

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





ALGAL REPORT

| CLIENT: | ALS |
|---------------------------|-----------------------------|
| LABORATORY NO./BATCH NO.: | 6722418 20-45935 |
| LOCALITY: | EM2017172-016 |
| SITE: | Bonney's |
| SAMPLE: | Surface |
| DATE SAMPLED : | 30/09/2020 |
| DATE ANALYSED : | 8/10/2020 |
| SAMPLED BY: | Sample analysed as received |

COMMENTS: + A diverse and abundant algal community was observed. Combined levels may impact water quality.

| Sedgewick-Rafter Vol.(ml) 1.019 Concentration 1 Magnification Fields | (T) a= | - 200x 20 | - 100x 500 | Total Cell Count (cells/mL) | Individual Algal Unit Volume (um3) | Total Biovolume (mm3/L) |
|--|----------|--------------|---------------|-----------------------------------|---|-------------------------------|
| BACILLARIOPHYCEAE | | | | | | |
| Centrales | | 1 | 0 | 49 | 200 | 0.00980 |
| Chaetoceros | | 178 | 0 | 8726 | 200 | 1.74527 |
| Naviculales | | 0 | 7 | 14 | 1400 | 0.01922 |
| Nitzschia | | 3 | 0 | 147 | 400 | 0.05883 |
| Pennales | | 1 | 0 | 49 | 300 | 0.01471 |
| Pennales (small <20um) | | 6 | 0 | 294 | 251 | 0.07383 |
| CHLOROPHYCEAE | | | | | | |
| Ankistrodesmoideae | | 12 | 0 | 588 | 132 | 0.07765 |
| Chlamydomonads | | 7 | 0 | 343 | 250 | 0.08579 |
| Chlorococcoids | | 3840 | 0 | 188254 | 500 | 94.12688 |
| Selenastrum | | 4 | 0 | 196 | 250 | 0.04902 |
| CRYPTOPHYCEAE | | | | | | |
| Cryptomonads | | 15 | 0 | 735 | 320 | 0.23532 |
| CYANOPHYCEAE | | | | | | |
| Limnothrix/Geitlerinema/Anagnostidinema | Р | 0 | 39 | 76 | 17.5 | 0.00134 |
| Planktolyngbya | | 119 | 0 | 5834 | 3.8 | 0.02217 |
| Synechococcales small (iauv <20) | | 5440 | 0 | 266693 | 5.25 | 1.40014 |
| DINOPHYCEAE | | | | | | |
| Dinoflagellates | | 0 | 1 | 2 | 20000 | 0.03922 |
| Gymnodiniales (small) | | 3 | 0 | 147 | 500 | 0.07354 |
| EUGLENOPHYCEAE | <u>'</u> | | | | | |
| Eutreptia | | 1 | 0 | 49 | 1000 | 0.04902 |
| OTHER PHYTOPLANKTON | | | | | | |
| Other small flagellates | | 0 | 9 | 18 | 80 | 0.00141 |
| Prasinophytes | | 1 | 0 | 49 | 100 | 0.00490 |

ANALYST: Karen Simonsen (signatory) REVIEWED: Adam Deliyiannis DATE: 08/10/2020 Biologist Biologist

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COMMENTS: + A diverse and abundant algal community was observed. Combined levels may impact water quality.

| Sedgewick-Rafter Vol.(ml) Concentration | 1.0199 1 : 1 | Toxigenic (T) or Potentially | | | Total Cell Count | Individual Algal Unit | Total Biovolume |
|---|-----------------|------------------------------------|--------|--------|---------------------|--------------------------|--------------------|
| Magnification | | toxic (P) | - 200x | - 100x | (cells/mL) | Volume | (mm3/L) |
| Fields | | * | 20 | 500 | (OCHS/IIIL) | (um3) | (IIIII3/L) |

| 272603 1.42364 | 272603 | TOTAL BGA |
|-----------------|--------|-----------------------------|
| 0 0.00000 | 0 | TOTAL TOXIGENIC BGA |
| 76 0.00134 | 76 | TOTAL POTENTIALLY TOXIC BGA |
| 472263 98.08806 | 472263 | TOTAL ALGAE |

⁺ 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.

ANALYST: Karen Simonsen (signatory) REVIEWED: Adam Deliyiannis DATE: 08/10/2020
Biologist Biologist

METHOD NO.: MB010/MW024CV Page 2 of 2

^{*} 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.