

STORM WATER - EXISTING SITE RUN-OFFS

Document A

|                              |                  |               |               |
|------------------------------|------------------|---------------|---------------|
| Job No.:                     | 405000           |               |               |
| Job Name:                    | 5-7 Station Road |               |               |
| Total site Area              |                  | 1895          | m2            |
| Surface                      | Area (m2)        | Run-off coeff | Eff Area (m2) |
| Building 7 Station road      | 104              | 1.00          | 104           |
| Building meridian motorhomes | 112.6            | 1.00          | 112.6         |
| Building Island Tyres        | 76               | 1.00          | 76            |
| Building Herons Autos        | 319              | 1.00          | 319           |
| Concrete hardstandings       | 1187             | 1.00          | 1187.4        |
| Softlandscaped               | 96               | 0.00          | 0             |
| Sum                          | 1895             |               |               |
|                              |                  |               | 0.1895        |

| 1 in 100 year event                     |         |                                    |          |          |     |          |  |  |  |
|-----------------------------------------|---------|------------------------------------|----------|----------|-----|----------|--|--|--|
| Eff Area                                | 1799    | m2                                 |          |          |     |          |  |  |  |
| 100 year return period + climate change |         |                                    |          |          |     |          |  |  |  |
|                                         |         | Storm duration (Min.)              | T        | N        | r   |          |  |  |  |
| R5                                      | 0.02315 | 5                                  | 0.08 hrs | 0.083333 | 0.1 | 0.023154 |  |  |  |
| R10                                     | 0.02869 | 10                                 | 0.17 hrs | 0.166667 | 0.1 | 0.028694 |  |  |  |
| R15                                     | 0.03247 | 15                                 | 0.25 hrs | 0.25     | 0.1 | 0.032473 |  |  |  |
| R30                                     | 0.04002 | 30                                 | 0.50 hrs | 0.5      | 0.1 | 0.040022 |  |  |  |
| R60                                     | 0.04920 | 60                                 | 1.00 hrs | 1        | 0.1 | 0.0492   |  |  |  |
| R120                                    | 0.06036 | 120                                | 2.00 hrs | 2        | 0.1 | 0.060356 |  |  |  |
| R240                                    | 0.07392 | 240                                | 4.00 hrs | 4        | 0.1 | 0.073917 |  |  |  |
| R360                                    | 0.08317 | 360                                | 6.00 hrs | 6        | 0.1 | 0.083168 |  |  |  |
| Run-off from site during 6 Hour event   |         |                                    |          |          |     |          |  |  |  |
| Volume of total run-off                 |         | Flow in Ltrs / second during event |          |          |     |          |  |  |  |
| I360                                    | 149.619 | m3                                 | Flow     | 6.927    | L/s |          |  |  |  |
| Therefore total run off                 |         |                                    |          |          |     |          |  |  |  |
|                                         | 149.6   | m3                                 | OR       | 6.927    | L/s |          |  |  |  |

| 1 in 30 year event                    |         |                                    |          |          |          |          |  |  |  |
|---------------------------------------|---------|------------------------------------|----------|----------|----------|----------|--|--|--|
| Eff Area                              | 1799    | m2                                 |          |          |          |          |  |  |  |
| 1 year return period + climate change |         |                                    |          |          |          |          |  |  |  |
|                                       |         | Storm duration (Min.)              | T        | N        | r        |          |  |  |  |
| R5                                    | 0.01576 | 5                                  | 0.08 hrs | 0.083333 | 0.333333 | 0.015764 |  |  |  |
| R10                                   | 0.01971 | 10                                 | 0.17 hrs | 0.166667 | 0.333333 | 0.01971  |  |  |  |
| R15                                   | 0.02240 | 15                                 | 0.25 hrs | 0.25     | 0.333333 | 0.022402 |  |  |  |
| R30                                   | 0.02778 | 30                                 | 0.50 hrs | 0.5      | 0.333333 | 0.02778  |  |  |  |
| R60                                   | 0.03432 | 60                                 | 1.00 hrs | 1        | 0.333333 | 0.034318 |  |  |  |
| R120                                  | 0.04227 | 120                                | 2.00 hrs | 2        | 0.333333 | 0.042265 |  |  |  |
| R240                                  | 0.05193 | 240                                | 4.00 hrs | 4        | 0.333333 | 0.051926 |  |  |  |
| R360                                  | 0.05852 | 360                                | 6.00 hrs | 6        | 0.333333 | 0.058516 |  |  |  |
| Run-off from site during 6 Hour event |         |                                    |          |          |          |          |  |  |  |
| Volume of total run-off               |         | Flow in Ltrs / second during event |          |          |          |          |  |  |  |
| I360                                  | 105.271 | m3                                 | Flow     | 4.874    | L/s      |          |  |  |  |
| Therefore total run off               |         |                                    |          |          |          |          |  |  |  |
|                                       | 105.3   | m3                                 | OR       | 4.874    | L/s      |          |  |  |  |

| 1 in 1 year event                     |         |                                    |          |          |     |          |  |  |  |
|---------------------------------------|---------|------------------------------------|----------|----------|-----|----------|--|--|--|
| Eff Area                              | m2      | m2                                 |          |          |     |          |  |  |  |
| 1 year return period + climate c      |         |                                    |          |          |     |          |  |  |  |
|                                       |         | Storm duration (Min.)              | T        | N        | r   |          |  |  |  |
| R5                                    | 0.01089 | 5                                  | 0.08 hrs | 0.083333 | 1   | 0.010892 |  |  |  |
| R10                                   | 0.01379 | 10                                 | 0.17 hrs | 0.166667 | 1   | 0.013788 |  |  |  |
| R15                                   | 0.01576 | 15                                 | 0.25 hrs | 0.25     | 1   | 0.015764 |  |  |  |
| R30                                   | 0.01971 | 30                                 | 0.50 hrs | 0.5      | 1   | 0.01971  |  |  |  |
| R60                                   | 0.02451 | 60                                 | 1.00 hrs | 1        | 1   | 0.024508 |  |  |  |
| R120                                  | 0.03034 | 120                                | 2.00 hrs | 2        | 1   | 0.03034  |  |  |  |
| R240                                  | 0.03743 | 240                                | 4.00 hrs | 4        | 1   | 0.037429 |  |  |  |
| R360                                  | 0.04227 | 360                                | 6.00 hrs | 6        | 1   | 0.042265 |  |  |  |
| Run-off from site during 6 Hour event |         |                                    |          |          |     |          |  |  |  |
| Volume of total run-off               |         | Flow in Ltrs / second during event |          |          |     |          |  |  |  |
| I360                                  | 76.035  | m3                                 | Flow     | 3.520    | L/s |          |  |  |  |
| Therefore total run off               |         |                                    |          |          |     |          |  |  |  |
|                                       | 76.0    | m3                                 | OR       | 3.520    | L/s |          |  |  |  |