## Availability of perennial and intermittent stream reaches for freshwater offsetting within the Aokautere Structure Plan area

For clarity, Table 3 below is taken from pg 17 of the s42A report - Ecology, unchanged. The updated version of Table 3 is on page 2. A plan of the stream classifications and gully numbers is on page 3. This is copied from Figure 2 of the stream classification report on pg 6 in Appendix C to the s42A report – Ecology.

The conclusion is there are many km available within the plan change area that would be highly suitable for freshwater offsetting. The SEV method allows for offsetting on stream reaches >0.2—<0.8 SEV. Many of these reaches are pasture with high potential for functional gains.

**Table 3**. Lengths (m) of each GHD recommended stormwater treatment and the availability of perennial and intermittent stream reaches available for offsetting within the Structure Plan area.

|        | Effects lengths (m) |                 |                        |            |                |                     |                 |                    | Reach accounting (m)         |                      |                  |  |  |
|--------|---------------------|-----------------|------------------------|------------|----------------|---------------------|-----------------|--------------------|------------------------------|----------------------|------------------|--|--|
| Gully# | Culvert             | Cascading weirs | Below<br>ground<br>dam | Inline dry | Online<br>pond | Bridge<br>abutments | Affected length | Reach<br>available | Unaffected reach after works | Restoration required | Reach<br>surplus |  |  |
| 1      | 100                 | 185             | 0                      | 0          | 0              | 0                   | 285             | 1906               | 1621                         | 707                  | 914              |  |  |
| 3      | 0                   | 250             | 40                     | 40         | 60             | 0                   | 390             | 1778               | 1388                         | 967                  | 421              |  |  |
| 11     | 0                   | 0               | 0                      | 0          | 0              | 40                  | 40              | N/A                | N/A                          | 99                   | N/A              |  |  |

Notes. N/A = not assessed in relation to the Structure Plan due to the extensive reach length available and the limited affected length

**UPDATED Table 3**. Lengths (m) of each GHD recommended stormwater treatment and the availability of perennial and intermittent stream reaches available for offsetting within the Structure Plan area.

| Gully<br># |         |                     | Effe                   | cts lengths           | (m)            |                         | Reach accounting (m) |                    |                              |                      | Riparian land<br>cover |   |
|------------|---------|---------------------|------------------------|-----------------------|----------------|-------------------------|----------------------|--------------------|------------------------------|----------------------|------------------------|---|
|            | Culvert | Cascadi<br>ng weirs | Below<br>ground<br>dam | Inline<br>dry<br>pond | Online<br>pond | Bridge<br>abutme<br>nts | Affecte<br>d length  | Reach<br>available | Unaffected reach after works | Restoration required | Reach<br>surplus       |   |
| 1          | 100     | 185                 | 0                      | 0                     | 0              | 0                       | 285                  | 1906               | 1621                         | 707                  | 914                    | Native (c.45%)<br>and gorse (c.55%)             |
| 3          | 0       | 250                 | 40                     | 40                    | 60             | 0                       | 390                  | 1778               | 1388                         | 967                  | 421                    | Native (c.55%)<br>and gorse (c.45%)             |
| 8          | 0       | 0                   | 0                      | 0                     | 0              | 0                       | 0                    | 207                | 207                          | 0                    | 207                    | Pasture, some<br>teatree                        |
| 9          | 0       | 0                   | 0                      | 0                     | 0              | 0                       | 0                    | 458                | 458                          | 0                    | 458                    | Pasture, some<br>teatree                        |
| 10         | 0       | 0                   | 0                      | 0                     | 0              | 0                       | 0                    | 208                | 208                          | 0                    | 208                    | Pasture, some<br>teatree                        |
| 11         | 0       | 0                   | 0                      | 0                     | 0              | 40                      | 40                   | 4013               | 3973                         | 99                   | 3874                   | Pasture, some<br>wetlands in<br>central portion |
|            |         |                     |                        |                       |                |                         |                      |                    |                              |                      | 6082                   | Sum   |

Dr Adam Forbes 17/10/2023 2

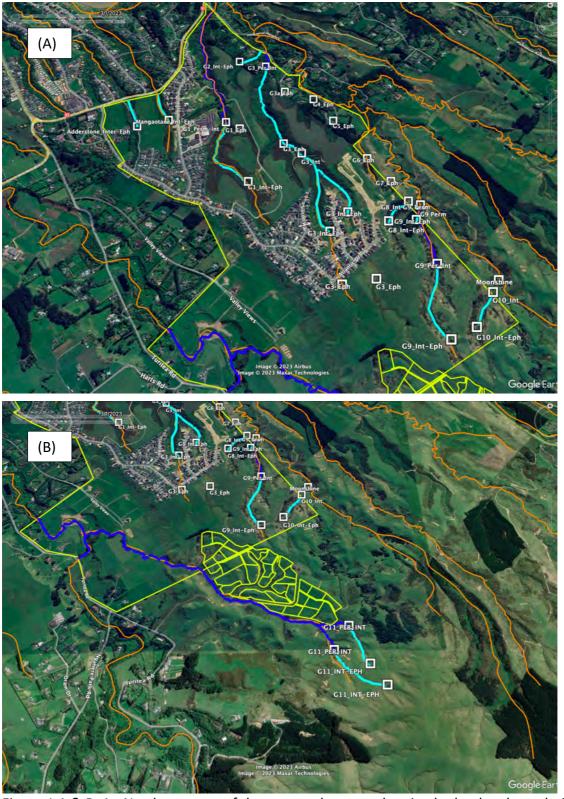


Figure 1 A & B. A - Northern parts of the masterplan area showing hydroclass boundaries and results for Gullies 1-10 plus Adderstone and Mangotane reserves and the Moonshine Stream. B — Hydroclass results for the Waters Block in the southern portion of the masterplan area. Dark blue = permanent hydroclass. Light blue = Intermittent hydroclass. Orange lines = PNCC stream layer.