

APPENDIX J – IMPACT TABLES

GEOGRAPHICAL AND PHYSICAL

1. GEOLOGY

Alternative 1 and 2	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 during excavation activities.
Nature of impact:	Disturbance to subsurface geological layers
Extent and duration of impact:	Extent 1 (footprint) & Duration 2 (two to five years)
Consequence of impact or risk:	Construction and excavation activities can affect the underlying geological layers on site to some extent.
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:	Partly reversible (PR)
Indirect impacts:	Disturbance to surrounding subsurface geological layers
Cumulative impact prior to mitigation:	It is not anticipated that the impact will be high as the affected substrata is deep and the integrity of the underlying ground structures will not be sacrificed.
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:	It is not anticipated that the impact will be high as the affected substrata is deep and the integrity of the underlying ground structures will not be sacrificed.
Cumulative impact post mitigation:	It is not anticipated that the impact will be high as the affected substrata is deep and the integrity of the underlying ground structures will not be sacrificed.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	8 - Low
OPERATIONAL PHASE	
Potential impact and risk:	Maintenance activities can affect the underlying geological layers on site to some extent – underground storage tanks.
Nature of impact:	Disturbance to subsurface geological layers
Extent and duration of impact:	Extent 1 (footprint) & Duration 2 (two to five years)
Consequence of impact or risk:	Construction and excavation activities can affect the underlying geological layers on site to some extent.
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:	Partly reversible (PR)
Indirect impacts:	Disturbance to surrounding subsurface geological layers
Cumulative impact prior to mitigation:	It is not anticipated that the impact will be high as the affected substrata is deep and the integrity of the underlying ground structures will not be sacrificed.
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:	It is not anticipated that the impact will be high as the affected substrata is deep and the integrity of the underlying ground structures will not be sacrificed.
Cumulative impact post mitigation:	It is not anticipated that the impact will be high as the affected substrata is deep and the integrity of the underlying ground structures will not be sacrificed.
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:	Decommissioning activities can affect the underlying geological layers on site to some extent – removal of underground storage tanks.
Nature of impact:	Disturbance to subsurface geological layers
Extent and duration of impact:	Extent 1 (footprint) & Duration 2 (two to five years)
Consequence of impact or risk:	Construction and excavation activities can affect the underlying geological layers on site to some extent.
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:	Partly reversible (PR)
Indirect impacts:	Disturbance to surrounding subsurface geological layers
Cumulative impact prior to mitigation:	It is not anticipated that the impact will be high as the affected substrata is deep and the integrity of the underlying ground structures will not be sacrificed.
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:	It is not anticipated that the impact will be high as the affected substrata is deep and the integrity of the underlying ground structures will not be sacrificed.
Cumulative impact post mitigation:	It is not anticipated that the impact will be high as the affected substrata is deep and the integrity of the underlying ground structures will not be sacrificed.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	8 - Low

2. SOIL AND GROUND WATER POLLUTION

Alternative 1 (tanks & bunding to SANS standards)	Geographical and Physical Impacts
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Impact of construction activities on soil and ground water pollution in relation to the sinking of underground storage tanks.
Nature of impact:	Regional groundwater as a whole is vulnerable to contamination. Contaminants and pollutants from both point and diffuse sources would quickly enter the regional groundwater system.
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 soil and ground water where excavation takes place.
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:	Partly reversible (PR)
Indirect impacts:	Pollution of soil and ground water resources.
Cumulative impact prior to mitigation:	Diesel, oil or chemical spills affecting soil and ground water quality.
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:	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, oil and chemical spills affecting ground and ground water quality.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	24 – Low
OPERATIONAL PHASE	
Potential impact and risk:	Impact of operational activities on soil and underground water. The underground storage tanks may cause pollution.
Nature of impact:	Leaks from the underground storage tanks would lead to soil and ground water pollution.
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 soil and ground water.
Probability of occurrence:	1 - Very improbable (VP)
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:	Chemical spill resulting in soil and ground water quality impacts.
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:	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:	Chemical spills affecting soil and ground water quality.

Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	12 – Low
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Decommissioning of underground storage tanks impact on soil and underground water pollution.
Nature of impact:	Decommissioning of underground storage tanks impacts on soil and ground water.
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 soil and ground water.
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:	Partly reversible (PR)
Indirect impacts:	Pollution of water resources
Cumulative impact prior to mitigation:	Chemical spills affecting soil and ground water quality.
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:	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:	Chemical spills affecting soil and ground water quality.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	24 – Low

Alternative 2 (tanks & bunding not to SANS standards)	Geographical and Physical Impacts
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Impact of construction activities on soil and ground water pollution in relation to the sinking of underground storage tanks.
Nature of impact:	Regional groundwater as a whole is vulnerable to contamination. Contaminants and pollutants from both point and diffuse sources would quickly enter the regional groundwater system.
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 soil and ground water where excavation takes place.
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 soil and ground water resources.
Cumulative impact prior to mitigation:	Diesel, oil or chemical spills affecting soil and ground water quality.
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:	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, oil and chemical spills affecting ground and ground water quality.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	56 – Medium
OPERATIONAL PHASE	
Potential impact and risk:	Impact of operational activities on soil and underground water. The underground storage tanks will cause pollution.
Nature of impact:	Leaks from the underground storage tanks would lead to soil and ground water pollution.
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:	Pollution of soil and ground water.
Probability of occurrence:	1 (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:	Chemical spill /leaks resulting in soil and ground water quality impacts.
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:	3 - Un-mitigatable (UM)
Proposed mitigation:	NA
Residual impacts:	Contaminated land - pollution of soil and ground water.
Cumulative impact post mitigation:	Chemical spills/leaks affecting soil and ground water quality.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	64 - High
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Decommissioning of underground storage tanks impact on soil and underground water pollution.
Nature of impact:	Decommissioning of underground storage tanks impacts on soil and ground water.
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 soil and 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:	Chemical spills affecting soil and ground water quality.
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:	3 - Un-mitigatable (UM)
Proposed mitigation:	NA
Residual impacts:	Contaminated land - pollution of soil and ground water.
Cumulative impact post mitigation:	Chemical spills/leaks affecting soil and ground water quality.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	64 - High

3. STORM WATER POLLUTION

Alternative 1 (tanks & bunding to SANS standards)	Geographical and Physical Impacts
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Impact of construction activities causing storm water pollution
Nature of impact:	Only storm water should enter the storm water drain / system and there is a risk of storm water contamination during construction.
Extent and duration of impact:	Extent 3 (Within a 20 km radius of the centre of the site) & Duration 1 (0-1 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:	Diesel and oil spills affecting water quality.
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:	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 surface water quality.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	24 – Low
OPERATIONAL PHASE	
Potential impact and risk:	The storage of dangerous goods and chemicals on site poses a risk of storm water contamination.
Nature of impact:	Only storm water should enter the storm water drain / system and there is a risk of storm water contamination during operation (storage and handling of dangerous goods/chemicals).
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:	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:	Partly reversible (PR)
Indirect impacts:	Pollution of water resources
Cumulative impact prior to mitigation:	Chemical spills affecting surface water quality.
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:	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:	Chemical spills affecting ground and surface water quality.

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:	The decommissioning of storage of dangerous goods and chemicals on site poses a risk of storm water contamination.
Nature of impact:	Only storm water should enter the storm water drain / system and there is a risk of storm water contamination during decommissioning of the chemical storage.
Extent and duration of impact:	Extent 3 (Within a 20 km radius of the centre of the site) & Duration 1 (0-1 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:	Diesel, oil and chemical spills affecting surface water quality.
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:	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, oil and chemical spills affecting surface water quality.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	24 – Low

Alternative 2 (tanks & bunding not to SANS standards)	Geographical and Physical Impacts
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Impact of construction activities causing storm water pollution
Nature of impact:	Only storm water should enter the storm water drain / system and there is a risk of storm water contamination during construction.
Extent and duration of impact:	Extent 3 (Within a 20 km radius of the centre of the site) & Duration 1 (0-1 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:	Diesel and oil spills affecting water quality.
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:	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 surface water quality.

Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	24 – Low
OPERATIONAL PHASE	
Potential impact and risk:	The storage of dangerous goods and chemicals on site poses a risk of storm water contamination. If appropriate bunding is not in place for the storage of chemicals in drums etc. storm water pollution is highlight likely.
Nature of impact:	Only storm water should enter the storm water drain / system and there is a risk of storm water contamination during operation (storage and handling of dangerous goods/chemicals).
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 - 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:	Partly reversible (PR)
Indirect impacts:	Pollution of water resources
Cumulative impact prior to mitigation:	Chemical spills affecting surface water quality.
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:	3 - Un-mitigatable (UM)
Proposed mitigation:	NA
Residual impacts:	Pollution of water resources.
Cumulative impact post mitigation:	Chemical spills affecting surface water quality.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	64 – High
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	The decommissioning of storage of dangerous goods and chemicals on site poses a risk of storm water contamination.
Nature of impact:	Only storm water should enter the storm water drain / system and there is a risk of storm water contamination during decommission of the chemical storage.
Extent and duration of impact:	Extent 3 (Within a 20 km radius of the centre of the site) & Duration 1 (0-1 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:	Diesel, oil and chemical spills affecting surface water quality.
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:	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, oil and chemical spills affecting surface water quality.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	24 – Low

4. EMISSIONS AND AIR QUALITY

Alternative 1 and 2	Geographical and Physical Impacts
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Emissions and impact on air quality
Nature of impact:	Not applicable to the planning, design and development phase.
OPERATIONAL PHASE	
Potential impact and risk:	Emissions and impact on air quality
Nature of impact:	<p>Volatile organic compound (VOC) will be emitted due to the presence of a large number of chemical constituents, commonly associated with paint manufacturing, including n-Hexane, Benzene, Toluene, Ethyl benzene and Xylene. All of the airborne contaminant concentrations will be kept below the respective Occupational Exposure Limits (OEL's). It is likely that Ethanol, Ethyl benzene and Xylene will be the chemicals with the highest concentrations. Dichloromethane, a substance with a Control Limit will also be emitted.</p> <p>Many uncertainties at this stage – Air Quality Specialist study required – once completed impact tables to be updated.</p>
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:	Air pollution can cause a variety of environmental effects, such as acid rain, eutrophication, effects on wildlife, ozone depletion, crop and forest damages, global climate change etc. However, the emissions from the proposed development will be negligible on a global scale.
Cumulative impact prior to mitigation:	Negative impact on surrounding air quality.
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:	<ul style="list-style-type: none"> Local exhaust ventilation system with extraction. Monitoring as per EMPr.
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)	<p>28 – Low</p> <p>Many uncertainties at this stage – Air Quality Specialist study required – once completed impact tables to be updated.</p>
DECOMMISSIONING AND CLOSURE PHASE	
Potential impact and risk:	Emissions and impact on air quality
Nature of impact:	Not applicable to the planning, design and development phase.

ECOLOGICAL AND BIOLOGICAL

None

SOCIO-ECONOMIC

5. INCREASE IN JOBS

Alternative 1 and 2	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 2 (On site or within 100 m of the site) & Duration 1 (0 – 1 years)
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)	8 – Low (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.
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)	8 – Low (positive)
OPERATIONAL PHASE	
Potential impact and risk:	Increased jobs
Nature of impact:	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 2 (On site or within 100 m of the site) & Duration 1 (0 – 1 years)
Consequence of impact or risk:	Influx of job seekers due to jobs created.
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)	8 – Low (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:	None.

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)	8 – Low (positive)
DECOMMISSIONING AND CLOSURE 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 2 (On site or within 100 m of the site) & Duration 1 (0 – 1 years)
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)	8 – Low (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.
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)	8 – Low (positive)

6. INCREASE IN TRAFFIC

Alternative 1 and 2	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:	Increased traffic due to the operation activities requiring various vehicles to come onto and leave the site. As the site is an existing warehouse, traffic volumes are not anticipated to increase significantly.
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:	The increase in traffic volumes at certain times of day will add to the existing traffic volumes. This cumulative impact is not significant.
Probability of occurrence:	1 (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 increase in traffic volumes at certain times of day will add to the existing traffic volumes. This cumulative impact is not significant.
Cumulative impact prior to mitigation:	The increase in traffic volumes at certain times of day will add to the existing traffic volumes. This cumulative impact is not significant.
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	18 – 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:	None
Residual impacts:	The increase in traffic volumes at certain times of day will add to the existing traffic volumes. 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. This cumulative impact is not significant.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	18 – 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. 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. 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. 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. This cumulative impact is not significant.
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	8 – Low

7. NOISE

Alternative 1 and 2	Socio-Economic Impacts
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Noise due to construction machinery
Nature of impact:	Noise due to construction machinery during the construction/development phase. Construction 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 construction activities is unlikely to cause a nuisance to adjacent residential areas (approximately 600m away). It must be noted that although residential properties are situated 600m away (Milnerton) they are situated on the opposite side of the N7 and the site is surrounded by industrial sites some of which operate 24 hours a day.
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:	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)	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:	1- Completely mitigatable (CM)
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 due to industrial activities on site during operational phase (boiler, process equipment, trucks etc.). Noise due to operational activities is unlikely to cause a nuisance to adjacent residential areas (approximately 600m away). It must be noted that although residential properties are situated 600m away (Milnerton) they are situated on the opposite side of the N7 and the site is surrounded by industrial sites some of which operate 24 hours a day.
Extent and duration of impact:	Extent 3 Local (Within a 20 km radius of the centre of the site) & Duration 5 Permanent (P) (Will not cease)
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:	Completely reversible (R)
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)	14 - 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:	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)	12 - 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 residential areas (approximately 600m away). It must be noted that although residential properties are situated 600m away (Milnerton) they are situated on the opposite side of the N7 and the site is surrounded by industrial sites some of which operate 24 hours a day.
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:	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)	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:	1- Completely mitigatable (CM)
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

8. ODOURS

Alternative 1 and 2	Socio-Economic Impacts
PLANNING, DESIGN AND DEVELOPMENT PHASE	
Potential impact and risk:	Odours
Nature of impact:	Not applicable to the planning, design and development phase.
OPERATIONAL PHASE	
Potential impact and risk:	Odours
Nature of impact:	Odours from solvents and chemicals used in the process may cause odours.
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:	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:	<ul style="list-style-type: none"> • Local exhaust ventilation system with extraction. • Complaints register must be in place.
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:	Odours
Nature of impact:	Not applicable to the planning, design and development phase.