

## APPENDIX E: MULTI-CRITERIA ASSESSMENT OF POSSIBLE MANAGEMENT OPTIONS

Refer Section 6.2 for discussion of options assessment.

Refer Section 5.7 for discussion of objectives prioritisation and relative scores.

Better options are those with higher overall scores, and represent options that address higher priority and/or multiple objectives, are low cost, and are likely to be effective when implemented (which includes consideration of community acceptance).

|        |              |            | Objectives                         |     |     |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    |           |      |       |           |              |           |             |             |       |  |
|--------|--------------|------------|------------------------------------|-----|-----|-----|---|-----|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----------|------|-------|-----------|--------------|-----------|-------------|-------------|-------|--|
|        |              |            | 1                                  | 2   | 3   | 4   | 5 | 6   | 7 | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18 | total     | Rank | costs | cost_fact | obj*costfact | effective | effect_fact | total score | Rank  |  |
| Type   | timeframe    | rel. score | 4                                  | 3.9 | 3.2 | 3.4 | 2 | 3.7 | 4 | 3.3 | 2.9 | 1.8 | 4.1 | 3.3 | 3.3 | 4.1 | 3.4 | 4.3 | 3.2 | 4  | obj_score | Rank | H-M-L | H-M-L     | H-M-L        | H-M-L     | H-M-L       | H-M-L       | H-M-L |  |
| WQ1    | On-grd wks   | Short      | Review and implement the rec       | 1   | 1   |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 7.9       | 10   | H     | 1         | 7.9          | M         | 2           | 15.8        | 26    |  |
| WQ2    | On-grd wks   | Short      | Ensure appropriate connection      | 1   | 1   |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 7.9       | 10   | H     | 1         | 7.9          | H         | 3           | 23.7        | 16    |  |
| WQ3    | On-grd wks   | Medium     | Install 'leaky pits' in the carava | 1   | 1   |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 7.9       | 10   | H     | 1         | 7.9          | H         | 3           | 23.7        | 16    |  |
| WQ4    | On-grd wks   | Long       | Upgrade the reticulated sewer      | 1   | 1   |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 7.9       | 10   | H     | 1         | 7.9          | L         | 1           | 7.9         | 34    |  |
| WQ5    | Education    | Medium     | Encourage on-site stormwater       | 1   | 1   |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 7.9       | 10   | M     | 2         | 15.8         | L         | 1           | 15.8        | 26    |  |
| WQ6    | Education    | Short      | Public education regarding imp     | 1   | 1   |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 7.9       | 10   | M     | 2         | 15.8         | L         | 1           | 15.8        | 26    |  |
| WQ7    | Education    | Short      | Public education regarding coll    | 1   | 1   |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 7.9       | 10   | M     | 2         | 15.8         | L         | 1           | 15.8        | 26    |  |
| WQ8    | Administrati | Short      | Prohibit discharge of agricultur   | 0   | 1   | 1   |   |     |   |     |     |     | 1   | 1   |     |     |     |     |     |    | 14.5      | 7    | L     | 3         | 43.5         | H         | 3           | 130.5       | 5     |  |
| WQ9    | On-grd wks   | Short      | Immediately artificially open the  | 0   | 1   |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 3.9       | 31   | M     | 2         | 7.8          | H         | 3           | 23.4        | 20    |  |
| WQ10   | On-grd wks   | Short      | Artificially open the creek entra  | 0   | 1   |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 3.9       | 31   | M     | 2         | 7.8          | H         | 3           | 23.4        | 20    |  |
| WQ11   | Further inve | Medium     | Conduct a pollutant source inve    | 1   | 1   |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 7.9       | 10   | H     | 1         | 7.9          | M         | 2           | 15.8        | 26    |  |
| WQ12   | Monitoring   | On-going   | Continue to monitor for bacteri    | 0   | 1   |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 3.9       | 31   | M     | 2         | 7.8          | H         | 3           | 23.4        | 20    |  |
| WQ13   | Monitoring   | Short      | Establish a comprehensive wa       | 1   | 1   |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 7.9       | 10   | H     | 1         | 7.9          | H         | 3           | 23.7        | 16    |  |
| WQ14   | Planning     | Medium     | Prepare a DCP for all new urba     | 1   | 1   |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 7.9       | 10   | L     | 3         | 23.7         | M         | 2           | 47.4        | 10    |  |
| EM1    | Further inve | Immediate  | Critically assess the actual thre  | 0   |     |     |   |     |   | 1   |     |     |     | 1   | 1   |     |     |     |     |    | 9.6       | 9    | L     | 3         | 28.8         | M         | 2           | 57.6        | 9     |  |
| EM2    | Planning     | Short      | Prepare a formal Entrance Mar      | 0   | 1   |     | 1 | 1   | 1 | 1   |     |     | 1   | 1   |     |     |     |     |     |    | 29.4      | 1    | L     | 3         | 88.2         | H         | 3           | 264.6       | 1     |  |
| EM3    | On-grd wks   | Short      | Install appropriate signage outl   | 0   |     |     |   | 1   |   |     |     |     |     |     |     |     |     |     |     |    | 2         | 34   | L     | 3         | 6            | M         | 2           | 12          | 33    |  |
| Sed1   | Administrati | Short      | Only allow floodwater flows int    | 0   |     |     |   |     |   |     |     |     | 1   |     | 1   |     |     |     |     |    | 7         | 23   | L     | 3         | 21           | M         | 2           | 42          | 12    |  |
| Sed2   | On-grd wks   | Medium     | Construct a block (weir) in the    | 0   |     |     |   |     |   |     |     |     | 1   |     | 1   |     |     |     |     |    | 7         | 23   | M     | 2         | 14           | M         | 2           | 28          | 14    |  |
| Sed3   | On-grd wks   | Short      | Remove / dredge sand shoal ir      | 0   | 1   | 1   |   |     |   | 1   | 1   |     |     | 1   | 1   |     |     |     |     |    | 22.7      | 3    | M     | 2         | 45.4         | H         | 3           | 136.2       | 4     |  |
| Ecol1  | Planning     | Long       | Rezone the estuary and its sur     | 0   |     |     |   |     |   |     |     |     | 1   | 1   |     |     |     |     |     |    | 5.9       | 25   | L     | 3         | 17.7         | L         | 1           | 17.7        | 24    |  |
| Ecol2  | Further inve | Medium     | Assess areas of coastal wetlan     | 0   |     |     |   |     |   |     |     |     | 1   | 1   |     |     |     |     |     |    | 5.9       | 25   | M     | 2         | 11.8         | M         | 2           | 23.6        | 19    |  |
| Ecol3  | On-grd wks   | Short      | Undertake riparian re-vegetati     | 0   |     |     |   |     |   |     |     |     |     | 1   |     |     |     |     |     |    | 4.1       | 28   | H     | 1         | 4.1          | H         | 3           | 12.3        | 31    |  |
| Ecol4  | On-grd wks   | Medium     | Undertake targeted rehabilitati    | 0   |     |     |   |     |   |     |     |     |     | 1   |     |     |     |     |     |    | 4.1       | 28   | H     | 1         | 4.1          | H         | 3           | 12.3        | 31    |  |
| Ecol5  | Monitoring   | Long       | Undertake periodic flora and fa    | 0   |     |     |   |     |   |     |     |     | 1   |     |     |     |     |     |     |    | 4.1       | 28   | M     | 2         | 8.2          | M         | 2           | 16.4        | 25    |  |
| FM1    | Planning     | Short      | Prepare a formal floodgate ma      | 0   |     | 1   |   |     |   |     |     |     | 1   | 1   | 1   |     |     |     |     |    | 20.1      | 4    | L     | 3         | 60.3         | H         | 3           | 180.9       | 2     |  |
| FM2    | On-grd wks   | Short      | Upgrade / repair floodgates to     | 0   |     | 1   |   |     |   |     |     |     | 1   | 1   | 1   |     |     |     |     |    | 20.1      | 4    | M     | 2         | 40.2         | H         | 3           | 120.6       | 6     |  |
| FM3    | Further inve | Immediate  | Carry out a hydrological model     | 0   |     |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 10.9      | 8    | M     | 2         | 21.8         | H         | 3           | 65.4        | 8     |  |
| FM4    | Further inve | Short      | Conduct a detailed agricultural    | 0   |     |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 4.3       | 27   | M     | 2         | 8.6          | H         | 3           | 25.8        | 15    |  |
| FM5    | Further inve | Short      | Assess the likely impacts of se    | 0   |     |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 7.7       | 21   | M     | 2         | 15.4         | H         | 3           | 46.2        | 11    |  |
| FM6    | Education    | Medium     | Targeted education of agricultu    | 0   |     |     |   |     |   |     |     |     |     |     |     |     |     |     |     |    | 7.7       | 21   | M     | 2         | 15.4         | M         | 2           | 30.8        | 13    |  |
| FM7    | On-grd wks   | Medium     | Restore entrance training wall     | 0   |     |     |   |     |   | 1   |     |     |     |     |     |     |     |     |     |    | 7.7       | 20   | h     | 1         | 7.7          | H         | 3           | 23.1        | 23    |  |
| Multi1 | Further inve | Immediate  | Carry out an environmental flo     | 0   |     | 1   |   |     |   |     |     | 1   | 1   |     |     |     |     |     |     |    | 19        | 6    | M     | 2         | 38           | H         | 3           | 114         | 7     |  |
| Multi2 | Administrati | Immediate  | Establish a number of local, co    | 1   | 1   | 1   | 1 | 1   |   |     |     | 1   |     |     |     |     |     |     |     |    | 25.6      | 2    | L     | 3         | 76.8         | M         | 2           | 153.6       | 3     |  |

Overall scores for different options considered (refer Section 6.1 for description of all options assessed).

