

N21 (R300) CAPE TOWN RING ROAD TOLL PROJECT

TABLE 1: AQUATIC ECOSYSTEMS: ASSESSMENT OF ALTERNATIVE ROUTES "FARMERS, B1 AND B2"

| Site Code | Field Code (s) | Description (site positions in Table 2)   | Affected by route | Present condition  | Likely impact of road construction   | Mitigation Status |          |
|-----------|----------------|---|-------------------|--|--|-------------------|----------|
|           |                |   |                   |  |  | Without (-)       | With (+) |
| 3         | 13/14          | First order stream north of farm Lochlynne  | B1 & B2           | Stream eroded and intermittently infilled with rubble. Source surrounded by ploughed fields. Condition = largely devastated.   | Route aligned down the upper reach of the stream bed. Risk of disturbance to bed and banks.  | -                 |          |
|           |                |   |                   |  |  |                   | +        |
| 1         | 15             | Stream (headwaters) drainage on farm Vrymansfontein   | Farmers           | Headwaters of stream impounded by 6 farm dams; landuse = intensive dairy farming on slope draining to stream, ploughed fields around source. Condition = poor  | Route crosses stream line. Risk of disturbance to bed and banks.   | -                 |          |
|           |                |   |                   |  |  |                   | +        |
| 2         | 16             | Stream drainage on farm Vrymansfontein  | Farmers           | Shallow stream bordered by pastures to both banks, no buffer zones; Condition = poor.  | Route crosses stream line. Risk of disturbance to bed and banks.   | -                 |          |
|           |                |   |                   |  |  |                   | +        |
| 4         | 17             | Second order stream channel   | Farmers           | Pastures on slopes above both banks. Condition = moderate to poor..  | Route crosses stream line. Risk of disturbance to bed and banks. Risk of erosion runoff north downslope of route north of this site.   | -                 |          |
|           |                |   |                   |  |  |                   | +        |
| 5         | 18             | Slope wetland and incised and vegetated drainage line north of Malanshoogte Road.                             | Farmers           | Bordered by road and largely undisturbed vegetation to the south, and pastures to the north. Culvert crosses road into head of wetland, but with no evident natural drainage from the south. Small area but habitat reasonably robust and diverse, increasing baseflow evident. Large numbers of nesting birds. Bisected by farm track in upper third. Condition = good.                   | Route crosses upper reaches of wetland. Risk of narrowing wetland, introduction of highway runoff.   | -                 |          |
|           |                |   |                   |  |  |                   | +        |
| 6         | 19             | Stream drainage line, incised to shale bed in places, confluent with Diep River at point where route crosses. | Farmers           | Partially eroded stream with pastures on both banks, lower reaches bordered by farm track on the southern bank. Condition = moderate to poor.  | Route aligned down the drainage channel to the confluence with the Diep R. Risk of disturbance to bed and banks.   | -                 |          |
|           |                |   |                   |  |  |                   | +        |
| 7         | 20             | Diep River  | Farmers           | Mature lower river reach, with rectangular to trapezoidal single x-section, evidencing from the vegetation stable and repetitive hydraulic flows. Width between crest of upper dry bank = 50-60 m. Gradients moderate to steep either side. Low to moderate Ecological Importance and Sensitivity, condition = moderate. River corridor is fenced off either side, but cattle have access. | Route crosses the river at this point. Risk of damage to bed and banks, as well as transfer of impact to important downstream environments (Vissershok and Rietvlei wetlands). | -                 |          |
|           |                |   |                   |  |  |                   | +        |
| 8         | 21             | First order stream drainage line  | Farmers           | Incised drainage line with remnant vegetation surrounded by ploughed fields. Condition = poor to moderate  | Route crosses drainage line close to source. Risk of damage to bed and banks.  | -                 |          |
|           |                |   |                   |  |  |                   | +        |
| 9         | 22             | First order stream drainage line  | Farmers           | Incised drainage line with remnant vegetation surrounded by ploughed fields. Condition = poor to moderate.   | Route crosses drainage line close to source. Risk of damage to bed and banks.  | -                 |          |
|           |                |   |                   |  |  |                   | +        |
| 10        | 23             | First order stream drainage line  | Farmers           | Incised drainage line with remnant vegetation surrounded by ploughed fields. Condition = poor.   | Route crosses drainage line close to source. Risk of damage to bed and banks.  | -                 |          |
|           |                |   |                   |  |  |                   | +        |
| 11        | 24             | Confluence of two first order stream drainage lines.  | Farmers           | Incised drainage lines with remnant vegetation surrounded by ploughed fields. Condition = poor to moderate.  | Route crosses at point of confluence of the two streams. Risk of damage to bed and banks.  | -                 |          |
|           |                |   |                   |  |  |                   | +        |
| 12        | 25             |   |                   |  |  | -                 |          |
|           |                |   |                   |  |  |                   | +        |
| 13        | 26             | Stream source.  | Farmers           | Source of first order stream. Condition = poor.  | Route aligned across source. Risk of impeded or loss of flow.  | -                 |          |
|           |                |   |                   |  |  |                   | +        |

