**SIGNIFICANCE RATING SCALE**

| Rating | | Description |
|---|---|---|
| 5 | VERY HIGH | Of the highest order possible within the bounds of impacts which could occur. In the case of adverse impacts: there is no possible mitigation and/or remedial activity which could offset the impact. In the case of beneficial impacts, there is no real alternative to achieving this benefit. |
| 4 | HIGH | Impact is of substantial order within the bounds of impacts, which could occur. In the case of adverse impacts: mitigation and/or remedial activity is feasible but difficult, expensive, time-consuming or some combination of these. In the case of beneficial impacts, other means of achieving this benefit are feasible but they are more difficult, expensive, time-consuming or some combination of these. |
| 3 | MODERATE | Impact is real but not substantial in relation to other impacts, which might take effect within the bounds of those which could occur. In the case of adverse impacts: mitigation and/or remedial activity are both feasible and fairly easily possible. In the case of beneficial impacts: other means of achieving this benefit are about equal in time, cost, effort, etc. |
| 2 | LOW | Impact is of a low order and therefore likely to have little real effect. In the case of adverse impacts: mitigation and/or remedial activity is either easily achieved or little will be required, or both. In the case of beneficial impacts, alternative means for achieving this benefit are likely to be easier, cheaper, more effective, less time consuming, or some combination of these. |
| 1 | VERY LOW | Impact is negligible within the bounds of impacts which could occur. In the case of adverse impacts, almost no mitigation and/or remedial activity is needed, and any minor steps which might be needed are easy, cheap, and simple. In the case of beneficial impacts, alternative means are almost all likely to be better, in one or a number of ways, than this means of achieving the benefit. Three additional categories must also be used where relevant. They are in addition to the category represented on the scale, and if used, will replace the scale. |
| 0 | NO IMPACT | There is no impact at all - not even a very low impact on a party or system. |

Impact Risk = (SIGNIFICANCE + Spatial + Temporal) / 3 X Probability / 5

| Rating | Impact class | Description |
|---|---|---|
| 0.1 – 1.0 | **1** | **Very Low** |
| 1.1 – 2.0 | **2** | **Low** |
| 2.1 – 3.0 | **3** | **Moderate** |
| 3.1 – 4.0 | **4** | **High** |
| 4.1 – 5.0 | **5** | **Very High** |

SPATIAL RATING SCALE

| Rating | | Description |
|---|---|---|
| 5 | Global/National | The maximum extent of any impact. |
| 4 | Regional/Provincial | The spatial scale is moderate within the bounds of impacts possible, and will be felt at a regional scale (District Municipality to Provincial Level). |
| 3 | Local | The impact will affect an area up to 5 km from the proposed route corridor. |
| 2 | Study Area | The impact will affect a route corridor not exceeding the boundary of the corridor. |
| 1 | Isolated Sites / proposed site | The impact will affect an area no bigger than the servitude. |

TEMPORAL RATING SCALE (DURATION)

| Rating | | Description |
|---|---|---|
| 1 | Incidental | The impact will be limited to isolated incidences that are expected to occur very sporadically. |
| 2 | Short-term | The environmental impact identified will operate for the duration of the construction phase or a period of less than 5 years, whichever is the greater. |
| 3 | Medium term | The environmental impact identified will operate for the duration of life of the line. |
| 4 | Long term | The environmental impact identified will operate beyond the life of operation. |
| 5 | Permanent | The environmental impact will be permanent. |

DEGREE OF PROBABILITY

| Rating | Description |
|---|---|
| 1 | Practically impossible |
| 2 | Unlikely |
| 3 | Could happen |
| 4 | Very Likely |
| 5 | It's going to happen / has occurred |

DEGREE OF CERTAINTY

| Rating | Description |
|---|---|
| Definite | More than 90% sure of a particular fact. |
| Probable | Between 70 and 90% sure of a particular fact, or of the likelihood of that impact occurring. |
| Possible | Between 40 and 70% sure of a particular fact or of the likelihood of an impact occurring. |
| Unsure | Less than 40% sure of a particular fact or the likelihood of an impact occurring. |
| Can't know | The consultant believes an assessment is not possible even with additional research. |

ALTERNATIVE:

| ENVIRONMENTAL ELEMENT | | Site 1 | | | | | | | Site 3A + 3B | | | | | | | "No-Go" | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Risdual Direction of Impact | Residual Degree of Certainty | **Project Impact** - Unmitigated | **Project Impact** - Mitigated | **Status Quo** Baseline Impact | **Cumulative Impact** | **Residual Impact** | Risdual Direction of Impact | Residual Degree of Certainty | **Project Impact** - Unmitigated | **Project Impact** - Mitigated | **Status Quo** Baseline Impact | **Cumulative Impact** | **Residual Impact** | Risdual Direction of Impact | Residual Degree of Certainty | **Project Impact** - Unmitigated | **Project Impact** - Unmitigated | **Status Quo** Baseline Impact | **Cumulative Impact** | **Residual Impact** |
| CODE: | | | | | | | | | | | | | | | | | | | | | | |
| | ***OPERATIONAL PHASE*** | | | | | | | | | | | | | | | | | | | | | |
| G-2 | Geology | Negative | Probable | 0 | 0 | 3.7 | 3.7 | 3.7 | Negative | Probable | 0 | 0 | 3.7 | 3.7 | 3.7 | | | 0 | 0 | 3.7 | 3.7 | 3.7 |
| | | | | NO | NO | HIGH | HIGH | HIGH | | | NO | NO | HIGH | HIGH | HIGH | | | NO | NO | HIGH | HIGH | HIGH |
| T-2 | Topography | Negative | Definite | 0 | 0 | 3.7 | 3.7 | 3.7 | Negative | Definite | 0 | 0 | 3.7 | 4 | 4 | | | 0 | 0 | 3.7 | 3.7 | 3.7 |
| | | | | NO | NO | HIGH | HIGH | HIGH | | | NO | NO | HIGH | HIGH | HIGH | | | NO | NO | HIGH | HIGH | HIGH |
| SLC-2 | Soil and Land Capability | Negative | Probable | 1.8 | 1 | 3 | 3.7 | 3.3 | Negative | Probable | 2 | 1.2 | 3 | 3.7 | 3.7 | | | 0 | 0 | 3 | 3 | 3 |
| | | | | LOW | VLOW | MOD | HIGH | HIGH | | | LOW | LOW | MOD | HIGH | HIGH | | | NO | NO | MOD | MOD | MOD |
| SWW-2 | Surface Water and Wetlands | Negative | Probable | 1.9 | 0.8 | 3.7 | 3.7 | 2.7 | Negative | Probable | 2.4 | 1 | 3.7 | 3.7 | 3.7 | | | 0 | 0 | 3.7 | 3.7 | 3.7 |
| | | | | LOW | VLOW | HIGH | HIGH | MOD | | | MOD | VLOW | HIGH | HIGH | HIGH | | | NO | NO | HIGH | HIGH | HIGH |
| GW-2 | Groundwater | Negative | Probable | 2.7 | 0.8 | 3 | 3.3 | 3 | Negative | Probable | 2.7 | 0.8 | 3 | 3.3 | 3 | | | 0 | 0 | 3 | 3 | 3 |
| | | | | MOD | VLOW | MOD | HIGH | MOD | | | MOD | VLOW | MOD | HIGH | MOD | | | NO | NO | MOD | MOD | MOD |
| TE-2 | Terrestrial Ecology<br>*(The direction of the project impact is positive, although the residual impact remains negative)* | Negative | Definite | 1.4 | 2.7 | 3 | 3 | 2.7 | Negative | Definite | 1.4 | 2.7 | 3 | 3.3 | 3 | | | 0 | 0 | 3 | 3 | 3 |
| | | | | LOW | MOD | MOD | MOD | MOD | | | LOW | MOD | MOD | HIGH | MOD | | | NO | NO | MOD | MOD | MOD |
| AF-2 | Avifauna | Negative | Definite | 0 | 0 | 3 | 3 | 3 | Negative | Definite | 0 | 0 | 3 | 3 | 3 | | | 0 | 0 | 3 | 3 | 3 |
| | | | | NO | NO | MOD | MOD | MOD | | | NO | NO | MOD | MOD | MOD | | | NO | NO | MOD | MOD | MOD |
| AQ-2 | Air Quality | Negative | Possible | 1.3 | 0.8 | 3.3 | 3.3 | 3.3 | Negative | Possible | 1.2 | 0.7 | 3.3 | 3.3 | 3.3 | | | 0 | 0 | 3.3 | 3.3 | 3.3 |
| | | | | LOW | VLOW | HIGH | HIGH | HIGH | | | LOW | VLOW | HIGH | HIGH | HIGH | | | NO | NO | HIGH | HIGH | HIGH |
| N-2 | Noise | Negative | Probable | 0 | 0 | 2.7 | 2.3 | 2.3 | Negative | Probable | 0 | 0 | 2.7 | 2.3 | 2.3 | | | 0 | 0 | 2.7 | 2.7 | 2.7 |
| | | | | NO | NO | MOD | MOD | MOD | | | NO | NO | MOD | MOD | MOD | | | NO | NO | MOD | MOD | MOD |
| SOC-2 | Social Environment | Positive | Probable | 0.3 | 0.6 | 2.7 | 2.7 | 2.7 | Positive | Probable | 0.6 | 0.9 | 2.7 | 2.7 | 2.7 | Negative | Definite | 0 | 0 | 2.7 | 4.7 | 4.7 |
| | | | | VLOW | VLOW | MOD | MOD | MOD | | | VLOW | VLOW | MOD | MOD | MOD | | | NO | NO | MOD | VHIGH | VHIGH |
| EC-2 | Economic | Positive | Definite | 0 | 0 | 2.7 | 3 | 3 | Positive | Definite | 0 | 0 | 2.7 | 2.4 | 2.4 | Negative | Definite | 0 | 0 | 2.7 | 4.7 | 4.7 |
| | | | | NO | NO | MOD | MOD | MOD | | | NO | NO | MOD | MOD | MOD | | | NO | NO | MOD | VHIGH | VHIGH |
| INF-2 | Infrastructure and Traffic | Negative | Definite | 0 | 0 | 2.7 | 4.3 | 2.7 | Negative | Definite | 0 | 0 | 2.7 | 4.3 | 2.7 | | | 0 | 0 | 2.7 | 2.7 | 2.7 |
| | | | | NO | NO | MOD | VHIGH | MOD | | | NO | NO | MOD | VHIGH | MOD | | | NO | NO | MOD | MOD | MOD |
| V-2 | Visual | Negative | Definite | 2.3 | 2 | 3.7 | 3.7 | 3.7 | Negative | Definite | 2.3 | 2 | 3.7 | 3.7 | 3.7 | | | 0 | 0 | 3.7 | 3.7 | 3.7 |
| | | | | MOD | LOW | HIGH | HIGH | HIGH | | | MOD | LOW | HIGH | HIGH | HIGH | | | NO | NO | HIGH | HIGH | HIGH |
| ArCH-2 | Archaeology, Palaeongology, Cultural Heritage | No Impact | Definite | 0 | 0 | 0 | 0 | 0 | No Impact | Definite | 0 | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 | 0 | 0 |
| | | | | NO | NO | NO | NO | NO | | | NO | NO | NO | NO | NO | | | NO | NO | NO | NO | NO |

Rated By: *Warren Kok*

Reviewed By:

ALTERNATIVES:

| IMPACT DESCRIPTION | | Direction of Impact | Degree of Certainty | Site 1 | | | | | | Site 3A + 3B | | | | | | "NO-GO" | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** |
| G-2 | *Geology* | | | | | | | | | | | | | | | | | | | | |
| | ***OPERATIONAL PHASE*** | | | 5 | | | | | | 5 | | | | | | 5 | | | | | |
| Impact 1 | NO ADDITIONAL IMPACT | No Impact | Definite | 1 | 0 | | | | **0** | 1 | 0 | | | | **0** | 1 | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| Mitigation Measures: | *None Required* | | | | 0 | | | | **0** | | 0 | | | | **0** | | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| **COMBINED WEIGHTED RATING** | **BEFORE MITIGATION** | No Impact | Definite | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** |
| | **AFTER MITIGATION** *(If mitigation is effective / possible this rating wil decrease)* | No Impact | Definite | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** |
| **STATUS QUO** | INITIAL BASELINE IMPACTS TO ENVIRONMENT | Negative | Probable | | 3 | 3 | 5 | 5 | **3.7** | | 3 | 3 | 5 | 5 | **3.7** | | 3 | 3 | 5 | 5 | **3.7** |
| | | | | | MOD | LOCAL | PERM | OCCUR | **HIGH** | | MOD | LOCAL | PERM | OCCUR | **HIGH** | | MOD | LOCAL | PERM | OCCUR | **HIGH** |
| **CUMULATIVE IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **BEFORE MITIGATION** | Negative | Probable | | 3 | 3 | 5 | 5 | **3.7** | | 3 | 3 | 5 | 5 | **3.7** | | 3 | 3 | 5 | 5 | **3.7** |
| | | | | | MOD | LOCAL | PERM | OCCUR | **HIGH** | | MOD | LOCAL | PERM | OCCUR | **HIGH** | | MOD | LOCAL | PERM | OCCUR | **HIGH** |
| **RESIDUAL IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **AFTER MITIGATION** | Negative | Probable | | 3 | 3 | 5 | 5 | **3.7** | | 3 | 3 | 5 | 5 | **3.7** | | 3 | 3 | 5 | 5 | **3.7** |
| | | | | | MOD | LOCAL | PERM | OCCUR | **HIGH** | | MOD | LOCAL | PERM | OCCUR | **HIGH** | | MOD | LOCAL | PERM | OCCUR | **HIGH** |

Rated By: *Warren Kok*

Reviewed By:

ALTERNATIVES:

| IMPACT DESCRIPTION | | Direction of Impact | Degree of Certainty | Site 1 | | | | | | Site 3A + 3B | | | | | | "NO-GO" | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** |
| T-2 | *Topography* | | | | | | | | | | | | | | | | | | | | |
| | ***OPERATIONAL PHASE*** | | | 5 | | | | | | 5 | | | | | | 5 | | | | | |
| Impact 1 | NO ADDITIONAL IMPACT | No Impact | Definite | 1 | 0 | | | | **0** | 1 | 0 | | | | **0** | 1 | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| Mitigation Measures: | *None Required* | | | | 0 | | | | **0** | | 0 | | | | **0** | | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| **COMBINED WEIGHTED RATING** | **BEFORE MITIGATION** | No Impact | Definite | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** |
| | **AFTER MITIGATION** *(If mitigation is effective / possible this rating wil decrease)* | No Impact | Definite | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** |
| **STATUS QUO** | INITIAL BASELINE IMPACTS TO ENVIRONMENT | Negative | Definite | | 3 | 3 | 5 | 5 | **3.7** | | 3 | 3 | 5 | 5 | **3.7** | | 3 | 3 | 5 | 5 | **3.7** |
| | | | | | MOD | LOCAL | PERM | OCCUR | **HIGH** | | MOD | LOCAL | PERM | OCCUR | **HIGH** | | MOD | LOCAL | PERM | OCCUR | **HIGH** |
| **CUMULATIVE IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **BEFORE MITIGATION** | Negative | Definite | | 3 | 3 | 5 | 5 | **3.7** | | 4 | 3 | 5 | 5 | **4** | | 3 | 3 | 5 | 5 | **3.7** |
| | | | | | MOD | LOCAL | PERM | OCCUR | **HIGH** | | HIGH | LOCAL | PERM | OCCUR | **HIGH** | | MOD | LOCAL | PERM | OCCUR | **HIGH** |
| **RESIDUAL IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **AFTER MITIGATION** | Negative | Definite | | 3 | 3 | 5 | 5 | **3.7** | | 4 | 3 | 5 | 5 | **4** | | 3 | 3 | 5 | 5 | **3.7** |
| | | | | | MOD | LOCAL | PERM | OCCUR | **HIGH** | | HIGH | LOCAL | PERM | OCCUR | **HIGH** | | MOD | LOCAL | PERM | OCCUR | **HIGH** |

Rated By: *Warren Kok*

Reviewed By:

ALTERNATIVES:

| | IMPACT DESCRIPTION | Direction of Impact | Degree of Certainty | Site 1 | | | | | | Site 3A + 3B | | | | | | "NO-GO" | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** |
| SLC-2 | *Soil and Land Capability* | | | | | | | | | | | | | | | | | | | | |
| | ***OPERATIONAL PHASE*** | | | 5 | | | | | | 5 | | | | | | 5 | | | | | |
| Impact 1 | Pollution of soils - leachate | Negative | Definite | 5 | 4 | 1 | 5 | 4 | **2.7** | 5 | 5 | 1 | 5 | 4 | **2.9** | 1 | 0 | | | | **0** |
| | | | | | HIGH | ISO | PERM | VLIKE | **MOD** | | VHIGH | ISO | PERM | VLIKE | **MOD** | | NO | | | | **NO** |
| Mitigation Measures: | *Install leachate collection system* | | | | 2 | 1 | 5 | 3 | **1.6** | | 3 | 1 | 5 | 3 | **1.8** | | 0 | | | | **0** |
| | | | | | LOW | ISO | PERM | COULD | **LOW** | | MOD | ISO | PERM | COULD | **LOW** | | NO | | | | **NO** |
| Impact 2 | Erosion of soils | Negative | Definite | 3 | 3 | 1 | 5 | 5 | **3** | 3 | 4 | 1 | 5 | 5 | **3.3** | | 0 | | | | **0** |
| | | | | | MOD | ISO | PERM | OCCUR | **MOD** | | HIGH | ISO | PERM | OCCUR | **HIGH** | | NO | | | | **NO** |
| Mitigation Measures: | *Place soil stockpiles out of water courses, Revegetate Stockpiles, Stormwater Management* | | | | 2 | 1 | 5 | 3 | **1.6** | | 3 | 1 | 5 | 3 | **1.8** | | 0 | | | | **0** |
| | | | | | LOW | ISO | PERM | COULD | **LOW** | | MOD | ISO | PERM | COULD | **LOW** | | NO | | | | **NO** |
| **COMBINED WEIGHTED RATING** | **BEFORE MITIGATION** | Negative | Definite | | 2.9 | 0.8 | 4 | 3.5 | **1.8** | | 3.7 | 0.8 | 4 | 3.5 | **2** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | MOD | ISO | LONG | VLIKE | **LOW** | | HIGH | ISO | LONG | VLIKE | **LOW** | | NO | #N/A | #N/A | #N/A | **NO** |
| | **AFTER MITIGATION** *(If mitigation is effective / possible this rating wil decrease)* | Negative | Definite | | 1.6 | 0.8 | 4 | 2.4 | **1** | | 2.4 | 0.8 | 4 | 2.4 | **1.2** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | LOW | ISO | LONG | COULD | **VLOW** | | MOD | ISO | LONG | COULD | **LOW** | | NO | #N/A | #N/A | #N/A | **NO** |
| **STATUS QUO** | INITIAL BASELINE IMPACTS TO ENVIRONMENT | Negative | Probable | | 2 | 2 | 5 | 5 | **3** | | 2 | 2 | 5 | 5 | **3** | | 2 | 2 | 5 | 5 | **3** |
| | | | | | LOW | STUDY | PERM | OCCUR | **MOD** | | LOW | STUDY | PERM | OCCUR | **MOD** | | LOW | STUDY | PERM | OCCUR | **MOD** |
| **CUMULATIVE IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **BEFORE MITIGATION** | Negative | Probable | | 4 | 2 | 5 | 5 | **3.7** | | 4 | 2 | 5 | 5 | **3.7** | | 2 | 2 | 5 | 5 | **3** |
| | | | | | HIGH | STUDY | PERM | OCCUR | **HIGH** | | HIGH | STUDY | PERM | OCCUR | **HIGH** | | LOW | STUDY | PERM | OCCUR | **MOD** |
| **RESIDUAL IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **AFTER MITIGATION** | Negative | Probable | | 3 | 2 | 5 | 5 | **3.3** | | 4 | 2 | 5 | 5 | **3.7** | | 2 | 2 | 5 | 5 | **3** |
| | | | | | MOD | STUDY | PERM | OCCUR | **HIGH** | | HIGH | STUDY | PERM | OCCUR | **HIGH** | | LOW | STUDY | PERM | OCCUR | **MOD** |

Rated By: *Warren Kok*

Reviewed By:

ALTERN

| | IMPACT DESCRIPTION | Direction of Impact | Degree of Certainty | Site 1 | | | | | | Site 3A + 3B | | | | | | "NO-GO" | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** |
| SWW-2 | *Surface Water and Wetlands* | | | | | | | | | | | | | | | | | | | | |
| | ***OPERATIONAL PHASE*** | | | 5 | | | | | | 5 | | | | | | 5 | | | | | |
| Impact 1 | Decreased water quality - leachate, suspended solids, turbidity, hydrocarbons, E.coli and trace elements | Negative | Definite | 5 | 4 | 3 | 3 | 5 | **3.3** | 5 | 5 | 3 | 2 | 5 | **3.3** | 1 | 0 | | | | **0** |
| | | | | | HIGH | LOCAL | MED | OCCUR | **HIGH** | | VHIGH | LOCAL | SHORT | OCCUR | **HIGH** | | NO | | | | **NO** |
| Mitigation Measures: | *Suitably sized stormwater infrastructure. Water treatment of De Jager's Pan. Build >100m from SW Resources.* | | | | 1 | 1 | 3 | 3 | **1** | | 2 | 2 | 1 | 4 | **1.3** | | 0 | | | | **0** |
| | | | | | VLOW | ISO | MED | COULD | **VLOW** | | LOW | STUDY | INCID | VLIKE | **LOW** | | NO | | | | **NO** |
| Impact 2 | Sedimentation of wetlands and surface water resources | Negative | Definite | 5 | 2 | 2 | 3 | 4 | **1.9** | 5 | 3 | 3 | 2 | 5 | **2.7** | | 0 | | | | **0** |
| | | | | | LOW | STUDY | MED | VLIKE | **LOW** | | MOD | LOCAL | SHORT | OCCUR | **MOD** | | NO | | | | **NO** |
| Mitigation Measures: | *Suitably sized stormwater infrastructure. Water treatment of De Jager's Pan. Build >100m from SW Resources.* | | | | 1 | 1 | 3 | 2 | **0.7** | | 2 | 2 | 1 | 3 | **1** | | 0 | | | | **0** |
| | | | | | VLOW | ISO | MED | UNLIKE | **VLOW** | | LOW | STUDY | INCID | COULD | **VLOW** | | NO | | | | **NO** |
| Impact 3 | Reduction in habitat integrity of downstream wetland areas | Negative | Probable | 5 | 1 | 1 | 3 | 3 | **1** | 5 | 2 | 1 | 2 | 4 | **1.3** | | 0 | | | | **0** |
| | | | | | VLOW | ISO | MED | COULD | **VLOW** | | LOW | ISO | SHORT | VLIKE | **LOW** | | NO | | | | **NO** |
| Mitigation Measures: | *Suitably sized stormwater infrastructure. Water treatment of De Jager's Pan. Build >100m from SW Resources.* | | | | 1 | 1 | 3 | 2 | **0.7** | | 1 | 1 | 2 | 3 | **0.8** | | 0 | | | | **0** |
| | | | | | VLOW | ISO | MED | UNLIKE | **VLOW** | | VLOW | ISO | SHORT | COULD | **VLOW** | | NO | | | | **NO** |
| **COMBINED WEIGHTED RATING** | **BEFORE MITIGATION** | Negative | Definite | | 2.3 | 2 | 3 | 4 | **1.9** | | 3.3 | 2.3 | 2 | 4.7 | **2.4** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | MOD | STUDY | MED | VLIKE | **LOW** | | HIGH | LOCAL | SHORT | OCCUR | **MOD** | | NO | #N/A | #N/A | #N/A | **NO** |
| | **AFTER MITIGATION** (*If mitigation is effective / possible this rating wil decrease*) | Negative | Definite | | 1 | 1 | 3 | 2.3 | **0.8** | | 1.7 | 1.7 | 1.3 | 3.3 | **1** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | VLOW | ISO | MED | COULD | **VLOW** | | LOW | STUDY | SHORT | VLIKE | **VLOW** | | NO | #N/A | #N/A | #N/A | **NO** |
| **STATUS QUO** | INITIAL BASELINE IMPACTS TO ENVIRONMENT | Negative | Probable | | 4 | 3 | 4 | 5 | **3.7** | | 4 | 3 | 4 | 5 | **3.7** | | 4 | 3 | 4 | 5 | **3.7** |
| | | | | | HIGH | LOCAL | LONG | OCCUR | **HIGH** | | HIGH | LOCAL | LONG | OCCUR | **HIGH** | | HIGH | LOCAL | LONG | OCCUR | **HIGH** |
| **CUMULATIVE IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **BEFORE MITIGATION** | Negative | Probable | | 4 | 3 | 4 | 5 | **3.7** | | 4 | 3 | 4 | 5 | **3.7** | | 4 | 3 | 4 | 5 | **3.7** |
| | | | | | HIGH | LOCAL | LONG | OCCUR | **HIGH** | | HIGH | LOCAL | LONG | OCCUR | **HIGH** | | HIGH | LOCAL | LONG | OCCUR | **HIGH** |
| **RESIDUAL IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **AFTER MITIGATION** | Negative | Probable | | 2 | 2 | 4 | 5 | **2.7** | | 4 | 3 | 4 | 5 | **3.7** | | 4 | 3 | 4 | 5 | **3.7** |
| | | | | | LOW | STUDY | LONG | OCCUR | **MOD** | | HIGH | LOCAL | LONG | OCCUR | **HIGH** | | HIGH | LOCAL | LONG | OCCUR | **HIGH** |

Rated By: *Warren Kok*

Reviewed By:

ALTERNATIVES:

| | IMPACT DESCRIPTION | Direction of Impact | Degree of Certainty | Site 1 | | | | | | Site 3A + 3B | | | | | | "NO-GO" | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** |
| GW-2 | *Groundwater* | | | | | | | | | | | | | | | | | | | | |
| | ***OPERATIONAL PHASE*** | | | 5 | | | | | | 5 | | | | | | 5 | | | | | |
| Impact 1 | Decreased water quality - Leachate (heavy metals) | Negative | Definite | 5 | 3 | 3 | 4 | 4 | **2.7** | 5 | 3 | 3 | 4 | 4 | **2.7** | 1 | 0 | | | | **0** |
| | | | | | MOD | LOCAL | LONG | VLIKE | **MOD** | | MOD | LOCAL | LONG | VLIKE | **MOD** | | NO | | | | **NO** |
| Mitigation Measures: | *Install leachate collection, Install Barrier System* | | | | 2 | 1 | 1 | 3 | **0.8** | | 2 | 1 | 1 | 3 | **0.8** | | 0 | | | | **0** |
| | | | | | LOW | ISO | INCID | COULD | **VLOW** | | LOW | ISO | INCID | COULD | **VLOW** | | NO | | | | **NO** |
| **COMBINED WEIGHTED RATING** | **BEFORE MITIGATION** | Negative | Definite | | 3 | 3 | 4 | 4 | **2.7** | | 3 | 3 | 4 | 4 | **2.7** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | MOD | LOCAL | LONG | VLIKE | **MOD** | | MOD | LOCAL | LONG | VLIKE | **MOD** | | NO | #N/A | #N/A | #N/A | **NO** |
| | **AFTER MITIGATION** *(If mitigation is effective / possible this rating wil decrease)* | Negative | Definite | | 2 | 1 | 1 | 3 | **0.8** | | 2 | 1 | 1 | 3 | **0.8** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | LOW | ISO | INCID | COULD | **VLOW** | | LOW | ISO | INCID | COULD | **VLOW** | | NO | #N/A | #N/A | #N/A | **NO** |
| **STATUS QUO** | INITIAL IMPACTS TO ENVIRONMENT | Negative | Probable | | 2 | 3 | 4 | 5 | **3** | | 2 | 3 | 4 | 5 | **3** | | 2 | 3 | 4 | 5 | **3** |
| | | | | | LOW | LOCAL | LONG | OCCUR | **MOD** | | LOW | LOCAL | LONG | OCCUR | **MOD** | | LOW | LOCAL | LONG | OCCUR | **MOD** |
| **CUMULATIVE IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **BEFORE MITIGATION** | Negative | Probable | | 3 | 3 | 4 | 5 | **3.3** | | 3 | 3 | 4 | 5 | **3.3** | | 2 | 3 | 4 | 5 | **3** |
| | | | | | MOD | LOCAL | LONG | OCCUR | **HIGH** | | MOD | LOCAL | LONG | OCCUR | **HIGH** | | LOW | LOCAL | LONG | OCCUR | **MOD** |
| **RESIDUAL IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **AFTER MITIGATION** | Negative | Probable | | 2 | 3 | 4 | 5 | **3** | | 2 | 3 | 4 | 5 | **3** | | 2 | 3 | 4 | 5 | **3** |
| | | | | | LOW | LOCAL | LONG | OCCUR | **MOD** | | LOW | LOCAL | LONG | OCCUR | **MOD** | | LOW | LOCAL | LONG | OCCUR | **MOD** |

Rated By: *Warren Kok*

Reviewed By:

ALTERNATIVES:

| | IMPACT DESCRIPTION | Direction of Impact | Degree of Certainty | Site 1 | | | | | | Site 3A + 3B | | | | | | "NO-GO" | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** |
| TE-2 | *Terrestrial Ecology* | | | | | | | | | | | | | | | | | | | | |
| | ***OPERATIONAL PHASE*** | | | 5 | | | | | | 5 | | | | | | 5 | | | | | |
| Impact 1 | Consecutive rehabiliation | Positive | Definite | 5 | 2 | 1 | 4 | 3 | **1.4** | 5 | 2 | 1 | 4 | 3 | **1.4** | 1 | 0 | | | | **0** |
| | | | | | LOW | ISO | LONG | COULD | **LOW** | | LOW | ISO | LONG | COULD | **LOW** | | NO | | | | **NO** |
| Mitigation Measures: | *Alien invasive control, Ameliorate soils replaced, Indigenous seedmix, Watering of seeded areas* | | | | 3 | 1 | 4 | 5 | **2.7** | | 3 | 1 | 4 | 5 | **2.7** | | 0 | | | | **0** |
| | | | | | MOD | ISO | LONG | OCCUR | **MOD** | | MOD | ISO | LONG | OCCUR | **MOD** | | NO | | | | **NO** |
| **COMBINED WEIGHTED RATING** | **BEFORE MITIGATION** | Positive | Definite | | 2 | 1 | 4 | 3 | **1.4** | | 2 | 1 | 4 | 3 | **1.4** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | LOW | ISO | LONG | COULD | **LOW** | | LOW | ISO | LONG | COULD | **LOW** | | NO | #N/A | #N/A | #N/A | **NO** |
| | **AFTER MITIGATION** *(If mitigation is effective / possible this rating wil decrease)* | Positive | Definite | | 3 | 1 | 4 | 5 | **2.7** | | 3 | 1 | 4 | 5 | **2.7** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | MOD | ISO | LONG | OCCUR | **MOD** | | MOD | ISO | LONG | OCCUR | **MOD** | | NO | #N/A | #N/A | #N/A | **NO** |
| **STATUS QUO** | INITIAL BASELINE IMPACTS TO ENVIRONMENT | Negative | Definite | | 3 | 2 | 4 | 5 | **3** | | 3 | 2 | 4 | 5 | **3** | | 3 | 2 | 4 | 5 | **3** |
| | | | | | MOD | STUDY | LONG | OCCUR | **MOD** | | MOD | STUDY | LONG | OCCUR | **MOD** | | MOD | STUDY | LONG | OCCUR | **MOD** |
| **CUMULATIVE IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **BEFORE MITIGATION** | Negative | Definite | | 3 | 2 | 4 | 5 | **3** | | 4 | 2 | 4 | 5 | **3.3** | | 3 | 2 | 4 | 5 | **3** |
| | | | | | MOD | STUDY | LONG | OCCUR | **MOD** | | HIGH | STUDY | LONG | OCCUR | **HIGH** | | MOD | STUDY | LONG | OCCUR | **MOD** |
| **RESIDUAL IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **AFTER MITIGATION** | Negative | Definite | | 2 | 2 | 4 | 5 | **2.7** | | 3 | 2 | 4 | 5 | **3** | | 3 | 2 | 4 | 5 | **3** |
| | | | | | LOW | STUDY | LONG | OCCUR | **MOD** | | MOD | STUDY | LONG | OCCUR | **MOD** | | MOD | STUDY | LONG | OCCUR | **MOD** |

Rated By: *Warren Kok*

Reviewed By:

ALTERNATIVES:

| IMPACT DESCRIPTION | | Direction of Impact | Degree of Certainty | Site 1 | | | | | | Site 3A + 3B | | | | | | "NO-GO" | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** |
| AF-2 | *Avifauna* | | | | | | | | | | | | | | | | | | | | |
| | ***OPERATIONAL PHASE*** | | | 5 | | | | | | 5 | | | | | | 5 | | | | | |
| Impact 1 | NO ADDITIONAL IMPACT | No Additional Impact | Definite | 1 | 0 | | | | **0** | 1 | 0 | | | | **0** | 1 | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| Mitigation Measures: | *None Required* | | | | 0 | | | | **0** | | 0 | | | | **0** | | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| **COMBINED WEIGHTED RATING** | **BEFORE MITIGATION** | Negative | Definite | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** |
| | **AFTER MITIGATION** *(If mitigation is effective / possible this rating wil decrease)* | Negative | Definite | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** |
| **STATUS QUO** | INITIAL BASELINE IMPACTS TO ENVIRONMENT | Negative | Definite | | 3 | 2 | 4 | 5 | **3** | | 3 | 2 | 4 | 5 | **3** | | 3 | 2 | 4 | 5 | **3** |
| | | | | | MOD | STUDY | LONG | OCCUR | **MOD** | | MOD | STUDY | LONG | OCCUR | **MOD** | | MOD | STUDY | LONG | OCCUR | **MOD** |
| **CUMULATIVE IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **BEFORE MITIGATION** | Negative | Definite | | 3 | 2 | 4 | 5 | **3** | | 3 | 2 | 4 | 5 | **3** | | 3 | 2 | 4 | 5 | **3** |
| | | | | | MOD | STUDY | LONG | OCCUR | **MOD** | | MOD | STUDY | LONG | OCCUR | **MOD** | | MOD | STUDY | LONG | OCCUR | **MOD** |
| **RESIDUAL IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **AFTER MITIGATION** | Negative | Definite | | 3 | 2 | 4 | 5 | **3** | | 3 | 2 | 4 | 5 | **3** | | 3 | 2 | 4 | 5 | **3** |
| | | | | | MOD | STUDY | LONG | OCCUR | **MOD** | | MOD | STUDY | LONG | OCCUR | **MOD** | | MOD | STUDY | LONG | OCCUR | **MOD** |

Rated By: *Warren Kok*

Reviewed By:

ALTERNATIVES:

| | IMPACT DESCRIPTION | Direction of Impact | Degree of Certainty | Site 1 | | | | | | Site 3A + 3B | | | | | | "NO-GO" | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** |
| AQ-2 | *Air Quality* | | | | | | | | | | | | | | | | | | | | |
| | ***OPERATIONAL PHASE*** | | | 5 | | | | | | 5 | | | | | | 5 | | | | | |
| Impact 1 | Greenhouse gas emissions | Negative | Possible | 3 | 2 | 1 | 2 | 3 | **1** | 3 | 2 | 2 | 2 | 3 | **1.2** | 1 | 0 | | | | **0** |
| | | | | | LOW | ISO | SHORT | COULD | **VLOW** | | LOW | STUDY | SHORT | COULD | **LOW** | | NO | | | | **NO** |
| Mitigation Measures: | *Reduce energy consumption, Regular vehicle maintenance, Consecutive Rehab* | | | | 1 | 1 | 2 | 3 | **0.8** | | 1 | 2 | 2 | 3 | **1** | | 0 | | | | **0** |
| | | | | | VLOW | ISO | SHORT | COULD | **VLOW** | | VLOW | STUDY | SHORT | COULD | **VLOW** | | NO | | | | **NO** |
| Impact 2 | Nuisance and fall out dust | Negative | Possible | 3 | 3 | 3 | 3 | 5 | **3** | 2 | 3 | 3 | 3 | 5 | **3** | | 0 | | | | **0** |
| | | | | | MOD | LOCAL | MED | OCCUR | **MOD** | | MOD | LOCAL | MED | OCCUR | **MOD** | | NO | | | | **NO** |
| Mitigation Measures: | *Watering to reduce dust mobilisation, Use Site 3, Revegetate stockpiles, Dust-aside / Chemical Suppressant on Roads.* | | | | 3 | 1 | 3 | 5 | **2.3** | | 3 | 1 | 2 | 5 | **2** | | 0 | | | | **0** |
| | | | | | MOD | ISO | MED | OCCUR | **MOD** | | MOD | ISO | SHORT | OCCUR | **LOW** | | NO | | | | **NO** |
| Impact 3 | Increased particulate matter (PM2.5 and PM10) | Negative | Possible | 5 | 3 | 4 | 3 | 5 | **3.3** | 5 | 4 | 4 | 3 | 5 | **3.7** | | 0 | | | | **0** |
| | | | | | MOD | REG | MED | OCCUR | **HIGH** | | HIGH | REG | MED | OCCUR | **HIGH** | | NO | | | | **NO** |
| Mitigation Measures: | *Watering to reduce dust mobilisation, Use Site 3, Revegetate stockpiles, Dust-aside / Chemical Suppressant on Roads.* | | | | 2 | 3 | 3 | 3 | **1.6** | | 3 | 3 | 3 | 3 | **1.8** | | 0 | | | | **0** |
| | | | | | LOW | LOCAL | MED | COULD | **LOW** | | MOD | LOCAL | MED | COULD | **LOW** | | NO | | | | **NO** |
| **COMBINED WEIGHTED RATING** | **BEFORE MITIGATION** | Negative | Possible | | 2 | 2.1 | 2 | 3.3 | **1.3** | | 2.1 | 2.1 | 1.8 | 2.9 | **1.2** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | LOW | LOCAL | SHORT | VLIKE | **LOW** | | MOD | LOCAL | SHORT | COULD | **LOW** | | NO | #N/A | #N/A | #N/A | **NO** |
| | **AFTER MITIGATION** *(If mitigation is effective / possible this rating wil decrease)* | Negative | Possible | | 1.5 | 1.4 | 2 | 2.6 | **0.8** | | 1.6 | 1.5 | 1.7 | 2.3 | **0.7** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | LOW | STUDY | SHORT | COULD | **VLOW** | | LOW | STUDY | SHORT | COULD | **VLOW** | | NO | #N/A | #N/A | #N/A | **NO** |
| **STATUS QUO** | INITIAL BASELINE IMPACTS TO ENVIRONMENT | Negative | Possible | | 3 | 4 | 3 | 5 | **3.3** | | 3 | 4 | 3 | 5 | **3.3** | | 3 | 4 | 3 | 5 | **3.3** |
| | | | | | MOD | REG | MED | OCCUR | **HIGH** | | MOD | REG | MED | OCCUR | **HIGH** | | MOD | REG | MED | OCCUR | **HIGH** |
| **CUMULATIVE IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **BEFORE MITIGATION** | Negative | Possible | | 3 | 4 | 3 | 5 | **3.3** | | 3 | 4 | 3 | 5 | **3.3** | | 3 | 4 | 3 | 5 | **3.3** |
| | | | | | MOD | REG | MED | OCCUR | **HIGH** | | MOD | REG | MED | OCCUR | **HIGH** | | MOD | REG | MED | OCCUR | **HIGH** |
| **RESIDUAL IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **AFTER MITIGATION** | Negative | Possible | | 3 | 4 | 3 | 5 | **3.3** | | 3 | 4 | 3 | 5 | **3.3** | | 3 | 4 | 3 | 5 | **3.3** |
| | | | | | MOD | REG | MED | OCCUR | **HIGH** | | MOD | REG | MED | OCCUR | **HIGH** | | MOD | REG | MED | OCCUR | **HIGH** |

Rated By: *Warren Kok*

Reviewed By:

ALTERNATIVES:

| IMPACT DESCRIPTION | | Direction of Impact | Degree of Certainty | Site 1 | | | | | | Site 3A + 3B | | | | | | "NO-GO" | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** |
| N-2 | *Noise* | | | | | | | | | | | | | | | | | | | | |
| | ***OPERATIONAL PHASE*** | | | 5 | | | | | | 5 | | | | | | 5 | | | | | |
| Impact 1 | Increased ambient noise levels | Negative | Probable | 1 | 0 | | | | **0** | 1 | 0 | | | | **0** | 1 | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| Mitigation Measures: | *6am - 6pm construction time, No Construction on Sundays* | | | | 0 | | | | **0** | | 0 | | | | **0** | | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| **COMBINED WEIGHTED RATING** | **BEFORE MITIGATION** | Negative | Probable | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** |
| | **AFTER MITIGATION** *(If mitigation is effective / possible this rating wil decrease)* | Negative | Probable | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** |
| **STATUS QUO** | INITIAL BASELINE IMPACTS TO ENVIRONMENT | Negative | Probable | | 2 | 3 | 3 | 5 | **2.7** | | 2 | 3 | 3 | 5 | **2.7** | | 2 | 3 | 3 | 5 | **2.7** |
| | | | | | LOW | LOCAL | MED | OCCUR | **MOD** | | LOW | LOCAL | MED | OCCUR | **MOD** | | LOW | LOCAL | MED | OCCUR | **MOD** |
| **CUMULATIVE IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **BEFORE MITIGATION** | Negative | Probable | | 2 | 2 | 3 | 5 | **2.3** | | 2 | 2 | 3 | 5 | **2.3** | | 2 | 3 | 3 | 5 | **2.7** |
| | | | | | LOW | STUDY | MED | OCCUR | **MOD** | | LOW | STUDY | MED | OCCUR | **MOD** | | LOW | LOCAL | MED | OCCUR | **MOD** |
| **RESIDUAL IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **AFTER MITIGATION** | Negative | Probable | | 2 | 2 | 3 | 5 | **2.3** | | 2 | 2 | 3 | 5 | **2.3** | | 2 | 3 | 3 | 5 | **2.7** |
| | | | | | LOW | STUDY | MED | OCCUR | **MOD** | | LOW | STUDY | MED | OCCUR | **MOD** | | LOW | LOCAL | MED | OCCUR | **MOD** |

Rated By: *Warren Kok*

Reviewed By:

ALTERNATIVES:

| | IMPACT DESCRIPTION | Direction of Impact | Degree of Certainty | Site 1 | | | | | | Site 3A + 3B | | | | | | "NO-GO" | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** |
| SOC-2 | *Social Environment* | | | | | | | | | | | | | | | | | | | | |
| | ***OPERATIONAL PHASE*** | | | 5 | | | | | | 5 | | | | | | 5 | | | | | |
| Impact 1 | Employment Oportunities - direct and indirect | Positive | Probable | 5 | 1 | 3 | 3 | 2 | **0.9** | 5 | 1 | 3 | 3 | 2 | **0.9** | 5 | 0 | | | | **0** |
| | | | | | VLOW | LOCAL | MED | UNLIKE | **VLOW** | | VLOW | LOCAL | MED | UNLIKE | **VLOW** | | NO | | | | **NO** |
| Mitigation Measures: | *Employ Unemployed Locals* | | | | 2 | 3 | 3 | 3 | **1.6** | | 2 | 3 | 3 | 3 | **1.6** | | 0 | | | | **0** |
| | | | | | LOW | LOCAL | MED | COULD | **LOW** | | LOW | LOCAL | MED | COULD | **LOW** | | NO | | | | **NO** |
| Impact 2 | Less environmental nuisance | Positive | Probable | 1 | 2 | 3 | 3 | 2 | **1.1** | 2 | 3 | 3 | 3 | 3 | **1.8** | 1 | 0 | | | | **0** |
| | | | | | LOW | LOCAL | MED | UNLIKE | **LOW** | | MOD | LOCAL | MED | COULD | **LOW** | | NO | | | | **NO** |
| Mitigation Measures: | *Maintain - (Complaints register and Feedback, Fines for breaking rules)* | | | | 3 | 3 | 3 | 4 | **2.4** | | 3 | 3 | 3 | 4 | **2.4** | | 0 | | | | **0** |
| | | | | | MOD | LOCAL | MED | VLIKE | **MOD** | | MOD | LOCAL | MED | VLIKE | **MOD** | | NO | | | | **NO** |
| **COMBINED WEIGHTED RATING** | **BEFORE MITIGATION** | Positive | Probable | | 0.7 | 1.8 | 1.8 | 1.2 | **0.3** | | 1.1 | 2.1 | 2.1 | 1.6 | **0.6** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | VLOW | STUDY | SHORT | UNLIKE | **VLOW** | | LOW | LOCAL | MED | UNLIKE | **VLOW** | | NO | #N/A | #N/A | #N/A | **NO** |
| | **AFTER MITIGATION** *(If mitigation is effective / possible this rating wil decrease)* | Positive | Probable | | 1.3 | 1.8 | 1.8 | 1.9 | **0.6** | | 1.6 | 2.1 | 2.1 | 2.3 | **0.9** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | LOW | STUDY | SHORT | UNLIKE | **VLOW** | | LOW | LOCAL | MED | COULD | **VLOW** | | NO | #N/A | #N/A | #N/A | **NO** |
| **STATUS QUO** | INITIAL BASELINE IMPACTS TO ENVIRONMENT | Positive | Probable | | 2 | 3 | 3 | 5 | **2.7** | | 2 | 3 | 3 | 5 | **2.7** | | 2 | 3 | 3 | 5 | **2.7** |
| | | | | | LOW | LOCAL | MED | OCCUR | **MOD** | | LOW | LOCAL | MED | OCCUR | **MOD** | | LOW | LOCAL | MED | OCCUR | **MOD** |
| **CUMULATIVE IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **BEFORE MITIGATION** | Positive | Probable | | 2 | 3 | 3 | 5 | **2.7** | | 2 | 3 | 3 | 5 | **2.7** | | 5 | 5 | 4 | 5 | **4.7** |
| | | | | | LOW | LOCAL | MED | OCCUR | **MOD** | | LOW | LOCAL | MED | OCCUR | **MOD** | | VHIGH | NAT | LONG | OCCUR | **VHIGH** |
| **RESIDUAL IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **AFTER MITIGATION** | Positive | Probable | | 2 | 3 | 3 | 5 | **2.7** | | 2 | 3 | 3 | 5 | **2.7** | | 5 | 5 | 4 | 5 | **4.7** |
| | | | | | LOW | LOCAL | MED | OCCUR | **MOD** | | LOW | LOCAL | MED | OCCUR | **MOD** | | VHIGH | NAT | LONG | OCCUR | **VHIGH** |

Rated By: *Warren Kok*

Reviewed By:

ALTERNATIVES:

| | IMPACT DESCRIPTION | Direction of Impact | Degree of Certainty | Site 1 | | | | | | Site 3A + 3B | | | | | | "NO-GO" | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** |
| EC-2 | *Economic* | | | | | | | | | | | | | | | | | | | | |
| | ***OPERATIONAL PHASE*** | | | 5 | | | | | | 5 | | | | | | 5 | | | | | |
| Impact 1 | NO ADDITIONAL IMPACT | NO IMPACT | Definite | 1 | 0 | | | | **0** | 1 | 0 | | | | **0** | 1 | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| Mitigation Measures: | *None Required* | | | | 0 | | | | **0** | | 0 | | | | **0** | | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| **COMBINED WEIGHTED RATING** | **BEFORE MITIGATION** | Positive | Definite | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** |
| | **AFTER MITIGATION** *(If mitigation is effective / possible this rating wil decrease)* | Positive | Definite | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** |
| **STATUS QUO** | INITIAL BASELINE IMPACTS TO ENVIRONMENT | Positive | Definite | | 2 | 3 | 3 | 5 | **2.7** | | 2 | 3 | 3 | 5 | **2.7** | | 2 | 3 | 3 | 5 | **2.7** |
| | | | | | LOW | LOCAL | MED | OCCUR | **MOD** | | LOW | LOCAL | MED | OCCUR | **MOD** | | LOW | LOCAL | MED | OCCUR | **MOD** |
| **CUMULATIVE IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **BEFORE MITIGATION** | Positive | Definite | | 3 | 3 | 3 | 5 | **3** | | 3 | 3 | 3 | 4 | **2.4** | **Neg** | 5 | 5 | 4 | 5 | **4.7** |
| | | | | | MOD | LOCAL | MED | OCCUR | **MOD** | | MOD | LOCAL | MED | VLIKE | **MOD** | | VHIGH | NAT | LONG | OCCUR | **VHIGH** |
| **RESIDUAL IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **AFTER MITIGATION** | Positive | Definite | | 3 | 3 | 3 | 5 | **3** | | 3 | 3 | 3 | 4 | **2.4** | **Neg** | 5 | 5 | 4 | 5 | **4.7** |
| | | | | | MOD | LOCAL | MED | OCCUR | **MOD** | | MOD | LOCAL | MED | VLIKE | **MOD** | | VHIGH | NAT | LONG | OCCUR | **VHIGH** |

Rated By: *Warren Kok*

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ALTERNATIVES:

| | IMPACT DESCRIPTION | Direction of Impact | Degree of Certainty | Site 1 | | | | | | Site 3A + 3B | | | | | | "NO-GO" | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** |
| INF-2 | *Infrastructure* | | | | | | | | | | | | | | | | | | | | |
| | ***OPERATIONAL PHASE*** | | | 5 | | | | | | 5 | | | | | | 5 | | | | | |
| Impact 1 | NO ADDITIONAL IMACT | No Impact | Definite | 5 | 0 | | | | **0** | 1 | 0 | | | | **0** | 1 | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| Mitigation Measures: | *None Required.* | | | | 0 | | | | **0** | | 0 | | | | **0** | | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| **COMBINED WEIGHTED RATING** | **BEFORE MITIGATION** | No Impact | Definite | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** |
| | **AFTER MITIGATION** *(If mitigation is effective / possible this rating wil decrease)* | No Impact | Definite | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** |
| **STATUS QUO** | INITIAL BASELINE IMPACTS TO ENVIRONMENT | Negative | Definite | | 3 | 2 | 3 | 5 | **2.7** | | 3 | 2 | 3 | 5 | **2.7** | | 3 | 2 | 3 | 5 | **2.7** |
| | | | | | MOD | STUDY | MED | OCCUR | **MOD** | | MOD | STUDY | MED | OCCUR | **MOD** | | MOD | STUDY | MED | OCCUR | **MOD** |
| **CUMULATIVE IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **BEFORE MITIGATION** | Negative | Definite | | 5 | 5 | 3 | 5 | **4.3** | | 5 | 5 | 3 | 5 | **4.3** | | 3 | 2 | 3 | 5 | **2.7** |
| | | | | | VHIGH | NAT | MED | OCCUR | **VHIGH** | | VHIGH | NAT | MED | OCCUR | **VHIGH** | | MOD | STUDY | MED | OCCUR | **MOD** |
| **RESIDUAL IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **AFTER MITIGATION** | Negative | Definite | | 3 | 2 | 3 | 5 | **2.7** | | 3 | 2 | 3 | 5 | **2.7** | | 3 | 2 | 3 | 5 | **2.7** |
| | | | | | MOD | STUDY | MED | OCCUR | **MOD** | | MOD | STUDY | MED | OCCUR | **MOD** | | MOD | STUDY | MED | OCCUR | **MOD** |

Rated By: *Warren Kok*

Reviewed By:

ALTERNATIVES:

| | IMPACT DESCRIPTION | Direction of Impact | Degree of Certainty | Site 1 | | | | | | Site 3A + 3B | | | | | | "NO-GO" | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** |
| V-2 | *Visual* | | | | | | | | | | | | | | | | | | | | |
| | ***OPERATIONAL PHASE*** | | | 5 | | | | | | 5 | | | | | | 5 | | | | | |
| Impact 1 | Visual impact - Ash Dam | Negative | Definite | 5 | 3 | 2 | 2 | 5 | **2.3** | 5 | 3 | 2 | 2 | 5 | **2.3** | 1 | 0 | | | | **0** |
| | | | | | MOD | STUDY | SHORT | OCCUR | **MOD** | | MOD | STUDY | SHORT | OCCUR | **MOD** | | NO | | | | **NO** |
| Mitigation Measures: | *Revegetate exposed areas consecutively, clean litter and waste* | | | | 2 | 2 | 2 | 5 | **2** | | 2 | 2 | 2 | 5 | **2** | | 0 | | | | **0** |
| | | | | | LOW | STUDY | SHORT | OCCUR | **LOW** | | LOW | STUDY | SHORT | OCCUR | **LOW** | | NO | | | | **NO** |
| Impact 2 | Visual Impact - Associated Infrastructure | Negative | Definite | 5 | 3 | 2 | 2 | 5 | **2.3** | 5 | 3 | 2 | 2 | 5 | **2.3** | 1 | 0 | | | | **0** |
| | | | | | MOD | STUDY | SHORT | OCCUR | **MOD** | | MOD | STUDY | SHORT | OCCUR | **MOD** | | NO | | | | **NO** |
| Mitigation Measures: | *Maintain revegetated areas, clean litter and waste* | | | | 2 | 2 | 2 | 5 | **2** | | 2 | 2 | 2 | 5 | **2** | | 0 | | | | **0** |
| | | | | | LOW | STUDY | SHORT | OCCUR | **LOW** | | LOW | STUDY | SHORT | OCCUR | **LOW** | | NO | | | | **NO** |
| **COMBINED WEIGHTED RATING** | **BEFORE MITIGATION** | Negative | Definite | | 3 | 2 | 2 | 5 | **2.3** | | 3 | 2 | 2 | 5 | **2.3** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | MOD | STUDY | SHORT | OCCUR | **MOD** | | MOD | STUDY | SHORT | OCCUR | **MOD** | | NO | #N/A | #N/A | #N/A | **NO** |
| | **AFTER MITIGATION** (*If mitigation is effective / possible this rating wil decrease)* | Negative | Definite | | 2 | 2 | 2 | 5 | **2** | | 2 | 2 | 2 | 5 | **2** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | LOW | STUDY | SHORT | OCCUR | **LOW** | | LOW | STUDY | SHORT | OCCUR | **LOW** | | NO | #N/A | #N/A | #N/A | **NO** |
| **STATUS QUO** | INITIAL BASELINE IMPACTS TO ENVIRONMENT | Negative | Definite | | 4 | 3 | 4 | 5 | **3.7** | | 4 | 3 | 4 | 5 | **3.7** | | 4 | 3 | 4 | 5 | **3.7** |
| | | | | | HIGH | LOCAL | LONG | OCCUR | **HIGH** | | HIGH | LOCAL | LONG | OCCUR | **HIGH** | | HIGH | LOCAL | LONG | OCCUR | **HIGH** |
| **CUMULATIVE IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **BEFORE MITIGATION** | Negative | Definite | | 4 | 3 | 4 | 5 | **3.7** | | 4 | 3 | 4 | 5 | **3.7** | | 4 | 3 | 4 | 5 | **3.7** |
| | | | | | HIGH | LOCAL | LONG | OCCUR | **HIGH** | | HIGH | LOCAL | LONG | OCCUR | **HIGH** | | HIGH | LOCAL | LONG | OCCUR | **HIGH** |
| **RESIDUAL IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **AFTER MITIGATION** | Negative | Definite | | 4 | 3 | 4 | 5 | **3.7** | | 4 | 3 | 4 | 5 | **3.7** | | 4 | 3 | 4 | 5 | **3.7** |
| | | | | | HIGH | LOCAL | LONG | OCCUR | **HIGH** | | HIGH | LOCAL | LONG | OCCUR | **HIGH** | | HIGH | LOCAL | LONG | OCCUR | **HIGH** |

Rated By:

Reviewed By:

ALTERNATIVES:

| | IMPACT DESCRIPTION | Direction of Impact | Degree of Certainty | Site 1 | | | | | | Site 3A + 3B | | | | | | "NO-GO" | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** | Weighting | Magnatude | Spatial | Temporal | Probability | **Impact Risk** |
| ArCH-2 | *Archaeology, Palaeontology, Cultural Heritage* | | | | | | | | | | | | | | | | | | | | |
| | ***OPERATIONAL PHASE*** | | | 5 | | | | | | 5 | | | | | | 5 | | | | | |
| Impact 1 | NO ADDITIONAL IMPACT | No Impact | Definite | 1 | 0 | | | | **0** | 1 | 0 | | | | **0** | 1 | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| Mitigation Measures: | *Mitigation:* | | | | 0 | | | | **0** | | 0 | | | | **0** | | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| **COMBINED WEIGHTED RATING** | **BEFORE MITIGATION** | No Impact | Definite | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** |
| | **AFTER MITIGATION** (*If mitigation is effective / possible this rating wil decrease)* | No Impact | Definite | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** | | 0 | 0 | 0 | 0 | **0** |
| | | | | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** | | NO | #N/A | #N/A | #N/A | **NO** |
| **STATUS QUO** | INITIAL BASELINE IMPACTS TO ENVIRONMENT | No Impact | Definite | | 0 | | | | **0** | | 0 | | | | **0** | | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| **CUMULATIVE IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **BEFORE MITIGATION** | No Impact | Definite | | 0 | | | | **0** | | 0 | | | | **0** | | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |
| **RESIDUAL IMPACT** | INITIAL IMPACTS TO ENVIRONMENT + ADDITIONAL IMPACTS FROM PROJECT, **AFTER MITIGATION** | No Impact | Definite | | 0 | | | | **0** | | 0 | | | | **0** | | 0 | | | | **0** |
| | | | | | NO | | | | **NO** | | NO | | | | **NO** | | NO | | | | **NO** |