

APPENDIX J – IMPACT TABLES

GEOGRAPHICAL AND PHYSICAL

SOIL EROSION AND DUST

| Alternative 1: | Geographical and Physical Impacts |
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| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | Soil erosion and dust |
| Nature of impact: | Disturbance to soil which is caused during the clearing of vegetation may lead to erosion of the site and surrounds. Soil erosion can occur due to wind (wind erosion cause dust pollution); and due to overland storm water flow should rains fall during construction. Due to the sloping nature of the terrain, it is unlikely that a shallow perched water table will develop on site. Residual soils are also expected to have a very low permeability and due to low infiltration rates and the sloping terrain, water will tend to runoff from surface in a downslope direction. |
| Extent and duration of impact: | Extent 1 & Duration 5 (permanent) |
| Consequence of impact or risk: | Clearing and excavation activities can result in erosion and dust. |
| Magnitude | 2 |
| Probability of occurrence: | 2 (Improbable: some possibility, but low likelihood) |
| Degree to which the impact may cause irreplaceable loss of resources: | 2-Resource may be partly destroyed (PR) |
| Degree to which the impact can be reversed: | Completely reversible (R) |
| Indirect impacts: | Disturbance to surface area can result in erosion and dust generation |
| Cumulative impact prior to mitigation: | Exposing soil may lead to erosion and dust generation if not mitigated. |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 16 - Low |
| Degree to which the impact can be avoided: | High |
| Degree to which the impact can be managed: | High |
| Degree to which the impact can be mitigated: | 1-Completely mitigatable (CM) |
| Proposed mitigation: | <ul style="list-style-type: none"> • Access to roads and other areas must be controlled to avoid disturbance of areas outside the development footprint. Personnel should be restricted to the immediate construction areas only. • Monitor construction areas frequently for signs of erosion and if signs of erosion are detected implement repair and preventative measures immediately. • Monitor vegetation clearing activities near sensitive areas such as the wetland and the river. • Undertake dust suppression as needed. • Rehabilitate or stabilise eroded areas immediately to prevent increase in erosion. • Undertake storm water management measures as required. |
| Residual impacts: | It is not anticipated that the impact will be high if the mitigation measures are adhered to. |
| Cumulative impact post mitigation: | It is not anticipated that the impact will be high if the mitigation measures are adhered to. |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 8 - Low |
| OPERATIONAL PHASE | |
| Potential impact and risk: | Not applicable to operational phase. |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | Similar to impacts associated with construction phase. |

STORM WATER

| Alternative: 1 | Geographical and Physical Impacts |
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| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | Increase in storm water / waste water run-off. |
| Nature of impact: | Hardening of surfaces due to the development of the compost will cause an increase in storm water / waste water runoff from the site. |
| Extent and duration of impact: | Extent 2 (on site within 100 m of the site) & Duration 5 (permanent) |
| Consequence of impact or risk: | Additional storm water runoff may lead to erosion in adjacent areas of the farm. The additional storm water may also lead to the flooding of adjacent areas. |
| Magnitude: | 2 |
| Probability of occurrence: | 3 |
| Degree to which the impact may cause irreplaceable loss of resources: | 2-Resource may be partly destroyed (PR) storm water run-off may cause partial loss of other resources |
| Degree to which the impact can be reversed: | Completely reversible (R) |
| Indirect impacts: | Additional storm water runoff may lead to erosion / flooding in adjacent areas of the farm. |
| Cumulative impact prior to mitigation: | Additional storm water runoff may lead to erosion / flooding in adjacent areas of the farm. |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 27 – Low |
| Degree to which the impact can be avoided: | High |
| Degree to which the impact can be managed: | High |
| Degree to which the impact can be mitigated: | 2 |
| Proposed mitigation: | <p>The contractor must take all appropriate and active measures to prevent erosion, especially wind and water erosion, resulting from operations and activities, specifically of storm water control measures to the satisfaction of the ECO/ER. During construction the contractor must protect areas susceptible to wind and water erosion, by installing all the necessary temporary and permanent works. Measures can include brush packing, anchovy net stabilisation, etc. Where required erosion protection measures must be installed. Aspects normally covered in construction contracts in terms of protection of works are standard and are not to be confused with those under environmental legislation.</p> <p>Development footprint must be minimised to ensure minimal disturbance. All areas disturbed during construction must be immediately rehabilitated and stabilised.</p> <p>Create single access points to all construction sites to restrict trampling and erosion.</p> <p>The existing storm water channels that are being left as public open space must be properly established and cleared of litter.</p> |
| Residual impacts: | It is not anticipated that the impact will be high if the mitigation measures are adhered to. |
| Cumulative impact post mitigation: | It is not anticipated that the impact will be high if the mitigation measures are adhered to. |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 27 – Low |
| OPERATIONAL PHASE | |
| Potential impact and risk: | Increase in storm water / waste water run-off. |
| Nature of impact: | Increase in storm water and waste water run-off from hardened surfaces of the compost area. |

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| Extent and duration of impact: | Extent 1 (footprint) & Duration 5 (permanent) |
| Consequence of impact or risk: | Flooding from the development area could result in the pollution of surface and groundwater resources. |
| Magnitude: | 2 |
| Probability of occurrence: | 2 - Improbable: some possibility, but low likelihood |
| Degree to which the impact may cause irreplaceable loss of resources: | 1 - Resource will not be lost (R) |
| Degree to which the impact can be reversed: | 2 - Partly reversible (PR) |
| Indirect impacts: | Loss of livestock and compost windrows due to flooding/erosion events. |
| Cumulative impact prior to mitigation: | Flooding from the development area could result in the pollution of surface and groundwater resources. |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 16 - Low |
| Degree to which the impact can be avoided: | High |
| Degree to which the impact can be managed: | High |
| Degree to which the impact can be mitigated: | 2-Partly mitigatable (PM) |
| Proposed mitigation: | The storm water channels must be monitored and maintained on a regular basis by the municipality. All waste within the channels must be removed on a weekly bases and at the discharge points on a monthly bases and after heavy rains. If any erosion and/or degradation of the storm water channel or surrounds are noticed immediate action must be taken by the municipality to rectify the situation. (Corrective and preventative measures taken will depend upon type and extent of erosion and/or degradation occurring). Storm water should be directed away from the roads and into the existing natural flow paths on site. |
| Residual impacts: | It is not anticipated that the impact will be high if the mitigation measures are adhered to. |
| Cumulative impact post mitigation: | It is not anticipated that the impact will be high if the mitigation measures are adhered to. |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 8 - Low |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | Increased storm water / waste water run-off. |
| Nature of impact: | Similar to construction phase. |

WATER POLLUTION

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| Alternative 1: | Geographical and Physical Impacts |
| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | Impact of construction activities on surface and underground water pollution. |
| Nature of impact: | The site is an Ecological Support Area (watercourse). Construction could result in the pollution of surface water and eventually result in ground water pollution. Storm water contamination will result in surface water pollution. Construction activities such as excavation and clearing of vegetation and or diesel and oil spills could impact surface and ground water quality. |
| Extent and duration of impact: | Extent 3 (Within a 20 km radius of the centre of the site) & Duration 2 (2-5 years) |
| Consequence of impact or risk: | Degradation of ESA. Possible pollution of surface and ground water. |
| Magnitude | 6 |
| Probability of occurrence: | 4 (most likely) |
| Degree to which the impact may cause irreplaceable loss of resources: | Partly destroyed 2 (PR) |
| Degree to which the impact can be reversed: | Partly reversible 6-89% (PR) |
| Indirect impacts: | Pollution of water resources. Degradation of ESA. |
| Cumulative impact prior to mitigation: | Diesel and oil spills affecting ground and surface water quality. |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 44 - Medium |
| Degree to which the impact can be avoided: | High |
| Degree to which the impact can be managed: | High |
| Degree to which the impact can be mitigated: | 2-Partly mitigatable (PM) |
| Proposed mitigation: | Mitigation measures included in EMP, attached as Appendix H, shall be adhered to. |
| Residual impacts: | It is not anticipated that the impact will be high if the mitigation measures are adhered to. |
| Cumulative impact post mitigation: | Diesel and oil spills affecting ground and surface water quality. |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 27 - Low |
| OPERATIONAL PHASE | |
| Potential impact and risk: | Not applicable to operational phase. |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | Similar to impacts associated with construction phase. |

DISTURBANCE TO SUBSURFACE GEOLOGICAL LAYERS

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| Alternative 1: | Geographical and Physical Impacts |
| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | Construction activities can affect the underlying geological layers on site to some extent. |
| Nature of impact: | Disturbance to subsurface geological layers. |
| Extent and duration of impact: | Extent 1 & Duration 2 (2-5 years) |
| Consequence of impact or risk: | Excavation activities can disturb subsurface geological layers. |
| Magnitude | 2 |
| Probability of occurrence: | 2 (Improbable: some possibility, but low likelihood) |
| Degree to which the impact may cause irreplaceable loss of resources: | 2-Resource may be partly destroyed (PR) |
| Degree to which the impact can be reversed: | 0% (IR) |
| Indirect impacts: | Disturbance to surface area can result in erosion and dust generation |
| Cumulative impact prior to mitigation: | It is not anticipated that the impact will be high as the affected substrata is very shallow and the integrity of the underlying ground structures will thus not be sacrificed. |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 10 – Low |
| Degree to which the impact can be avoided: | High |
| Degree to which the impact can be managed: | High |
| Degree to which the impact can be mitigated: | 2 |
| Proposed mitigation: | Due to the nature of the impacts, not much can be done to mitigate the impact, only the severity of it can be managed. Mitigation and management for affecting geology is to ensure that removal of soil is kept to a minimum – removal of soil should only be in areas where infrastructure will be established. Disturbance through the river must preferably be in summer and definitely not when the river flows. The pipe and culvert must be laid and constructed and the area compacted in one time and the area must be immediately filled, shaped, compacted and rehabilitated. |
| Residual impacts: | It is not anticipated that the impact will be high if the mitigation measures are adhered to. |
| Cumulative impact post mitigation: | It is not anticipated that the impact will be high if the mitigation measures are adhered to. |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 10 - Low |
| OPERATIONAL PHASE | |
| Potential impact and risk: | Not applicable to operational phase. |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | Similar to impacts associated with construction phase. |

ECOLOGICAL AND BIOLOGICAL

IMPACT ON SENSITIVE ENVIRONMENTS (RIVER, WETLANDS ETC)

| Alternative 1: | Biological Impacts |
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| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | Impact on sensitive environment specifically the river and wetland. Potential introduction of alien invasive species. Loss of freshwater ecology habitat. Siltation and degradation of river and wetland. |
| Nature of impact: | Disturbance of an ESA2 watercourse. The non-perennial riverine systems have very low flows as part of their annual hydrological cycles. The proposed development project has the potential to lead to the alteration of the aquatic and riparian resources on the study area. |
| Extent and duration of impact: | Extent 2 (On site or within 100 m of the site) & Duration 5 |
| Consequence of impact or risk: | <ul style="list-style-type: none"> • Disturbances of soils leading to increased alien vegetation proliferation, and in turn to further altered freshwater habitat; • Potential sedimentation of the watercourse; • Potential impacts on water quality and contamination of soils within the watercourse; • Potential of backfill material to enter the watercourse, increasing the sediment load within the watercourse. |
| Magnitude | 8 |
| Probability of occurrence: | 4 |
| Degree to which the impact may cause irreplaceable loss of resources: | 2-Resource may be partly destroyed (PR) |
| Degree to which the impact can be reversed: | Partly reversible (PR) |
| Indirect impacts: | Loss of habitat. |
| Cumulative impact prior to mitigation: | <ul style="list-style-type: none"> • Impacts on the hydrology and sediment balance of the river changes to ecological and socio-cultural service provision. • Changes to hydrological function and sediment balance. • Loss of habitat and ecological structure resulting in impacts on vegetation and biota. • Potential risks to water quality. |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 60 – Medium |
| Degree to which the impact can be avoided: | High |
| Degree to which the impact can be managed: | High |
| Degree to which the impact can be mitigated: | 2-Partly mitigatable (PM) |
| Proposed mitigation: | Essential mitigation measures: <ul style="list-style-type: none"> • Limit the footprint area of the construction activity to what is absolutely essential in order to minimise the loss of aquatic habitats in the area. • Keep all demarcated sensitive zones outside of the construction area off limits during the construction phase of the project; • Restrict construction activities to the drier summer months, if possible, to avoid sedimentation and siltation of riparian features in the vicinity of the proposed development and aim for completion in early spring at which time revegetation should take place allowing for a full summer growing season to become established. |
| Residual impacts: | Loss of significantly impacted upon habitat. |
| Cumulative impact post mitigation: | Possible impact on habitats. |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 52 – Medium |
| OPERATIONAL PHASE | |
| Potential impact and risk: | Impact on sensitive environments (rivers, wetlands etc) |

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| Nature of impact: | Disturbance of an ESA2 watercourse |
| Extent and duration of impact: | Extent 2 & Duration 3 |
| Consequence of impact or risk: | Minor disturbance to riparian area and vegetation due to edge effects. Illegal Squatting. |
| Magnitude: | 4 |
| Probability of occurrence: | 4 (most likely) |
| Degree to which the impact may cause irreplaceable loss of resources: | 2-Resource may be partly destroyed (PR) |
| Degree to which the impact can be reversed: | Partly reversible (PR) |
| Indirect impacts: | Loss of habitat. |
| Cumulative impact prior to mitigation: | Loss of habitat. |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 36 – Medium |
| Degree to which the impact can be avoided: | High |
| Degree to which the impact can be managed: | High |
| Degree to which the impact can be mitigated: | 2-Partly mitigatable (PM) |
| Proposed mitigation: | Comply with mitigation measures as per EMP. |
| Residual impacts: | Loss of significantly impacted upon habitat. |
| Cumulative impact post mitigation: | Possible impact on habitats. |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 28 – Low |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | Similar to impacts associated with construction phase. |

DEGRADATION / LOSS OF INDIGENOUS FLORA TERRESTRIL VEGETATION AND HABITATS

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| Alternative 1: | Biological Impacts |
| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | Degradation / loss of naturally occurring / indigenous flora and habitats. |
| Nature of impact: | Vegetation will be removed if the proposed development is approved. |
| Extent and duration of impact: | Extent 2 & Duration 5 |
| Consequence of impact or risk: | Activities can disturb vegetation. |
| Magnitude | 2 |
| Probability of occurrence: | 5 |
| Degree to which the impact may cause irreplaceable loss of resources: | 2-Resource may be partly destroyed (PR) |
| Degree to which the impact can be reversed: | Partly reversible 6-89% |
| Indirect impacts: | Disturbance to surface area can result in erosion and dust generation |
| Cumulative impact prior to mitigation: | Loss of significantly impacted upon vegetation and habitat. |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 45– Medium |
| Degree to which the impact can be avoided: | High |
| Degree to which the impact can be managed: | High |
| Degree to which the impact can be mitigated: | 2 |
| Proposed mitigation: | Construction activities must be controlled to ensure that the adjacent vegetated areas are not negatively impacted. Undertake construction activities only in identified and specifically demarcated areas. Invasive vegetation to be removed during construction to be disposed of at landfill site in such a manner that seeds must not be able to spread from the disposal site or during transportation. At no point may construction equipment stand unauthorised within or near the river. |

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| Residual impacts: | It is not anticipated that the impact will be high if the mitigation measures are adhered to. |
| Cumulative impact post mitigation: | It is not anticipated that the impact will be high if the mitigation measures are adhered to. |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 25 – Low |
| OPERATIONAL PHASE | |
| Potential impact and risk: | Not applicable to operational phase. |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | Similar to impacts associated with construction phase. |

SOCIO-ECONOMIC

INCREASE IN JOBS

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| Alternative 1: | Socio-Economic Impacts |
| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | Increased jobs |
| Nature of impact: | Temporary construction jobs will be created. The locals may not have sufficient skills to utilize the employment opportunities and “others (work force and job seekers)” may be employed from outside the community. |
| Extent and duration of impact: | Extent 3 & Duration 1 (0 – 1 years) |
| Magnitude | 8 (Positive) |
| Consequence of impact or risk: | Influx of contract workers due to lack of skills. Influx of job seekers due to jobs created. Littering. |
| Probability of occurrence: | 4 (most likely) |
| Degree to which the impact may cause irreplaceable loss of resources: | NA – Positive |
| Degree to which the impact can be reversed: | NA – Positive |
| Indirect impacts: | NA – Positive |
| Cumulative impact prior to mitigation: | NA – Positive |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | Positive |
| Degree to which the impact can be avoided: | NA – Positive |
| Degree to which the impact can be managed: | NA – Positive |
| Degree to which the impact can be mitigated: | NA – Positive |
| Proposed mitigation: | Local contractors, employing or seeking to employ local (historically disadvantaged individuals (HDIs) from the region who are suitably qualified, should get preference. The local community and local community organizations should be informed of the project and potential job opportunities. |
| Residual impacts: | NA – Positive |
| Cumulative impact post mitigation: | NA – Positive |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | Positive |
| OPERATIONAL PHASE | |
| Potential impact and risk: | Not applicable to operational phase. |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | Similar to impacts associated with construction phase. |

CRIME

| Alternative 1 | |
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| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | Crime and security |
| Nature of impact: | Increased crime as a result of the influx of temporary workers within the Darling community. |
| Extent and duration of impact: | Extent 3 & Duration 2 |
| Consequence of impact or risk: | Security risk for adjacent land owners and land users. |
| Magnitude: | 2 |
| Probability of occurrence: | 2 |
| Degree to which the impact may cause irreplaceable loss of resources: | PR |
| Degree to which the impact can be reversed: | PR |
| Indirect impacts: | Nuisance, disturbance of the peace, fear within the community. |
| Cumulative impact prior to mitigation: | Increased risk of crime and a sense of insecurity for adjacent land owners / land users. |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 14 – Low |
| Degree to which the impact can be avoided: | Medium |
| Degree to which the impact can be managed: | Medium |
| Degree to which the impact can be mitigated: | Medium |
| Proposed mitigation: | The risk can be mitigated through community awareness and by having a community policing forum / neighbourhood watch to assist with policing within the community. |
| Residual impacts: | None. |
| Cumulative impact post mitigation: | A more informed public with additional visible policing strategies in place. |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 14 - Low |
| OPERATIONAL PHASE | |
| Potential impact and risk: | Crime and security |
| Nature of impact: | Increased crime as a result of the influx of residents within the Darling community. |
| Extent and duration of impact: | Extent 3 & Duration 5 |
| Consequence of impact or risk: | Security risk for adjacent land owners and land users. |
| Magnitude: | 2 |
| Probability of occurrence: | 1 |
| Degree to which the impact may cause irreplaceable loss of resources: | PR |
| Degree to which the impact can be reversed: | PR |
| Indirect impacts: | Nuisance, disturbance of the peace, fear within the community. |
| Cumulative impact prior to mitigation: | Increased risk of crime and a sense of insecurity for adjacent land owners / land users. |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 10 – Low |
| Degree to which the impact can be avoided: | Medium |
| Degree to which the impact can be managed: | Medium |
| Degree to which the impact can be mitigated: | Medium |
| Proposed mitigation: | The risk can be mitigated through community awareness and by having a community policing forum / neighbourhood watch to assist with policing within the community. |
| Residual impacts: | None. |
| Cumulative impact post mitigation: | A more informed public with additional visible policing strategies in place. |

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| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 10 – Low |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | Similar to impacts associated with construction phase. |

TRAFFIC IMPACTS

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| Alternative 1: | Socio-Economic Impacts |
| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | Traffic Impacts |
| Nature of impact: | The construction machinery during the upgrade will have a traffic impact. |
| Extent and duration of impact: | Extent 2 (On site or within 100 m of the site) & Duration 2 |
| Consequence of impact or risk: | Local residents may experience traffic delays. |
| Magnitude | 2 - Minor |
| Probability of occurrence: | 2 |
| Degree to which the impact may cause irreplaceable loss of resources: | 1-Resource will not be lost (R) |
| Degree to which the impact can be reversed: | Partly reversible (PR) |
| Indirect impacts: | The minor increase in travel times for a limited number of local residents, therefore cumulative impact is not significant. |
| Cumulative impact prior to mitigation: | The minor increase in travel times for a limited number of local residents, therefore cumulative impact is not significant. |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 12 – Low |
| Degree to which the impact can be avoided: | Low |
| Degree to which the impact can be managed: | High |
| Degree to which the impact can be mitigated: | 2-Partly mitigatable (PM) |
| Proposed mitigation: | <p>Contractors will at all times be responsible for compliance by their delivery service providers as engaged. Delivery times will be limited to working times as defined in this document.</p> <p>Contractors have the responsibility of advising the property security staff of deliveries expected and to be executed. Contractors must further ensure that drivers of service providers are informed of all procedures and restrictions e.g. which access road to use, speed limits, no-go areas, demarcated construction areas, and maximum allowed vehicle mass etc., as applicable before their first visit to site. Washing of service provider delivery vehicles and equipment will not be allowed on the property and must be carried out elsewhere.</p> |
| Residual impacts: | The minor increase in travel times for a limited number of local residents, therefore cumulative impact is not significant. |
| Cumulative impact post mitigation: | The minor increase in travel times for a limited number of local residents, therefore cumulative impact is not significant. |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 12 - Low |
| OPERATIONAL PHASE | |
| Potential impact and risk: | Traffic Impacts (vehicular and pedestrian) |
| Nature of impact: | Not applicable. Traffic increases negligible. Municipality confirmed infrastructure is suitable for increase in vehicles hence traffic will not increase. |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | Similar to impacts associated with construction phase. |

WASTE IMPACTS

| Alternative 1: | Socio-Economic Impacts |
|---|--|
| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | Waste Impacts |
| Nature of impact: | General construction waste will be generated during the construction phase. Poor waste management practices on site may lead to dumping and windblown litter creating a negative visual impact and nuisance for adjacent landowners / users as well as impacting the natural environment. |
| Extent and duration of impact: | Extent 2 (On site or within 100 m of the site) & Duration 2 |
| Consequence of impact or risk: | Pollution and nuisance. |
| Magnitude: | 4 |
| Probability of occurrence: | 3 |
| Degree to which the impact may cause irreplaceable loss of resources: | 1-Resource will not be lost (R) |
| Degree to which the impact can be reversed: | Reversible |
| Indirect impacts: | Impacts on ecological functioning of river. Impacts on fauna. |
| Cumulative impact prior to mitigation: | <ul style="list-style-type: none"> • Dumping; • Windblown litter causing nuisance; • Pollution / degradation of the natural environment. |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 24 -Low |
| Degree to which the impact can be avoided: | High |
| Degree to which the impact can be managed: | High |
| Degree to which the impact can be mitigated: | 1 |
| Proposed mitigation: | <ul style="list-style-type: none"> • All waste generated on site shall be collected and disposed of at a registered landfill facility; • All safe disposal certificates and waste manifests from service providers to be kept and maintained; • All staff to receive training on correct waste management practices. |
| Residual impacts: | None |
| Cumulative impact post mitigation: | None |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 18 – Low |
| OPERATIONAL PHASE | |
| Potential impact and risk: | Waste Impacts |
| Nature of impact: | Improved waste collection and service provision. Removal of litter in public open spaces according to EMPr. |
| Extent and duration of impact: | Extent 2 (On site or within 100 m of the site) & Duration 5 (Will not cease) |
| Consequence of impact or risk: | NA – Positive |
| Probability of occurrence: | 5 – Definite |
| Degree to which the impact may cause irreplaceable loss of resources: | NA – Positive |
| Degree to which the impact can be reversed: | NA – Positive |
| Indirect impacts: | NA – Positive |
| Cumulative impact prior to mitigation: | NA – Positive |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | Positive |
| Degree to which the impact can be avoided: | NA – Positive |
| Degree to which the impact can be managed: | NA – Positive |
| Degree to which the impact can be mitigated: | NA – Positive |
| Proposed mitigation: | NA – Positive |
| Residual impacts: | NA – Positive |
| Cumulative impact post mitigation: | NA – Positive |

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| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | Positive |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | Similar to impacts associated with construction phase. |

HOUSING PROVISION

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|---|---|
| Alternative 1: | Socio-Economic Impacts |
| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | Housing provision |
| Nature of impact: | NA |
| OPERATIONAL PHASE | |
| Potential impact and risk: | Housing Provision |
| Nature of impact: | Provision of housing and services to the community. |
| Extent and duration of impact: | Extent 2 (On site or within 100 m of the site) & Duration 5 (Will not cease) |
| Consequence of impact or risk: | NA – Positive |
| Probability of occurrence: | 5 – Definite |
| Degree to which the impact may cause irreplaceable loss of resources: | NA – Positive |
| Degree to which the impact can be reversed: | NA – Positive |
| Indirect impacts: | NA – Positive |
| Cumulative impact prior to mitigation: | NA – Positive |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | Positive |
| Degree to which the impact can be avoided: | NA – Positive |
| Degree to which the impact can be managed: | NA – Positive |
| Degree to which the impact can be mitigated: | NA – Positive |
| Proposed mitigation: | NA – Positive |
| Residual impacts: | NA – Positive |
| Cumulative impact post mitigation: | NA – Positive |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | Positive |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | NA |

NOISE

| | |
|---|---|
| Alternative 1: | Socio-Economic Impacts |
| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | Impact of noise on surrounding environment. |
| Nature of impact: | Environmental noise pollution. Nuisance impacts could relate to the increase noise and disturbance associated with the proposed development, e.g. noise, traffic etc. Construction activities and construction personnel on the sites, and construction vehicles moving to and from the sites would cause an increase in noise in the area, which may impact negatively upon the adjoining landowners. |
| Extent and duration of impact: | Extent 2 (On site or within 100 m of the site) & Duration 1 (0 – 1 years) |
| Magnitude | 2 |
| Consequence of impact or risk: | Nuisance |
| Probability of occurrence: | 3 (distinct possibly) |

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| Degree to which the impact may cause irreplaceable loss of resources: | 1-Resource will not be lost (R) |
| Degree to which the impact can be reversed: | Completely reversible (R) - This will not be a long-term impact nor will it have an impact on the natural processes. It is thus 100% reversible. |
| Indirect impacts: | Nuisance |
| Cumulative impact prior to mitigation: | Nuisance |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 15 - Low |
| Degree to which the impact can be avoided: | High |
| Degree to which the impact can be managed: | High |
| Degree to which the impact can be mitigated: | 1- Completely mitigatable (CM) |
| Proposed mitigation: | <ul style="list-style-type: none"> Working hours will be restricted to normal working hours. All noise and sounds generated by plant or machinery must adhere to SABS 0103 specifications for the maximum permissible noise levels. All plant and machinery are to be fitted with adequate silencers. No sound amplification equipment such as sirens, loud hailers or hooters may be used on site, after normal working hours, except in emergencies. If work is to be undertaken outside of normal work hours, permission must be obtained from the Local Authority |
| Residual impacts: | Nuisance |
| Cumulative impact post mitigation: | Nuisance |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 15 - Low |
| OPERATIONAL PHASE | |
| Potential impact and risk: | Not applicable to operational phase. |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | Similar to impacts associated with construction phase. |

VISUAL IMPACT

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|---|---|
| Alternative 1: | Socio-Economic Impacts |
| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | The surrounding land users/ owners will be exposed to the presence of the construction machinery |
| Nature of impact: | Visual impact of construction of proposed serviced erven |
| Extent and duration of impact: | Extent 3 & Duration 2 (2-5 years) |
| Consequence of impact or risk: | The surrounding land users/ owners will be exposed to the presence of the construction machinery |
| Magnitude | 2 |
| Probability of occurrence: | 4 (most likely) |
| Degree to which the impact may cause irreplaceable loss of resources: | 2 (PR) |
| Degree to which the impact can be reversed: | 2 (PM) |
| Indirect impacts: | |
| Cumulative impact prior to mitigation: | Unightly construction camp/s and activities on construction site |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 28 - Low |
| Degree to which the impact can be avoided: | Low |
| Degree to which the impact can be managed: | Low |
| Degree to which the impact can be mitigated: | Low |
| Proposed mitigation: | <ul style="list-style-type: none"> Proposed construction activities must be limited to development footprint site. Construction camp must be neatly fenced and construction site must be neat and tidy. |

| | |
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| | <ul style="list-style-type: none"> Stockpile construction materials in one specific area. Criteria |
| Residual impacts: | Unightly |
| Cumulative impact post mitigation: | The surrounding environment will not be affected by construction activities |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 24 – Low |
| OPERATIONAL PHASE | Not applicable |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | Similar to construction phase. |

IMPACT TABLES-NO-GO

GEOGRAPHICAL AND PHYSICAL

SOIL EROSION AND DUST

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| Alternative 1: | Geographical and Physical Impacts |
| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | Not applicable |
| OPERATIONAL PHASE | |
| Potential impact and risk: | Soil erosion |
| Nature of impact: | Storm water channels prone to erosion. |
| Extent and duration of impact: | Extent 2 & Duration 3 (5 – 15 years) |
| Consequence of impact or risk: | Degradation of ESA. Possible pollution of surface and ground water. |
| Magnitude | 4 (will cause a slight impact on processes) |
| Probability of occurrence: | 4 (most likely) |
| Degree to which the impact may cause irreplaceable loss of resources: | 2-Resource may be partly destroyed (PR) |
| Degree to which the impact can be reversed: | Partly reversible (PR) |
| Indirect impacts: | Pollution of water resources. Degradation of ESA. |
| Cumulative impact prior to mitigation: | Erosion and impact on watercourse. |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 36-Medium |
| Degree to which the impact can be avoided: | Low |
| Degree to which the impact can be managed: | Low |
| Degree to which the impact can be mitigated: | 3 |
| Proposed mitigation: | NA |
| Residual impacts: | Soil erosion. |
| Cumulative impact post mitigation: | Soil erosion. |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 36 – Medium |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | Not applicable |

SURFACE AND GROUND WATER POLLUTION

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| Alternative 1: | Geographical and Physical Impacts |
| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | Not applicable |
| OPERATIONAL PHASE | |
| Potential impact and risk: | Surface and ground water pollution |
| Nature of impact: | Lack of access to services can result in water pollution due to limited waste services. Litter. |
| Extent and duration of impact: | Extent 2 & Duration 5 (will not cease) |
| Consequence of impact or risk: | Degradation of ESA. Possible pollution of surface and ground water. |
| Magnitude | 4 (will cause a slight impact on processes) |
| Probability of occurrence: | 5 (impact will occur regardless of any prevention measures) |
| Degree to which the impact may cause irreplaceable loss of resources: | 2-Resource may be partly destroyed (PR) |
| Degree to which the impact can be reversed: | Partly reversible (PR) |
| Indirect impacts: | Pollution of water resources. Degradation of ESA. |
| Cumulative impact prior to mitigation: | Erosion and impact on watercourse. |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 55-High |
| Degree to which the impact can be avoided: | Low |
| Degree to which the impact can be managed: | Low |
| Degree to which the impact can be mitigated: | 3 |
| Proposed mitigation: | NA |
| Residual impacts: | Pollution. |
| Cumulative impact post mitigation: | Pollution. |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 55 – High |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | Not applicable |

ECOLOGICAL AND BIOLOGICAL

IMPACT ON SENSITIVE ENVIRONMENTS (RIVER)

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|---|---|
| Alternative 1: | Biological Aspect Impacts |
| PLANNING, DESIGN AND DEVELOPMENT PHASE | |
| Potential impact and risk: | Not applicable. |
| OPERATIONAL PHASE | |
| Potential impact and risk: | Vehicles and pedestrians using the informal road to cross the river results in degradation of the river. |
| Extent and duration of impact: | Extent 2 & Duration 3 (5 – 15 years) |
| Consequence of impact or risk: | Degradation of ESA. |
| Magnitude | 4 (will cause a slight impact on processes) |
| Probability of occurrence: | 4 (most likely) |
| Degree to which the impact may cause irreplaceable loss of resources: | 2-Resource may be partly destroyed (PR) |
| Degree to which the impact can be reversed: | Partly reversible (PR) |
| Indirect impacts: | Pollution of water resources. Soil erosion. Degradation of ESA. |
| Cumulative impact prior to mitigation: | Erosion and impact on watercourse. |
| Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 36 – Medium |
| Degree to which the impact can be avoided: | Low |
| Degree to which the impact can be managed: | Low |
| Degree to which the impact can be mitigated: | 3 |
| Proposed mitigation: | NA |
| Residual impacts: | Changes to hydrology and flow. |
| Cumulative impact post mitigation: | Changes to hydrology and flow. |
| Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High) | 36 – Medium |
| DECOMMISSIONING AND CLOSURE PHASE | |
| Potential impact and risk: | Not applicable |