GEOGRAPHICAL AND PHYSICAL

SURFACE AND GROUND WATER POLLUTION

Alternative: 1	Geographical and Physical Impacts
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Surface Water Contamination**
Nature of impact:	**Not applicable to the planning, design and development phase.**
OPERATIONAL PHASE	
Potential impact and risk:	**Surface Water Contamination**
Nature of impact:	**Leachate generation from the processing of compost.**
Extent and duration of impact:	**Extent 3 (Within a 20 km radius of the centre of the site) & Duration 3 (5 – 15 years)**
Consequence of impact or risk:	**Possible pollution of surface water.**
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.**
Cumulative impact prior to mitigation:	**Surface water contamination / pollution.**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**64 - High**
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:	**This is mitigated minimising, containing and re-using contaminated stormwater and leachate so there is no discharge of contaminated wastewater from the premises; avoid run-off from feedstock or compost material.** **Sediments and suspended solids. This is mitigated through the revegetation of exposed soils; reducing runoff volume and velocity; avoiding run-off from feedstock, compost material, exposed soil; and good housekeeping.**
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)	**28 - Low**
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**Surface Water Contamination**
Nature of impact:	**Not applicable to the planning, design and development phase.**

Alternative: 1	Geographical and Physical Impacts
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Ground Water Contamination**
Nature of impact:	**Not applicable to the planning, design and development phase.**
OPERATIONAL PHASE	

Potential impact and risk:	**Ground Water Contamination**
Nature of impact:	**Leachates from the processing of compost**
Extent and duration of impact:	**Extent 3 (Within a 20 km radius of the centre of the site) & Duration 3 (5 – 15 years)**
Consequence of impact or risk:	**Possible pollution of ground water.**
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.**
Cumulative impact prior to mitigation:	**Surface water contamination / pollution.**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**64 - High**
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:	**This can be mitigated by storing feedstock and compost on bunded and hard foundation, where practical to minimise groundwater intrusion.**
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)	**28 - Low**
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**Ground Water Contamination**
Nature of impact:	**Not applicable to the planning, design and development phase.**

Alternative: 1	**Geographical and Physical Impacts**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Soil contamination**
Nature of impact:	**Not applicable to the planning, design and development phase.**
OPERATIONAL PHASE	
Potential impact and risk:	**Soil contamination**
Nature of impact:	**Leachate allowed to infiltrate through the ground.**
Extent and duration of impact:	**Extent 3 (Within a 20 km radius of the centre of the site) & Duration 3 (5 – 15 years)**
Consequence of impact or risk:	**Soil contamination**
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:	**Soil contamination**
Cumulative impact prior to mitigation:	**Soil contamination**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**64 - High**

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:	**This is controlled through reducing leachate infiltration; storing feedstock and compost on bunded and hard foundation, where practical to minimise groundwater intrusion.**
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)	**28 - Low**
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**Soil contamination**
Nature of impact:	**Not applicable to the planning, design and development phase.**

EMISSIONS AND AIR QUALITY

Alternative: 1	**Geographical and Physical Impacts**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Odour**
Nature of impact:	**Not applicable to the planning, design and development phase.**
OPERATIONAL PHASE	
Potential impact and risk:	**Odour**
Nature of impact:	**Possible odorous emissions associated with the biological decomposition process of organic waste to produce compost may be emitted. The compost facility will operate in terms of best practice measures intend to minimise or avoid offensive odours.** **Hydrogen sulphide and ammonia as gaseous emissions, which could be associated with the activity and might negatively affect the receptor community and the environment. In order to ensure the above-mentioned odorous emissions from this proposed activity is not harmful to the health and well-being of people, passive fence line monitoring for these pollutants may be required by the relevant authority.** **The National Ambient Air Quality Standards in terms of Section 9(1) of the Air Quality Act as promulgated in the Government Notice 1210 of 2009 does not make provision for limit values as odour indicators, aimed to reduce the detrimental effect on the environment, including health, social conditions, economic conditions, ecological conditions or cultural heritage. Although South Africa do not have guidelines for controlling and managing odours, various odour thresholds and guidelines have been published internationally in the determination of the odour impact.**
Extent and duration of impact:	**Extent 3 (local) & Duration 5 (permanent)**
Consequence of impact or risk:	**Air pollution**
Probability of occurrence:	**4 (Highly probable (HP))**
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:	**Negative impact on surrounding air quality.**
Cumulative impact prior to mitigation:	**Negative impact on surrounding air quality.** **Hydrogen sulphide and ammonia as gaseous emissions, which could be associated with the activity and might negatively affect the receptor community and the environment.**
Significance rating of impact prior to mitigation	**48 – Medium**

(e.g. Low, Medium, Medium-High, High, or Very-High)	
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 applicant must follow best available techniques (BAT) to avoid offensive odours at the compost facility.** • **Increased aeration of compost piles;** • **Decreased moisture content of over-saturated piles;** • **Prevent water-logging** • **Minimise storage of unprocessed feedstock;** • **Install odour control equipment;** • **Correct C:N ratio;** • **Reduce the use of high quality nitrogen feedstocks.**
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)	**Low**
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**Odour**
Nature of impact:	**Not applicable to the planning, design and development phase.**

Alternative: 1	**Geographical and Physical Impacts**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Exhaust Emissions**
Nature of impact:	**Not applicable to the planning, design and development phase.**
OPERATIONAL PHASE	
Potential impact and risk:	**Exhaust Emissions**
Nature of impact:	**Excessive exhaust emissions may be generated from vehicles and the operation of machinery.**
Extent and duration of impact:	**Extent 3 (local) & Duration 5 (permanent)**
Consequence of impact or risk:	**Air pollution / Nuisance**
Probability of occurrence:	**4 (Highly probable (HP))**
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:	**Air pollution / Nuisance**
Cumulative impact prior to mitigation:	**Air pollution / Nuisance**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**48 – 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:	**This can be mitigated by attaching emission filters onto the vehicles / equipment.**
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)	**Low**
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**Exhaust Emissions**
Nature of impact:	**Not applicable to the planning, design and development phase.**

Alternative: 1	**Geographical and Physical Impacts**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Dust**
Nature of impact:	**Not applicable to the planning, design and development phase.**
OPERATIONAL PHASE	
Potential impact and risk:	**Dust**
Nature of impact:	**Dust may be generated by vehicle movement, exposed soils and during storage, shredding, mixing, and screening of compost.**
Extent and duration of impact:	**Extent 3 (local) & Duration 5 (permanent)**
Consequence of impact or risk:	**Air pollution / Nuisance**
Probability of occurrence:	**4 (Highly probable (HP))**
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:	**Air pollution / Nuisance**
Cumulative impact prior to mitigation:	**Air pollution / Nuisance**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**48 – 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:	**This is mitigated by covering dusty materials; applying a light water spray over the dry materials; paving of all operating, storage, unloading and loading areas; and revegetating exposed soils**
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)	**Low**
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**Dust**
Nature of impact:	**Not applicable to the planning, design and development phase.**

Alternative: 1	**Geographical and Physical Impacts**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Bio-aerosols**
Nature of impact:	**Not applicable to the planning, design and development phase.**
OPERATIONAL PHASE	
Potential impact and risk:	**Bio-aerosols**

Nature of impact:	**Bio-aerosols are organisms which can enter the ambient air during the movement and agitation of materials.**
Extent and duration of impact:	**Extent 3 (local) & Duration 5 (permanent)**
Consequence of impact or risk:	**Air pollution / Nuisance**
Probability of occurrence:	**4 (Highly probable (HP))**
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:	**Air pollution / Nuisance**
Cumulative impact prior to mitigation:	**Air pollution / Nuisance**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**48 – 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:	**This is mitigated though the paving of all operating, storage, unloading and loading areas; applying a light water spray over the dry materials; windbreaks around the facility/windrows; and suction sweeping of areas.**
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)	**Low**
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**Bio-aerosols**
Nature of impact:	**Not applicable to the planning, design and development phase.**

COMPACTION OF SOIL

Alternative: 1	**Geographical and Physical Impacts**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Compaction of soil.**
Nature of impact:	**Compaction of soil is required for surfaces used for composting activities.**
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:	**Soil compaction will contribute to the loss of soil functionality; as such compaction will cause a slight impact on processes.**
Probability of occurrence:	**4 - Highly Probable (HP)**
Degree to which the impact may cause irreplaceable loss of resources:	**2 - Resource may be partly destroyed.**
Degree to which the impact can be reversed:	**2 - Partly reversible (PR)**
Indirect impacts:	**The compaction of the topsoil would further reduce the likelihood of salts leaching from the profile to contaminate groundwater.**
Cumulative impact prior to mitigation:	**Loss of soil functionality on the development footprint or within 100m of the site.**
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:	**Low**
Degree to which the impact can be managed:	**High - can be managed to occur only on the development footprint.**
Degree to which the impact can be mitigated:	**2 - Partly.**

Proposed mitigation:	**Demarcation and work within demarcated areas only.**
Residual impacts:	**Loss of soil functionality on the development areas.**
Cumulative impact post mitigation:	**The compaction of the topsoil would further reduce the likelihood of salts leaching from the profile to contaminate groundwater**
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**40 - Medium**
OPERATIONAL PHASE	
Potential impact and risk:	**Compaction of soil.**
Nature of impact:	**Maintenance of hardened surfaces required for composting activities.**
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:	**Soil compaction will contribute to the loss of soil functionality; as such compaction will cause a slight impact on processes.**
Probability of occurrence:	**4 - Highly Probable (HP)**
Degree to which the impact may cause irreplaceable loss of resources:	**2 - Resource may be partly destroyed.**
Degree to which the impact can be reversed:	**2 - Partly reversible (PR)**
Indirect impacts:	**The compaction of the topsoil would further reduce the likelihood of salts leaching from the profile to contaminate groundwater.**
Cumulative impact prior to mitigation:	**Loss of soil functionality on the development footprint or within 100m of the site.**
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:	**Low**
Degree to which the impact can be managed:	**High - can be managed to occur only on the development footprint.**
Degree to which the impact can be mitigated:	**2 - Partly.**
Proposed mitigation:	**Demarcation and work within demarcated areas only.**
Residual impacts:	**Loss of soil functionality on the development areas.**
Cumulative impact post mitigation:	**The compaction of the topsoil would further reduce the likelihood of salts leaching from the profile to contaminate groundwater.**
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**40 - Medium**
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**Compaction of soil.**
Nature of impact:	**Compaction of soil resulting from the removal of structures (stormwater cut off drains and retention pond) and rehabilitation of disturbed areas.**
Extent and duration of impact:	**Extent 1 (footprint) & Duration 2 (two to five years)**
Consequence of impact or risk:	**Removal of structures would require the use of heavy machinery contribution to the compaction of soil.**
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:	**Hardening of surfaces.**
Cumulative impact prior to mitigation:	**Loss of soil functionality.**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**8 - 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:	**Demarcation and work within demarcated areas only.**
Residual impacts:	**Loss of soil functionality.**
Cumulative impact post mitigation:	**Loss of soil functionality.**
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**8 - Low**

INCREASE IN STORM WATER /WASTE WATER RUN-OFF

Alternative: 1	**Geographical and Physical Impacts**
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.**
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)** **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)	**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:	**A storm water management plan is included in Appendix K2. All storm water / waste water from the compost areas will gravitate towards the collection dam. The collected water will then be re-used in the composting process to moisten the windrows. In order to limit the runoff to the dams a cut-off drain will be constructed on the southern boundary of Portion 56. Runoff from the adjacent property will then be intercepted and directed towards the watercourse described above. This will reduce the catchment area of stormwater crossing the properties to ±13ha.**
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:	**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.**
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.** **Erosion of adjacent areas could result in damage to property and impacts on sensitive environments located on the property.**
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. Erosion of adjacent areas could result in damage to property and impacts on sensitive environments located on the property.**
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:	**A storm water management plan is included in Appendix K2. All storm water / waste water from the compost areas will gravitate towards the collection dam. The collected water will then be re-used in the composting process to moisten the windrows. In order to limit the runoff to the dams a cut-off drain will be constructed on the southern boundary of Portion 56. Runoff from the adjacent property will then be intercepted and directed towards the watercourse described above. This will reduce the catchment area of stormwater crossing the properties to ±13ha.**
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:	**Not Applicable.**

ECOLOGICAL AND BIOLOGICAL

IMPACT ON FAUNA

Alternative: 1	**Biological Aspect Impacts**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Impact on Fauna.**
Nature of impact:	**Not Applicable.**
OPERATIONAL PHASE	
Potential impact and risk:	**Impact on Fauna.**
Nature of impact:	**Human/Wildlife Interactions.**
Extent and duration of impact:	**Extent 1 (footprint) & Duration 5 (permanent)**
Consequence of impact or risk:	**Attraction of un-wanted naturally occurring wild animals to the vicinity as a result composting activities.**
Probability of occurrence:	**3 - Probable**
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:	**Shift in distribution of certain animals entering the area due to their opportunistic nature and the potential scavenging opportunities the compost facility pose.**
Cumulative impact prior to mitigation:	• **Human/wildlife interactions** • **Damage to property** • **Attraction of nuisance (un-wanted) animals**
Significance rating of impact prior to mitigation	**24 - Low**

(e.g. Low, Medium, Medium-High, High, or Very-High)	
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:	**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:	**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)	**14 - Low**
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**Impact on fauna.**
Nature of impact:	**Not Applicable.**

IMPACT ON SENSITIVE ENVIRONMENTS (RIVERS, WETLANDS ETC)

Alternative: 1	**Biological Aspect Impacts**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Impact on sensitive environments (rivers, wetlands etc)**
Nature of impact:	**Compost facility within 100m from a watercourse.**
Extent and duration of impact:	**Extent 1 (footprint) & Duration 1 (0 – 1 years)**
Consequence of impact or risk:	**Polluted water entering the non-perennial water course with impacts to the river quality and ecological functioning.**
Probability of occurrence:	**2 - Improbable (I)**
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:	**2 - Partly reversible (PR)**
Indirect impacts:	**Loss of significantly impacted upon habitat.**
Cumulative impact prior to mitigation:	**A non-perennial tributary of the Klapmuts river runs adjacent to the western boundary of portions 716/54 and 716/56.** **The existing earthen dams located on portion 54 and 56 respectively has been classified as follows in terms of the western cape biodiversity spatial plan 2017:** **Feature: River, Wetland, Watercourse** **Category 1: ESA2: Restore from other land use** **It is not the intention for the proposed development to negatively impact on the existing functioning of these two earthen dams. It is proposed that the two dams be consolidated into one dam and that a 3m earthen dam wall be erected on the dam's western boundary. This will allow for sufficient capacity within the dam for the stormwater runoff from the properties and the activities proposed to be conducted on these properties. The dam is expected to have a combined capacity of approximately 13800m^3 sufficient for a catchment of 13ha with the implementation of the cut-off drain established on the southern boundary of portion 53 to limit runoff on the property from adjacent properties.** **Northern half of portion 54 is classified as a CBA: Terrestrial. The CBA makes up 13.2% of the proposed development area and consists predominantly of grass and a clustering of trees. The CBA falls within an ecosystem which historically consists of Swartland Alluvium Fynbos (CR). It is however not likely that this classification is consistent with the current vegetation (grass and clustering of trees) on the property. The conservation / biodiversity significance of the vegetation present is considered to be low.**
Significance rating of impact prior to mitigation	**8 – Low**

(e.g. Low, Medium, Medium-High, High, or Very-High)	
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:	**It is not the intention for the proposed development to negatively impact on the existing functioning of these two earthen dams. It is proposed that the two dams be consolidated into one dam and that a 3m earthen dam wall be erected on the dam's western boundary. This will allow for sufficient capacity within the dam for the stormwater runoff from the properties and the activities proposed to be conducted on these properties. The dam is expected to have a combined capacity of approximately 13800m³ sufficient for a catchment of 13ha with the implementation of the cut-off drain established on the southern boundary of portion 53 to limit runoff on the property from adjacent properties.** **Northern half of portion 54 is classified as a CBA: Terrestrial. The CBA makes up 13.2% of the proposed development area and consists predominantly of grass and a clustering of trees. The CBA falls within an ecosystem which historically consists of Swartland Alluvium Fynbos (CR). It is however not likely that this classification is consistent with the current vegetation (grass and clustering of trees) on the property. The conservation / biodiversity significance of the vegetation present is considered to be low.**
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)	**3 - Low**
OPERATIONAL PHASE	
Potential impact and risk:	**Impact on sensitive environments (rivers, wetlands etc)**
Nature of impact:	**Compost facility within 100m from a watercourse.**
Extent and duration of impact:	**Extent 3 Local (Within a 20 km radius of the centre of the site) & Duration 4 Long term (>15 years)**
Consequence of impact or risk:	**Polluted water entering the non-perennial water course with impacts to the river quality and ecological functioning.**
Probability of occurrence:	**2 - Improbable (I)**
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:	**2 - Partly reversible (PR)**
Indirect impacts:	**Loss of habitat and ecological support areas.**
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)	**30 - 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:	**1- Completely mitigatable (CM)**
Proposed mitigation:	**It is not the intention for the proposed development to negatively impact on the existing functioning of these two earthen dams. It is proposed that the two dams be consolidated into one dam and that a 3m earthen dam wall be erected on the dam's western boundary. This will allow for sufficient capacity within the dam for the stormwater runoff from the properties and the activities proposed to be conducted on these properties. The dam is expected to have a combined capacity of approximately 13800m³ sufficient for a catchment of 13ha with the implementation of the cut-off drain established on the southern boundary of portion 53 to limit runoff on the property from adjacent properties.** **Northern half of portion 54 is classified as a CBA: Terrestrial. The CBA makes up 13.2% of the proposed development area and consists predominantly of grass and a clustering of trees. The CBA falls within an ecosystem which historically consists of Swartland Alluvium Fynbos (CR). It is however not likely that this classification is consistent with the current vegetation (grass and clustering of trees) on the property. The conservation / biodiversity significance of the vegetation present is considered to be low.**

Residual impacts:	**Loss of habitat.**
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)	**Low**
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**Impact on sensitive environments (rivers, wetlands etc)**
Nature of impact:	**The decommissioning activities will only take place on disturbed areas.**
Extent and duration of impact:	**Extent 2 (On site or within 100 m of the site) & Duration 1 (0 – 1 years)**
Consequence of impact or risk:	**Degradation of water course**
Probability of occurrence:	**1 - Very improbable (VP)**
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 significantly impacted upon habitat.**
Cumulative impact prior to mitigation:	**Loss of significantly impacted upon habitat.**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**7 – 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:	**Work within site boundaries with no decommissioning activities outside the boundary of the proposed development.**
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)	**3 - Low**

SOCIO-ECONOMIC

TRAFFIC

Alternative: 1	**Socio-Economic Impacts**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Traffic Impacts**
Nature of impact:	**The construction machinery will only have a traffic impact on delivery to, and collection from the site and are therefore regarded as negligible.**
Extent and duration of impact:	**Extent 2 (On site or within 100 m of the site) & Duration 2 (2 – 5 years)**
Consequence of impact or risk:	**The construction machinery will only have a traffic impact on delivery to, and collection from the site and are therefore regarded as negligible.**
Probability of occurrence:	**2 (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:	**Partly reversible (PR)**
Indirect impacts:	**The minor increase in traffic volumes at certain times of day will add to the existing traffic volumes. As the existing traffic volumes are relatively low, this cumulative impact is not significant.**

Cumulative impact prior to mitigation:	**The minor increase in traffic volumes at certain times of day will add to the existing traffic volumes. As the existing traffic volumes are relatively low, this cumulative impact is not significant.**
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:	**Avoid peak traffic hours (07h00 – 08h00 and 17h00 – 18h00) as far as possible**
Residual impacts:	**The minor increase in traffic volumes at certain times of day will add to the existing traffic volumes. As the existing traffic volumes are relatively low, this cumulative impact is not significant.**
Cumulative impact post mitigation:	**The minor increase in traffic volumes at certain times of day will add to the existing traffic volumes. As the existing traffic volumes are relatively low, this cumulative impact is not significant.**
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**8 – Low**
OPERATIONAL PHASE	
Potential impact and risk:	**Traffic Impacts**
Nature of impact:	**The existing composting facility and proposed expansion area is located approximately 3km northwest of Klapmuts off Divisional Road 1104, access to the site is obtained on Minor Road 5241 (See locality map in Appendix A1). It is expected that as a result of the expansion of the composting facility the existing traffic on Divisional Road 1104 and Minor Road 5241 is expected to slightly increase as the facility would require more deliveries of organic waste, bulking agents and the transporting of finished product from the facility.**
Extent and duration of impact:	**Extent 3 (Within 20 km from the centre of the site) & Duration 5 (Will not cease)**
Consequence of impact or risk:	**Dusts, noise and the obstruction of Divisional Road 1104 and Minor Road 5241.**
Probability of occurrence:	**2 - Improbable (I)**
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:	**The impact of the slight increase in traffic could result in additional dust, noise and congestion on and adjacent to the two roads.**
Cumulative impact prior to mitigation:	**The increase in traffic volumes at certain times of day will add to the existing traffic volumes. The two to three trips per day required by the facility will not have an additional substantial impact if compared to the surrounding environment and existing traffic volumes.**
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:	**This can be mitigated by the implementation of a delivery schedule, limiting speed on these roads, ensuring that deliveries are only conducted during normal working hours and days.**
Residual impacts:	**The increase in traffic volumes at certain times of day will add to the existing traffic volumes. As the existing traffic volumes are relatively low, this cumulative impact is not significant.**
Cumulative impact post mitigation:	**The increase in traffic volumes at certain times of day will add to the existing traffic volumes. As the existing traffic volumes are relatively low, this cumulative impact is not significant.**
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**16 – Low**
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**Traffic Impacts**
Nature of impact:	**The decommissioning machinery will only have a traffic impact on delivery to, and collection from the site and are therefore**

	regarded as negligible.
Extent and duration of impact:	**Extent 2 (On site or within 100 m of the site) & Duration 2 (2 – 5 years)**
Consequence of impact or risk:	**The decommissioning machinery will only have a traffic impact on delivery to, and collection from the site and are therefore regarded as negligible.**
Probability of occurrence:	**2 (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:	**Partly reversible (PR)**
Indirect impacts:	**The minor increase in traffic volumes at certain times of day will add to the existing traffic volumes. As the existing traffic volumes are relatively low, this cumulative impact is not significant.**
Cumulative impact prior to mitigation:	**The minor increase in traffic volumes at certain times of day will add to the existing traffic volumes. As the existing traffic volumes are relatively low, this cumulative impact is not significant.**
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:	**Avoid peak traffic hours (07h00 – 08h00 and 17h00 – 18h00) as far as possible**
Residual impacts:	**The minor increase in traffic volumes at certain times of day will add to the existing traffic volumes. As the existing traffic volumes are relatively low, this cumulative impact is not significant.**
Cumulative impact post mitigation:	**The minor increase in traffic volumes at certain times of day will add to the existing traffic volumes. As the existing traffic volumes are relatively low, this cumulative impact is not significant.**
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**8 – Low**

NOISE

Alternative: 1	**Socio-Economic Impacts**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Noise.**
Nature of impact:	**Noise can be generated from the delivery of products to or from the facility.** **Noise can also be generated through construction activities associated with the composting facility.**
Extent and duration of impact:	**Extent 2 (On site or within 100 m of the site) & Duration 1 (0 – 1 years)**
Consequence of impact or risk:	**Nuisance**
Probability of occurrence:	**3 - Probable (P)**
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:	**Nuisance**
Cumulative impact prior to mitigation:	**Nuisance**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**9 – 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- Partially mitigatable (PM)**

Proposed mitigation:	**Machinery and vehicles should be regularly maintained to prevent excessive noise. All machinery and work activities must adhere to the requirements of the noise regulations.**
Residual impacts:	**Nuisance**
Cumulative impact post mitigation:	**Nuisance**
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**7 - Low**
OPERATIONAL PHASE	
Potential impact and risk:	**Noise impacts**
Nature of impact:	**Noise can be generated from the delivery of products to or from the facility.** **Noise can also be generated through operational activities associated with the composting process.** **Vehicles and machinery such as front loaders / digger-loaders / chipping machine may be some of the machinery used at the facility for the forming of windrows, turning of windrows or for the chipping of wood to be used as bulking agents during the composting process.**
Extent and duration of impact:	**Extent 2 (On site or within 100 m of the site) & Duration 1 (0 – 1 years)**
Consequence of impact or risk:	**Nuisance**
Probability of occurrence:	**3 - Probable (P)**
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:	**Nuisance**
Cumulative impact prior to mitigation:	**Nuisance**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**9 – 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- Partially mitigatable (PM)**
Proposed mitigation:	**This can be mitigated through the implementation of a delivery schedule to ensure that deliveries are only conducted during normal working hours and days.** **This can be mitigated through the restriction of operating hours of the facility to ensure that excessive noise outside of normal operating hours is not generated.**
Residual impacts:	**Nuisance**
Cumulative impact post mitigation:	**Nuisance**
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**7 - Low**
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**Noise due to decommissioning machinery**
Nature of impact:	**Noise due to decommissioning machinery during the decommissioning phase. Decommissioning machinery may cause noise disturbance to the directly adjacent land users/ owners. It is not anticipated that the noise will be considerable and will only be temporary. Noise due to decommissioning activities is unlikely to cause a nuisance to adjacent neighbours.** **Machinery and vehicles should be regularly maintained to prevent excessive noise. All machinery and work activities must adhere to the requirements of the noise regulations.**
Extent and duration of impact:	**Extent 2 (On site or within 100 m of the site) & Duration 1 (0 – 1 years)**
Consequence of impact or risk:	**Nuisance**
Probability of occurrence:	**1 - Very improbable (VP)**

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:	**Nuisance**
Cumulative impact prior to mitigation:	**Nuisance**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**9 – 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- Partially mitigatable (PM)**
Proposed mitigation:	**Machinery and vehicles should be regularly maintained to prevent excessive noise. All machinery and work activities must adhere to the requirements of the noise regulations.**
Residual impacts:	**Nuisance**
Cumulative impact post mitigation:	**Nuisance**
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**7 - Low**

FLIES

Alternative: 1	**Socio-Economic Impacts**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Flies.**
Nature of impact:	**Not applicable.**
OPERATIONAL PHASE	
Potential impact and risk:	**Flies.**
Nature of impact:	**Flies attracted as a result of the composting activities.**
Extent and duration of impact:	**Extent 3 (local) & Duration 5 (permanent)**
Consequence of impact or risk:	**Nuisance**
Probability of occurrence:	**4 - Highly probable (HP)**
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:	**Nuisance**
Cumulative impact prior to mitigation:	**Nuisance**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**48 – 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:	• **All by-products are covered immediately on delivery which reduces the numbers of flies to a large extent.** • **The composting process will control the spread of diseases through correct management of temperature and ph. No larva/eggs/worms/bacteria can live in the desirable 55°C within the windrows.** • **Treatment of windrows with chemicals to kill breeding flies attracted to the windrows.**

	• **Implementation of flytraps around the boundary of the composting facility as required.** • **This will be replaced on a regularly basis.** • **Problems experienced / complaints received will be recorded in a complaints register and addressed when 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)	**Low**
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**Flies.**
Nature of impact:	**Not applicable.**

ODOURS

Alternative: 1	**Socio-Economic Impacts**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Odours**
Nature of impact:	**Not applicable.**
OPERATIONAL PHASE	
Potential impact and risk:	**Odours**
Nature of impact:	**Odours from the composting activities.**
Extent and duration of impact:	**Extent 3 (local) & Duration 5 (permanent)**
Consequence of impact or risk:	**Nuisance**
Probability of occurrence:	**4 - Highly probable (HP)**
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:	**Nuisance**
Cumulative impact prior to mitigation:	**Nuisance**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**48 – 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:	• **The balance of PH, temperature, air, moisture are critical parameters to ensure correct fermentation/digestion without causing odour or any other problems in the composting facility.** • **Any feedstock that is brought to the site is covered immediately.** • **Problems experienced / complaints received will be recorded in a complaints register and addressed when required.** **(See section on emissions in the tables above).**
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)	**Low**
DECOMMISSIONING AND CLOSURE PHASE	

Potential impact and risk:	**Odours**
Nature of impact:	**Not applicable.**

TOURISM

Alternative: 1	**Socio-Economic Impacts**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Tourism**
Nature of impact:	**Not applicable.**
OPERATIONAL PHASE	
Potential impact and risk:	**Tourism**
Nature of impact:	**Nuisance as a result of the operation of the compost facility.**
Extent and duration of impact:	**Extent 3 (local) & Duration 5 (permanent)**
Consequence of impact or risk:	**Nuisance, Loss of visitors to the area, Financial implications of adjacent tourism related business as a result of the facility.**
Probability of occurrence:	**4 - Highly probable (HP)**
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:	**Nuisance, Loss of visitors to the area, Financial implications of adjacent tourism related business as a result of the facility.**
Cumulative impact prior to mitigation:	**Nuisance, Loss of visitors to the area, Financial implications of adjacent tourism related business as a result of the facility.**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**48 – 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:	**Nuisance to be mitigated as described in the impacts tables above which deal with noise, flies, odour, and traffic as these are some of the main factors associated with the facility that may influence tourism in the immediate area.**
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)	**Low**
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**Tourism**
Nature of impact:	**Not applicable.**

HERITAGE AND CULTURAL HISTORIC

IMPACT ON ARCHAEOLOGICAL ETC

Alternative: 1	**Cultural-Historical Impacts**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**The potential impact of the proposed development on archaeological, paleontological and heritage remains.**

Nature of impact:	**The potential impact of the proposed development on archaeological, paleontological and heritage remains**
Extent and duration of impact:	**Extent 1 (Footprint) & Duration 5 (Will not cease)**
Consequence of impact or risk:	**The proposed development, related facilities and infrastructure will have no impact on the cultural-historical aspects.**
Probability of occurrence:	**2 - 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:	**2 - Partly reversible (PR)**
Indirect impacts:	**The proposed development, related facilities and infrastructure will have no impact on the cultural-historical aspects.**
Cumulative impact prior to mitigation:	**Destruction of cultural-historical features at the site will contribute to the loss of such features in the general area due to other non-related activities. This can at all times be mitigated to prevent/ minimise the loss of such features.**
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:	**Should any burials, fossils or other historical material be encountered during construction, work must cease immediately and HWC must be contacted.**
Residual impacts:	**Destruction of cultural-historical features at the site will contribute to the loss of such features in the general area due to other non-related activities. This can at all times be mitigated to prevent/ minimise the loss of such features.**
Cumulative impact post mitigation:	**Destruction of cultural-historical features at the site will contribute to the loss of such features in the general area due to other non-related activities. This can at all times be mitigated to prevent/ minimise the loss of such features.**
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**8 – Low**
OPERATIONAL PHASE	
Potential impact and risk:	**The potential impact of the proposed development on archaeological, paleontological and heritage remains.**
Nature of impact:	**The potential impact of the proposed development on archaeological, paleontological and heritage remains**
Extent and duration of impact:	**Extent 1 (Footprint) & Duration 5 (Will not cease)**
Consequence of impact or risk:	**The proposed development, related facilities and infrastructure will have no impact on the cultural-historical aspects.**
Probability of occurrence:	**2 - 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:	**2 - Partly reversible (PR)**
Indirect impacts:	**The proposed development, related facilities and infrastructure will have no impact on the cultural-historical aspects.**
Cumulative impact prior to mitigation:	**Destruction of cultural-historical features at the site will contribute to the loss of such features in the general area due to other non-related activities. This can at all times be mitigated to prevent/ minimise the loss of such features.**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**8 – 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:	**Should any burials, fossils or other historical material be encountered during construction, work must cease immediately and HWC must be contacted.**
Residual impacts:	**Destruction of cultural-historical features at the site will contribute to the loss of such features in the general area due to other non-related activities. This can at all times be mitigated to prevent/ minimise the loss of such features.**
Cumulative impact post mitigation:	**Destruction of cultural-historical features at the site will contribute to the loss of such features in the general area due to other non-related activities. This can at all times be mitigated to prevent/ minimise the loss of such features.**

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:	**The potential impact of the proposed development on archaeological, paleontological and heritage remains.**
Nature of impact:	**The potential impact of the proposed development on archaeological, paleontological and heritage remains**
Extent and duration of impact:	**Extent 1 (Footprint) & Duration 5 (Will not cease)**
Consequence of impact or risk:	**The proposed development, related facilities and infrastructure will have no impact on the cultural-historical aspects.**
Probability of occurrence:	**2 - 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:	**2 - Partly reversible (PR)**
Indirect impacts:	**The proposed development, related facilities and infrastructure will have no impact on the cultural-historical aspects.**
Cumulative impact prior to mitigation:	**Destruction of cultural-historical features at the site will contribute to the loss of such features in the general area due to other non-related activities. This can at all times be mitigated to prevent/ minimise the loss of such features.**
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:	**Should any burials, fossils or other historical material be encountered during construction, work must cease immediately and HWC must be contacted.**
Residual impacts:	**Destruction of cultural-historical features at the site will contribute to the loss of such features in the general area due to other non-related activities. This can at all times be mitigated to prevent/ minimise the loss of such features.**
Cumulative impact post mitigation:	**Destruction of cultural-historical features at the site will contribute to the loss of such features in the general area due to other non-related activities. This can at all times be mitigated to prevent/ minimise the loss of such features.**
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**8 – Low**

VISUAL/SENSE OF PLACE

Alternative: 1	**Cultural-Historical Impacts**
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	**Visual impact of construction.**
Nature of impact:	**The construction activities for the proposed development will have a temporary visual impact on the landscape.**
Extent and duration of impact:	**Extent 3 (Local) & Duration 1 (0 – 1 years)**
Consequence of impact or risk:	**Unsightly construction camp/s and activities on construction site.**
Probability of occurrence:	**2 - 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:	**Partly reversible (PR)**
Indirect impacts:	**Temporary visual impact on the landscape; Loss of visitors / tourism.**
Cumulative impact prior to mitigation:	**Temporary visual impact on the landscape; Loss of visitors / tourism.**
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:	**Proposed construction activities must be limited to development footprint site. Construction camp must be neatly fenced and construction site must be neat and tidy.**
Residual impacts:	**Temporary visual impact on the landscape; Loss of visitors / tourism.**
Cumulative impact post mitigation:	**Temporary visual impact on the landscape; Loss of visitors / tourism.**
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**8 – Low**
OPERATIONAL PHASE	
Potential impact and risk:	**Visual impact**
Nature of impact:	**The compost facility has an agricultural feel with no negative visual impacts.**
Extent and duration of impact:	**Extent 3 (Local) & Duration 5 (permanent)**
Consequence of impact or risk:	**Visual impact**
Probability of occurrence:	**4 - Highly probable (HP)**
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:	**2 - Partly reversible (PR)**
Indirect impacts:	**Visual impact on the landscape; Loss of visitors / tourism.**
Cumulative impact prior to mitigation:	**Visual impact on the landscape; Loss of visitors / tourism.**
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**56 - Medium-High**
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:	**Landscape plan**
Residual impacts:	**Visual impact on the landscape; Loss of visitors / tourism.**
Cumulative impact post mitigation:	**Visual impact on the landscape; Loss of visitors / tourism.**
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**20 – Low**
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	**Visual impact of decommissioning.**
Nature of impact:	**The decommissioning activities for the proposed developments and decommissioning will have a temporary visual impact on the landscape.**
Extent and duration of impact:	**Extent 3 (Local) & Duration 1 (0 – 1 years)**
Consequence of impact or risk:	**Unsightly activities on decommissioning site.**
Probability of occurrence:	**2 - 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:	**Partly reversible (PR)**
Indirect impacts:	**Temporary visual impact on the landscape; Loss of visitors / tourism.**
Cumulative impact prior to mitigation:	**Temporary visual impact on the landscape; Loss of visitors / tourism.**
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:	**Proposed decommissioning activities must be limited to development footprint site. Decommissioning site must be neat and tidy.**
Residual impacts:	**Temporary visual impact on the landscape; Loss of visitors / tourism.**
Cumulative impact post mitigation:	**Temporary visual impact on the landscape; Loss of visitors / tourism.**
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	**8 – Low**