

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. : | 7136737 21-41798                          |  |  |  |
| LOCALITY:                  | EM2116912-015                             |  |  |  |
| SITE:                      | Morella Basin @ O/L                       |  |  |  |
| SAMPLE:                    | Surface                                   |  |  |  |
| DATE SAMPLED :             | 24/08/2021                                |  |  |  |
| DATE ANALYSED :            | 27/08/2021                                |  |  |  |
| SAMPLED BY:                | Sample analysed as received               |  |  |  |

**COMMENTS: +** A diverse algal community was observed. Combined levels are unlikely to impact water quality.

| Sedgewick-Rafter Vol.(ml) 1.0744 Concentration 1 : 7 Magnification Fields | (T) a | - 200x<br>20 | - 100x<br>500 | Total Cell<br>Count<br>(cells/mL) | Individual<br>Algal Unit<br>Volume<br>(um3) | Total<br>Biovolume<br>(mm3/L) |
|---|-------|--------------|---------------|-----------------------------------|---|-------------------------------|
| BACILLARIOPHYCEAE   |       |              |               |                                   |   |                               |
| Amphora   |       | 1            | 0             | 47                                | 500   | 0.02327                       |
| Centrales - (5-10um)  |       | 3            | 0             | 140                               | 80  | 0.01117                       |
| Cocconeis   |       | 2            | 0             | 93                                | 450   | 0.04188                       |
| Entomoneis  |       | 0            | 7             | 13                                | 1000  | 0.01303                       |
| Naviculales   |       | 3            | 0             | 140                               | 1400  | 0.19546                       |
| Pennales  |       | 0            | 8             | 15                                | 300   | 0.00447                       |
| Pennales (small <20um)  |       | 6            | 0             | 279                               | 251   | 0.07009                       |
| CHLOROPHYCEAE   |       |              |               |                                   |   |                               |
| Ankistrodesmoideae  |       | 45           | 0             | 2094                              | 132   | 0.27643                       |
| Chlamydomonads  |       | 54           | 0             | 2513                              | 250   | 0.62826                       |
| Filamentous Green   |       | 0            | 5             | 9                                 | 386   | 0.00359                       |
| Oocystis  |       | 3            | 0             | 140                               | 300   | 0.04188                       |
| Scenedesmus   |       | 0            | 4             | 7                                 | 250   | 0.00186                       |
| CRYPTOPHYCEAE   |       |              |               |                                   |   |                               |
| Cryptomonads  |       | 7            | 0             | 326                               | 320   | 0.10424                       |
| CYANOPHYCEAE  |       |              |               |                                   |   |                               |
| Aphanizomenonaceae family - straight                                      | Р     | 0            | 11            | 20                                | 67  | 0.00137                       |
| Planktolyngbya  |       | 160          | 0             | 7446                              | 3.8   | 0.02829                       |
| Synechococcales small (iauv <20)  |       | 41           | 0             | 1908                              | 5.25  | 0.01002                       |
| DINOPHYCEAE   |       |              |               |                                   |   |                               |
| Gymnodiniales (small)   |       | 3            | 0             | 140                               | 500   | 0.06981                       |
| Peridiniales  |       | 8            | 0             | 372                               | 5000  | 1.86150                       |
| OTHER PHYTOPLANKTON   |       |              |               |                                   |   |                               |
| Other small flagellates   |       | 15           | 0             | 698                               | 80  | 0.05585                       |
| Prasinophytes   |       | 3            | 0             | 140                               | 100   | 0.01396                       |

ANALYST: Karen Simonsen (signatory)  ${\tt REVIEWED:} \textbf{\textit{Adam Deliyiannis}}$ **Biologist** 

METHOD NO.: MB010/MW024VCA

Biologist

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DATE: 30/08/2021



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**COMMENTS: +** A diverse algal community was observed. Combined levels are unlikely to impact water quality.

| Sedgewick-Rafter Vol.(ml) 1.0744 Concentration 1 : 1 Magnification | Toxigenic<br>(T) or<br>Potentially<br>toxic (P) | - 200x<br>20 | - 100x<br>500 | Total Cell<br>Count<br>(cells/mL) | Individual<br>Algal Unit<br>Volume<br>(um3) | Total<br>Biovolume<br>(mm3/L) |
|--|---|--------------|---------------|-----------------------------------|---|-------------------------------|
| Fields   |   | 20           | 300           |                                   |   |                               |

| TOTAL BGA                   | 9374  | 0.03968 |
|-----------------------------|-------|---------|
| TOTAL TOXIGENIC BGA         | 0     | 0.00000 |
| TOTAL POTENTIALLY TOXIC BGA | 20    | 0.00137 |
| TOTAL ALGAE                 | 16540 | 3.45644 |

<sup>+</sup> 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: 30/08/2021
Biologist Biologist

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<sup>\*</sup> 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.