | | | |
| *Cryptomonads* | | 12 | 0 | 581 | 320 | 0.18605 |
| ***CYANOPHYCEAE*** | | | | | | |
| *Aphanizomenonaceae family - straight* | P | 46 | 0 | 2229 | 67 | 0.14932 |
| *Chroococcus (small cells)* | | 0 | 12 | 23 | 12 | 0.00028 |

ANALYST: *Kirsten Mudie (signatory)* REVIEWED: *Adam Deliyiannis (signatory)* DATE: **02/02/2022**
**Biologist** **Biologist**

METHOD NO.: MB010/MW024VCA

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|---|---|---|---|---|---|---|
| *Cuspidothrix issatschenkoi* | | 0 | 265 | 514 | 57 | 0.02927 |
| *Limnolyngbya (Planktolyngbya circumcreta)* | | 3160 | 0 | 153101 | 4.9 | 0.75019 |
| *Limnothrix/Geitlerinema/Anagnostidinema* | P | 0 | 40 | 78 | 17.5 | 0.00136 |
| *Oscillatoriales (iauv 101-200)* | P | 0 | 135 | 262 | 142.8 | 0.03736 |
| *Planktolyngbya* | | 2730 | 0 | 132267 | 3.8 | 0.50262 |
| *Pseudanabaena* | | 35 | 0 | 1696 | 12.5 | 0.02120 |
| *Synechococcales small (iauv <20)* | | 1520 | 0 | 73643 | 5.25 | 0.38663 |
| ***EUGLENOPHYCEAE*** | | | | | | |
| *Euglena* | | 0 | 1 | 2 | 7000 | 0.01357 |

| | | |
|---|---|---|
| **TOTAL BGA** | **363813** | **1.87823** |
| **TOTAL TOXIGENIC BGA** | **0** | **0.00000** |
| **TOTAL POTENTIALLY TOXIC BGA** | **2569** | **0.18804** |
| **TOTAL ALGAE** | **416754** | **13.72722** |

***+ The comments are discretionary and are for the purpose of helping to understand WQ implications.The comments are not accredited by NATA.***

***The biovolume values reported are those derived from documented information, including scientific literature. These are average values and not those measured on individual samples.***

***A Certificate of analysis will follow, linked by the above batch number. Independent algal reports are forwarded to clients expeditiously to facilitate operational decision making.***

**** P's and T's denote those cyanobacteria/blue-green algae (BGA) associated with toxin production in Australian waters. Overseas studies have shown other cyanobacteria to produce toxins. All contain lipopolysaccharides (LPS) in their cell wall and many have been found to produce β-N-methylamino-L-alanine (BMAA) and its analogues. Therefore all cyanobacteria could be considered to pose a level of risk.***

ANALYST: ***Kirsten Mudie (signatory)*** REVIEWED: ***Adam Deliyiannis (signatory)*** DATE: **02/02/2022**
**Biologist** **Biologist**

METHOD NO.: MB010/MW024VCA