



## **BASIC ASSESSMENT REPORT**

**THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) AND  
THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS.**

**NOVEMBER 2019**

(For official use only)	
Pre-application Reference Number (if applicable):	
EIA Application Reference Number:	
NEAS Reference Number:	
Exemption Reference Number (if applicable):	
Date BAR received by Department:	
Date BAR received by Directorate:	
Date BAR received by Case Officer:	

### **GENERAL PROJECT DESCRIPTION**

(This must Include an overview of the project including the Farm name/Portion/Erf number)

**THE PROPOSED EXPANSION OF A DIESEL STORAGE & DISTRIBUTION DEPOT, WESGRAAN  
KLIPHEUWEL SILO, PORTION 17 OF THE FARM VRYHEID NO. 55, KLIPHEUWEL.**

**FEBRUARY 2022**

## IMPORTANT INFORMATION TO BE READ PRIOR TO COMPLETING THIS BASIC ASSESSMENT REPORT

1. **The purpose** of this template is to provide a format for the Basic Assessment report as set out in Appendix 1 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), Environmental Impact Assessment ("EIA") Regulations, 2014 (as amended) in order to ultimately obtain Environmental Authorisation.
2. The Environmental Impact Assessment ("EIA") Regulations is defined in terms of Chapter 5 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") hereinafter referred to as the "NEMA EIA Regulations".
3. The required information must be typed within the spaces provided in this Basic Assessment Report ("BAR"). The sizes of the spaces provided are not necessarily indicative of the amount of information to be provided.
4. All applicable sections of this BAR must be completed.
5. Unless protected by law, all information contained in, and attached to this BAR, will become public information on receipt by the Competent Authority. If information is not submitted with this BAR due to such information being protected by law, the applicant and/or Environmental Assessment Practitioner ("EAP") must declare such non-disclosure and provide the reasons for believing that the information is protected.
6. This BAR is current as of **November 2019**. It is the responsibility of the Applicant/ EAP to ascertain whether subsequent versions of the BAR have been released by the Department. Visit this Department's website at <http://www.westerncape.gov.za/eadp> to check for the latest version of this BAR.
7. This BAR is the standard format, which must be used in all instances when preparing a BAR for Basic Assessment applications for an environmental authorisation in terms of the NEMA EIA Regulations when the Western Cape Government Department of Environmental Affairs and Development Planning ("DEA&DP") is the Competent Authority.
8. Unless otherwise indicated by the Department, one hard copy and one electronic copy of this BAR must be submitted to the Department at the postal address given below or by delivery thereof to the Registry Office of the Department. Reasonable access to copies of this Report must be provided to the relevant Organs of State for consultation purposes, which may, if so indicated by the Department, include providing a printed copy to a specific Organ of State.
9. This BAR must be duly dated and originally signed by the Applicant, EAP (if applicable) and Specialist(s) and must be submitted to the Department at the details provided below.
10. The Department's latest Circulars pertaining to the "One Environmental Management System" and the EIA Regulations, any subsequent Circulars, and guidelines must be taken into account when completing this BAR.
11. Should a water use licence application be required in terms of the National Water Act, 1998 (Act No. 36 of 1998) ("NWA"), the "One Environmental System" is applicable, specifically in terms of the synchronisation of the consideration of the application in terms of the NEMA and the NWA. Refer to this Department's Circular EADP 0028/2014: One Environmental Management System.
12. Where Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA") is triggered, a copy of Heritage Western Cape's final comment must be attached to the BAR.
13. The Screening Tool developed by the National Department of Environmental Affairs must be used to generate a screening report. Please use the Screening Tool link <https://screening.environment.gov.za/screeningtool> to generate the Screening Tool Report. The screening tool report must be attached to this BAR.

14. Where this Department is also identified as the Licencing Authority to decide on applications under the National Environmental Management: Air Quality Act (Act No. 29 of 2004) ('NEM:AQA"), the submission of the Report must also be made as follows, for-  
Waste Management Licence Applications, this report must also (i.e., another hard copy and electronic copy) be submitted for the attention of the Department's Waste Management Directorate (Tel: 021-483-2728/2705 and Fax: 021-483-4425) at the same postal address as the Cape Town Office.

Atmospheric Emissions Licence Applications, this report must also be (i.e., another hard copy and electronic copy) submitted for the attention of the Licensing Authority or this Department's Air Quality Management Directorate (Tel: 021 483 2888 and Fax: 021 483 4368) at the same postal address as the Cape Town Office.

## DEPARTMENTAL DETAILS

<b>CAPE TOWN OFFICE: REGION 1 and REGION 2</b>  <b>(Region 1: City of Cape Town, West Coast District)</b> <b>(Region 2: Cape Winelands District &amp; Overberg District)</b>	<b>GEORGE OFFICE: REGION 3</b>  <b>(Central Karoo District &amp; Garden Route District)</b>
<p>BAR must be sent to the following details:</p> <p>Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 1 or 2) Private Bag X 9086 Cape Town, 8000</p> <p>Registry Office 1<sup>st</sup> Floor Utilitas Building 1 Dorp Street, Cape Town</p> <p>Queries should be directed to the Directorate: Development Management (Region 1 and 2) at: Tel: (021) 483-5829 Fax (021) 483-4372</p>	<p>BAR must be sent to the following details:</p> <p>Western Cape Government Department of Environmental Affairs and Development Planning Attention: Directorate: Development Management (Region 3) Private Bag X 6509 George, 6530</p> <p>Registry Office 4<sup>th</sup> Floor, York Park Building 93 York Street George</p> <p>Queries should be directed to the Directorate: Development Management (Region 3) at: Tel: (044) 805-8600 Fax (044) 805 8650</p>

## MAPS

<b>Provide a location map (see below) as Appendix A1 to this BAR that shows the location of the proposed development and associated structures and infrastructure on the property.</b>	
<p>Locality Map:</p>	<p>The scale of the locality map must be at least 1:50 000. For linear activities or development proposals of more than 25 kilometres, a smaller scale e.g., 1:250 000 can be used. The scale must be indicated on the map. The map must indicate the following:</p> <ul style="list-style-type: none"> <li>• an accurate indication of the project site position as well as the positions of the alternative sites, if any;</li> <li>• road names or numbers of all the major roads as well as the roads that provide access to the site(s)</li> <li>• a north arrow;</li> <li>• a legend; and</li> <li>• a linear scale.</li> </ul> <p>For ocean based or aquatic activity, the coordinates must be provided within which the activity is to be undertaken and a map at an appropriate scale clearly indicating the area within which the activity is to be undertaken.</p> <p>Where comment from the Western Cape Government: Transport and Public Works is required, a map illustrating the properties (owned by the Western Cape Government: Transport and Public Works) that will be affected by the proposed development must be included in the Report.</p>

<b>Provide a detailed site development plan / site map (see below) as Appendix B1 to this BAR; and if applicable, all alternative properties and locations.</b>	
Site Plan:	<p>Detailed site development plan(s) must be prepared for each alternative site or alternative activity. The site plans must contain or conform to the following:</p> <ul style="list-style-type: none"> <li>• The detailed site plan must preferably be at a scale of 1:500 or at an appropriate scale. The scale must be clearly indicated on the plan, preferably together with a linear scale.</li> <li>• The property boundaries and numbers of all the properties within 50m of the site must be indicated on the site plan.</li> <li>• On land where the property has not been defined, the co-ordinates of the area in which the proposed activity or development is proposed must be provided.</li> <li>• The current land use (not zoning) as well as the land use zoning of each of the adjoining properties must be clearly indicated on the site plan.</li> <li>• The position of each component of the proposed activity or development as well as any other structures on the site must be indicated on the site plan.</li> <li>• Services, including electricity supply cables (indicate aboveground or underground), water supply pipelines, boreholes, sewage pipelines, storm water infrastructure and access roads that will form part of the proposed development <b>must</b> be clearly indicated on the site plan.</li> <li>• Servitudes and an indication of the purpose of each servitude must be indicated on the site plan.</li> <li>• Sensitive environmental elements within 100m of the site must be included on the site plan, including (but not limited to): <ul style="list-style-type: none"> <li>◦ Watercourses / Rivers / Wetlands</li> <li>◦ Flood lines (i.e., 1:100 year, 1:50 year and 1:10 year where applicable);</li> <li>◦ Coastal Risk Zones as delineated for the Western Cape by the Department of Environmental Affairs and Development Planning ("DEA&amp;DP");</li> <li>◦ Ridges;</li> <li>◦ Cultural and historical features/landscapes;</li> <li>◦ Areas with indigenous vegetation (even if degraded or infested with alien species).</li> </ul> </li> <li>• Whenever the slope of the site exceeds 1:10, a contour map of the site must be submitted.</li> <li>• North arrow</li> </ul> <p>A map/site plan must also be provided at an appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred and alternative sites indicating any areas that should be avoided, including buffer areas.</p>
Site photographs	<p>Colour photographs of the site that shows the overall condition of the site and its surroundings (taken on the site and taken from outside the site) with a description of each photograph. The vantage points from which the photographs were taken must be indicated on the site plan, or locality plan as applicable. If available, please also provide a recent aerial photograph. Photographs must be attached to this BAR as <b>Appendix C</b>. The aerial photograph(s) should be supplemented with additional photographs of relevant features on the site. Date of photographs must be included. Please note that the above requirements must be duplicated for all alternative sites.</p>
Biodiversity Overlay Map:	<p>A map of the relevant biodiversity information and conditions must be provided as an overlay map on the property/site plan. The Map must be attached to this BAR as <b>Appendix D</b>.</p>
Linear activities or development and multiple properties	<p>GPS co-ordinates must be provided in degrees, minutes and seconds using the Hartebeeshoek 94 WGS84 co-ordinate system.</p> <p>Where numerous properties/sites are involved (linear activities) you must attach a list of the Farm Name(s)/Portion(s)/Erf number(s) to this BAR as an Appendix.</p> <p>For linear activities that are longer than 500m, please provide a map with the co-ordinates taken every 100m along the route to this BAR as <b>Appendix A3</b>.</p>

## ACRONYMS

DAFF:	Department of Forestry and Fisheries
DEA:	Department of Environmental Affairs
DEA& DP:	Department of Environmental Affairs and Development Planning
DHS:	Department of Human Settlement
DoA:	Department of Agriculture
DoH:	Department of Health
DWS:	Department of Water and Sanitation
EMPr:	Environmental Management Programme
HWC:	Heritage Western Cape
NFEPA:	National Freshwater Ecosystem Protection Assessment
NSBA:	National Spatial Biodiversity Assessment
TOR:	Terms of Reference

WCBS:	Western Cape Biodiversity Spatial Plan
WCG:	Western Cape Government

## ATTACHMENTS

**Note:** The Appendices must be attached to the BAR as per the list below. Please use a ✓ (tick) or a x (cross) to indicate whether the Appendix is attached to the BAR.

The following checklist of attachments must be completed.

APPENDIX			✓ (Tick) or x (cross)
Appendix A:	Locality Maps		
	Appendix A1:	Locality Map	✓
	Appendix A2:	<del>Coastal Risk Zones as delineated in terms of ICMA for the Western Cape by the Department of Environmental Affairs and Development Planning</del>	N/A
	Appendix A3:	<del>Map with the GPS co-ordinates for linear activities</del>	N/A
Appendix B:	Site Layout Plans		
	Appendix B1:	Proposed Site Layout Plan (Option 1)	✓
	Appendix B2:	Proposed Site Layout Plan (Option 2)	✓
	Appendix B2	<del>A map of appropriate scale, which superimposes the proposed development and its associated structures and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffer areas;</del>	N/A
Appendix C:	Photographs		✓
Appendix D:	Appendix D1:	Biodiversity overlay map	✓
	Appendix D2:	Water Resource Map	✓
Appendix E:	Permit(s) / license(s) / exemption notice, agreements, comments from State Department/Organs of state and service letters from the municipality.		
	Appendix E1:	Final comment/ROD from HWC	x
	Appendix E2:	Copy of comment from Cape Nature	x
	Appendix E3:	Final Comment from the DWS / BGCMA	x
	Appendix E4:	<del>Comment from the DEA: Oceans and Coast</del>	N/A
	Appendix E5:	<del>Comment from the DAFF</del>	N/A

	Appendix E6:	Comment from WCG: Transport and Public Works	x
	Appendix E7:	Comment from WCG: DoA	x
	<del>Appendix E8:</del>	<del>Comment from WCG: DHS</del>	N/A
	Appendix E9:	Comment from WCG: DoH	x
	Appendix E10:	Comment from DEA&DP: Pollution Management	Pending
	Appendix E11:	Comment from DEA&DP: Waste Management	x
	<del>Appendix E12:</del>	<del>Comment from DEA&amp;DP: Biodiversity</del>	N/A
	Appendix E13:	Comment from DEA&DP: Air Quality	x
	<del>Appendix E14:</del>	<del>Comment from DEA&amp;DP: Coastal Management</del>	N/A
	Appendix E15:	Comment from the Local Authority (DEA&DP & CoCT)	✓
	Appendix E16:	Confirmation of all services (water, electricity, sewage, solid waste management)	✓
	<del>Appendix E17:</del>	<del>Comment from the District Municipality</del>	N/A
	<del>Appendix E18:</del>	<del>Copy of an exemption notice</del>	N/A
	<del>Appendix E19:</del>	<del>Pre-approval for the reclamation of land</del>	N/A
	<del>Appendix E20:</del>	<del>Proof of agreement/TOR of the specialist studies conducted.</del>	N/A
	Appendix E21:	Proof of land use rights	✓
	<del>Appendix E22:</del>	<del>Proof of public participation agreement for linear activities</del>	N/A
	Appendix E23:	Acknowledgement of receipt and comment on the NOI	✓
Appendix F:	Public Participation Information:		
	Appendix F1: Registered I & AP's		✓

	Appendix F2: Proof of Newspaper Advert	✓
	Appendix F3: Proof of Site Notice	✓
	Appendix F4: Proof of Notification Letter to I & AP's	✓
	Appendix F5: Proof of Notification email to relevant State Departments / Organs	✓
	Appendix F6: Comments Received: Pre-Application DBAR	✓
	Appendix F7: Comments & Responses Table	✓
	Appendix F8: Copy of the approved PPP Plan	✓
Appendix G:	Specialist Report(s)	
	Appendix G1: Traffic Impact Assessment	✓
	Appendix G2: Major Hazard Installation Risk Assessment	✓
	Appendix G3: Emergency Risks Plan	✓
	Appendix G4: Noise Impact Assessment & Noise Management Plan	✓
	Appendix G5: Dust Management Plan	✓
	Appendix G6: Stormwater Management Plan	✓
Appendix H:	EMPr	✓
Appendix I:	Appendix I1: Screening Tool Report	✓
	Appendix I2: Site Verification Report	✓
Appendix J:	<del>The impact and risk assessment for each alternative</del>	N/A
Appendix K:	<del>Need and desirability for the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013)/DEA Integrated Environmental Management Guideline</del>	N/A
Appendix L:	Appendix L1: CV of the EAP, Anthony Mader	✓
	Appendix L2: CV of the Review EAP, Chantel Müller	

## EXECUTIVE SUMMARY OF THE BASIC ASSESSMENT REPORT:

### Introduction

Kaap Agri (Pty) Ltd (hereafter referred to as "Kaap Agri") has an existing silo facility, called the Wesgraan – Klipheuwel Silo, currently storing large volumes of oats, wheat, maize, canola, and grain. Grain harvested by farmers are sold to Kaap Agri which are subsequently stored at Wesgraan – Klipheuwel Silo facility prior to being transported to the mills for processing.

An existing diesel depot, comprised of 2 x 23m<sup>3</sup> aboveground storage tanks (ASTs), with a total storage capacity of 46m<sup>3</sup>, are located at the Wesgraan Klipheuwel Silo Facility. Kaap Agri propose to expand their existing diesel depot by an additional 5 x 83m<sup>3</sup> ASTs (and associated infrastructure) to increase the existing fuel storage capacity by 415m<sup>3</sup> to have a total, combined storage capacity of 461m<sup>3</sup>. This facility is located on Portion 17 of Farm Vryheid, Farm No. 55, Klipheuwel, Western Cape.



**Figure 1:** Location of the proposed site for development (Portion 17 of the Farm Vryheid No 55, Klipheuwel).

### Summary of Proposed Development

Please refer to **Annexure B1** for the proposed **Site Layout Plan (Option 1)**.

The site currently has two 23m<sup>3</sup> capacity storage tanks. The proposed application is to expand the existing fuel storage capacity by an additional five (5) horizontal 83m<sup>3</sup> capacity tanks. It is therefore proposed to expand the current facility (46m<sup>3</sup>) by an additional 415m<sup>3</sup>, to have a total combined capacity of 461m<sup>3</sup>.





## Legislative Context

The proposed expansion of the existing diesel fuel depot triggers the following activity, which is listed in terms of 2014 EIA Regulations, as amended, published under the National Environmental Management Act, Act No. 107 of 1998 (NEMA), and therefore requires an application for Environmental Authorisation:

**Table 1:** Listed Activities in the 2014 EIA Regulations, as amended.

Listed Activity	Reason for Listing
Listing Notice 1, Activity 51:  <i>The expansion of facilities for the storage, or for the storage and handling, of a dangerous good, where the capacity of such storage facility will be expanded by more than 80 cubic meters.</i>	The capacity of the storage facility is proposed to expand by 415 cubic meters (5 x 83m <sup>3</sup> ).

## Planning Context

With reference to **Appendix E21 (Existing Land Use Rights and Zoning Map)**, a portion of the site has been spot-zoned for General Industry.

The current site is zoned for Agriculture with a spot-zoning for General Industry 1. This includes the silos, existing fuel tanks and offices.

As per **Appendix E21**, an application was made to the CoCT to expand the existing above ground 43m<sup>3</sup> diesel storage capacity by an additional 43m<sup>3</sup> storage capacity (namely the installation of underground storage tanks). This expansion was allowed for at the time under the General Industry 1 zoning and would have allowed for a total of 92m<sup>3</sup> of diesel storage. The expansion to include the fuel service station however did not take place. It is therefore only the existing 43m<sup>3</sup> of above ground tanks that remain.

## Specialist Assessment Key Findings

### 1. Traffic Impact Statement (Appendix G1)

- Main Road 188 (Klipheuwel Road) is not operating at full operating capacity and is typical of commuter traffic travel patterns;
- Based on 2019 RNIS data, Main Road 188 carries approximately 6000 vehicles/day and approximately 600 vehicles during peak hours (morning/evening);
- It is envisaged that the proposed expansion project will increase truck traffic by:
  - ±10 trucks in/day
  - ±10 trucks out/day
  - No more than ±2 trucks in/out during peak traffic times
  - This was stated to be insignificant and does not warrant a detailed traffic analysis
- Two site layout options (Option 1 and Option 2) were proposed by the Specialist where both Options have similar traffic impact ratings. However, Option 1 is preferred as it provides for slightly more stacking (i.e., minimizes potential for conflict with the fuel depot operations). Both Options can be supported;
- Based on these findings, the Specialist recommended that the proposed expansion be supported as the traffic impact was rated as Low.

## **2. Major Hazard Installation Risk Assessment (Appendix G2)**

- Fifteen (15) hazard scenarios were analyzed.
- Based on the risk assessment, the facility is not classified as a Major Hazardous Installation – as a major incident at the site would not impact members of the public outside of the property boundaries;
- There are no developing conflicts for this site;
- The Specialist stated, to the best of their knowledge, that no major hazard installation is within reach of the worst-case major incident that can occur at this site.
- New developments, situated around the site, may take place.

## **3. Emergency Response Plan (Appendix G3)**

- As per the Emergency Response Plan (ERP), numerous activity hazards and risks were identified and rated.
- Control measures were proposed where the residual risk rating was rated as "Low" and "Medium" for identified activities should control measures be implemented.
- Please refer to ERP for more information on control measures.

## **4. Noise Impact Assessment (NIA) and Management Plan (Appendix G4)**

- Daytime rating level of noise emitted from existing operations was lower than typical rating level for noise for an industrial district. The applicant is therefore compliant with Regulation 4 of the Western Cape Noise Control Regulations, 2013 (NCR). No noise mitigation measures are required;
- During operation, the proposed addition of ASTs will have a negligible intensity of noise impact in terms of SANS 10103:2008. The proposed expansion will therefore be compliant with Regulation 4 of the NCR. No noise mitigation measures are required; and
- During the construction phase, noise mitigation measures as per the Noise Management Plan (Section 5 of the NIA, Appendix G4), must be complied with.

## **5. Dust Management Plan (DMP) (Appendix G5)**

- The City of Cape Town requested that a Dust Management Plan be submitted to the City's Air Quality Management Unit in terms Section 26 of the City of Cape Town Air Quality Management By-law (August 2016).
- Construction activities, namely bulk earthworks, construction of access road and the ASTs, and associated activities, were identified as potential dust-generating activities. Mitigation measures were added to the existing dust control measures currently implemented by Kaap-Agri.
- Kaap Agri must provide an implementation progress report to the air quality officer at agreed time intervals. The DMP must be assessed on an annual basis, as required for specific dust control measures, or should any complaint or incident occur which results in high dust emissions.

## **6. Stormwater Management Plan (SWMP) (Appendix G6)**

- The SWMP includes existing and proposed open stormwater channels and proposed detention ponds.
- Two detention ponds (total approximate storage capacity of 53m<sup>3</sup>) are proposed. This will address CoCT's following comments in the following ways:
  - Additional runoff generated (by stormwater events of up to 1 in 50 years) by the proposed expansion will be attenuated to pre-development levels; and
  - Stormwater runoff must be polished and treated to appropriate levels of phosphorous and total suspended solids. The two detention ponds will retain the stormwater runoff of a 1 in ½ year, 24hr storm event that will slowly filter through the bottom of the pond to subsurface pipes.

- An emergency overflow will discharge any additional stormwater runoff from the pond in the unlikely event of a 1 in 100-year storm event.
  - Maintenance must be undertaken as per the proposed maintenance schedule (Table 4.3 of the SWMP) in order to ensure optimal operation of the detention ponds and associated stormwater infrastructure.
- The Engineers support this environmental application based on the (1) construction of the detention ponds which will enable sufficient stormwater drainage and flood attenuation, and (2) the maintenance of the detention ponds as per the proposed schedule (Table 4.3 of the SWMP).

## Public Participation

A key component of the Basic Assessment process is public participation. Public participation allows identified Interested and Affected Parties (I&AP's) to assist in identifying issues or concerns around the activity which may need further investigation or assessment.

### **Summary of public participation undertaken during the initial and pre-application public participation process, as is required in terms of the 2014 EIA Regulations (regulation 41 – 44 in Chapter 6 of GN386):**

- A register of potential interested & affected parties was opened.
- All surrounding neighbours with formalized erven with postal addresses were notified via letters (sent via the postal system). The adjacent landowners and / or occupiers were therefore notified via letters of the availability of the Pre-Application Draft Basic Assessment (hardcopy and electronic copy) during the two respective 30-day commenting periods.
- Organs of State; the local ward councillor, local municipality, and civic representative bodies (such as ratepayers' associations) were notified by email and/ or post.
- An advertisement was published in the Tygerburger (local newspaper) in English on the 3<sup>rd</sup> February 2021.
- A site notice was erected at a place visible near the proposed entrance to the Klipheuwel fuel depot.
- The Pre-Application DBAR was sent to Organs of State in electronic format via a Cloud Based service and/or via email.
- The reports were made available on the SEC website ([www.environmentalconsultants.co.za](http://www.environmentalconsultants.co.za)) for review and comment for a period of 30 days during the pre-application consultation phase (on the Pre-Application Draft BAR). The Post-Application DBAR will be made available for a period of 30 days during the post-application consultation phase.
- Following the initial 30 days public consultation phase and the second 30-day PPP period on the pre-application Draft BAR, the I&AP Register has been updated with all those who provided comments on the Pre-Application BAR.

Following the initial 30 days public consultation, and the second 30-day PP period on the Pre-Application Draft BAR, a Comments & Response Table, summarising all comments received during the Initial and Pre-Application DBAR phase, as well as SEC's response to the comments received, has been appended to the Post-Application DBAR.

### **Summary of additional measures that will be implemented to ensure all I&APs are notified of the availability of the BAR applications, and the opportunity to participate:**

- A link to access the Post-Application DBAR will be made available to all Registered I&APs. Registered I&APs will be given a 30-day comment period.
- The Post-Application Draft BAR will be made available on the SEC website. The executive summary will also be uploaded as a data saving alternative.
- The Post-Application DBAR will be made available in a hardcopy format at the Sisonke Sibambisene ECD centre located at the Klipheuwel Community Church.
- Additional arrangements have been made with Ruan Beneke (Councillor – Ward 105) and Lynette Dalasile (Klipheuwel Leadership Group – Chairperson). Sillito will provide Lynette

Dalasilile with a hardcopy copy of the Post-Application Draft BAR when they become available for public and authority comment.

## **Alternatives Investigations**

The NEMA EIA Regulations, 2014, as amended, require that an Applicant identify and investigate alternative “means of meeting the general purposes and requirements of the activity” for which authorisation is being applied for.

### Site Alternatives:

No site alternatives have been investigated as the proposed site for the expansion of an existing diesel depot with sufficient resources and space available for the proposed installation of five new 83m<sup>3</sup> diesel tanks and associated infrastructure. The site is already zoned for industrial use. It is therefore not reasonable to identify or assess site alternatives as this is an expansion activity not a new activity.

### Layout Alternatives:

The proposed development is to construct an additional five (5) Aboveground Diesel Storage Tanks (ASTs) north of the two (2) existing ASTs on site.

The existing access, stacking and circulation of grain trucks to/from the silos were taken into account when developing the two options, i.e. **Proposed Site Layout Plan Option 1** (See attached as **Appendix B1**) and **Proposed Site Layout Plan Option 2**, for the proposed bulk fuel depot. The key operational concern is for two grain trucks to be able to move around the outer edge of the site as this would allow trucks to stack in two queues in the peak harvest time.

Both options can accommodate two grain trucks side by side (without overlapping) from the entry gate to when they start to merge about 35 m prior to the weighbridge. The fuel delivery and despatch trucks have two slabs and the initial path from the gate indicates that the fuel trucks will “share” the inner lane of the grain route before splitting off to the right to align with the slabs. The trucks to and from the proposed new fuel depot will therefore have a negligible impact on the existing grain operation on site. It should also be noted that as part of both options, the existing gates will also be widened making entry and exit easier.

In **Option 1** the tanks are located approximately 17 m away from the fence and as far away from the residential community as possible.

In **Option 2** the aim is to reduce the amount of construction by moving the path that the grain trucks follow further away from the railway line siding. This necessitates that the tanks are also moved closer to the road. As there is an electrical power line that runs between the road and the tanks this was used as a guide in limiting the shift of the tanks towards the road.

While the construction area of **Option 1** is greater it is still preferred operationally as it provides slightly more stacking and thereby minimises the potential for conflict with the fuel depot operations.

### NO-GO Alternative:

The No-Go alternative entails maintaining the existing state of the site and to operate the depot in its current form. Negative impacts associated with the No-Go alternative include lack of temporary and permanent job opportunities, the additional profit opportunity cost lost for Kaap Agri (Pty) Ltd and the opportunity cost lost to supply diesel to the farmers. The NO-GO alternative would result in the existing facility being unable to provide for the projected future diesel demand in the area.

## Identification & Assessment of Impacts

The proposed expansion entails the construction and operation of five 83m<sup>3</sup> additional fuel storage tanks and associated infrastructure. The potentially significant impacts identified as being associated with the depot are as follows:

### Construction phase:

- **Soil & Groundwater Contamination & Pollution:** Fuel, oil, lubricants, and other pollutants may leak from vehicles/ machinery and contaminate the soil. Pollution and soil contamination could also occur from chemical toilets, cement mixing directly on the soil and stormwater runoff may flow over the site camp area and carry contaminants off-site.
- **Fire, Health & Safety Risk:** Exposure through breathing vapours, swallowing hazardous substances or skin contact may have possible health effects. There is a minor risk of a diesel pool fire and toxic combustion gases if an incident occurs at the existing facility while construction takes place for the upgrade.
- **Dust & Noise Impacts:** As a result of the construction phase of this development noise and dust impacts are expected to occur in the area due to an increase in construction vehicles and road tankers for the duration of the construction phase while materials are being transported to the site and excavations are being made.
- **Traffic, Safety and Access Impacts:** As a result of the construction phase of this development traffic impacts are expected to occur in the area due to an increase in construction vehicle and truck traffic in the area for the duration of the construction phase while materials are being transported to the site. Road safety impacts and road condition impacts could also occur.
- **Visual Impacts:** The construction phase is associated with temporary disturbance as a result of construction (trench excavations, vehicles, machinery, fencing & signage) that may have a negative visual impact on the public.
- **Socio-economic – Creation of employment opportunities:** Temporary employment opportunities will be provided during the construction phase to those residing in the geographical area.

### Operational phase:

- **Soil & Groundwater Contamination & Pollution:** During the operational phase of the proposed development soil and groundwater contamination could result due to fuel spills associated with re-filling of the above ground storage tanks. In addition, if stormwater is not managed correctly there is the potential for the unmanaged stormwater runoff to impact negatively on the environment, potentially causing pollution and contamination. The aboveground fuel storage tanks could leak and contaminate the soil and groundwater.
- **Traffic & Safety Impacts:** Traffic impacts are expected to occur for the duration of the operational phase of the activity as a result of the additional vehicles making use of the fuel depot. This could lead to safety impacts or damage to road infrastructure.
- **Fire, Health & Safety Impact:** Exposure through breathing vapours, swallowing hazardous substances or skin contact may have possible health effects. The hazardous events identified by the MHI Risk Assessment that could occur at the facility could be an uncontrolled leak of

diesel at the depot from a bulk storage tank or an uncontrolled leak of diesel from the delivery road tanker. As a result of the hazardous events, the identified potential major incidents could be a diesel pool fire at the storage tanks or the delivery road tanker and toxic effect of diesel combustion gases in case of a pool fire at the storage tanks. The most critical effect that a major incident at the facility could have is a pool fire inside the common bund of the storage tanks.

- **Air Quality Impact:** Fuel vapour emissions may cause an odour nuisance or health impacts to adjacent residents, staff on site or to users of the fuel depot.
- **Visual Impact:** The visibility of the fuel storage tanks from prominent viewpoints and receptors.
- **Socio Economic Benefit:** Creation of new permanent job opportunities.
- **Socio Economic Benefit:** Supply of diesel fuel to farmers and additional income opportunity for Kaap Agri as they can meet the demand.

The EAP has assessed the impacts associated with the fuel depot to be as follows, after mitigation:

**Table 2:** Summary Tables of Construction & Operation Phase Impact Significance, After Mitigation

CONSTRUCTION PHASE IMPACTS & BENEFITS			
IMPACT	IMPACT MITIGATION	SIGNIFICANCE	AFTER
Soil & Groundwater Contamination & Pollution	Low (-)		
Visual Impact	Low (-)		
Dust & Noise Impact	Low (-)		
Fire, Health and Safety Risk	Low - Medium (-)		
Traffic, Safety and Access	Low (-)		
Socio-economic – creation of temporary employment opportunities	Low – Medium (+)		
OPERATION PHASE IMPACTS			
IMPACT	IMPACT MITIGATION	SIGNIFICANCE	AFTER
Soil & Groundwater Contamination & Pollution	Low - Medium (-)		
Fire, Health and Safety Risk	Low - Medium (-)		
Air Quality: Fuel Vapour Emissions	Low (-)		
Traffic & Safety	Low (-)		
Visual Impact	Low (-)		
Socio-economic benefit – creation of permanent employment opportunities	Low – Medium (+)		
Socio-economic benefit – fuel supply to farmers and income opportunity	Medium (+)		

The Basic Assessment has determined that none of these associated impacts have been found to be of an unacceptable level; all of these impacts can either be avoided or minimised to an acceptable level of risk, provided that the mitigation measures recommended in the EMPr are followed and complied with.

## Conclusions & Recommendations by the EAP

Findings from the investigation and assessment of the proposed site for development (Portion 17 of the Farm Vryheid No. 55, Klipheuwel) showed that the proposed site is a suitable location to provide additional fuel storage and supply services. This is based on the insignificant biodiversity impacts associated with the proposed expansion, due to the previous transformation of the entire site proposed for development. Moreover, no water resources are present on or adjacent to the site, no cultural or heritage impacts are expected to occur within the proposed site for development. The site is completely transformed, is within the Klipheuwel Urban Edge, aligns with the property's existing land use rights (General Industry) and is zoned for General industrial use in the Spatial Development Framework.

The most significant impact of the development proposal is the potential health and safety risk. The MHI Risk Assessment found that a major incident at the existing plant (pool fire inside common bund) will not impact on people outside the boundaries of the depot, especially towards future developments around the site. The proposed AST installation on the premises does not comprise an MHI. The diesel delivery tankers constitute a MHI because a pool fire caused by the road tanker on site or a pool fire in the proposed new retaining bund could impact the public outside the boundaries of the site. However, the risk is lower than when the fuel tankers are driving on the roads due to potential collisions with vehicles. The MHI Assessment found that the proposed expansion of the site is expected to have a low societal risk as there are no MHI within reach of the worst-case major incident that can occur at this site.

The MHI Risk Assessment concluded that even if future developments around the site take place, the health & safety risk is expected to be low as risk is a measure of the likelihood of an event and the consequence of an event. With the proposed mitigation measures implemented, the likelihood of an event occurring is exponentially low, resulting in the level of risk expected to be low.

In terms of benefits, the depot expansion will provide short- and long-term job opportunities to the community during the construction and operation phases, an income stream for the applicant, as well as additional provision of fuel supply services which are required by farmers in the area.

Given the low significance of the impacts assessed, as well as the likelihood of an incident occurring to be very low, the socio-economic benefit of this project should be realised and the EAP recommends that the proposed site be developed. Measures as stipulated in the EMP (**Appendix H**) must be implemented and complied with. The implementation of the design, construction and operational phase measures contained in the EMP in **Appendix H**, will maximize the benefits and avoid/ minimize any environmental risks associated with the proposed expansion. It is of particular importance to manage the health and safety risk associated with a potential pool fire and/or exposure to hazardous liquids (diesel fuel) and fuel vapours.

There is thus adequate motivation for the Kaap Agri (Pty) Ltd fuel depot expansion to proceed under the following recommended conditions of approval:

- The mitigation measures listed in the EMP must be strictly implemented and complied with.
- Two mobile foam pourers of 100 kg should each be placed on the northern and southern sides of the diesel depot.
- The tanks must be installed according to the following SANS:
  - *SANS 10131(2004): Above-ground storage tanks for petroleum products.*



- *SANS 10 400TT (Fire Protection) 53 Sections 1-6 (The application of the National Building Regulations-Installation of Liquid Fuel Dispensing Pumps and Tanks).*
  - *SANS 10087-3 (2008) (English): The handling, storage, distribution and maintenance of liquefied petroleum gas in domestic, commercial, and industrial installations Part 3: Liquefied petroleum gas installations involving storage vessels of individual water capacity exceeding 500 L.*
- The following plans & procedures must be produced prior to construction taking place (as per design phase requirements listed in the EMPr):
  - Stormwater Management Plan (refer to **Appendix G6**).
  - Spill Contingency Plan.
  - Fire Plan.
  - Update Emergency Response Plan.
  - Update Preventative Maintenance Plans.
- The installation of the ASTs and associated infrastructure (e.g., pipework) must comply with the National Building Regulations and Standards Act No. 103 of 1977.
- The installation of the ASTs and associated infrastructure must comply with local authority bylaws and all procedures and equipment used must be in accordance with the Occupational Health & Safety Act (No. 85 of 1993).
- Upon completion of the UST installation, an engineer is to inspect and verify that the tanks and the associated infrastructure have been installed as per the design criteria described in the Final BAR and in accordance with all required SABS / SANS standards and applicable legislation.
- Substantial on-site road works to provide sufficient stacking for, and circulation through the site by the fuel tankers and grain trucks. The grain trucks and fuel tankers' tracking are separated once they enter the site.
- The tank farm is located as far from the community on the opposite side of the access road as possible.

The implementation of the design, construction, and operational phase measures contained in the EMPr in **Appendix H**, must be implemented and complied with.

There is thus adequate motivation for the proposed expansion of the fuel depot to proceed.

## SECTION A: ADMINISTRATIVE DETAILS

Highlight the Departmental Region in which the intended application will fall	CAPE TOWN OFFICE:		GEORGE OFFICE:
	REGION 1 (City of Cape Town, West Coast District)	REGION 2 (Cape Winelands District & Overberg District)	REGION 3 (Central Karoo District & Garden Route District)
<b>Duplicate this section where there is more than one Proponent</b> Name of Applicant/Proponent: Name of contact person for Applicant/Proponent (if other): Company/ Trading name/State Department/Organ of State: Company Registration Number: Postal address:  Telephone: E-mail:	Kaap Agri (Pty) Ltd		
	David Gempies		
	Kaap Agri (Pty) Ltd		
	2011/113185/06		
			Postal code: 7620
	(021) 860 3745		Cell: 083 440 0165
	<a href="mailto:david.gempies@kaapagri.co.za">david.gempies@kaapagri.co.za</a> <a href="mailto:tiaan.lesing@kaapagri.co.za">tiaan.lesing@kaapagri.co.za</a>		Fax: : (086) 631 8008
Company of EAP: EAP name: Postal address:  Telephone: E-mail:  Qualifications:  EAPASA registration no:	Sillito Environmental Consulting (Pty) Ltd		
	<ul style="list-style-type: none"> <li>Lead EAP &amp; Reviewer: Chantel Müller</li> <li>Secondary EAP and Author: Anthony Mader</li> </ul>		
	PO Box 30134, Tokai		
			Postal code: 7966
	(021) 712 5060		Cell: 071 313 4193 (Chantel) 083 309 9211 (Anthony)
	<a href="mailto:chantel@environmentalconsultants.co.za">chantel@environmentalconsultants.co.za</a> <a href="mailto:anthony@environmentalconsultants.co.za">anthony@environmentalconsultants.co.za</a>		Fax: (021) 712 5061
	<b>Lead EAP &amp; Reviewer: Chantel Müller</b> M Phil in Environmental Management (2008) BA in Social Dynamics (2004) Chantel Muller is a registered EAP with EAPSA as well as a member of the International Association for Impact Assessment (IAIA). Chantel is also an Accredited Professional with the Green Building Council of South Africa.		
	<b>Secondary EAP and Author: Anthony Mader</b> BSc (Honours) Ecology, Environment and Conservation Doctor of Philosophy (PhD): <i>Currently Completing</i>		
	Chantel Müller: 2019/1362		
<b>Duplicate this section where there is more than one landowner</b> Name of landowner: Name of contact person for landowner (if other): Postal address:  Telephone: E-mail:	Kaap Agri (Pty) Ltd		
	Same as Above – Applicant Details. The Applicant is the landowner.		
	Private Bag X3401, Paarl		
			Postal code: 7620
	(021) 860 3745		Cell: 083 440 0165
	<a href="mailto:david.gempies@kaapagri.co.za">david.gempies@kaapagri.co.za</a> <a href="mailto:tiaan.lesing@kaapagri.co.za">tiaan.lesing@kaapagri.co.za</a>		Fax: (086) 631 8008

Name of Person in control of the land:	Kaap Agri (Pty) Ltd		
Name of contact person for person in control of the land:	Same as Above – Applicant Details. The Applicant is in control of the land.		
Postal address:	Private Bag X3401, Paarl		
		Postal code: 7620	
Telephone:	(021) 860 3745	Cell: 083 440 0165	
E-mail:	<a href="mailto:david.gempies@kaapagri.co.za">david.gempies@kaapagri.co.za</a> <a href="mailto:tiaan.lessing@kaapagri.co.za">tiaan.lessing@kaapagri.co.za</a>	Fax: (086) 631 8008	

<b>Duplicate this section where there is more than one Municipal Jurisdiction</b> Municipality in whose area of jurisdiction the proposed activity will fall:  Contact person:  Postal address:  Telephone:  E-mail:	City of Cape Town		
	Municipal Manager: Lungelo Mbandazayo Regional Head Environmental & Heritage Region: Morne Theron		
	Private Bag X9181, Cape Town		
	Cape Town	Postal code: 8000	
	Lungelo Mbandazayo: (021) 400 1111 Morne Theron: (021) 444 0601	Cell: N/A	
	<a href="mailto:City.manager@capetown.gov.za">City.manager@capetown.gov.za</a> <a href="mailto:morne.theron@capetown.gov.za">morne.theron@capetown.gov.za</a>	Fax: (021) 400 1313	

## SECTION B: CONFIRMATION OF SPECIFIC PROJECT DETAILS AS INCLUDED IN THE APPLICATION FORM

1.	Is the proposed development (please tick):	New		<b>Expansion</b>	X
2.	Is the proposed site(s) a brownfield of greenfield site? Please explain.				
<p>The Environmental Protection Agency defines "brownfield sites" as "a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant." The term typically describes areas of land that were once used for commercial or industrial purposes such as factories and warehouses.</p> <p>A "greenfield site" is land that has never been built upon.</p> <p>The proposed site for development is located within the property boundaries of the existing Wesgraan Klipheuwel Silo grain storage facility. The entire site has been previously transformed/highly disturbed and comprises of roads and gravel surfaces. The proposed site for the new diesel storage tanks is located in close proximity to the existing diesel depot facility.</p> <p>The site may therefore be classified as more of a brownfield development than a greenfield development due to the high level of transformation/disturbance (i.e., comprised of roads and gravel surfaces). The existing diesel storage area is spot zoned for General Industry.</p> <p>The site is on previously disturbed land comprising of brick and gravel. The site is within the boundaries of an existing operational facility currently used to test and store grain and where diesel is currently stored and distributed.</p>					
3.	<b>For Linear activities or developments</b>				
3.1.	Provide the Farm(s)/Farm Portion(s)/Erf number(s) for all routes:				
3.2.	Development footprint of the proposed development for all alternatives.				m <sup>2</sup>

3.3.	Provide a description of the proposed development (e.g. for roads the length, width and width of the road reserve in the case of pipelines indicate the length and diameter) for all alternatives.																				
3.4.	Indicate how access to the proposed routes will be obtained for all alternatives.																				
3.5.	SG—Digit codes—of the Farms/Farm Portions/Erf numbers for—all alternatives																				
3.6.	<b>Starting point co-ordinates for all alternatives</b>																				
	Latitude (S)	°				'				"											
	Longitude (E)	°				'				"											
	<b>Middle point co-ordinates for all alternatives</b>																				
	Latitude (S)	°				'				"											
	Longitude (E)	°				'				"											
	<b>End point co-ordinates for all alternatives</b>																				
	Latitude (S)	°				'				"											
	Longitude (E)	°				'				"											
<b>Note: For linear activities or developments longer than 500m, a map indicating the co-ordinates for every 100m along the route must be attached to this BAR as Appendix A3.</b>																					
4.	<b>Other developments</b>																				
4.1.	Property size(s) of all proposed site(s):																		25 800m <sup>2</sup>		
4.2.	Developed footprint of the existing facility and associated infrastructure (if applicable):																		25 800m <sup>2</sup>		
4.3.	Development footprint of the proposed development and associated infrastructure size(s) for all alternatives:  The proposed development footprint is located within the existing disturbed cadastral unit, comprised of gravel surfaces.  The total development footprint will be approximately 2391m <sup>2</sup> and will be comprised of: <ul style="list-style-type: none"> <li>• 5 x 83m<sup>3</sup> above ground tanks and associated infrastructure = 430m<sup>2</sup></li> <li>• 2 x spill containment slabs = ~190m<sup>2</sup></li> <li>• Proposed brick paved roads = ~1429m<sup>2</sup></li> <li>• New raised island = ~ 342m<sup>2</sup></li> </ul>																		2 391m <sup>2</sup>		
4.4.	Provide a detailed description of the proposed development and its associated infrastructure (This must include details of e.g. buildings, structures, infrastructure, storage facilities, sewage/effluent treatment and holding facilities).  The primary use of the existing operating facility includes the storage and handling of grain. A number of grain storage silos are located on the property. In addition, there are two existing 23m <sup>3</sup> above ground storage tanks (AST) (with a combined storage capacity of 46m <sup>3</sup> ).  The applicant proposes to construct a bulk fuel storage depot on site. This bulk fuel depot will include 5 X 83m <sup>3</sup> ASTs and associated infrastructure. The five (5) x 83m <sup>3</sup> capacity above ground, horizontal, diesel storage tanks, are proposed to be located within a single bunded area. Fuel deliveries will occur on a concrete surfaced area (spill slab) which will be sloped to a containment pit for spillage containment. Fuel dispensing to Kaap Agri road tanks will take place on a separate spill containment slab.  In summary, the following is proposed: <ul style="list-style-type: none"> <li>• 5 x 83m<sup>3</sup> above ground diesel storage tanks and associated infrastructure;</li> </ul>																				

- Bund retaining wall;
- Separate loading and offloading points on spill containment slabs;
- Brick paved roadways; and
- Raised islands (to prevent access via truck).

Please refer to item 4.3 above for the proposed development footprints. The proposed development footprint is within the previously transformed/ highly disturbed property (i.e., Portion 17, Farm Vryheid, Farm No. 55, Klipheuwel).

The proposed site layout plan (Option 1 in **Appendix M1**) can accommodate two grain trucks side by side (without overlapping) from the entry gate to when they start to merge about 35m prior to the weighbridge. The fuel delivery and dispatch trucks have two slabs and the initial path from the gate indicates that the fuel trucks will "share" the inner lane of the grain route before splitting off to the right to align with the slabs. The trucks to and from the proposed new fuel depot will therefore have a negligible impact on the existing grain operation on site.

The proposed fuel depot will enable some existing Moorreesburg clients to be serviced from the Klipheuwel depot. Fuel will be delivered to the depot typically by 40 000 litre (40m<sup>3</sup>) tankers. This will enable Kaap Agri to deliver fuel from the proposed depot directly to Kaap Agri farm clients. A smaller 16 000 litre (16m<sup>3</sup>) tanker will be used to make the farm deliveries.

Access to/from the site can be obtained from the existing Minor Road 60 intersection with MR188 (Klipheuwel Road) and subsequently via three gates along the western boundary of the site (fronting Minor Road 60). The northern gate is ingress only, while the middle and southern gates are egress only. It should also be noted that as part of both options [i.e., Appendix M1 (Option 1) and Appendix M2 (Option 2)], the existing gates will also be widened making entry and exit easier.

4.5.	Indicate how access to the proposed site(s) will be obtained for all alternatives.			
Access to/from the site can be obtained from two the existing Minor Road 60 intersection with MR188 (Klipheuwel Road) and subsequently via three gates along the western boundary of the site fronting Minor Road 60. The northern gate is ingress only, while the middle and southern gates are egress only.				
4.6.	SG Digit code(s) of the proposed site(s) for all alternatives:	C01600000000005500017		
4.7.	Coordinates of the proposed site(s) for all alternatives:			
	Latitude (S)	33°	42'	08.53"
	Longitude (E)	18°	42'	07.72"

## SECTION C: LEGISLATION/POLICIES AND/OR GUIDELINES/PROTOCOLS

### 1. Exemption applied for in terms of the NEMA and the NEMA EIA Regulations

Has exemption been applied for in terms of the NEMA and the NEMA EIA Regulations. If yes, include a copy of the exemption notice in Appendix E18.	YES	NO
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### 2. Is the following legislation applicable to the proposed activity or development.

The National Environmental Management: Integrated Coastal Management Act, 2008 (Act No. 24 of 2008) ("ICMA"). If yes, attach a copy of the comment from the relevant competent authority as Appendix E4 and the pre-approval for the reclamation of land as Appendix E19.	YES	NO
The National Heritage Resources Act, 1999 (Act No. 25 of 1999) ("NHRA"). If yes, attach a copy of the comment from Heritage Western Cape as Appendix E1.	YES	NO
The National Water Act, 1998 (Act No. 36 of 1998) ("NWA"). If yes, attach a copy of the comment from the DWS as Appendix E3.	YES	NO
The National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) ("NEM:QA"). If yes, attach a copy of the comment from the relevant authorities as Appendix E13.	YES	NO

The National Environmental Management Waste Act (Act No. 59 of 2008) ("NEM:WA")	YES	NO
The National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004 ("NEMBA").	YES	NO
The National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) ("NEMPAA").	YES	NO
The Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983). If yes, attach comment from the relevant competent authority as Appendix E5.	YES	NO

### 3. Other legislation

<p>List any other legislation that is applicable to the proposed activity or development.</p> <p><b>Spatial Planning Land Use Management Act 16 of 2013</b></p> <p><b>Mineral and Petroleum Resources Act 49 of 2008</b></p> <p><b>National Energy Regulator Act 40 of 2004</b></p> <p><b>The National Environmental Management Act, Act 107 of 1998, as amended.</b></p> <ul style="list-style-type: none"> <li>The proposed expansion of the diesel depot will take place according to the conditions set out in the NEMA, whereby environmental authorization is required for the development of facilities or infrastructure for the storage, or storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 but not exceeding 500 cubic meters.</li> </ul> <p><b>National Environmental Management Act (Act 39 of 2004), as amended: Section 35(2)</b></p> <ul style="list-style-type: none"> <li><i>"The occupier of any premises must take all reasonable steps to prevent emission of any offensive odour caused by any activity on such premises."</i></li> </ul> <p><b>Occupational Health and Safety Act 85 of 1993</b></p> <ul style="list-style-type: none"> <li>The Occupational Health and Safety Act (Act 85 of 1993) defines a major hazard installation as "an installation-             <ol style="list-style-type: none"> <li>where more than the prescribed quantity of any substance is or may be kept, whether permanently or temporarily; or</li> <li>where any substance is produced, used, handled or stored in such a form and quantity that it has the potential to cause a major incident".</li> </ol> </li> </ul> <p>The proposed expansion could potentially impact on people outside of the boundary of the site and is therefore defined as a major hazard installation.</p> <p><b>The National Health Act 61 of 2003</b></p> <p><b>Major Hazardous Installation Regulations issued in Terms of Occupational Health and Safety.</b></p> <ul style="list-style-type: none"> <li>Nature and Business Alliance Africa (Pty) Ltd conducted an MHI Risk Assessment in line with the MHI Regulations.</li> </ul> <p><b>EIA regulations in terms of Chapter 5 of the NEMA, 1998. Regulations R982, R983, R984 and R985 of December 2014.</b></p>
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### 4. Policies

Explain which policies were considered and how the proposed activity or development complies and responds to these policies.

**Western Cape Spatial Development Framework (PSDF), 2009**

**City of Cape Town Municipal Spatial Development Framework (MSDF) 2018**

**City of Cape Town Social Development Strategy**

**City of Cape Town Economic Growth Strategy**

**City of Cape Town Municipal Planning By-Law 2015**

**City of Cape Town Transit Orientated Development Strategy**

**City of Cape Town: Environmental Health By-law, 30 June 2003**

**DEA Integrated Environmental Management Guidelines Series, Guideline 5: Assessment of Alternatives and Impacts in support of the Environmental Impact Assessment Regulations.**

## 5. Guidelines

List the guidelines which have been considered relevant to the proposed activity or development and explain how they have influenced the development proposal.

DEA&DP EIA Guideline Information Document on Need and Desirability, March 2013

DEA&DP EIA Guideline Information Document on Alternatives, March 2013

DEA&DP EIA Guideline Information Document on Public Participation, March 2013

DEA&DP EIA Guideline Information Document on Environmental Management Plans, July 2005

DEAT EIA Guideline Document 5, on the assessment of impacts and alternatives (DEAT 2006)

DEA&DP Specialist Guidelines Series (2005).

The City of Cape Town Air Quality By-law, 2016

These guidelines were used to guide the EAP to ensure all the requirements with regards to the consideration of alternatives, public participation and procedures to assess the need and desirability were assessed and inquired. These guidelines were considered during the BAR and preparation of this report.

## 6. Protocols

Explain how the proposed activity or development complies with the requirements of the protocols referred to in the NOI and/or application form

The table below indicates the level of sensitivity of each of the themes identified in the National Web-based Screening Tool Report (See attached as **Appendix I1**):

Theme	Very High Sensitivity	High Sensitivity	Medium Sensitivity	Low Sensitivity
Agriculture Theme			X	
Animal Species Theme		X		
Aquatic Biodiversity Theme				X

Archaeological & Cultural Heritage		X		
Civil Aviation Theme		X		
Plant Species Theme			X	
Defense Theme				X
Terrestrial Biodiversity Theme	X			

The following themes, for which protocols were legislated on the 20<sup>th</sup> of March 2020 and 30<sup>th</sup> October 2020 have been identified in the Screening Tool Report:

- Agricultural Assessment
- Terrestrial Biodiversity Impact Assessment
- Aquatic Biodiversity Impact Assessment
- Noise Impact Assessment
- Plant Species Assessment
- Animal Species Assessment

None of these protocols are however applicable to the proposed development, as the proposed site for development is (i) an existing operational site, (ii) completely transformed/highly disturbed, and (iii) offers little-to-no ecological functioning [as the site consists only of hard gravel surfaces and contains no vegetation, no animal species, and no natural watercourses]. Therefore, due to these previous disturbances (namely the previous transformation of the site as well as current operational activities associated with the Grain Storage Facility), it is envisaged that the proposed development is unlikely to impact any terrestrial and aquatic biodiversity, fauna, flora, or support any species of conservational concern]. The site does support some trees and grass along the existing stormwater infrastructure at the entrance to the site. The site is zoned for General Industry and not for Agriculture. No loss of agricultural land is proposed (i.e., no cropland or arable land is required to be cleared). The soil has been completely disturbed and no archaeological material is present on site. Please refer to the Site Verification Report, attached as **Appendix I2**, that motivates and disputes the results generated in the Site Screening Tool Report.

#### **Site Verification / Site Assessment and Determination of Site Sensitivity by EAP**

A site visit was carried out on the 26<sup>th</sup> of August 2020 to verify the site sensitivity and the specialist assessments required. Please refer to the figures below which show the existing property (Portion 17 of Farm No 55) and the development footprint for the proposed 5 x diesel storage tanks.

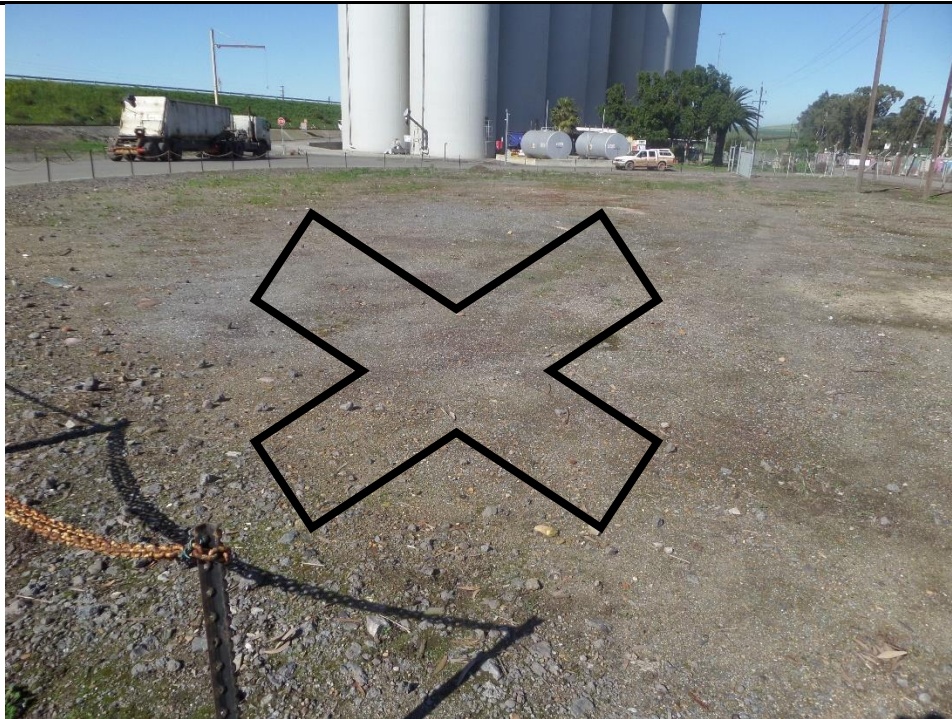




**Figure 3:** Existing grain trucks enter the existing Wesgraan-Klipheuwel Silo grain storage facility from Klipheuwel Road and the enter the site at entrance No 3 shown in the figure above.



**Figure 4 and Figure 5:** The existing 2 X 23m<sup>3</sup> diesel storage & distribution facility on site.



**Figure 6:** The proposed location for the 5 x new 83m<sup>3</sup> diesel storage and distribution depot. The development footprint of the site is completely transformed land comprising of a hard gravel surface.



**Figure 7:** The proposed location for the new entrance road for the grain carrier trucks. The existing road currently used by the grain carrier trucks (as per this image) will be used by the trucks dispatching and refuelling.





**Figure 8 & Figure 9:** Storm water management infrastructure on site directing clean stormwater through the site underneath the existing prick paved road. A concrete canal (**Figure 8**) and stone pitched canal (**Figure 9**).

Based on the site visit and the images provided above it is evident that the property is completely transformed and is currently an operating facility (Zoned General Industry – Grain Storage Facility). The site has an insignificant ecological functioning, as the site consists mostly of hard gravel surfaces. The site is operational and fenced off. No animal species were observed during the site visit. No natural watercourses are present within the development footprint. The site does support some trees and grass along the existing stormwater infrastructure (Figure 6) and at the entrance to the site.

## SECTION D: APPLICABLE LISTED ACTIVITIES

List the applicable activities in terms of the NEMA EIA Regulations

Activity No(s):	Provide the relevant <b>Basic Assessment Activity(ies)</b> as set out in <b>Listing Notice 1</b>	Describe the portion of the proposed development to which the applicable listed activity relates.
51	The expansion of facilities for the storage, or for the storage and handling, of a dangerous good, where the capacity of such storage facility will be expanded by more than 80 cubic meters.	The capacity of the storage facility is proposed to expand by 415 cubic meters (5 x 83m <sup>3</sup> ).
Activity No(s):	Provide the relevant <b>Basic Assessment Activity(ies)</b> as set out in <b>Listing Notice 3</b>	Describe the portion of the proposed development to which the applicable listed activity relates.
N/A		
<b>Note:</b> <ul style="list-style-type: none"> <li>The listed activities specified above must reconcile with activities applied for in the application form. The onus is on the Applicant to ensure that all applicable listed activities are included in the application. If a specific listed activity is not included in an Environmental Authorisation, a new application for Environmental Authorisation will have to be submitted.</li> <li>Where additional listed activities have been identified, that have not been included in the application form, and amended application form must be submitted to the competent authority.</li> </ul>		

List the applicable waste management listed activities in terms of the NEM:WA

Activity No(s):	Provide the relevant <b>Basic Assessment Activity(ies)</b> as set out in <b>Category A</b>	Describe the portion of the proposed development to which the applicable listed activity relates.
N/A		

List the applicable listed activities in terms of the NEM:AQA

Activity No(s):	Provide the relevant <b>Listed Activity(ies)</b>	Describe the portion of the proposed development to which the applicable listed activity relates.
N/A		

## SECTION E: PLANNING CONTEXT AND NEED AND DESIRABILITY

1.	Provide a description of the preferred alternative.
<p>The land use activity proposed is for the storage of dangerous goods / storing of bulk fuel.</p> <p>With reference to <b>Appendix E21 (Existing Land Use Rights and Zoning Map)</b>, a portion of the site has been spot-zoned for General Industry.</p> <p>The current site is zoned for Agriculture with a spot-zoning for General Industry 1. This includes the silos, existing fuel tanks and offices.</p> <p>As is evident from <b>Appendix E21</b>, an application was made to the CCT to expand the existing above ground 43m<sup>3</sup> diesel storage by an additional 43m<sup>2</sup> of underground tanks. This expansion was allowed for at the time under the General Industry 1 Zoning and would have allowed for a total of 92m<sup>2</sup> of diesel storage. The expansion to include the fuel service station however never did take place. It is therefore only the existing 43m<sup>3</sup> of above ground tanks that remain.</p>	
2.	Explain how the proposed development is in line with the existing land use rights of the property as you have indicated in the NOI and application form? Include the proof of the existing land use rights granted in Appendix E21.
<p>Upon initial consultation with a town planner however, it is evident that the storing of bulk fuel <u>could</u> be seen as a <i>noxious industry</i><sup>1</sup> and not allowed within a GI 1 zone, thus rezoning to Risk Industry could be required in terms of the bylaw (to be confirmed with the local municipality Town Planning Department).</p> <p>A rezoning application therefore could be required to rezone the site if the municipality does not allow the fuel storage and distribution facility to be operated under the existing General Industry 1 zoning. Engagements with the municipality are required in this regard.</p>	
3.	Explain how potential conflict with respect to existing approvals for the proposed site (as indicated in the NOI/and or application form) and the proposed development have been resolved.
See above.	
4.	Explain how the proposed development will be in line with the following?
4.1	The Provincial Spatial Development Framework.
Job opportunities as well as additional services will be provided in the community.	
4.2	The Integrated Development Plan of the local municipality.
<p>The site is within the Klipheuwel Urban Edge, aligns with the properties existing land use rights (General Industry) and is zoned for General industrial use in the Spatial Development Framework.</p> <p>It is unknown if the municipality will allow this quantity of fuel to be stored under the existing GI zoning or if the facility will need to apply to rezone the site to noxious.</p>	
4.3.	The Spatial Development Framework of the local municipality.
<p>The site is within the Klipheuwel Urban edge, aligns with the properties existing land use rights (General Industry) and is zoned for General industrial use in the Spatial Development Framework.</p>	

<sup>1</sup>'noxious trade' may be defined as an offensive, poisonous, or potentially harmful trade, use or activity which, because of fumes, emissions, smell, vibration, noise, waste products, nature of material used, processes employed, or other cause, is considered by the City to be a potential source of danger, nuisance or offence to the general public or persons in the surrounding area.

It is unknown if the municipality will allow this quantity of fuel to be stored under the existing GI zoning or if the facility will need to apply to rezone the site to noxious.	
4.4.	The Environmental Management Framework applicable to the area.
N/A	
5.	Explain how comments from the relevant authorities and/or specialist(s) with respect to biodiversity have influenced the proposed development.
N/A – No comments have been received yet. This site has no biodiversity constraints.	
6.	Explain how the Western Cape Biodiversity Spatial Plan (including the guidelines in the handbook) has influenced the proposed development.
N/A - This site has no biodiversity constraints.	
7.	Explain how the proposed development is in line with the intention/purpose of the relevant zones as defined in the ICMA.
N/A	
8.	Explain whether the screening report has changed from the one submitted together with the application form. The screening report must be attached as Appendix I.
It has not changed.	
9.	Explain how the proposed development will optimise vacant land available within an urban area.
The property is completely transformed and currently an operational facility (Zoned General Industry – Grain Storage Facility). The site has an insignificant ecological function, as the site is mostly transformed/highly disturbed and consists mostly of hard gravel surfaces. The site is operational and fenced off. No animal species were observed during the site visit. No natural watercourses are present within the development footprint. The site does support some trees and grass along the existing stormwater infrastructure (Figure 6) and at the entrance to the site.	
10.	Explain how the proposed development will optimise the use of existing resources and infrastructure.
See above.	
11.	Explain whether the necessary services are available and whether the local authority has confirmed sufficient, spare, unallocated service capacity. (Confirmation of all services must be included in Appendix E16).
No services are required to support this proposal. This is a diesel storage expansion activity, at an existing facility with existing infrastructure in place (existing ablutions, existing electricity, existing stormwater management infrastructure etc).	
12.	In addition to the above, explain the need and desirability of the proposed activity or development in terms of this Department's guideline on Need and Desirability (March 2013) or the DEA's Integrated Environmental Management Guideline on Need and Desirability. This may be attached to this BAR as Appendix K.
<p>The activity is needed and desired <b><u>at this location</u></b> due to the following reasons:</p> <ul style="list-style-type: none"> <li>• The site is on previously disturbed land comprising of brick and gravel.</li> <li>• The site is within the boundaries of an existing operational facility currently used to test and store grain and where diesel is currently stored and distributed.</li> <li>• The property is completely transformed and currently an operational facility (Zoned General Industry – Grain Storage Facility).</li> <li>• The site has no ecological functioning, as the site consists only of hard gravel surfaces and contains no vegetation, no animal species and no natural watercourses.</li> </ul> <p>The activity is needed and desired by Kaap Agri <b><u>at this point in time</u></b> due to the demand for diesel by the farmers in the region. The fuel depot will enable some existing Kaap Agri Moorreesburg clients to be serviced from the Klipheuwel depot. Fuel will be delivered to the depot typically by 40m<sup>3</sup> tankers. This will enable Kaap Agri to deliver fuel from the proposed depot directly to Kaap Agri farm clients. A smaller 16m<sup>3</sup> tanker will be used to make the local farm deliveries.</p>	

## SECTION F: PUBLIC PARTICIPATION

The Public Participation Process ("PPP") must fulfil the requirements as outlined in the NEMA EIA Regulations and must be attached as Appendix F. Please note that If the NEM: WA and/or the NEM: AQA is applicable to the proposed development, an advertisement must be placed in at least two newspapers.

1. Exclusively for linear activities: Indicate what PPP was agreed to by the competent authority. Include proof of this agreement in Appendix E22.

N/A – this is not a linear development.

2. Confirm that the PPP as indicated in the application form has been complied with. All the PPP must be included in Appendix F.

Confirmed. Please refer to **Appendix F8**.

3. Confirm which of the State Departments and Organs of State indicated in the Notice of Intent/application form were consulted with.

All of the Organs of State indicated in the NOI will be consulted with.

NAME OF ORGANIZATION / PARTY REPRESENTED	NAME AND SURNAME	TEL.NR. OR FAX.	EMAIL
DEA & DP Development Management Region 1	Zaahir Toefy	Tel: 021 483 4793 Fax: 021 483 3633	<a href="mailto:zaahir.toefy@westerncape.gov.za">zaahir.toefy@westerncape.gov.za</a>
DEA & DP Development Management Region 1	Saa-rah Adams (Case Officer) Taryn Dreyer (Supervisor)	Tel: 021 483 4793 Fax: 021 483 3633	<a href="mailto:Saa-rah.Adams@westerncape.gov.za">Saa-rah.Adams@westerncape.gov.za</a> ; <a href="mailto:Taryn.Dreyer@westerncape.gov.za">Taryn.Dreyer@westerncape.gov.za</a>
Western Cape Department of Agriculture	Cor van de Walt	Tel: (021) 808 5093/9	<a href="mailto:landuse.elsenburg@elsenburg.com">landuse.elsenburg@elsenburg.com</a> ;
DEA&DP Pollution and Chemicals Management	Wilna Kloppers & Arabel McClelland	Tel: 021 483 2660	<a href="mailto:Wilna.Kloppers@westerncape.gov.za">Wilna.Kloppers@westerncape.gov.za</a> & <a href="mailto:Arabel.McClelland@westerncape.gov.za">Arabel.McClelland@westerncape.gov.za</a>
DEA&DP Waste Management	Etienne Roux	Tel: 021 483 8378 Fax: 021 483 3186	<a href="mailto:Etienne.roux@westerncape.gov.za">Etienne.roux@westerncape.gov.za</a>
DEA&DP Air Quality Management	Joy Leaner	Tel: 021 483 2798 Fax: 021 483 3254	<a href="mailto:joy.leaner@westerncape.gov.za">joy.leaner@westerncape.gov.za</a>
Western Cape Government: Department of Transport and Public Works	Grace Swanepoel Lyle Martin	Tel: 021 483 4669	<a href="mailto:Grace.Swanepoel@westerncape.gov.za">Grace.Swanepoel@westerncape.gov.za</a> ; <a href="mailto:Lyle.Martin@westerncape.gov.za">Lyle.Martin@westerncape.gov.za</a>
Western Cape Department of Health	Stanley Nomdo and Graham Nevin	Tel: 021 934 0229 / 021 483 9342 Fax: 021 418 5685	<a href="mailto:stanley.nomdo@westerncape.gov.za">stanley.nomdo@westerncape.gov.za</a> <a href="mailto:graham.nevin@westerncape.gov.za">graham.nevin@westerncape.gov.za</a>
Heritage Western Cape	Waseefa Dhansay	Tel: 021 483 9598	<a href="mailto:waseefa.dhansay@westerncape.gov.za">waseefa.dhansay@westerncape.gov.za</a>
City of Cape Town Municipal Manager	Lungelo Mbandazayo	Tel: 021 400 1330	<a href="mailto:City.manager@capetown.gov.za">City.manager@capetown.gov.za</a>
City of Cape Town Ward Councillor	Ward 105 Ruan Beneke	Cell number: 084 509 5599	<a href="mailto:Ruan.Beneke@capetown.gov.za">Ruan.Beneke@capetown.gov.za</a>
City of Cape Town Safety and Security Fire and Rescue	André Moolman (Platoon Commander – Fire & Life Safety Northern/Tygerberg)	Tel: 021 444 8292	<a href="mailto:Andries.Moolman@capetown.gov.za">Andries.Moolman@capetown.gov.za</a>
City of Cape Town Environmental & Heritage Department (Northern District)	Morne Theron	Tel: 021 444 0597	<a href="mailto:morne.theron@capetown.gov.za">morne.theron@capetown.gov.za</a>
City of Cape Town Disaster Risk Management (Area North)	Judy Haumann	Tel: 021 983 2662	<a href="mailto:judy.haumann@capetown.gov.za">judy.haumann@capetown.gov.za</a>
Department of Water and Sanitation	Nelisa Ndobeni	Tel: 021 941 6033	<a href="mailto:NdobeniN2@dws.gov.za">NdobeniN2@dws.gov.za</a>
CapeNature-Land Use Advice	Ismat Adams	Tel: 021 866 8000 Fax: 021 866 1523	<a href="mailto:iadams@capenature.co.za">iadams@capenature.co.za</a>
Eskom	Alwie Lester (Provincial Head)	Cell: 071 116 1799	<a href="mailto:GMWCape@eskom.co.za">GMWCape@eskom.co.za</a>

4. If any of the State Departments and Organs of State were not consulted, indicate which and why.

N/A

5. If any of the State Departments and Organs of State did not respond, indicate which.

Western Cape Department of Agriculture  
DEA&DP Pollution and Chemicals Management  
DEA&DP Waste Management  
DEA&DP Air Quality Management  
Western Cape Government: Department of Transport and Public Works  
Western Cape Department of Health  
Heritage Western Cape  
CapeNature  
Department of Water and Sanitation  
Eskom

Please refer to the Comments and Response Report has been attached to the Draft BAR as **Appendix F7**.

6. Provide a summary of the issues raised by I&APs and an indication of the manner in which the issues were incorporated into the development proposal.

- CoCT requested a SWMP: A SWMP was conducted by EFG Engineers and has been appended to the DBAR as Appendix G6.
- CoCT request to adhere to specific legislation and policies: These have been incorporated into the DBAR.
- CoCT requested various plans and a risk assessment for health, fire and safety risk: An MHI Risk Assessment and Emergency Response Plan have been conducted and appended to the DBAR as Appendix G2 and G3 respectively.
- CoCT requested a Noise Impact Assessment and Noise Management Plan: A Noise Impact Assessment was conducted and a Noise Management Plan was compiled and appended to the DBAR as Appendix G4.

Please refer to the Comments and Response Report will be attached to the Final BAR as **Appendix F7**.

**Note:**

A register of all the I&AP's notified, including the Organs of State, and all the registered I&APs must be included in Appendix F. The register must be maintained and made available to any person requesting access to the register in writing. The EAP must notify I&AP's that all information submitted by I&AP's becomes public information.

Your attention is drawn to Regulation 40 (3) of the NEMA EIA Regulations which states that "*Potential or registered interested and affected parties, including the competent authority, may be provided with an opportunity to comment on reports and plans contemplated in subregulation (1) prior to submission of an application but **must** be provided with an opportunity to comment on such reports once an application has been submitted to the competent authority.*"

All the comments received from I&APs on the pre -application BAR (if applicable and the draft BAR must be recorded, responded to and included in the Comments and Responses Report and must be included in Appendix F.

All information obtained during the PPP (the minutes of any meetings held by the EAP with I&APs and other role players wherein the views of the participants are recorded) and must be included in Appendix F.

Please note that proof of the PPP conducted must be included in Appendix F. In terms of the required "proof" the following is required:

- a site map showing where the site notice was displayed, dated photographs showing the notice displayed on site and a copy of the text displayed on the notice;
- in terms of the written notices given, a copy of the written notice sent, as well as:
  - if registered mail was sent, a list of the registered mail sent (showing the registered mail number, the name of the person the mail was sent to, the address of the person and the date the registered mail was sent);

- if normal mail was sent, a list of the mail sent (showing the name of the person the mail was sent to, the address of the person, the date the mail was sent, and the signature of the post office worker or the post office stamp indicating that the letter was sent);
- if a facsimile was sent, a copy of the facsimile Report;
- if an electronic mail was sent, a copy of the electronic mail sent; and
- if a "mail drop" was done, a signed register of "mail drops" received (showing the name of the person the notice was handed to, the address of the person, the date, and the signature of the person); and
- a copy of the newspaper advertisement ("newspaper clipping") that was placed, indicating the name of the newspaper and date of publication (of such quality that the wording in the advertisement is legible).

## SECTION G: DESCRIPTION OF THE RECEIVING ENVIRONMENT

All specialist studies must be attached as Appendix G.

### 1. Groundwater

1.1.	Was a specialist study conducted?	YES	NO
1.2.	Provide the name and or company who conducted the specialist study.		
N/A			
1.3.	Indicate above which aquifer your proposed development will be located and explain how this has influenced your proposed development.		
<p>In this case the storage of fuel is proposed in Above Ground Tanks, not underground. The tanks will be placed on concrete surfaces within concrete bunded walls and therefore even if a leak does take place there will be no risk of soil or groundwater contamination as the fuel will be retained within the bund wall.</p> <p>The aquifer type therefore has no influence on the proposed development.</p> <p>The 1:1 000 000 Hydrogeological Map Series of South Africa published by the DWS states the following about the site (as viewed on Cape Farm Mapper):</p> <ul style="list-style-type: none"> <li>• Aquifer Type and Yield Classification: Fractured 2.0 – 5.0 l/s</li> <li>• Aquifer Vulnerability: Most</li> <li>• Depth to Groundwater (mbgl): 9.99mbgl</li> <li>• Aquifer Classification: Major</li> <li>• Aquifer Susceptibility: High</li> </ul>			
1.4.	Indicate the depth of groundwater and explain how the depth of groundwater and type of aquifer (if present) has influenced your proposed development.		
<p>The groundwater depth is approximately 10m below ground. In this case the storage of fuel is proposed in Above Ground Tanks, not underground. The tanks will be placed on concrete surfaces within concrete bunded walls and therefore even if a leak or spill does take place there will be no risk of soil or groundwater contamination as the fuel will be retained within the bund wall.</p> <p>The groundwater depth therefore has no influence on the proposed development.</p>			

### 2. Surface water

2.1.	Was a specialist study conducted?	YES	NO
2.2.	Provide the name and/or company who conducted the specialist study.		
N/A			
2.3.	Explain how the presence of watercourse(s) and/or wetlands on the property(ies) has influenced your proposed development.		

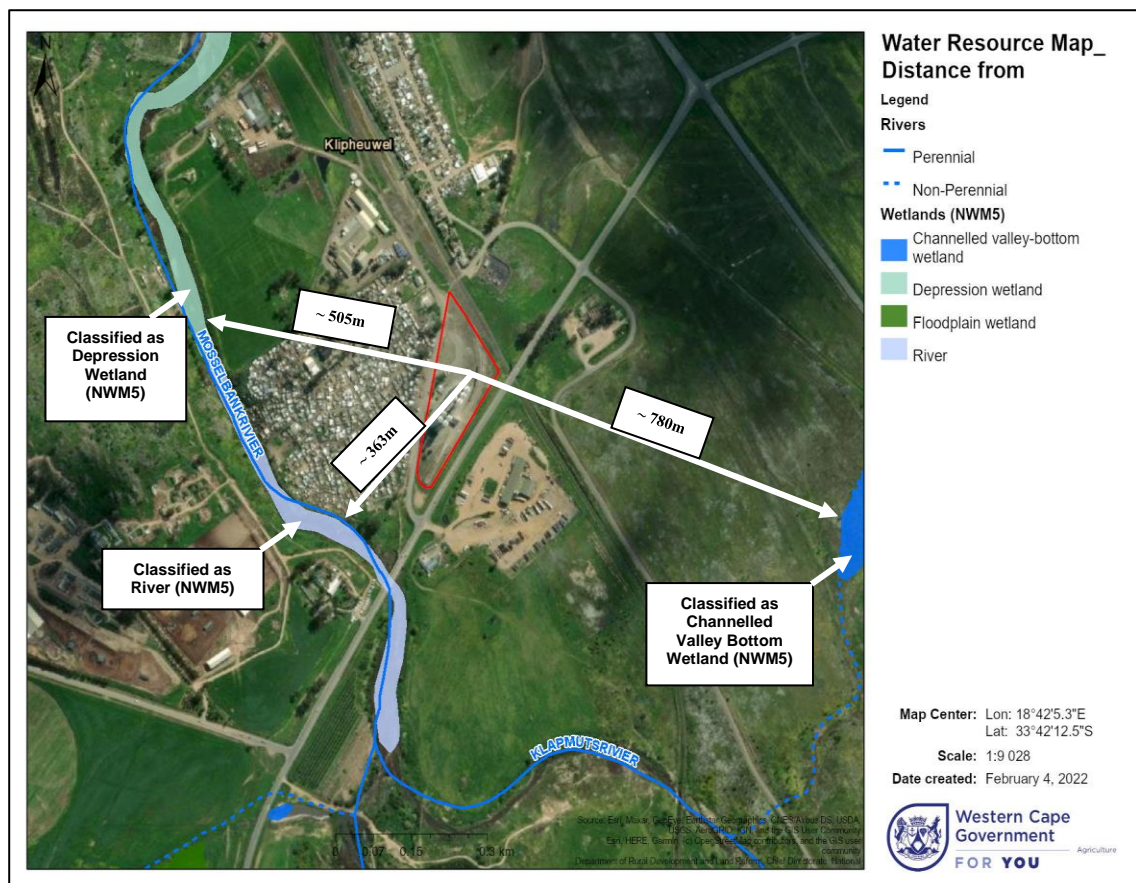


With reference to section 21(c) or (i) water uses of the National Water Act (Act No 36 of 1998) an application for general authorisation (or GA) applies when:

Section 21(c) or (i) water uses:

- The outer edge of the 1 in 100-year flood line and /or delineated riparian habitat, whichever is the greatest distance, measured from the middle of the watercourse of a river, spring, natural channel, lake or dam;
- In the absence of a determined 1 in 100-year flood line or riparian area the area within 100m from the edge of a watercourse where the edge of the watercourse is the first identifiable annual bank fill flood bench (subject to compliance to section 144 of the Act); or
- A 500 m radius from the delineated boundary (extent) of any wetland or pan.

Please see Appendix D2 showing the Water Resource Map and distance to the nearest identified watercourses, namely the Mosselbankrivier (located approximately 363m from proposed site for development), Depression Wetland (located approximately 505m away from the proposed site for development), and Channeled Valley Bottom Wetland (located approximately 780m away from the proposed site for development). Thus, the proposed development is **not** located within 100m of a watercourse or within 500m of a wetland. Therefore, the proposed development does not trigger the need for a WUA. Moreover, the river will not be at any risk due to (i) the proximity of the watercourse, and (ii) proposed construction of the bund wall around the ASTs (in case of any leaks or tank failure). The tanks are proposed above ground. Due to the distance from the nearest watercourse, the proposed development, the potential status of the watercourse [i.e., negative impact on watercourses by urban settlements – e.g., Okurut *et al.*, (2015)<sup>2</sup>], status of the proposed site for development (i.e., previously transformed), and physical barriers (e.g., roads, informal settlement, etc.), it was envisaged that a Freshwater Assessment would not be required.



### 3. Coastal Environment

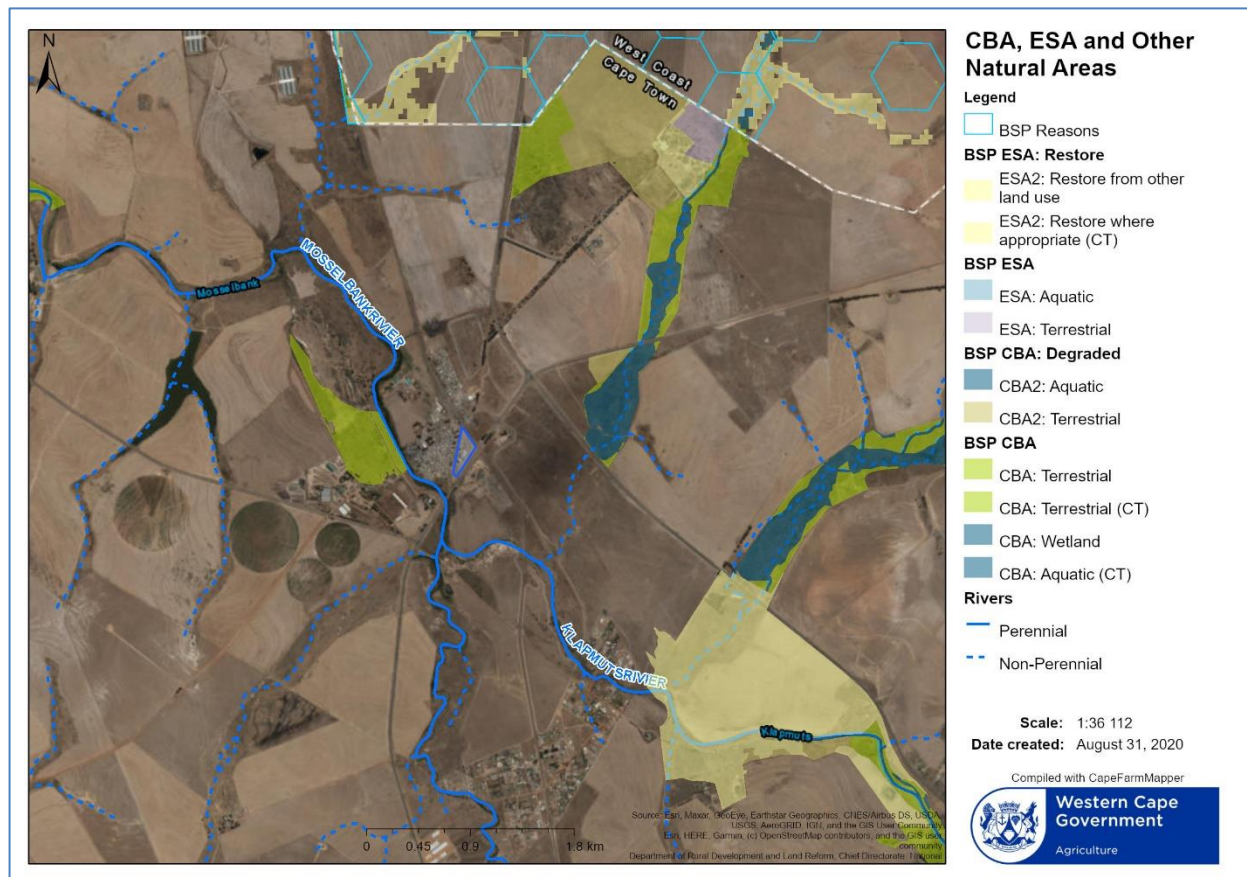
3.1.	Was a specialist study conducted?	YES	NO
3.2.	Provide the name and/or company who conducted the specialist study.		
	N/A		
3.3.	Explain how the relevant considerations of Section 63 of the ICMA were taken into account and explain how this influenced your proposed development.		
	N/A		
3.4.	Explain how estuary management plans (if applicable) has influenced the proposed development.		
	N/A		
3.5.	Explain how the modelled coastal risk zones, the coastal protection zone, littoral active zone and estuarine functional zones, have influenced the proposed development.		
	N/A		

### 4. Biodiversity

4.1.	Were specialist studies conducted?	YES	NO
4.2.	Provide the name and/or company who conducted the specialist studies.		
	N/A		
4.3.	Explain which systematic conservation planning and other biodiversity informants such as vegetation maps, NFEPA, NSBA etc. have been used and how has this influenced your proposed development.		

The property is completely transformed and is currently an operational facility (Zoned General Industry – Grain Storage Facility). The site has an insignificant ecological functioning, as the site consists mostly of hard gravel surfaces and contains no animal species and no natural watercourses. The site does support some trees and grass along the existing stormwater infrastructure and at the entrance to the site.

There are no CBA, ESA, or Other Natural Areas on site or surrounding the site (Figure 10).



**Figure 3:** CBA, ESA and Other Natural Areas as mapped by the Western Cape Biodiversity Spatial Plan. The site is shown by the blue triangle.

The original extent of vegetation in the larger geographical area was Swartland Shale Renosterveld. However, there is no vegetation present within the proposed development footprint.

The Western Cape Biodiversity Spatial Plan (WCBSBP) is the product of a systematic biodiversity planning assessment that delineates Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) which require safeguarding to ensure the continued existence and functioning of species and ecosystems, including the delivery of ecosystem services, across terrestrial and freshwater realms. These spatial priorities are used to inform sustainable development in the Western Cape Province. The WCBSBP spatial data and mapping was taken into consideration during the screening of the development via the Cape Farm Mapper website.

Faunal and flora diversity changes through space and time and are directly influenced by anthropogenic activities. Such activities include the transformation of land (Chapin *et al.*, 2000<sup>3</sup>). Direct impacts are typically associated with land cover changes (and consequent loss of natural areas) and edge effects (McDonald *et al.*, 2020)<sup>4</sup>. Edge effects have a range of impacts on biodiversity and site ecological functioning (Razafindratsima *et al.*, 2018)<sup>5</sup>. The property is completely transformed/highly disturbed and is currently used as an operational Grain Storage Facility (Zoned General Industry). Such effects contribute to a disturbance factor, which is likely to have driven most

wild animals away from the proposed site for development (i.e. due to activities associated with the previous development and operation of the Grain Storage Facility). Moreover, the site is fenced off. The site has no ecological functioning, as the site consists only of hard gravel surfaces and contains no vegetation, no animal species, and no natural watercourses. Therefore, previous disturbances (namely the previous transformation of the site as well as current operational activities associated with the Grain Storage Facility) has resulted in the proposed site for development being transformed/highly disturbed.

The South African National Biodiversity Institute (2006-2018). The Vegetation Map of South Africa, Lesotho and Swaziland, Mucina, L., Rutherford, M.C. and Powrie, L.W. (Editors), was taken into consideration during the screening of the development via the Cape Farm Mapper website.

4.4.	Explain how the objectives and management guidelines of the Biodiversity Spatial Plan have been used and how has this influenced your proposed development.
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It has not influenced the development because there are no CBA, ESA or Other Natural Areas on site or surrounding the site or any natural vegetation or aquatic ecosystems. The closest watercourse (Mosselbank Rivier) is located approximately 365m away from the proposed site for development.

4.5.	Explain what impact the proposed development will have on the site specific features and/or function of the Biodiversity Spatial Plan category and how has this influenced the proposed development.
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It has not influenced the development because there are no CBA, ESA or Other Natural Areas on site or surrounding the site or any natural vegetation or aquatic ecosystems. The closest watercourse (Mosselbank Rivier) is located approximately 365m away from the proposed site for development.

4.6.	If your proposed development is located in a protected area, explain how the proposed development is in line with the protected area management plan.
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N/A

4.7.	Explain how the presence of fauna on and adjacent to the proposed development has influenced your proposed development.
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The property is completely transformed and is currently an operational facility (Zoned General Industry – Grain Storage Facility). Faunal and flora diversity changes through space and time and are directly influenced by anthropogenic activities. Such activities include the transformation of land (Chapin *et al.*, 2000). Direct impacts are typically associated with land cover changes (and consequent loss of natural areas) and edge effects (McDonald *et al.*, 2020). Edge effects have a range of impacts on biodiversity and site ecological functioning (Razafindratsima *et al.*, 2018). The property is completely transformed/highly disturbed and is currently used as an operational Grain Storage Facility (Zoned General Industry). Such effects contribute to a disturbance factor, which is likely to have driven most wild animals away from the proposed site for development (i.e. due to activities associated with the previous development and operation of the Grain Storage Facility). Moreover, the site is fenced off. The site has no ecological functioning, as the site consists only of hard gravel surfaces and contains no vegetation, no animal species, and no natural watercourses. Therefore, previous disturbances (namely the previous transformation of the site as well as current operational activities associated with the Grain Storage Facility) has resulted in the proposed site for development being transformed/highly disturbed. It is envisaged that the proposed development is unlikely to impact any terrestrial and aquatic biodiversity, fauna, flora, or support any species of conservational concern.

<sup>3</sup> Chapin Iii, F.S., Zavaleta, E.S., Eviner, V.T., Naylor, R.L., Vitousek, P.M., Reynolds, H.L., Hooper, D.U., Lavorel, S., Sala, O.E., Hobbie, S.E. & Mack, M.C., 2000. Consequences of changing biodiversity. *Nature*, 405(6783), pp.234-242.

<sup>4</sup> McDonald, R.I., Mansur, A.V., Ascensão, F., Crossman, K., Elmqvist, T., Gonzalez, A., Güneralp, B., Haase, D., Hamann, M., Hillel, O. and Huang, K., 2020. Research gaps in knowledge of the impact of urban growth on biodiversity. *Nature Sustainability*, 3(1), pp.16-24.

<sup>5</sup> Razafindratsima, O.H., Brown, K.A., Carvalho, F., Johnson, S.E., Wright, P.C. and Dunham, A.E., 2018. Edge effects on components of diversity and above-ground biomass in a tropical rainforest. *Journal of Applied Ecology*, 55(2), pp.977-985.

## 5. Geographical Aspects

Explain whether any geographical aspects will be affected and how has this influenced the proposed activity or development.

Due to the location of the development (i.e., opposite an informal settlement), a potential health and safety risk was identified. Therefore, the above ground diesel storage tanks (ASTs) were placed as far away from the community as possible to still ensure adequate movement by trucks on site. A Major Hazard Installation Risk Assessment has been undertaken to assess the risk to the community of the proposed location of the hazardous goods (please refer to **Appendix G2**).

Due to the location of the site and the fact that a significant amount of fuel is proposed to be stored on site (in addition to a significant amount of grain), truck traffic on site relating to the existing grain storage / silo facility as well as the proposed upgrade had to be assessed by a traffic engineer to ensure the site is safe, with safe access positions and turning / movement on site by trucks for both activities on the same site. A Traffic Impact Statement was undertaken (**Appendix G1**).

## 6. Heritage Resources

6.1.	Was a specialist study conducted?	YES	<b>NO</b>
6.2.	Provide the name and/or company who conducted the specialist study.		
N/A			
6.3.	Explain how areas that contain sensitive heritage resources have influenced the proposed development.		
There are no sensitive heritage resources on site or adjacent to the site. The nearest heritage resource is a river over 300m away.			
The property is completely transformed and currently an operational facility (Zoned General Industry – Grain Storage Facility). The soil has been completely disturbed and no archaeological material is on site.			

## 7. Historical and Cultural Aspects

Explain whether there are any culturally or historically significant elements as defined in Section 2 of the NHRA that will be affected and how has this influenced the proposed development.

There are no sensitive heritage resources on site or adjacent to the site. The nearest heritage resource is a river over 300m away.

## 8. Socio/Economic Aspects

8.1.	Describe the existing social and economic characteristics of the community in the vicinity of the proposed site.
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An informal settlement, namely the Klipheuwel Informal Settlement, is located directly opposite (west) the proposed site. The nearest town to the site is Klipheuwel, located approximately 2.1km (as the crow flies) south of the proposed site for development.

According to the SA Census 2011 data, Klipheuwel is a village of about 2,300 people. According to the Census 2011, Klipheuwel has the following racial make-up:

- Black African: 54.1%
- Coloured: 38.6%
- Indian/Asian: 0.1%
- White: 6.8%
- Other: 0.4%

Klipheuwel is located within Ward 105 of the City of Cape Town Metropolitan.

According to the latest census 2011 data, Ward 105 has a total population of approximately 33 464 people over an area of 469km<sup>2</sup>. Approximately 28% of the ward's population are Black African, 34% White and 36% are Coloured. Afrikaans is the most widely spoken language in the ward with 56% of the ward population speaking Afrikaans, 20% Xhosa, and 17% English.

8.2.	Explain the socio-economic value/contribution of the proposed development.
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The development proposal will create temporary employment opportunities during the construction phase. The most significant socio-economic contribution of the development proposal is that the proposed expansion will ensure supply of fuel to meet the fuel needs of the farmers in the region. These farmers require diesel to power their farming vehicles and equipment – providing us with food and ultimately promoting food security.

8.3.	Explain what social initiatives will be implemented by applicant to address the needs of the community and to uplift the area.
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None are proposed.

8.4.	Explain whether the proposed development will impact on people's health and well-being (e.g. in terms of noise, odours, visual character and sense of place etc) and how has this influenced the proposed development.
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Regarding the health and well-being of people surrounding the development, no significant negative impacts are expected. The expected impacts in terms of noise, odours, visual character and sense of place are briefly explained:

**Noise:** It is anticipated that the development will not cause a significant increase in noise in the area, as the development is situated within an industrial area and on a property that is already fully operational facility (Zoned General Industry – Grain Storage Facility). Moreover, a NIA was undertaken (Appendix G4). The Specialists concluded that the

- Daytime rating level of noise emitted from existing operations was lower than typical rating level for noise for an industrial district. The applicant is therefore compliant with Regulation 4 of the Western Cape Noise Control Regulations, 2013 (NCR). No noise mitigation measures are required;
- During operation, the proposed addition of ASTs will have a negligible intensity of noise impact in terms of SANS 10103:2008. The proposed expansion will therefore be compliant with Regulation 4 of the NCR. No noise mitigation measures are required; and
- During the construction phase, noise mitigation measures as per the Noise Management Plan (Section 5 of the NIA, Appendix G4), must be complied with.

**Odours:** Since the development entails the expansion of a diesel storage and distribution depot, there is a possibility that fuel vapour emissions from the storage tanks may cause a nuisance for the neighbours. These emissions will be emitted primarily when the fuel tanks are refilled by road tanker and in lesser volume, but more frequent emissions during refuelling.

**Visual Character and Sense of Place:** The development proposal will have no significant visual impacts as the site is located within an industrial area and on a property that is already fully transformed and is an operational facility (Zoned General Industry – Grain Storage Facility).

The site is expected to have limited visual/ aesthetic impacts, noise pollution and odour/fumes (of low significance and which can be managed). Mitigation measures described in this BAR and in the attached EMPr (Appendix H) must be implemented to decrease these impacts to a level where people's health and well-being will not be impacted.

The development proposal will ultimately have a positive impact as the depot upgrade will provide job opportunities to the community during the construction and operation phases, an income stream for the applicant, as well as additional provision of fuel supply services needed by farmers in the area.

## SECTION H: ALTERNATIVES, METHODOLOGY AND ASSESSMENT OF ALTERNATIVES

### 1. Details of the alternatives identified and considered

1.1.	Property and site alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.
Provide a description of the preferred property and site alternative.	
The preferred property is Portion 17 of the Farm Vryheid No. 55, Klipheuwel. The site is within the property boundaries of the existing Wesgraan Klipheuwel Silo grain storage facility. The primary use of the existing operating facility includes the storage and handling of grain. A number of grain storage silos are located on the property. In addition, there are two existing 23m <sup>3</sup> ASTs. The development proposal is to construct a bulk fuel storage depot on site to include 5 x 83m <sup>3</sup> ASTs. The existing diesel storage area is spot zoned for General Industry. Moreover, the development of 5 x 83m <sup>3</sup> ASTs and associated infrastructure at a different location will significantly increase impacts on the fauna, flora, and the receiving environment of the different location, compared with the current location which has been	

previously transformed. The proposed site is considered ideally suited for the proposed development due to level of transformation (i.e., negligible impacts on fauna and flora) and proximity of the site to the farmers requiring the fuel (i.e., the site is ideally located).
Provide a description of any other property and site alternatives investigated.
This application is for the proposed expansion of fuel storage capacity on a previously transformed site which will have a negligible impact on the environmental pillar of sustainable development <sup>6</sup> while promoting the social and economic pillars of sustainable development. No site alternatives have been investigated as the proposed site for the expansion of an existing diesel depot with sufficient resources and space available for the proposed installation of five (5) new 80m <sup>3</sup> diesel tanks and associated infrastructure. The site is already zoned for industrial use. It is therefore not reasonable to identify or assess site alternatives as this is an expansion activity not a new activity. Moreover, the development of 5 x 83m <sup>3</sup> ASTs and associated infrastructure at a different location will significantly increase impacts on the fauna, flora, and the receiving environment of the different location, compared with the current location which has been previously transformed. The proposed site is considered ideally suited for the proposed development due to level of transformation (i.e., negligible impacts on fauna and flora) and proximity of the site to the farmers requiring the fuel (i.e., the site is ideally located).
Provide a motivation for the preferred property and site alternative including the outcome of the site selectin matrix.
Kaap Agri (Pty) Ltd already owns the property and propose to expand their existing facility. It is therefore not reasonable or feasible to consider site alternatives.
Provide a full description of the process followed to reach the preferred alternative within the site.
See paragraphs above.
Provide a detailed motivation if no property and site alternatives were considered.
<p>No property alternatives were considered as the proposed development entails the expansion of an existing diesel depot with sufficient resources and space available for the proposed installation of five new 80m<sup>3</sup> diesel tanks and associated infrastructure. The site is already zoned for industrial use. It is therefore not reasonable to identify or assess site alternatives as this is an expansion activity not a new activity.</p> <p>The development of 5 x 83m<sup>3</sup> ASTs and associated infrastructure at a different location will significantly increase impacts on the fauna, flora, and the receiving environment of the different location, compared with the current location which has been previously transformed. The proposed site is considered ideally suited for the proposed development due to level of transformation (i.e., negligible impacts on fauna and flora) and proximity of the site to the farmers requiring the fuel (i.e., the site is ideally located).</p>
List the positive and negative impacts that the property and site alternatives will have on the environment.
<p><b>Positive impacts associated with the site alternative:</b></p> <ul style="list-style-type: none"> <li>• The proposed development will create some temporary employment during construction and permanent employment opportunities during the operational phase, with the associated economic and social upliftment and skills transfer, during the construction and operational phases of the development.</li> <li>• Additional fuel supply services needed in the area by farmers would be put in place on site.</li> <li>• No new land has to be cleared for the development, as the development only entails the expansion of an existing operational diesel depot.</li> <li>• Increased income stream for the applicant and economic development.</li> <li>• Additional capital investment would result from the proposed development.</li> </ul>

<sup>6</sup> Sustainable development (defined as meeting the needs of the current generation without compromising the needs of future generations) is comprised of three main pillars, namely the environmental, social, and economic pillars (Hák *et al.*, 2016; WCED, 1987).



**Negative impacts associated with the site alternative:**

- Some noise, light, vibration and dust impacts will be experienced during the construction phase.
- Noise, light, and vibration impacts, as well as fuel vapour emissions and risk of soil and groundwater contamination associated with a spill or leak could be experienced during the operational phase.
- Health and safety impacts during the operational phase.

1.2. Activity alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred activity alternative.

Activity alternatives are not appropriate for further investigation within this application. The need that this development addresses is that of additional fuel storage tanks, no other activity would meet this need.

Provide a description of any other activity alternatives investigated.

**N/A**

Provide a motivation for the preferred activity alternative.

**N/A**

Provide a detailed motivation if no activity alternatives exist.

Activity alternatives are not appropriate for further investigation within this application. The need that this development addresses is that of additional fuel storage tanks, no other activity would meet this need.

List the positive and negative impacts that the activity alternatives will have on the environment.

**N/A**

1.3. Design or layout alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts

Provide a description of the preferred design or layout alternative.

The proposed development is to construct an additional 5 x ASTs located North of the two (2) x existing ASTs on site.

The existing access, stacking and circulation of grain trucks to/from the silos were taken into account when developing the two options, i.e. **Proposed Site Layout Plan Option 1** (See attached as **Appendix B1**) and **Proposed Site Layout Plan Option 2**, for the proposed bulk fuel depot.

The key operational concern is for two grain trucks to be able to move around the outer edge of the site as this would allow trucks to stack in two queues in the peak harvest time.

Both options can accommodate two grain trucks side by side (without overlapping) from the entry gate to when they start to merge about 35 m prior to the weighbridge. The fuel delivery and despatch trucks have two slabs and the initial path from the gate indicates that the fuel trucks will "share" the inner lane of the grain route before splitting off to the right to align with the slabs. The trucks to and from the proposed new fuel depot will therefore have a negligible impact on the existing grain operation on site.

It should also be noted that as part of both options, the existing gates will also be widened making entry and exit easier.

In **Option 1** the tanks are located about 17 m away from the fence and as far away from the residential community as possible.

In **Option 2** the aim is to reduce the amount of construction by moving the path that the grain trucks follow further away from the railway line siding. This necessitates that the tanks are also moved closer

to the road. As there is an electrical power line that runs between the road and the tanks this was used as a guide in limiting the shift of the tanks towards the road.

While the construction area of **Option 1** is greater it is still preferred operationally as it provides slightly more stacking and thereby minimises the potential for conflict with the fuel depot operations.

Provide a description of any other design or layout alternatives investigated.

See paragraph above.

Provide a motivation for the preferred design or layout alternative.

See paragraph above.

Provide a detailed motivation if no design or layout alternatives exist.

**N/A**

List the positive and negative impacts that the design alternatives will have on the environment.

**Positive impacts:**

- Space optimization by Kaap Agri (Pty) Ltd, therefore not clearing land is required as the site is an existing diesel depot.
- Potential diesel spills/transport accidents will be avoided, as the as the additional diesel storage will ensure diesel is more readily available for farmers in the area.

**Negative impacts:**

- Possibility for air quality/odour impacts
- Possible traffic impacts, as the site is accessed via an existing road.

1.4. Technology alternatives (e.g., to reduce resource demand and increase resource use efficiency) to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred technology alternative:

The existing diesel storage depot comprises of 2 x ASTs. The objective of the proposed development is to provide additional diesel storage by expanding the existing facility, so it makes operational management sense to construct similar to what is already on site and being managed on site.

Provide a description of any other technology alternatives investigated.

The proposed development is to store fuel and therefore does not utilise resources. Fuel can either be stored in Aboveground Tanks or Underground Tanks. Aboveground Storage Tanks are easier to maintain than Underground Storage Tanks and are financially feasible for the applicant to implement compared to Underground Storage Tanks because deep excavations and soil disposal would not be required for Aboveground Tanks. In addition, Underground Storage Tanks have a higher risk of leaks being undetected resulting in higher risk of soil and groundwater contamination. Maintenance costs for Underground Tanks is high because monitoring wells are required to be installed and regularly tested by service providers and if a leak occurs high excavation costs and costs to take the tank out the ground would be required.

Provide a motivation for the preferred technology alternative.

See paragraph above.

Provide a detailed motivation if no alternatives exist.

**N/A**

List the positive and negative impacts that the technology alternatives will have on the environment.

**Positive impacts:**

- The regulated nature of the fuel industry ensures that current technical and operational standards are upheld.

**Negative impacts:**

- The proposed development is for the aboveground storage of fuel, which is a flammable substance, with several health and safety, and environmental risks to the surrounding community.

1.5. Operational alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts.

Provide a description of the preferred operational alternative.

The following operational procedures will be followed by Kaap Agri (Pty) Ltd during the day-to-day running of the fuel depot. These procedures will maximise the benefits and minimise the impacts/risks associated with the fuel depot. Therefore, alternative operational procedures were not investigated:

- a) Sustainable management of waste to keep the site neat and tidy and to minimise complaints from Interested and Affected Parties (I&AP's) will be implemented on site.
- b) Effective storm water management techniques will be implemented in order to minimise loss of topsoil, avoid flooding and to minimise pollution of soil and ground water.
- c) A routine inspection for tank integrity shall be implemented.
- d) Noise levels will be kept at acceptable limits determined by the relevant local law.
- e) Road tankers will drive at a speed of 40km/h or lower on Abattoir Street to minimise dust creation and reduce the risks of incidents and complaints by I&AP's.
- f) An emergency plan, fire plan and spill contingency plan shall be implemented.
- g) Traffic management will be implemented to ensure backlog of traffic does not develop at access points through a scheduling system.
- h) All buildings will be maintained at the engineering's specifications.
- i) All pipes/ taps will be inspected for any burst, leakage or blockage regularly.

Provide a description of any other operational alternatives investigated.

**N/A**

Provide a motivation for the preferred operational alternative.

**N/A – no other operational alternatives were considered.**

Provide a detailed motivation if no alternatives exist.

No operational alternatives were considered, as there is no other operation alternative that can be investigated at this moment.

List the positive and negative impacts that the operational alternatives will have on the environment.

**Positive Impacts:**

- Creation of employment opportunities.
- Provision of fuel to the surrounding farmers, increasing supply in the area.
- Improvement of service infrastructure in the area,

**Negative Impacts:**

- Increased traffic volume.
- Potential increase in odours.
- Possible health and safety risk in case of an emergency.

1.6. The option of not implementing the activity (the 'No-Go' Option).

Provide an explanation as to why the 'No-Go' Option is not preferred.

The No-Go alternative entails maintaining the existing state of the site and to operate the depot in its current form. Negative impacts associated with the No-Go alternative include lack of temporary and permanent job opportunities, the additional profit opportunity cost lost for Kaap Agri (Pty) Ltd and the opportunity cost lost to supply diesel to the farmers. The NO-GO alternative would result in the existing facility being unable to provide for the projected future diesel demand in the area.

1.7.	Provide and explanation as to whether any other alternatives to avoid negative impacts, mitigate unavoidable negative impacts and maximise positive impacts, or detailed motivation if no reasonable or feasible alternatives exist.
None	
1.8.	Provide a concluding statement indicating the preferred alternatives, including the preferred location of the activity.
<p>The proposed site is within an existing diesel depot within the Klipheuwel Urban edge and aligns with the properties existing land use rights (General Industry) and is zoned for General industrial use in the Spatial Development Framework. The development of 5 x 83m<sup>3</sup> ASTs and associated infrastructure at a different location will significantly increase impacts on the fauna, flora, and the receiving environment of the different location, compared with the current location which has been previously transformed. The proposed site is considered ideally suited for the proposed development due to level of transformation (i.e., negligible/insignificant impacts on fauna and flora) and proximity of the site to the farmers requiring the fuel (i.e., the site is ideally located).</p> <p>There are no sensitive natural or cultural areas in close proximity to the site, the site is not within a Critical Biodiversity Area, is situated far from rivers and wetlands and existing infrastructure at the site makes the proposed location the most financially feasible alternative for Kaap Agri (Pty) Ltd as they own the site already and propose to expand their existing facility. It is therefore not reasonable or feasible for Kaap Agri (Pty) Ltd to consider site alternatives when an existing industrial zoned site has the required space for additional storage.</p> <p>The proposed development is to construct an additional 5 x Aboveground Diesel Storage Tanks North of the 2 x existing aboveground diesel storage tanks on site. It is proposed to install a retaining wall (bund) around the new tanks to contain a potential leak. The development proposal is to essentially duplicate what is already on the site. The proposed site layout is preferred as its feasible and reasonable, as it provides slightly more stacking and thereby minimises the potential for conflict with the fuel depot operations. Access to/from the site can be obtained from the existing Minor Road 60 intersection with MR188 (Klipheuwel Road) and subsequently via three gates along the western boundary of the site fronting Minor Road 60. The northern gate is ingress only, while the middle and southern gates are egress only. This option will allow constraint free movement of delivery and upload vehicles around all the main tanks. Maintenance costs for this option will be minimal due to easy access and no groundwater monitoring wells are required.</p>	

## 2. “No-Go” areas

Explain what “no-go” area(s) have been identified during identification of the alternatives and provide the co-ordinates of the “no-go” area(s).
No “No-Go” Areas are located within the proposed development site. The closest watercourse to the site is the Mosselbank Rivier located 365m away from the site proposed for diesel storage. The river will not be at any risk because a bund wall will be built around the storage tanks in case of any leaks or tank failure and the watercourse is too far away for there to be any risk. The tanks are proposed above ground. This watercourse will however still be listed as a No-Go Area.

## 3. Methodology to determine the significance ratings of the potential environmental impacts and risks associated with the alternatives.

Describe the methodology to be used in determining and ranking the nature, significance, consequences, extent, duration of the potential environmental impacts and risks associated with the proposed activity or development and alternatives, the degree to which the impact or risk can be reversed and the degree to which the impact and risk may cause irreplaceable loss of resources.
The Basic Assessment was undertaken in accordance with the principles of Integrated Environmental Management as detailed in Section 23 of NEMA and in the NEMA EIA Regulations.

The impact assessment is aimed at determining the likely significance of any impacts (positive or negative) associated with the development. The significance of the impacts is determined by investigating certain key aspects, or parameters, of the potential impact, which are determined by the nature of the activity, as well as the nature of the receiving environment. Aspects investigated include the extent, duration and timing, and magnitude of the impact.

**Table 3:** Methodology in determining the extent, duration, probability, significance, reversibility and cumulative impact of an environmental impact (to be read with impact tables below).

**Determination of Extent (Scale):**

<b>Site Specific</b>	The impact is limited to the development site (development footprint) or part thereof.
<b>Local</b>	The impacted area includes the whole or a measurable portion of the site, but could affect the area surrounding the development, including the neighboring properties and wider municipal area.
<b>Regional</b>	The impact would affect the broader region (e.g. neighboring towns) beyond the boundaries of the adjacent properties.
<b>National</b>	The impact would affect the whole country (if applicable).

**Determination of Duration:**

<b>Temporary</b>	The impact will be limited to part of the construction phase or less than one month.
<b>Short term</b>	The impact will continue for the duration of the construction phase, or less than one year.
<b>Medium term</b>	The impact will continue for part the operational phase
<b>Long term</b>	The impact will continue for the entire operational lifetime of the development but will be mitigated by direct human action or by natural processes thereafter.
<b>Permanent</b>	This is the only class of impact that will be non-transitory. Such impacts are regarded to be irreversible, irrespective of what mitigation is applied.

**Determination of Probability:**

<b>Improbable</b>	The possibility of the impact occurring is very low, due either to the circumstances, design or experience.
<b>Probable</b>	There is a possibility that the impact will occur to the extent that provisions must therefore be made.
<b>Highly probable</b>	It is most likely that the impacts will occur at some stage of the development. Plans must be drawn up to mitigate the activity before the activity commences.
<b>Definite</b>	The impact will take place regardless of any prevention plans.

**Determination of Significance (without mitigation):**

<b>No significance</b>	The impact is not substantial and does not require any mitigation action.
<b>Low</b>	The impact is of little importance but may require limited mitigation.

<b>Medium</b>	The impact is of sufficient importance and is therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels.
<b>Medium-High</b>	The impact is of high importance and is therefore considered to have a negative impact. Mitigation is required to manage the negative impacts to acceptable levels.
<b>High</b>	The impact is of great importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.
<b>Very High</b>	The impact is critical. Mitigation measures cannot reduce the impact to acceptable levels. As such the impact renders the proposal unacceptable.

**Determination of Significance (with mitigation):**

<b>No significance</b>	The impact will be mitigated to the point where it is regarded to be insubstantial.
<b>Low</b>	The impact will be mitigated to the point where it is of limited importance.
<b>Medium</b>	Notwithstanding the successful implementation of the mitigation measures, the impact will remain of significance. However, taken within the overall context of the project, such a persistent impact does not constitute a fatal flaw.
<b>High</b>	Mitigation of the impact is not possible on a cost-effective basis. The impact continues to be of great importance, and taken within the overall context of the project, is considered to be a fatal flaw in the project proposal.

**Determination of Reversibility:**

<b>Completely Reversible</b>	The impact is reversible with implementation of minor mitigation measures
<b>Partly Reversible</b>	The impact is partly reversible but more intense mitigation measures
<b>Barely Reversible</b>	The impact is unlikely to be reversed even with intense mitigation measures
<b>Irreversible</b>	The impact is irreversible and no mitigation measures exist

**Determination of Degree to which an Impact can be Mitigated:**

<b>Can be mitigated</b>	The impact can be completely mitigated
<b>Can be partly mitigated</b>	The impact can be partly mitigated
<b>Can be barely mitigated</b>	It is possible to mitigate the impact only slightly
<b>Not able to mitigate</b>	It is not possible to mitigate the impacts

**Determination of Loss of Resources:**

<b>No loss of resource</b>	The impact will not result in the loss of any resources
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<b>Marginal loss of resource</b>	The impact will result in marginal loss of resources
<b>Significant loss of resources</b>	The impact will result in significant loss of resources
<b>Complete loss of resources</b>	The impact will result in a complete loss of all resources

**Determination of Cumulative Impact:**

<b>Negligible</b>	The impact would result in negligible to no cumulative effects
<b>Low</b>	The impact would result in insignificant cumulative effects
<b>Medium</b>	The impact would result in minor cumulative effects
<b>High</b>	The impact would result in significant cumulative effects

Other factors which are also considered in the assessment of impacts include whether the impact is direct, indirect or cumulative. A direct impact can be explained as being a direct result of activities associated with the development, such as damage of on-site infrastructure due to a fire.

An indirect impact would be a downstream, secondary or “knock-on” impact resulting from an impact directly associated with the development (such as the contamination of freshwater resources downstream of the municipal stormwater system in the event of a contamination incident).

A cumulative impact would be an impact which already occurs in the receiving environment associated with other activities taking place in proximity to the development, such as noise, vibration and dust due to industrial activities in the area.

Other factors considered include whether the impact is reversible; and whether the impact could cause an irreplaceable loss of resources.

The impact assessment methodology used has been closely guided by the DEAT EIA Guideline Document 5, on the assessment of impacts and alternatives (DEAT 2006); as well as reference to the description of the criteria used for the assessment of impacts as contained in the DEA&DP Specialist Guidelines Series (2005).

The assessment of the potential impacts has been based on SEC’s extensive experience related to environmental impact assessment as well as specialist assessment and input, where applicable.

The impact assessment has also been informed by input and comment from stakeholders once public participation is undertaken. The potential impacts have been assessed after review by the professional team, including specialists where required, and on the basis of professional judgement.

It must be noted that determining the significance of impacts, although carefully and systematically considered, still remains a subjective judgement, as there are no truly objective measures that can be used to judge significance.

Practicable mitigation measures (where warranted) have been identified to minimize the potential impacts associated with proposed development. The significance of any potential impact before and after mitigation is also provided to give an indication of the efficacy of the proposed mitigation measures.

#### 4. Assessment of each impact and risk identified for each alternative

**Note:** The following table serves as a guide for summarising each alternative. The table should be repeated for each alternative to ensure a comparative assessment. The EAP may decide to include this section as Appendix J to this BAR.

#### Planning, Design and Construction Phase Assessment of Significance of Alternative A: Proposed Site Layout

**\*Note:** The only impact associated with the NO-GO alternative for the construction phase is that a negative socio-economic impact will result due to the opportunity cost lost to provide temporary employment opportunities. No other impacts are expected is the development is not built.

#### Soil & Groundwater Contamination & Pollution

<b>Potential impact and risk:</b>	<b>Soil &amp; Groundwater Contamination &amp; Pollution:</b> Fuel, oil, lubricants and other pollutants may leak from vehicles/ machinery and contaminate the soil. Pollution and soil contamination could also occur from chemical toilets, cement mixing directly on the soil and stormwater runoff may flow over the site camp area and carry contaminants off-site.
Nature of impact:	Negative
Extent and duration of impact:	Site specific; temporary
Consequence of impact or risk:	Contamination & pollution of the soil and / or groundwater.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Partly reversible
Indirect impacts:	Soil and groundwater contamination could result in human health impacts if humans are exposed to the soil or contaminated groundwater by dermal contact (touching the soil or drinking the groundwater)
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low to Medium
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	<ol style="list-style-type: none"> <li>1. A Spill Contingency Plan must be produced. This should be a stand-alone operational procedure). It should be compiled prior to the construction phase of the extension to the fuel depot and included as an Annexure to the EMP.</li> <li>2. A storm water management plan (Appendix G6) was designed by a suitably qualified engineer (EFG Engineers) which adheres to the principles of storm water management. Two detention ponds (total approximate storage capacity of 53m<sup>3</sup>) are proposed. This will address CoCT's comments in the following ways: <ol style="list-style-type: none"> <li>a. Additional runoff generated (by stormwater events of up to 1 in 50 years) by the proposed</li> </ol> </li> </ol>



	<p>expansion to be attenuated to pre-development levels; and</p> <ol style="list-style-type: none"> <li>b. Stormwater runoff must be polished and treated to appropriate levels of phosphorous and total suspended solids. The two detention ponds will retain the stormwater runoff of a 1 in ½ year, 24hr storm event that will slowly filter through the bottom of the pond to subsurface pipes.</li> <li>c. An emergency overflow will discharge any additional stormwater runoff from the pond in the unlikely event of a 1 in 100 year storm event.</li> <li>d. Maintenance must be undertaken as per the proposed maintenance schedule (Table 4.3 of the SWMP) in order to ensure optimal operation of the detention ponds and associated stormwater infrastructure.</li> </ol> <ol style="list-style-type: none"> <li>3. The appointed Environmental Control Officer (ECO) must undertake at least one site inspection fortnightly, for the duration of the construction phase, and to produce a short ECO report monitoring the compliance of the property developer with the conditions of the approved EMP.</li> <li>4. During the construction phase of the common bund area for the fuel storage tanks and associated infrastructure, an experienced contractor will be appointed and it will be ensured that the correct protocols will be followed that relate to the handling of materials, thereby minimising the likelihood of such an incident occurring.</li> <li>5. Adequate training of construction personnel will ensure that incidents resulting in product spills are minimised and that the correct actions are taken in the event of an incident.</li> <li>6. In the event of such an emergency condition, a suitably trained clean-up contractor will be appointed to clean up the spill. Hazardous waste may be generated where absorbent materials are used to mop up a product spill. This will be suitably contained and handled by a specialist contractor using the correct personal protective equipment and hazardous waste temporary storage receptacles.</li> <li>7. Disposal of such waste at a suitable hazardous landfill site with chain-of-custody documentation provided by the contractor as proof of end recipient.</li> <li>8. The ECO will supervise any remediation procedures in order to ensure that the correct material is treated.</li> <li>9. If the location of the existing fuel lines is not known, a Ground Probing Radar (GPR) survey is required to take place prior to construction to map out the existing fuel lines on site. The objective is to avoid accidental damage of service &amp; fuel lines which may cause impacts to the receiving environment.</li> <li>10. Excavation should not be conducted at depth below water table.</li> </ol>
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	<p>In addition, the following general management measures will be implemented to avoid contamination of soil and groundwater:</p> <p><u>Waste Management:</u></p> <ol style="list-style-type: none"> <li>1. Hazardous waste bins must be kept on an impermeable bunded surface capable of holding at least 110% of the volume of the bins.</li> <li>2. Skips/ bins must be provided with secure lids or covering that will prevent scavenging and windblown waste or dust.</li> <li>3. Waste bins/skips must be regularly emptied and must not be allowed to overflow.</li> <li>4. Construction workers must be instructed not to litter and to place all waste in the appropriate waste bins provided on site.</li> <li>5. All waste, hazardous as well as general, which result from the proposed activities must be disposed of appropriately at a licensed Waste Disposal Facility (WDF).</li> </ol> <p><u>Pollution Management – hydrocarbons (oil, fuel etc.)</u></p> <ol style="list-style-type: none"> <li>1. Vehicles and machinery must be in good working order and must be regularly inspected for leaks.</li> <li>2. If a vehicle or machinery is leaking pollutants it must, as soon as possible, be taken to an appropriate location for repair.</li> <li>3. Repairs to vehicles/ machinery may take place on site, within a designated maintenance area at the site camp. Drip trays, tarpaulin or other impermeable layer must be laid down prior to undertaking repairs.</li> <li>4. Refuelling of vehicles/ machinery may only take place at the site camp or vehicle maintenance yard. Where refuelling must occur, drip trays should be utilised to catch potential spills/ drips.</li> <li>5. Drip trays must be utilised during decanting of hazardous substances and when refilling chemical/ fuel storage tanks.</li> <li>6. Drip trays must be placed under generators (if used on site) water pumps and any other machinery on site that utilises fuel/ lubricant, or where there is risk of leakage/spillage.</li> <li>7. Soil contaminated by hazardous substances must be excavated and disposed of as hazardous waste.</li> </ol> <p><u>Pollution Management – Ablution facilities</u></p> <ol style="list-style-type: none"> <li>1. Chemical toilets should be kept at the site camp, on a level surface and secured from blowing over.</li> <li>2. Toilets must be located well outside of any storm water drainage lines and may not be linked to the storm water drainage system in any way.</li> <li>3. Chemical toilets must be regularly emptied, and the waste disposed of at an appropriate wastewater disposal/ treatment site. Care must be taken to prevent spillages when moving or servicing chemical toilets.</li> </ol>
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	<p><u>Cement Batching:</u></p> <ol style="list-style-type: none"> <li>1. Cement batching must take place on an impermeable surface large enough to retain any slurry or cement water run-off. If necessary, plastic/ biddim lined detention ponds (or similar) should be constructed to catch the run-off from batching areas. Once the water content of the cement water/ slurry has evaporated the dried cement should be scraped out of the detention pond and disposed of at an appropriate disposal facility authorised to deal with such waste</li> <li>2. Cement batching should take place on already transformed areas within the footprint of the facility.</li> <li>3. Unused cement bags must be stored in such a way that they will be protected from rain. Empty cement bags must not be left lying on the ground and must be disposed of in the appropriate waste bin.</li> <li>4. Washing of excess cement/concrete into the ground is not allowed. All excess concrete/ cement must be removed from site and disposed of at an appropriate location.</li> </ol>
Residual impacts:	None
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)

### **Dust & Noise Impacts**

<b>Potential impact and risk:</b>	<b>Dust &amp; Noise Impacts:</b> As a result of the construction phase of this development noise and dust impacts are expected to occur in the area due to an increase in construction vehicles and road tankers for the duration of the construction phase while materials are being transported to the site and excavations are being made.
Nature of impact:	Negative
Extent and duration of impact:	Site specific; short term
Consequence of impact or risk:	Nuisance to surrounding residents
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Completely reversible
Indirect impacts:	Nuisance impacts to surrounding residents
Cumulative impact prior to mitigation:	Negligible
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low to Medium
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	<p><u>Dust Mitigation:</u></p> <ol style="list-style-type: none"> <li>1. If dust issues occur, dust can be suppressed on access roads and the construction site during dry periods by the</li> </ol>

	<p>regular application of non-potable water or a biodegradable soil stabilisation agent. Under no circumstances should potable water be used for dust suppression. Potable water should not be used for anything besides drinking.</p> <ol style="list-style-type: none"> <li>2. Dust suppression measures such as the wetting down of sand heaps as well as exposed areas around the site should be implemented especially on windy days.</li> <li>3. Appropriate dust control systems fitted on cement silos in order to reduce dust emissions during the loading, unloading and transfer of bulk materials.</li> <li>4. Water browser to set site floor prior to loading activities. Municipal water may not be used.</li> <li>5. Maximum speed limit on site of 30km/h.</li> <li>6. The use of straw worked into the sandy areas may also help and the ECO must advise when this is necessary.</li> <li>7. If dust appears to be a continuous problem the option of using shade cloth to cover open areas may be necessary or the erecting of shade netting above the fenced off area may need to be explored.</li> <li>8. All vehicles transporting sand need to have tarpaulins covering their loads which will assist in any windblown sand occurring off the trucks.</li> <li>9. Dust levels specified in the National Dust Control Regulations (GN 827 of November 2013) may not be exceeded.</li> <li>10. A Complaints Register must be available at the site office for inspection by the ECO of dust complaints that may have been received.</li> <li>11. The appointed Environmental Control Officer (ECO) must undertake regular site inspections for the duration of the construction phase, and to produce regular ECO monitoring audit reports, auditing on the compliance of the CCT with the conditions of the Environmental Authorisation and the approved EMP.</li> </ol> <p><u>Additional Dust Control Measures:</u></p> <p>Nine (9) additional dust control measures were identified for dust in the construction phase as summarized below.</p> <ol style="list-style-type: none"> <li>12. Machinery generating emissions must be regularly services and maintained such that their emissions are acceptable.</li> <li>13. If cement silos are utilised, filters must be installed to prevent excessive generation of cement dust during deliveries. The silos are to be fitted with appropriate dust control systems (as mentioned above).</li> <li>14. Use of water bowzers and wetting down of loose soil areas, as well as the erection of shade netting screens to prevent off-site movement of dust is required and/or other appropriate action to minimise windblown dust and sand.</li> <li>15. Rubble, waste and dust generated on higher open floor levels vulnerable to the effects of the wind must be covered and removed regularly to prevent becoming windblown and migrating off site.</li> </ol>
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	<p>16. The use of straw stabilisation or mulching of exposed sandy areas may also be considered in consultation with the ECO.</p> <p>17. The height of exposed loose material stockpiles, such as sand, rubble, etc. must be minimised as far as possible and covered or screened during high wind conditions, overnight and over weekends.</p> <p>18. As a general best practice guideline, the Water By-law (PG 6378) issued by the City of Cape Town (2006) must be adhered to at all times. In particular, no potable water may be used for dust suppression purposes.</p> <p>19. Spraying of stockpiles with a fine mist of water for 10–15 minutes during windy conditions. Municipal potable water will not be used.</p> <p>20. All vehicles transporting sand need to have tarpaulins covering their loads which will assist in any windblown sand occurring off the trucks.</p> <p><u>Noise Mitigation:</u></p> <p>21. Daytime rating level of noise emitted from existing operations was lower than typical rating level for noise for an industrial district. The applicant is therefore compliant with Regulation 4 of the Western Cape Noise Control Regulations, 2013 (NCR). No noise mitigation measures are required;</p> <p>22. During operation, the proposed addition of ASTs will have a negligible intensity of noise impact in terms of SANS 10103:2008. The proposed expansion will therefore be compliant with Regulation 4 of the NCR. No noise mitigation measures are required; and</p> <p>23. During the construction phase, noise mitigation measures as per the Noise Management Plan (<b>Section 5 of the NIA, Appendix G4</b>), must be complied with.</p> <p>24. A noise complaints register will be opened.</p> <p>25. Excavations and earth-moving activities should be restricted to normal construction working hours (7:30 – 17:30) as far as possible.</p> <p>26. Vehicles and equipment should be kept in good working condition. If deemed necessary, machinery and equipment should be fitted with mufflers/ exhaust silencers. No unnecessary disturbances should be allowed to emanate from the construction site.</p> <p>27. Noise levels must comply with the relevant health &amp; safety regulations and SANS codes and should be monitored by the Health &amp; Safety Officer as necessary and appropriate.</p> <p>28. The appointed Environmental Control Officer (ECO) must undertake regular site inspections for the duration of the construction phase, and to produce regular ECO monitoring audit reports, auditing on the compliance of the property developer with the conditions of the Environmental Authorisation and the approved EMP.</p>
Residual impacts:	None
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)

**Fire, health and safety risk:**

<b>Potential impact and risk:</b>	<b>Fire, Health &amp; Safety Risk:</b> Exposure through breathing vapours, swallowing hazardous substances or skin contact may have possible health effects. There is a minor risk of a diesel pool fire and toxic combustion gases if an incident occurs at the existing facility while construction takes place for the upgrade.
Nature of impact:	Negative
Extent and duration of impact:	Site Specific; Temporary
Consequence of impact or risk:	Damage to property and may cause injuries to people on site.
Probability of occurrence:	Improbable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Barely reversible
Indirect impacts:	A localised fire may cause nuisance impacts such as smoke to surrounding residents.
Cumulative impact prior to mitigation:	Negligible
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	<ol style="list-style-type: none"> <li>1. The mitigation measures listed under the operational phase to avoid fire, health and safety risks are also applicable to be implemented during the construction phase seeming as there are existing tanks on the site.</li> <li>2. A Fire Plan schematic (layout plan) and supporting narrative must be compiled that shows the location of the fire extinguishers, hydrants, ingress, exits, assembly points, bund walls etc.</li> <li>3. The Emergency Plan has to be compiled / updated with the input and cooperation of both the employer and the local government in response the risks identified in the MHI.</li> <li>4. The installation of Aboveground Storage Tanks and associated pipework must be implemented in accordance with the relevant South African National Standards (SANS), specifically (not exclusive to) the following standards:</li> <li>5. SANS 10131(2004): Above-ground storage tanks for petroleum products.</li> <li>6. SANS 10 400TT (Fire Protection) 53 Sections 1-6 (The application of the National Building Regulations-Installation of Liquid Fuel Dispensing Pumps and Tanks);</li> <li>7. SANS 10087-3 (2008) (English): The handling, storage, distribution and maintenance of liquefied petroleum gas in domestic, commercial, and industrial installations Part 3: Liquefied petroleum gas installations involving storage vessels of individual water capacity exceeding 500 L</li> </ol>

	<ol style="list-style-type: none"> <li>8. The installation of the Aboveground Storage Tanks and associated pipework must comply with the National Building Regulations and Standards Act No. 103 of 1977;</li> <li>9. The installation must comply with local authority bylaws and all procedures and equipment used must be in accordance with the Occupational Health &amp; Safety Act (No. 85 of 1993);</li> <li>10. Upon completion of the UST installation, an engineer is to inspect and verify that the tanks and the associated infrastructure have been installed as per the design criteria described in the final BAR and to all required SABS / SANS standards and applicable legislation.</li> <li>11. The installation must comply with local authority bylaws and all procedures and equipment used must be in accordance with the Occupational Health &amp; Safety Act (No. 85 of 1993);</li> <li>12. Upon completion of the AST installation, an engineer is to inspect and verify that the tanks and the associated infrastructure have been installed as per the design criteria described in the final BAR and to all required SABS / SANS standards and applicable legislation.</li> <li>13. Adequate training in emergency response situations of the contractor and personnel undertaking the construction activities will be carried out. All workers on site will be informed of the emergency procedure to follow in the event of accidental fires.</li> <li>14. No open fires will be allowed on the construction site during any phase of the project. No smoking will be allowed on the construction site.</li> <li>15. Minimisation of hot work by using alternative methods and equipment such as air driven tools, cold cutting and pre-fabrication off site.</li> <li>16. The use of appropriate shielding and screening such as blanketing with firefighting foam and water screens to minimise fire risk.</li> <li>17. Minimisation through spark quenching by wetting down and/or using construction power tools such as jack hammers under sprayed water.</li> <li>18. All people working on site are responsible for their own safety on site. Contractors and Principal Agent/s shall at all times comply with the relevant statutory requirements including the Occupational Health and Safety Act, Act 85 of 1993.</li> <li>19. A comprehensive site specific first aid kit must be available on site at all times.</li> <li>20. At least one person trained in safety and first aid and familiar with the first aid equipment on site must be present on the site at all times.</li> <li>21. Emergency procedures will be established prior to the start of construction works on site.</li> <li>22. Awareness training of personnel at the site and for road tanker drivers delivering fuel to site will be conducted.</li> <li>23. Personnel must wear correct PPE and adhere to appropriate signage.</li> <li>24. Training measures must be in place regarding housekeeping.</li> </ol>
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	25. Personnel must use correct equipment and ensure regular monitoring of such equipment.
Residual impacts:	None
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low to Medium (-)

### **Traffic, Safety and Access Impacts:**

<b>Potential impact and risk:</b>	<b>Traffic, Safety and Access Impacts:</b> As a result of the construction phase of this development traffic impacts are expected to occur in the area due to an increase in construction vehicle and truck traffic in the area for the duration of the construction phase while materials are being transported to the site. Road safety impacts and road condition impacts could also occur.
Nature of impact:	Negative
Extent and duration of impact:	Local; Short term
Consequence of impact or risk:	Safety risks may occur and damages to road infrastructure
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resources
Degree to which the impact can be reversed:	Partly reversible
Indirect impacts:	Safety risks may occur and damages to road infrastructure. Nuisance impacts to surrounding residents due to increased traffic
Cumulative impact prior to mitigation:	Low to Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low to Medium
Degree to which the impact can be avoided:	Can be partly avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be partly mitigated
Proposed mitigation:	<ol style="list-style-type: none"> <li>1. The contractor must provide a traffic marshal for situations where heavy construction traffic may impede normal traffic flows on any roads adjacent to the site.</li> <li>2. All drivers and machinery operators must exercise due caution when entering/ exiting the site.</li> <li>3. Construction vehicles must adhere to the load carrying capacity of road surfaces and adhere to all other prescriptive regulations regarding the use of public roads by construction vehicles.</li> <li>4. The Contractor must ensure that any large or abnormal loads (including hazardous materials) that must be transported to/ from the site are routed appropriately, and that appropriate safety precautions are taken during transport to prevent road accidents.</li> <li>5. All vehicles will be legally compliant.</li> <li>6. All drivers will be competent and in possession of an appropriate valid driver's license.</li> <li>7. All vehicles travelling on site will adhere to the specified speed limits.</li> </ol>



	8. The movement of all vehicles will be controlled such that they remain on designated routes. 9. No member of the workforce will be permitted to drive a vehicle under the influence of alcohol or narcotic substances. 10. Warning signage (i.e. "trucks turning") must be erected near the access point to the site. 11. A traffic marshal should be posted at the entrance to the site to assist with the safe and smooth flow of vehicles on the road whilst heavy construction traffic is entering and exiting the site. 12. No construction traffic may access the site after normal working hours as defined by the local authority. 13. Option 1 (Appendix B1) and Option 2 (Appendix B2) have a similar traffic impact rating although Option 1 is preferred as it provides slightly more stacking and thereby minimises the potential for conflict with the fuel depot operations.
Residual impacts:	None
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)

### **Visual Impacts**

<b>Potential impact and risk:</b>	<b>Visual Impacts:</b> The construction phase is associated with temporary disturbance as a result of construction (trench excavations, vehicles, machinery and signage) that may have a negative visual impact to the area.
Nature of impact:	Negative
Extent and duration of impact:	Site specific; temporary
Consequence of impact or risk:	Visual impacts to sensitive receptors
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Partly reversible
Indirect impacts:	None
Cumulative impact prior to mitigation:	Negligible
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low –Medium (-)
Degree to which the impact can be avoided:	Can be partly avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be partly mitigated
Proposed mitigation:	1. Consult with the ECO when determining the appropriate site for the site camp. 2. The site camp must be kept neat and tidy and free of litter at all times. 3. Waste must be managed according to the EMPr. 4. Good housekeeping practices on site must be maintained to ensure the site is kept neat and tidy.

	<p>5. The site camp, storage facilities, stockpiles, waste bins, and any other temporary structures on site should be located in such a way that they will present as little visual impact to surrounding residents and road users as possible.</p> <p>6. Work on site must be well-planned and well-managed so that work proceeds quickly and efficiently, thus minimizing the disturbance time.</p> <p>7. The site camp will require visual screening via shade cloth or other suitable material.</p> <p>8. Special attention should be given to the screening of highly reflective material.</p> <p>9. Use of lighting (if required) should take into account surrounding land users and should present little or no nuisance. Downward facing, spill-off type lighting is recommended.</p> <p>10. Construction vehicles must enter and leave the site during working hours.</p> <p>11. The appointed Environmental Control Officer (ECO) must undertake at least one site inspection fortnightly for the duration of the construction phase, and to produce a short ECO report monitoring the compliance of the property developer with the conditions of the approved EMP.</p>
Residual impacts:	None
Cumulative impact post mitigation:	Negligible
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)

### **Socio-economic – Creation of business and employment opportunities**

<b>Potential impact and risk:</b>	<b>Socio-economic – Creation of business and employment opportunities:</b> Temporary employment opportunities will be provided during the construction phase.
Nature of impact:	Positive
Extent and duration of impact:	Local Extent; Short term duration
Consequence of impact or risk:	This positive impact will result in job creation and income opportunity
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A – this is a positive impact
Degree to which the impact can be reversed:	N/A – this is a positive impact
Indirect impacts:	N/A – this is a positive impact
Cumulative impact prior to mitigation:	N/A – this is a positive impact
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low to Medium
Degree to which the impact can be avoided:	N/A – this is a positive impact
Degree to which the impact can be managed:	N/A – this is a positive impact
Degree to which the impact can be mitigated:	N/A – this is a positive impact

Proposed <b>enhancement</b> :	Preference should be given to historically disadvantaged individuals from the local, surrounding community, when appointing employees for construction work.
Residual impacts:	None
Cumulative impact post mitigation:	N/A – this is a positive impact
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – Medium (+)

### Operational Phase Assessment of Significance of Alternative A: Proposed Site Layout

**\*Note: The only operational phase impacts associated with Alternative B: The NO-GO Alternative is the socio-economic impact associated with no permanent job opportunities being provided to the local community (Low – Medium significance), the opportunity cost lost to provide the farmers in the area with diesel fuel (Medium negative significance) and the loss of income potential for Kaap Agri (Pty) Ltd (Medium negative significance). No positive impacts are expected as a result of the no-go alternative.**

### Contamination & Pollution of the Soil and / or Groundwater

<b>Potential impact and risk:</b>	<b>Soil &amp; Groundwater Contamination &amp; Pollution:</b> During the operational phase of the proposed development soil and groundwater contamination could result due to fuel spills associated with re-filling of the above ground storage tanks. In addition, if stormwater is not managed correctly there is the potential for the unmanaged stormwater runoff to impact negatively on the environment, potentially causing pollution and contamination. The aboveground fuel storage tanks could leak and contaminate the soil and groundwater.
Nature of impact:	Negative
Extent and duration of impact:	Local; medium term duration
Consequence of impact or risk:	Soil and / or ground water impacts could cause health impacts to those exposed to the soil or groundwater
Probability of occurrence:	Improbable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Can be barely reversed
Indirect impacts:	Community health impacts
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	The following precautionary measures will be followed on site: a) Fuel storage records must be kept on site (incoming & outgoing fuel) as to account for fuel leaks and spills. b) Drip trays will be available for any vehicles that may be potentially leaking. c) Emergency spill kits will be kept on site. d) The storage tanks will be regularly inspected for any leaks.

	<p>e) The installation of Aboveground Storage Tanks and associated pipework must be implemented in accordance with the relevant South African National Standards (SANS), specifically (not exclusive to) the following standards:</p> <ul style="list-style-type: none"> <li>o <b>SANS 10131(2004): Above-ground storage tanks for petroleum products.</b></li> <li>o <b>SANS 10 400TT (Fire Protection) 53 Sections 1-6 (The application of the National Building Regulations-Installation of Liquid Fuel Dispensing Pumps and Tanks);</b></li> <li>o <b>SANS 10087-3 (2008) (English): The handling, storage, distribution and maintenance of liquefied petroleum gas in domestic, commercial, and industrial installations Part 3: Liquefied petroleum gas installations involving storage vessels of individual water capacity exceeding 500 L</b></li> </ul> <p>f) The installation of the Aboveground Storage Tanks and associated pipework must comply with the National Building Regulations and Standards Act No. 103 of 1977.</p> <p>g) The installation must comply with local authority bylaws and all procedures and equipment used must be in accordance with the Occupational Health &amp; Safety Act (No. 85 of 1993);</p> <p>h) Upon completion of the UST installation, an engineer is to inspect and verify that the tanks and the associated infrastructure have been installed as per the design criteria described in the final BAR and to all required SABS / SANS standards and applicable legislation.</p> <p>i) An Emergency Response Plan &amp; Spill Contingency Plan must be produced (or any existing plans updated) prior to the operation of the upgrade and included as an Annexure to the EMP.</p> <p>j) Emergency incidents such as significant hydrocarbon spills must be brought to the attention of the relevant authorities as described in Section 30 of the National Environmental Management Act (NEMA) within the prescribed legal timelines. This would require notification to the relevant local and provincial authorities and any other authority deemed necessary.</p> <p>k) If an "incident"<sup>7</sup> takes place on site, the owner of the facility must within 14 days of the incident, report to the Director General, provincial head of department and municipality such information as is available to enable an initial evaluation of the incident, including (refer to footnote below for definition of "incident"):</p> <ul style="list-style-type: none"> <li>l) The nature of the incident.</li> <li>m) The substances involved and an estimation of the quantity released and their possible acute effect on persons and the environment and data needed to assess these effects.</li> <li>n) Initial measures taken to minimise impacts.</li> </ul>
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<sup>7</sup> In terms of section 30(1)(a) of NEMA, an "incident" means an unexpected, sudden and uncontrolled release of a hazardous substance (such a diesel/fuel), including from a major emission, fire or explosion, that causes, has caused or may cause significant harm to the environment, human life or property.

	<p>o) Causes of the incident, whether direct or indirect, including equipment, technology, system or management failure; and measures taken and to be taken to avoid a recurrence of such incident.</p> <p>p) A storm water management plan (<b>Appendix G6</b>) was designed by a suitably qualified engineer (EFG Engineers) which adheres to the principles of storm water management. Two detention ponds (total approximate storage capacity of 53m<sup>3</sup>) are proposed. This will address CoCT's following comments:</p> <ul style="list-style-type: none"> <li>o Additional runoff generated (by stormwater events of up to 1 in 50 years) by the proposed expansion to be attenuated to pre-development levels; and</li> <li>o Stormwater runoff must be polished and treated to appropriate levels of phosphorous and total suspended solids. The two detention ponds will retain the stormwater runoff of a 1 in ½ year, 24hr storm event that will slowly filter through the bottom of the pond to subsurface pipes.</li> <li>o An emergency overflow will discharge any additional stormwater runoff from the pond in the unlikely event of a 1 in 100-year storm event.</li> <li>o Maintenance must be undertaken as per the proposed maintenance schedule (Table 4.3 of the SWMP) in order to ensure optimal operation of the detention ponds and associated stormwater infrastructure.</li> </ul>
Residual impacts:	Groundwater contamination
Cumulative impact post mitigation:	Low - medium
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – Medium (-)

### **Fire, Health and Safety Risk**

<b>Potential impact and risk:</b>	<b>Fire, Health &amp; Safety Impact:</b> Exposure through breathing vapours, swallowing hazardous substances or skin contact may have possible health effects. The hazardous events identified by the MHI Risk Assessment that could occur at the facility could be an uncontrolled leak of diesel at the depot from a bulk storage tank or an uncontrolled leak of diesel from the delivery road tanker. As a result of the hazardous events, the identified potential major incidents could be a diesel pool fire at the storage tanks or the delivery road tanker and toxic effect of diesel combustion gases in case of a pool fire at the storage tanks. The most critical effect that a major incident at the facility could have is a pool fire inside the common bund of the storage tanks.
Nature of impact:	Negative
Extent and duration of impact:	Local; Medium term
Consequence of impact or risk:	Damage to property and equipment, illness, injuries or death to people on site or on the adjacent currently vacant erf.
Probability of occurrence:	Improbable
Degree to which the impact may cause irreplaceable loss of resources:	If loss of life occurs this will be irreplaceable.

Degree to which the impact can be reversed:	Partly reversible
Indirect impacts:	A localised fire may cause nuisance impacts such as smoke to surrounding residents.
Cumulative impact prior to mitigation:	Negligible
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	High
Degree to which the impact can be avoided:	Can be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	<ol style="list-style-type: none"> <li>Two mobile foam pourers of 100 kg should each be placed on the northern and southern sides of the diesel depot.</li> <li>No flammable materials, such as wooden pallets, must be stored near the bulk diesel tanks or near the area where the road tanker parks for diesel deliveries.</li> <li>The emergency management plan must be updated at least once per year.</li> <li>Operating procedures must be updated for the facility, to include preventative measures against the following potential major incidents: <ol style="list-style-type: none"> <li>Diesel leaks.</li> </ol> </li> <li>All possible ignition sources near areas where diesel is stored and handled at the facility must be eliminated. Guidelines for the control of ignition sources are as follows: <ol style="list-style-type: none"> <li>Use only electrical equipment that is certified to be flameproof and spark proof.</li> <li>Control static electricity.</li> <li>Ensure that vulnerable equipment is properly bonded to ground.</li> <li>Prohibit smoking, open flames and sparks.</li> <li>Prevent mechanical sparks and friction.</li> <li>Use separator devices to remove foreign materials capable of igniting from process materials.</li> <li>Separate heated surfaces from dust.</li> <li>Separate heating systems from dust.</li> <li>Select and use industrial trucks properly.</li> <li>Use cartridge activated tools properly.</li> <li>Implement an equipment preventative maintenance programme.</li> </ol> </li> <li>The outcome of the risk assessment must be brought to the attention of all the employees at the facility.</li> <li>The diesel storage tanks, and all pipelines and fittings must be protected against corrosion, to prevent diesel leaks.</li> <li>The Maintenance Plan must be updated for all the equipment used on the facility. The Plan must contain at least the following: <ol style="list-style-type: none"> <li>List of all equipment and facilities on the facility.</li> <li>Maintenance frequency.</li> <li>Particulars of maintenance activities that must be performed on the listed equipment.</li> </ol> </li> </ol>

	<p>d. Responsible person.</p> <p>9. All hazardous equipment and facilities on the facility must be inspected on a weekly basis by means of an Inspection Register. The Register must contain at least the following:</p> <ul style="list-style-type: none"> <li>a. List of all equipment and facilities on the facility.</li> <li>b. Equipment items that must be inspected.</li> <li>c. Facilities that must be inspected.</li> <li>d. Areas that must be inspected.</li> <li>e. Inspection findings.</li> <li>f. Responsible person who carried out the inspection.</li> </ul> <p>10. Detailed operating procedures must be updated at least annually for all sections of the depot, in collaboration with the equipment suppliers. All authorised operators must be trained in the application of the procedure. Special attention must be given to the offloading of diesel via road tankers on the premises.</p> <p>11. Material safety data sheets (MSDS) for the following hazardous materials must be available on site at all times:</p> <ul style="list-style-type: none"> <li>a. Diesel.</li> </ul> <p>12. All operating personnel at the facility must be made aware and kept aware of the dangers involving diesel.</p> <p>13. Access to the facility must be controlled 24 hours per day. The safety guard on duty must comply with the following requirements:</p> <ul style="list-style-type: none"> <li>a. The guard must be trained in the potential major incidents that could occur at the site as well as the emergency procedure that must be followed.</li> <li>b. The guard must be linked via safety management system or cellular phone with a responsible standby person of the operating company.</li> <li>c. The guard must be able to contact the local Fire Department immediately.</li> </ul> <p>14. The Emergency Evacuation Procedure aimed at workers must be updated at least once per year in collaboration with the emergency services of City of Cape Town Municipality.</p> <p>15. The Emergency Response Plan and Emergency Evacuation Procedure must be tested at least once every 12 months by means of mock emergencies. The Fire Department of City of Cape Town Municipality must preferably participate in such tests.</p> <p>16. Customer parking bays must be located in an area where public vehicles will not cause obstruction of emergency vehicles.</p> <p>17. Adequate space must be provided for the road tankers to enter, exit and park safely for delivery of diesel to the bulk storage tanks.</p> <p>18. The bulk storage tanks must be adequately earthed against lightning.</p> <p>19. All workers and tank drivers will be informed of the emergency procedure to follow in the event of accidental fires.</p>
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	<p>20. Effective measures must be implemented to prevent overfilling of the storage tanks and the resultant spillage of diesel.</p> <p>21. In order to minimise the risk of diesel spillages, the delivery road tanker may not reverse or manoeuvre on site.</p> <p>22. No open fires will be allowed on the site.</p> <p>23. A dedicated smoking area will be designated; no smoking is to take place outside of the dedicated smoking area.</p> <p>24. Firefighting facilities will be to Oil Industry standards, which will include hand-held fire extinguishers and a hose reel. These facilities must be approved by the local fire department.</p> <p>25. All people working on site are responsible for their own safety on site. Contractors and Principal Agent/s shall at all times comply with the relevant statutory requirements including the Occupational Health and Safety Act, Act 85 of 1993.</p> <p>26. A comprehensive site specific first aid kit must be available on site at all times.</p> <p>27. At least one person trained in safety and first aid and familiar with the first aid equipment on site must be present on the site at all times.</p>
Residual impacts:	None
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – Medium (-)

### **Air Quality Impact**

<b>Potential impact and risk:</b>	<b>Air Quality Impact:</b> Fuel vapour emissions may cause an odour nuisance or health impacts to adjacent residents, staff on site or to users of the fuel depot.
Nature of impact:	Negative
Extent and duration of impact:	Site specific; Medium term (the fuel vapour fumes will be present for the lifespan of the depot)
Consequence of impact or risk:	Odour nuisance to the adjacent residents and inhalation of fuel vapour fumes could cause health impacts to those exposed to the fumes.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Completely reversible
Indirect impacts:	Odour nuisance to the adjacent resident's and health impacts due to inhalation to those exposed to the fumes.
Cumulative impact prior to mitigation:	Low - Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	No avoidable
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be partly mitigated

Proposed mitigation:	<ol style="list-style-type: none"> <li>1. Awareness training of personnel at the site and for road tanker drivers delivering fuel to site will be conducted.</li> <li>2. Contractors and Principal Agent/s shall at all times comply with the relevant statutory requirements including the Occupational Health and Safety Act, Act 85 of 1993.</li> <li>3. The development of site-specific protocols with regard to delivery and use of products and use of the relevant SANS procedures.</li> <li>4. The careful location and elevation of the vent pipes to allow for the maximum dispersion of vapour.</li> <li>5. Construction activities, namely bulk earthworks, construction of access road and the ASTs, and associated activities, were identified as potential dust-generating activities. Mitigation measures were added to the existing dust control measures currently implemented by Kaap-Agri.</li> <li>6. Kaap Agri must provide an implementation progress report to the air quality officer at agreed time intervals. The DMP must be assessed on an annual basis, as required for specific dust control measures, or should any complaint or incident occur which results in high dust emissions.</li> </ol>
Residual impacts:	Health impacts
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)

### **Traffic & Safety Impacts:**

<b>Potential impact and risk:</b>	<b>Traffic &amp; Safety Impacts:</b> Traffic impacts are expected to occur for the duration of the operational phase of the activity as a result of the additional vehicles making use of the fuel depot. This could lead to safety impact or damage to road infrastructure.
Nature of impact:	Negative
Extent and duration of impact:	Local extent; Long term duration
Consequence of impact or risk:	Nuisances to road users may occur. Infrastructure damages to the road network may occur and there may be safety risks associated with high traffic events.
Probability of occurrence:	Probable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Partly reversible
Indirect impacts:	Nuisances to road users may occur. Infrastructure damages to the road network may occur and there may be safety risks associated with high traffic events.
Cumulative impact prior to mitigation:	Medium
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Medium
Degree to which the impact can be avoided:	Not avoidable
Degree to which the impact can be managed:	Can be managed

Degree to which the impact can be mitigated:	Can be mitigated
Proposed mitigation:	<ol style="list-style-type: none"> <li>1. Damages to the road network should be monitored and repaired as they occur.</li> <li>2. All vehicles will be legally compliant.</li> <li>3. All drivers will be competent and in possession of an appropriate valid driver's license.</li> <li>4. All vehicles travelling on site will adhere to the specified speed limits.</li> <li>5. The movement of all vehicles will be controlled such that they remain on designated routes.</li> <li>6. No member of the workforce will be permitted to drive a vehicle under the influence of alcohol or narcotic substances.</li> <li>7. Warning signage (i.e. "trucks turning") must be erected near the access point to the site.</li> <li>8. Substantial on-site road works to provide sufficient stacking for, and circulation through the site by the fuel tankers and grain trucks. The grain trucks and fuel tankers' tracking are separated once they enter the site.</li> <li>9. The tank farm is located as far from the community on the opposite side of the access road as possible.</li> </ol>
Residual impacts:	Even after the above mitigation measures have been implemented, when (worst case scenario) there is a breakdown of a road tanker or a customer's vehicle, or an unanticipated que, temporary traffic impacts may occur to the flow of existing traffic in the area.
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)

### **Visual Impact**

<b>Potential impact and risk:</b>	<b>Visual Impact:</b> The visibility of the fuel storage tanks from prominent viewpoints and receptors.
Nature of impact:	Negative
Extent and duration of impact:	Site specific; long term
Consequence of impact or risk:	Impact to "sense of place"
Probability of occurrence:	Improbable
Degree to which the impact may cause irreplaceable loss of resources:	No loss of resource
Degree to which the impact can be reversed:	Irreversible
Indirect impacts:	Impact to "sense of place"
Cumulative impact prior to mitigation:	Negligible
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be avoided:	Cannot be avoided
Degree to which the impact can be managed:	Can be managed
Degree to which the impact can be mitigated:	Can be mitigated

Proposed mitigation:	1. Preventative Maintenance Plans for the facility should be implemented to ensure good housekeeping of the infrastructure.
Residual impacts:	None
Cumulative impact post mitigation:	Low
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low (-)

### **Socio-economic – Creation of business and employment opportunities**

<b>Potential impact and risk:</b>	<b>Socio-economic – Creation of business and employment opportunities:</b> New permanent employment opportunities are proposed to be created.
Nature of impact:	Positive
Extent and duration of impact:	Local Extent; Long term
Consequence of impact or risk:	This positive impact will result in job creation and income opportunity
Probability of occurrence:	Definite
Degree to which the impact may cause irreplaceable loss of resources:	N/A – this is a positive impact
Degree to which the impact can be reversed:	N/A – this is a positive impact
Indirect impacts:	N/A – this is a positive impact
Cumulative impact prior to mitigation:	N/A – this is a positive impact
Significance rating of impact prior to mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low to Medium (+)
Degree to which the impact can be avoided:	N/A – this is a positive impact
Degree to which the impact can be managed:	N/A – this is a positive impact
Degree to which the impact can be mitigated:	N/A – this is a positive impact
Proposed <b>enhancement:</b>	Preference should be given to historically disadvantaged individuals from the local, surrounding community, when appointing employees for operation phase.
Residual impacts:	None
Cumulative impact post mitigation:	N/A – this is a positive impact
Significance rating of impact after mitigation (e.g. Low, Medium, Medium-High, High, or Very-High)	Low – Medium (+)

## SECTION I: FINDINGS, IMPACT MANAGEMENT AND MITIGATION MEASURES

1.	Provide a summary of the findings and impact management measures identified by all Specialist and an indication of how these findings and recommendations have influenced the proposed development.
<b><u>Transport Impact Statement, EFG Engineers (Pty) Ltd (September 2020)</u></b>	
<p>EFG Engineers (Pty) Ltd conducted a Transport Impact Statement (please see <b>Appendix G1</b>) and detailed the following findings:</p>	
<ul style="list-style-type: none"> <li>• The Main Road 188 (Klipheuwel Road) is not operating at full capacity.</li> <li>• Existing travel patterns are typical of commuter traffic.</li> <li>• 2019 RNIS data shows that Main Road 188 carries <math>\pm 6\,000</math> vehicles per day and <math>\pm 600</math> vehicles during the AM/PM peak hours (two-directional traffic).</li> <li>• The planned expansion that entails the implementation of 5 x new 83 000 litre fuel tanks is anticipated to increase the truck traffic by <math>\pm 10</math> trucks IN and <math>\pm 10</math> trucks OUT per day with no more than <math>\pm 2</math> trucks IN and <math>\pm 2</math> trucks OUT during the AM/PM peak hours. This trip generation is insignificant and does not warrant a detailed traffic analysis.</li> <li>• Access to the site is from an intersection along Main Road 188 (just south of the railway bridge) and then via three gates located along the western boundary of the site fronting Minor Road 60.</li> <li>• Two site layout options (1 and 2) are proposed that are to be evaluated as part of the EIA.</li> <li>• In terms of traffic impact ratings, Site Layout Option 1 and Site Layout Option 2 have a similar traffic impact rating although Option 1 is preferred as it provides slightly more stacking and thereby minimises the potential for conflict with the fuel depot operations.</li> <li>• Option 1 and Option 2 can both be supported.</li> <li>• Traffic impacts during the construction phase are considered unlikely to have a greater impact than existing heavy traffic.</li> <li>• No significant transport impacts are anticipated during the operational phase.</li> <li>• The overall traffic impact is rated as "Low".</li> </ul>	
<p>Based on these findings, the following mitigation measures are proposed:</p>	
<ul style="list-style-type: none"> <li>• No mitigatory measures were proposed for the construction or operational phase.</li> <li>• Proposed mitigation measures relate to the provision of substantial on-site road works. This will enable sufficient stacking and circulation of traffic through the site for fuel tankers and grain trucks. Once fuel tankers and grain trucks enter the site, operations are to be separated.</li> <li>• The tank farm must be located on the opposite side of the access road in order to be as far as possible from the community.</li> </ul>	
<b><u>2. Major Hazard Installation (MHI) Risk Assessment (Appendix G2)</u></b>	
<p>A Major Hazard Installation (MHI) Risk Assessment (please see <b>Appendix G2</b>) was conducted (dated October 2020) where the main findings of the Assessment are listed below:</p>	
<ul style="list-style-type: none"> <li>• The Occupational Health and Safety Act (Act 85 of 1993) defines a major hazard installation as "an installation-             <ul style="list-style-type: none"> <li>▪ <i>where more than the prescribed quantity of any substance is or may be kept, whether permanently or temporarily; or</i></li> <li>▪ <i>where any substance is produced, used, handled or stored in such a form and quantity that it has <u>the potential to cause a major incident</u>".</i></li> </ul> </li> </ul>	

- The MHI Assessment concluded that the Diesel tanks installation on the premises does not comprise an MHI. This is attributed to a major incident on site not impacting members of the public outside the boundaries of the site.
- The Diesel delivery road tanker comprises an MHI while it is parked on the property. However, this risk is lower than when the road tanker drives in the streets due to possible collisions with vehicles.
- Potential hazardous events identified by the MHI Risk Assessment include:
  - a) An uncontrolled leak of diesel at the depot from a bulk storage tank; or
  - b) An uncontrolled leak of diesel from the delivery road tanker.
- As a result of the hazardous events, the identified potential major incidents were:
  - a) A diesel pool fire at the storage tanks or the delivery road tanker.
  - b) Toxic effect of diesel combustion gases in case of a pool fire at the storage tanks.
  - c) Grain dust cloud explosion at the storage silos.
- The most critical effect that a major incident at the facility could have is a pool fire inside the common bund of the storage tanks.
- The MHI Risk Assessment stated that the:
  - a) Cumulative individual safety risks for the site is  $2.10 \text{ E-6 d/p/yr}$ .
  - b) Individual risk at the site is broadly acceptable for the public ( $<1.0 \text{ E-6}$ ) and for employees ( $<1.0 \text{ E-5}$ ) on site.
  - c) Societal safety risks on this site are acceptably low ( $1.0 \text{ E-06}$ ).
- Various mitigation measures have been recommended to be implemented to reduce any potential risk. These mitigation measures have been incorporated into the EMPr.

The MHI Risk Assessment concluded the following:

- The facility is **not** classified as a major hazard installation. This is attributed to a major incident at the site not impacting members of the public outside the boundaries of the premises.
- The road tankers that will deliver diesel to the proposed new bulk storage tanks on site constitute temporary installations and were subjected to an individual risk assessment. It is concluded that the diesel road tankers constitute major hazard installations, because a pool fire caused by the road tanker on site or a pool fire in the proposed new retaining bund could impact the public outside the boundaries of the site
- There are no developing conflicts for this site.
- To the best knowledge of the risk assessor there are no major hazard installation within reach of the worst-case major incident that can occur at this site.
- New developments around the site may take place.
- The safety risk is expected to be a low risk as risk is a measure of the likelihood of an event and the consequence of an event.
- With the proposed mitigation measures implemented, the likelihood of an event occurring is exponentially low, resulting in the level of risk expected to be low.
- The MHI Risk Assessment recommends that amongst other mitigation measures listed in the MHI Assessment, key mitigation measures to reduce risk of impact to humans if new development around the site take place would be the following:
  - a) If new development around the site is planned, the local authority must take the land-use planning zones in **Figure 11** below into consideration.





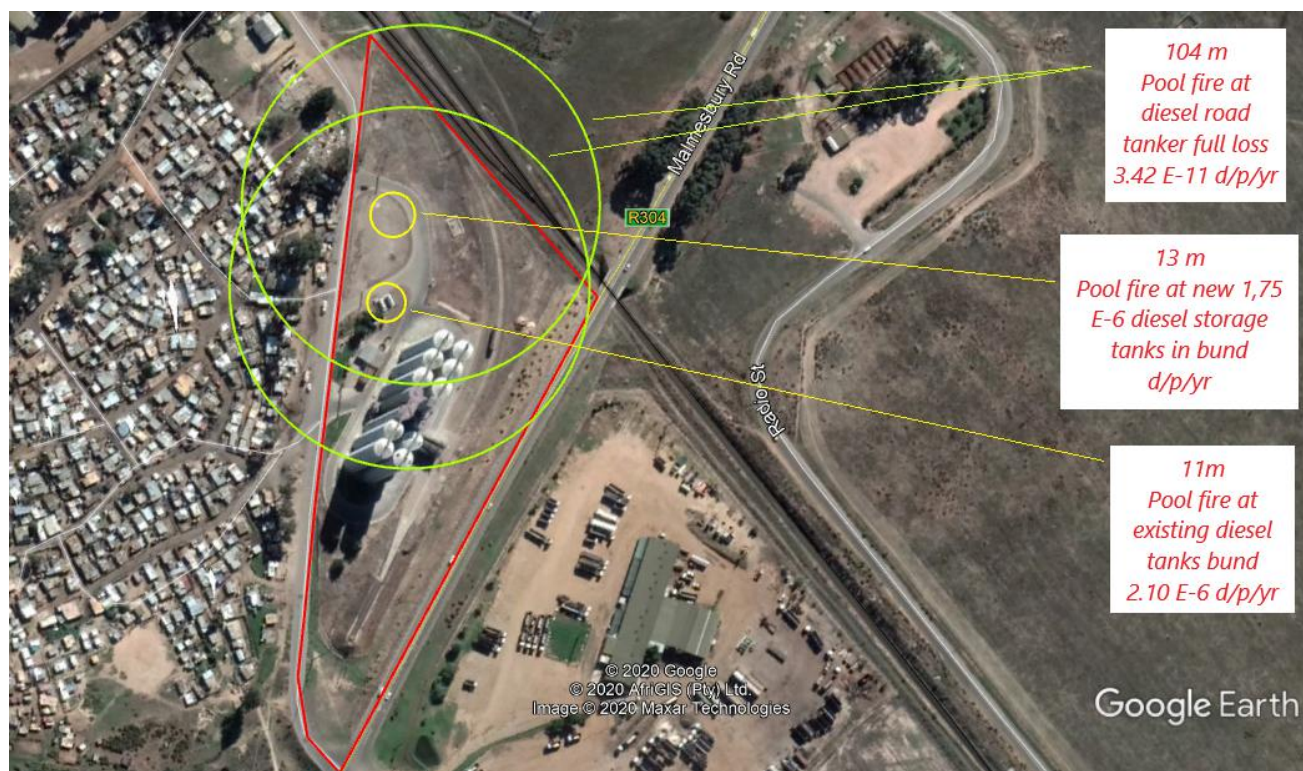
**Figure 4:** Land-use planning zones (Sourced from MHI Risk Assessment. Source: Dr Alfonso Niemand, October 2020) (Appendix G2)

**Key:**

Red: Inner zone > 10 chances of a major incident per million per annum ( $1.0 \text{ E-5}$  per year).

Orange: Middle zone > 1 chance of a major incident per million per annum ( $1.0 \text{ E-6}$  per year).

Yellow: Outer zone > 0.3 chances of a major incident per million per annum ( $3.0 \text{ E-7}$  per year).



**Figure 5:** Main Risk Contours (Source: MHI Risk Assessment, Dr Alfonso Niemand, October 2020)



### 3. Emergency Response Plan (Appendix G3)

In the Emergency Response Plan (ERP), numerous activity hazards and risks were identified and rated. Control measures were proposed where the residual risk rating was rated as "Low" and "Medium" for activities should control measures be implemented.

The activity hazards and risks pertain to different areas and/or facilities on site, namely the;

- Entrance;
- Offices;
- Weighbridge;
- Off loading;
- Loading Zone;
- Exit;
- Silo bin (full or empty);
- Control room;
- Canteen and ablution facilities; and the
- Railway.

Mitigation/ control measures have been included in the ERP. These control measures have been included in the EMP. Please refer to **Appendix G3** for more information.

### 4. Noise Management Assessment and Noise Management Plan (Appendix G4)

Jongens Keet Associates (JKA) were commissioned by Sillito Environmental Consulting (Pty) Ltd to conduct a Noise Impact Assessment (NIA) and compile a Noise Management Plan (NMP) on existing noise sources and on activities associated with the proposed expansion of fuel storage capacity (please see **Appendix G4**). The following findings were made:

During normal loading operations, the duration of each loading and fan operation is 20 minutes with, on average, 10 loadings occurring per day. Therefore, the total duration of noise per day is 200 minutes = 3.33 hours. This represents 0.21 (21%) of a 16-hour daytime reference time period. Averaging (logarithmically) the 76 dBA for 3.33 hours over the 16-hour daytime reference time period, the daytime rating level,  $L_{Req,d}$  of silo noise becomes 69 dBA. This is lower than the 70 dBA daytime rating level for noise in an industrial district and therefore compliant with Regulation 4 of the NCR. No noise mitigation procedures were thus required. In terms of SANS 10103:2008 the intensity of noise impact is negligible. Due to the infrequent screening operations in any year, the potential noise impact was not considered further.

The noise impact of the proposed development may be divided into the construction phase and operation phase respectively. The findings of noise impacts are summarised below:

#### a) Construction Phase

- No major construction work is envisaged.
- Construction period would be very short (no more than a few weeks)
- The construction work would need to comply with the Noise Management Plan.
- Noise impacts for the construction phase were given a "minor-negative" significance rating without mitigation and a "negligible-negative" significance rating with mitigation.
- Cumulative noise impacts of the construction phase unlikely to exceed that of existing passing heavy vehicles.

#### b) Operation Phase

- In terms of SANS 10103:2008 the intensity of noise impact would be negligible during the operation phase. It would be compliant with Regulation 4 of the NCR and no noise mitigation would be required.

- The NMP requires that the proposed works are undertaken in accordance with Part F6 of the National Building Regulations and Building Standards Act No.103 of 1977 (as amended) and must comply with best practice standards provided therein.
- The following conclusions can be drawn:
- An investigation into noise emitting from the existing operations of the Klipheuwel Silo established that the daytime rating level of noise was lower than the typical rating level for noise for an industrial district and therefore compliant with Regulation 4 of the Noise Control Regulations. No noise mitigation procedures were thus required. In terms of SANS 10103:2008 the intensity of noise impact is negligible.
- The proposed addition of fuel tanks would have a negligible intensity of noise impact in terms of SANS 10103:2008 during the operation phase. It would be compliant with Regulation 4 of the NCR and no noise mitigation procedures would be required.
- During the construction phase construction work would need to comply with the Noise Management Plan contained in Section 5 of the report.

## **7. Dust Management Plan (Appendix G5)**

An independent Dust Management Plan was compiled for the proposed Kaap Agri Diesel Depot in Klipheuwel by Sillito Environmental Consulting (Pty) Ltd (please see **Appendix G5**).

To minimise the generation of dust, access roads and gravel working areas should be treated with dust suppressing agents like Dustex or watered with a water cart, using non-potable water. These mitigation measures are mostly effective where there are flat gravel/ fill surfaces. To mitigate the formation of dust during the construction activities, construction materials, where possible, can be kept moist by means of water carts and/or dust suppressing fog sprayers can be positioned on site. Hay can also be worked into fill slopes where required.

Although the existing facility already has dust control measures in place (**Table 1 of Appendix G5**), additional measures (**Table 2 of Appendix G5**) were proposed and added to the dust management plan in order to assist in decreasing the amount of dust fallout. Any dust control measure that requires water or misting systems should not use municipal potable water. Contingency actions were also identified for high or abnormal dust conditions due to windy conditions or operation processes (**Table 3 of Appendix G5**). A complaints register will be kept up to date by client and the construction company and will be available for City scrutiny on request.

An implementation progress report is also to be provided to the air quality officer at agreed time intervals when required. The Dust Management Plan will also be assessed on an annual basis, or as required for specific dust control measures, in order to determine its compliance with this Dust Management Plan.

Based on the Dust Management Plan, the following conclusions were drawn:

An implementation progress report shall be provided to the air quality officer at agreed time intervals when required. Compliance with this Dust Management Plan will be evaluated by the CoCT Air Quality Management Unit on an annual basis or as required for specific dust control measures.

This plan must be reviewed and revised by Kaap Agri (Pty) Ltd:

- On an annual basis
- If there are any major changes to the operation
- In response to any complaint or incident resulting in high dust emissions

### **Current Dust Management:**

- Roads sprayed should be dust suppressant to control dust generated from the movement of vehicles when accessing and existing the site.

- Silos fitted with dust control systems to enable dust emissions abatement during bulk materials loading, unloading and transfer operations. Filters installed to prevent excessive cement dust during deliveries.
- Water browser to wet site floor before loading of trucks commences on site
- Watering with municipal potable water is prohibited. Only non-potable water may be used for dust suppression activities.
- All vehicles must adhere to a speed limit of 30km/h within the property.

#### Additional Dust Control Measures:

Nine (9) additional dust control measures were identified for dust in the construction phase as summarized below:

- Machinery generating emissions must be regularly serviced and maintained to ensure that their emissions are at acceptable standards.
- If cement silos are utilised, filters must be installed to prevent excessive generation of cement dust during deliveries. The silos are to be fitted with appropriate dust control systems (as mentioned above).
- Use of water bowzers and wetting down of loose soil areas, as well as the erection of shade netting screens to prevent off-site movement of dust is required and/or other appropriate action to minimise windblown dust and sand.
- Rubble, waste, and dust generated on higher open floor levels (which are vulnerable to the effects of the wind) must be covered and removed regularly to prevent becoming windblown and migrating off site.
- The use of straw/hay stabilisation or mulching of exposed sandy areas may also be considered. This must be undertaken in consultation with the ECO.
- The height of exposed loose material stockpiles, such as sand, rubble, etc. must be minimised as far as possible and covered or screened during high wind conditions, overnight, and/or over weekends.
- As a general best practice guideline, the Water By-law (PG 6378) issued by the City of Cape Town (2006) must be adhered to at all times. In particular, no potable water may be used for dust suppression purposes.
- Spraying of stockpiles with a fine mist of water for 10–15 minutes must be implemented during windy conditions. The use of municipal potable water for these purposes is strictly prohibited.
- All vehicles transporting sand need to have tarpaulins covering their loads which will assist in any windblown sand occurring off the trucks.

#### **8. Stormwater Management Plan (Appendix G6)**

A stormwater Management Plan (SWMP) was compiled by EFG Engineers (Pty) Ltd. This was produced in response to a comment raised by the City of Cape Town comment in the Pre-Application BAR phase.

In terms of existing stormwater infrastructure, an open drainage channel was identified on site that runs the entire length of the property from east to west. The majority of this drain is lined with concrete/grouted stone pitching, with a short section that is unlined south of the railway line. This section of open drain crosses underneath the railway line by means of two 300mm Ø concrete pipes and then back into a concrete lined drain.

The lined open channel runs underneath the existing paved roadway through an 450mm Ø concrete pipe and into a grouted stone pitched open drain. Stormwater in the grouted stone pitched open

drain flows in a westerly direction and gets intercepted by an outlet structure before exiting the property.

Run-off from the property is released into a 150mm concrete pipe that runs parallel to Vryheid Road towards Klipheuwel Road and then crosses underneath the road through a 600mm Ø concrete pipe towards the Mosselbank River. Run-off generated by the area east of the railway line flows in an unlined open drain along the eastern boundary fence in a southerly direction. As the run-off reaches the southern corner of the property it goes underneath the fence through a 450mm Ø concrete pipe that has an outlet into a lined trapezoidal open drain along the southern boundary.

The lined open drain diverts run-off towards the existing 600mm Ø stormwater pipe that crosses underneath Vryheid Road towards the Mosselbank River. It was found that the informal settlement between the site and the Mosselbank River creates significant pollution and the quality of run-off generated upstream is largely irrelevant.

As per City of Cape Town requirements and policies, the SWMP addresses the following:

- *The post-development stormwater runoff rates of the site should be reduced to the pre-development runoff rates for up to 1 in 50-year storm events by means of attenuation.*
- *The pollution removal targets for the stormwater runoff of the site are either a reduction of pollutants to pre-development levels or a 45% reduction in the total phosphorus discharge and an 80% reduction in total suspended solids, whichever requires the higher level of treatment.*

The findings of the SWMP propose that two detention ponds (total approximate storage capacity of 57m<sup>3</sup>) are constructed to attenuate stormwater runoff up to a 1 in 50-year storm event to pre-developed (existing) flow levels. This is to be substantiated with formalised outlet structures and optimised use of existing stormwater channels.

These proposed stormwater infrastructures will address CoCT's comments as follows:

- Additional runoff generated (by stormwater events of up to 1 in 50 years) by the proposed expansion will be attenuated to pre-development levels; and
- The two detention ponds will retain the stormwater runoff of a 1 in ½ year, 24hr storm event that will slowly filter through the bottom of the pond to subsurface pipes. This will address the need for stormwater runoff to be polished and treated to appropriate levels of phosphorous and total suspended solids.
- An emergency overflow will discharge any additional stormwater runoff from the pond in the unlikely event of a 1 in 100-year storm event.

The SWMP proposes that maintenance must be undertaken as per the proposed maintenance schedule (Table 4.3 of the SWMP – Appendix G6) in order to ensure optimal operation of the detention ponds and associated stormwater infrastructure.

The Engineers support this environmental application based on the (1) construction of the detention ponds which will enable sufficient stormwater drainage and flood attenuation, and (2) the maintenance of the detention ponds as per the proposed schedule (Table 4.3 of the SWMP).

2.	List the impact management measures that were identified by all Specialist that will be included in the EMP
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### **1. Transport Impact Statement (Appendix G1)**

The Following Impact Management Measures were recommended by the Transport Impact Statement Specialist:

a) Construction Phase

No mitigation measures are proposed for the construction phase.

b) Operational Phase

- Substantial on-site road works to provide sufficient stacking for, and circulation through the site by the fuel tankers and grain trucks. The grain trucks and fuel tankers' tracking are separated once they enter the site.
- The tank farm is located as far from the community on the opposite side of the access road as possible.

## **2. Major Hazard Installation (MHI) Risk Assessment (Appendix G2)**

The Following Impact Management Measures were recommended by the **Major Hazardous Risk Installation Specialist**:

- a) The layout of the Diesel storage facilities must be approved by the local emergency services.
- b) The emergency management plan must be updated when personnel changes or contact details occurs, in accordance with the guidelines given in this report.
- c) Operating procedures for the site must be kept up to date to include preventative measures against the uncontrolled release of the following hazardous substances:
  - Diesel from the delivery road tanker.
  - Diesel from the storage tanks.
- d) The outcome of the risk assessment must be brought to the attention of all the employees at the site.
- e) A Maintenance Plan must be compiled and kept up to date for all the hazardous equipment used on the facility. The Plan must contain at least the following:
  - List of all equipment and facilities on the facility.
  - Maintenance frequency.
  - Particulars of maintenance activities that must be performed on the listed equipment.
  - Responsible person.
- f) All hazardous equipment and facilities on the facility must be inspected on a regular basis by means of an Inspection Register. The Register must contain at least the following:
  - List of all equipment and facilities on the facility.
  - Equipment items that must be inspected.
  - Facilities that must be inspected.
  - Areas that must be inspected.
  - Inspection findings.
  - Responsible person who carried out the inspection.
- g) All authorised operators must be trained in the application of the operating procedures applicable to their jobs.
- h) All operating personnel at the facility must be made aware and kept aware of the dangers involving Diesel.
- i) The facility must remain under safety and security access control for 24 hours per day. If a security guard is employed, he/she must comply with the following requirements:
  - The guard must be trained in the potential major incidents that could occur at the site as well as the emergency procedure that must be followed.
  - The guard must be linked via SMS or cellular phone with a responsible standby person at the site.
  - The guard must be able to contact the local Fire Department immediately.

- j) The Emergency Evacuation Procedure aimed at workers and visitors must be updated at least annually in collaboration with the emergency services of City of Cape Town Municipality.
- k) The Diesel delivery road tankers must never reverse on site.
- l) The Diesel road tankers must be inspected when it comes onto the site, for possible overheated tyres, smell of heated rubber, diesel leaks or other defects that can place the site at risk of fire.
- m) The Emergency Management Plan and Emergency Evacuation Procedure must be tested at least once every 12 months by means of mock emergencies. The emergency services of City of Cape Town must be invited to participate in these tests.
- n) Customer and staff parking bays must be located in an area where public vehicles will not cause obstruction to emergency vehicles.
- o) Prior to any construction work on site, the local office of the Department of Employment and Labour must be notified in writing, in accordance with the Construction Regulations of the Department of Employment and Labour.
- p) No modifications may be made to the facilities on site unless an MHI risk assessment has been done beforehand.
- q) Train all staff in emergency preparedness for a Diesel leak, in collaboration with the fire department of City of Cape Town.
- r) The highest risks at the site are manageable, namely a pool fire at the Diesel storage tanks or at the delivery road tanker.

### **3. Emergency Response Plan (Appendix G3)**

The Emergency Response Plan (ERP) identifies numerous activity hazards and risks, which are rated accordingly. Proposed mitigation measures (control) measures, related to such activities and the risk(s) associated with the different areas and/or facilities, that were identified and rated on site are included in the ERP.

Please refer to Appendix G3 for more information on specific control measures which have been incorporated into the EMPr.

### **4. Noise Management Assessment and Plan (Appendix G4)**

#### Noise impact of existing activities:

No noise mitigation procedures were thus required. In terms of SANS 10103:2008 the intensity of noise impact is negligible. Due to the infrequent screening operations in any year, the potential noise impact was not considered further.

#### Proposed works:

- a) Construction phase
  - The construction work would need to comply with the Noise Management Plan.
  - The NMP requires that the proposed works are undertaken in accordance with Part F6 of the National Building Regulations and Building Standards Act No.103 of 1977 (as amended) and must comply with the following best practice standards:
    - i. All construction equipment utilised and activities undertaken must be compliant with the Western Cape Noise Control Regulations, 2013.
    - ii. All communities located within 200 m of construction activities are to be notified prior to work commencing and how long they will occur.
    - iii. Restrict construction activities generating noise outputs of 85 dBA or more to the hours of 08h00 to 17h00 Mondays to Fridays. Should the Contractor need to do this work outside of these hours, the approval of the Environmental Control Officer (ECO) must be obtained and surrounding communities must be informed prior to the work

taking place.

- iv. No amplified music shall be allowed on site. The use of audio equipment shall not be permitted, unless the volume is kept sufficiently low so as to be unobtrusive. The Contractor shall not use sound amplification equipment on Site, unless in emergency situations.
- v. If excessive noise is expected, neighbouring residents must be informed in advance of when the high noise levels will occur and for how long they will occur.
- vi. The Contractor must post signage indicating contact details of the Contractor and/or ECO on the site to allow for reporting of complaints.

## **5. Dust Management Plan (Appendix G5)**

Dust Management measures incorporated into the EMPr:

- Roads sprayed with dust suppressant to control dust from movement of vehicles when accessing and existing the site.
- Silos fitted with dust control systems to enable dust emissions abatement during bulk materials loading, unloading and transfer operations. Filters installed to prevent excessive cement dust during deliveries.
- Water browser to wet site floor before loading of trucks commences on site (no watering with municipal potable water).
- Speed limit of 30km/h on site.
- Machinery generating emissions must be regularly serviced and maintained such that their emissions are acceptable.
- If cement silos are utilised, filters must be installed to prevent excessive generation of cement dust during deliveries. The silos are to be fitted with appropriate dust control systems (as mentioned above).
- Use of water bowsers and wetting down of loose soil areas, as well as the erection of shade netting screens to prevent off-site movement of dust is required and/or other appropriate action to minimise windblown dust and sand.
- Rubble, waste and dust generated on higher open floor levels vulnerable to the effects of the wind must be covered and removed regularly to prevent becoming windblown and migrating off site.
- The use of straw stabilisation or mulching of exposed sandy areas may also be considered in consultation with the ECO.
- The height of exposed loose material stockpiles, such as sand, rubble, etc. must be minimised as far as possible and covered or screened during high wind conditions, overnight and over weekends.
- As a general best practice guideline, the Water By-law (PG 6378) issued by the City of Cape Town (2006) must be adhered to at all times. In particular, no potable water may be used for dust suppression purposes.
- Spraying of stockpiles with a fine mist of water for 10–15 minutes during windy conditions. Municipal potable water will not be used.
- All vehicles transporting sand need to have tarpaulins covering their loads which will assist in any windblown sand occurring off the trucks.

Contingency Actions:

During windy conditions, it is possible that dust emissions may still be generated from the site. The actions provided in **Table 3** (please see below) have been incorporated into the EMP to ensure that dust levels generated by the activities on the site do not create a nuisance.

All site staff will be responsible for reporting high or abnormally dust conditions to one of the Directors as soon as is reasonably practicable.

**Table 3 Contingency Actions (extracted from DMP - Appendix G5)**

Trigger	Actions	Person Responsible
Visible dust emissions occurring from site or site access road during windy conditions.	Investigate cause and implement necessary control to prevent further emissions (e.g. ceasing of work in peak wind periods or increasing frequency of watering)	Client and main contractor
Visible dust emissions occurring due to operation processes.	Investigate cause and implement necessary control to prevent further emissions (e.g. wetting of dust generating areas)	Client and main contractor

## **6. Stormwater management Plan (Appendix G6)**

The impact management measures identified by the SWMP pertain to the proposed construction of two detention ponds (total approximate storage capacity of 57m<sup>3</sup>) so as to attenuate stormwater runoff up to a 1 in 50-year storm event to pre-developed (existing) flow levels. This will be substantiated with the formalisation of outlet structures and the optimised use of existing stormwater channels.

The two proposed detention ponds will further retain stormwater runoff of a 1 in ½ year, 24hr storm event that will slowly filter through the bottom of the pond to subsurface pipes. This will address the need for stormwater runoff to be polished and treated to appropriate levels of phosphorous and total suspended solids. An emergency overflow will also discharge any additional stormwater runoff from the pond in the unlikely event of a 1 in 100-year storm event.

The SWMP proposes that maintenance must be undertaken as per the proposed maintenance schedule (Table 4.3 of the SWMP) in order to ensure optimal operation of the detention ponds and associated stormwater infrastructure.

3. List the specialist investigations and the impact management measures that will **not** be implemented and provide an explanation as to why these measures will not be implemented.

All impact management measures recommended by the specialists will be implemented.

4. Explain how the proposed development will impact the surrounding communities.

The proposed development will create new job opportunities to individuals from previously disadvantaged backgrounds. Additional services will be available to the surrounding communities such as the availability of diesel, improving the communities' access to such services. The fuel depot will enable some existing Moorreesburg clients to be serviced from the Klipheuwel depot. Kaap Agri will be able to deliver fuel from the proposed depot directly to Kaap Agri farm clients.



The proposed development could potentially have a negative effect on the surrounding communities in the case of an emergency event such as a diesel pool fire.

5. Explain how the risk of climate change may influence the proposed activity or development and how has the potential impacts of climate change been considered and addressed.

When considering climate change in an EIA context, two specific terms are appropriate, i.e. climate change "adaptation" and "mitigation". Climate change "adaptation" refers to the implementation of measures to reduce the impacts of climate change on a specific project, thereby addressing a project's vulnerability to climate change by implementing measures to increase project resilience. Climate change "mitigation" refers to the implementation of measures to reduce the impact of a proposed project on climate change, thereby reducing a project's greenhouse gas (GHG) emissions.

The information below aims to identify potential adaptation responses to the effects of climate change as it relates to the proposed development, and to identify potential measures to minimise the effects of the proposed project on climate change through climate change mitigation (by reducing GHG emissions).

The complexity associated with climate change prediction highlights the need for adaptive and flexible responses to climate variability. The incorporation of climate change mitigation and adaptation into projects through the EIA and BA processes is therefore eminent.

#### **Climate change adaptation:**

Climate change projections for the Western Cape include higher mean annual temperatures, higher maximum temperatures, more hot days and more heat waves, higher minimum temperatures, fewer cold days and frost days, intensification of rainfall events, and increased mean sea level and associated storm surges (DEA&DP, 2014).

In order to increase a project's ability to adapt to the impacts of climate change, it is important to identify its vulnerability or sensitivity to the potential effects of climate change. The parameters to which this project could be vulnerable or sensitive to, together with more information on the potential impacts, are as follows:

#### **Increased temperatures may cause increase in fire risks or major hazardous events occurring:**

The increased temperatures associated with climate change will lead to increased fire risk. Inadequate fire risk management may result in an increased major hazardous risk occurring. The significance of this potential impact associated will be medium without mitigation and low with mitigation.

#### **Climate Change mitigation:**

Measures should be implemented to ensure resource efficiency and renewable energy supply in order for the proposed development to limit its greenhouse gas emissions and thereby reducing its impact on climate change:

- Renewable energy installations such as solar should be considered for implementation as part of the proposed development, as well as LED lighting and lightbulbs and similar fittings in the buildings on site.
- During the operational phase, the proposed development will encourage gas usage as energy source for cooking and heating as compared to conventional coal powered electricity. Therefore, promoting energy efficiency and a greener alternative to the surrounding communities.

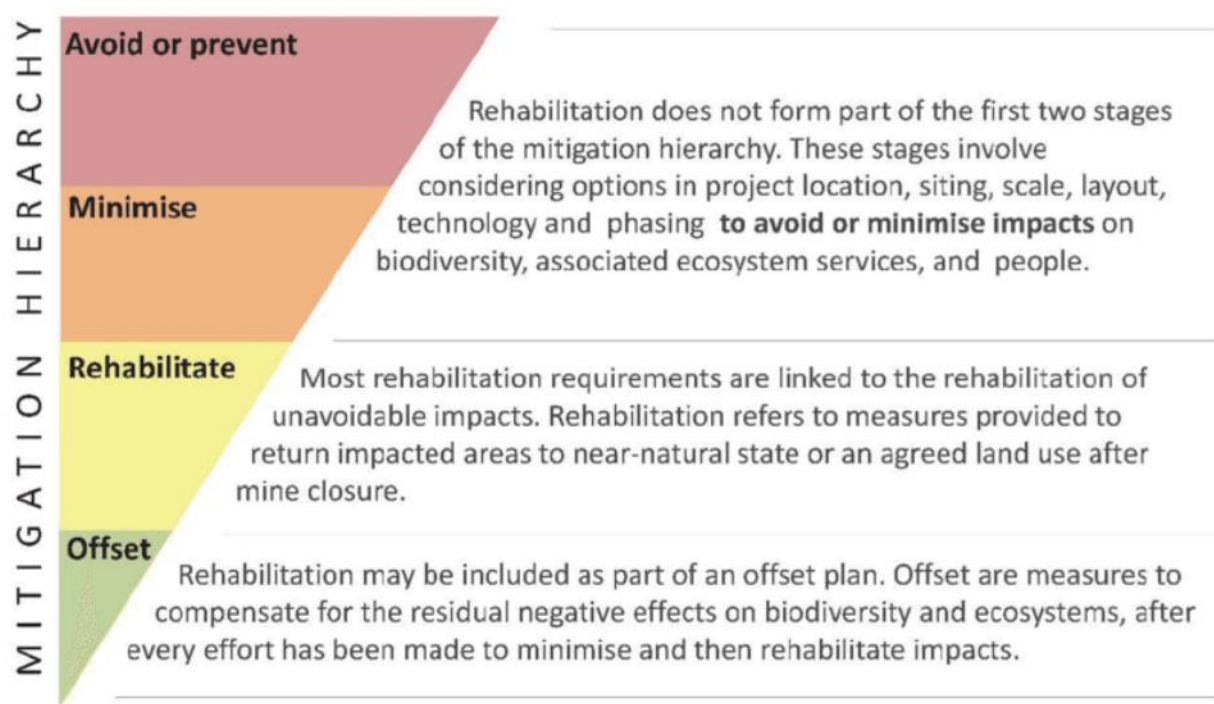
6. Explain whether there are any conflicting recommendations between the specialists. If so, explain how these have been addressed and resolved.

N/A

7.	Explain how the findings and recommendations of the different specialist studies have been integrated to inform the most appropriate mitigation measures that should be implemented to manage the potential impacts of the proposed activity or development.
<p><b>Transport Impact Statement:</b></p> <p>The findings of the Transport Impact Statement concluded that no significant transport impact is anticipated as a result of the proposed bulk fuel storage depot. Mitigation measures were provided to the EAP which have been included in the BAR and EMPr to ensure optimal stacking - thereby minimizing the potential vehicle conflict during the operational phase.</p> <p><b>Major Hazard Installation:</b></p> <p>The recommendations made by the Hazardous Risk Specialist was used to ensure that the development proposal is in accordance with the safety requirements for the installation of ASTs. Mitigation measures were provided to the EAP and were included in the BAR and EMPr to ensure that health and safety risks are minimised/mitigated for, during the construction and operational phases.</p> <p><b>Emergency Response Plan</b></p> <p>The findings of the Emergency Response Plan were used to ensure that the development proposal is in accordance with relevant health and safety control measures for operations on site and for the installation of the ASTs. Mitigation measures were provided to the EAP and were included in the BAR and EMPr to ensure that certain activity hazards and risks are minimised/mitigated for during the construction and operational phases.</p> <p><b>Noise Management Assessment and Plan</b></p> <p>The recommendations made by the Acoustical Engineers was used to ensure that noise generated by the existing operations and development proposal is in accordance with Regulation 4 of the Western Cape Noise Control Regulations, 2013 (NCR). Mitigation measures were provided to the EAP which were subsequently incorporated into the BAR and EMPr to ensure that the generation of noise is minimised/mitigated for, during the construction and operational phases.</p> <p><b>Dust Management Plan</b></p> <p>The recommendations made by SEC in the Dust Management Plan was used to ensure that the development proposal is in accordance with the requirements of Section 26 of the City of Cape Town Air Quality Management By-Law (August 2016) and Section 6(2) of the NEM:AQA National Dust Control Regulations (GN.R 827, November 2013). Existing and additional mitigation measures have been included in the BAR and EMPr to ensure that risks associated with dust generation are minimised during the construction and operational phases.</p> <p><b>Stormwater management Plan</b></p> <p>The recommendations made by the Engineers were used to ensure that the development proposal addresses comments raised by the City of Cape Town, pertaining to contaminated water entering the municipal system and the amount of stormwater should an uncommon storm event occur. Mitigation measures were provided to the EAP and were included in the BAR and EMPr to ensure that stormwater is attenuated in accordance with formalised requirements and associated risk are minimised/mitigated for during the operational phase.</p>	
8.	Explain how the mitigation hierarchy has been applied to arrive at the best practicable environmental option.

The mitigation hierarchy consists of four (4) actions that are designed to be implemented sequentially<sup>8</sup>. These actions include impact (1) avoidance, (2) minimization, (3) rehabilitation, and (4) offset (if required). Please refer to Figure 13 below for a graphical representation of the mitigation hierarchy.

- (1) **Avoidance:** avoiding impacts on biodiversity within the proposed site of development and surrounding area. This includes identifying potential risks and investigating alternatives<sup>9</sup>.
- (2) **Minimize potential impacts:** mitigation measures<sup>10</sup> and recommendations have been proposed by the Specialists (please refer to Appendices G1-6) to mitigate and reduce identified potential impacts. These mitigation measures and recommendations have been incorporated into the EMP (Appendix H) and are to be implemented during the construction and operational (where applicable) phases.
- (3) **Rehabilitation:** this action includes the rehabilitation of areas impacted outside of the proposed development footprint by anthropogenic activities (associated with construction and/or operational activities).
- (4) Offset: see Figure 13 below.



**Figure 6: Mitigation hierarchy.**

<sup>8</sup>Arlidge, W.N., Bull, J.W., Addison, P.F., Burgass, M.J., Gianuca, D., Gorham, T.M., Jacob, C., Shumway, N., Sinclair, S.P., Watson, J.E. and Wilcox, C., 2018. A global mitigation hierarchy for nature conservation. *BioScience*, 68(5), pp.336-347.

<sup>9</sup>Phalan, B., Hayes, G., Brooks, S., Marsh, D., Howard, P., Costelloe, B., Vira, B., Kowalska, A. and Whitaker, S., 2018. Avoiding impacts on biodiversity through strengthening the first stage of the mitigation hierarchy. *Oryx*, 52(2), pp.316-324.

<sup>10</sup>Mitigation measures and erosion control methods include, but are not limited to, silt fences, retention basins, detention ponds, erosion mats, mulching, gabion baskets, etc. Exposed areas, susceptible to erosion, must be rehabilitated. Mitigation measures are not limited to measures mentioned here. As such measures may need to be adapted for site-specific conditions. This includes planting vegetation, characteristic of the pertinent vegetation type, to stabilize the soil.

According to the Environmental Impact Assessment and Management strategy for South Africa, 2014 Impact Mitigation Hierarchy is a tool used throughout a project lifecycle to limit negative impacts on the environment.

### **1. Avoid and Prevent**

The development proposal is for the installation of 5 X Aboveground Diesel Storage Tanks at an existing facility with existing infrastructure in place. The facility is located within an industrial zone, with several developments surrounding the site. It is therefore not possible to avoid or prevent the development, as the site and area is already established.

### **2. Minimise**

The proposed development entails the installation of 5 X Aboveground Diesel Storage Tanks at an existing facility with existing infrastructure in place; therefore, layout alternatives, scale and technology options are limited. The preferred layout alternative was deemed to have the lowest impacts, due to the layout, safety and traffic considerations. The development will keep environmental impacts to a minimum by complying to various industry standards as well as regulation from the department of energy as well as the National Energy Regulator of South Africa, among others.

### **3. Rehabilitate**

The proposed development will not cause an irreplaceable loss of resource, as the development proposal entails the installation of 5 x ASTs at an existing facility with existing infrastructure in place. The site is located on previously disturbed land comprising of brick and gravel and is completely transformed; therefore, no rehabilitation is expected. Should the diesel depot be decommissioned, all relevant legal procedures will need to be complied with at that moment in time.

## **SECTION J: GENERAL**

### **1. Environmental Impact Statement**

1.1.	Provide a summary of the key findings of the EIA.
<p>Investigation and assessment of Portion 17 of the Farm Vryheid No. 55, Klipheuwel found that the proposed site is a suitable location to provide additional fuel storage and supply services as there are no/insignificant biodiversity impacts associated with the proposed expansion, there is no vegetation on the site and no water resources on or adjacent to the site. In addition, no cultural or heritage impacts are expected to occur. The site is completely transformed, is within the Klipheuwel Urban Edge, aligns with the properties existing land use rights (General Industry), and is zoned for General industrial use in the Spatial Development Framework.</p> <p>The most significant impact of the development proposal is the potential health and safety risk. The MHI Risk Assessment found that a major incident at the existing plant (pool fire inside common bund) will not impact on people outside the boundaries of the depot, especially towards future developments around the site. The diesel road tankers constitute major hazard installations because a pool fire caused by the road tanker on site or a pool fire in the proposed new retaining bund could impact the public outside the boundaries of the site. The MHI Assessment found that the proposed expansion of the site is expected to have a low societal risk (even if the adjacent erf owned to the best knowledge of the risk assessor there are no major hazard installation within reach of the worst-case major incident that can occur at this site.</p>	

The author of the MHI Risk Assessment, Dr Niemand, confirmed that even if future developments around the site take place, the health & safety risk is expected to be a low risk because risk is a measure of the likelihood of an event and the consequence of an event. With the proposed mitigation measures implemented, the likelihood of an event occurring is exponentially low, resulting in the level of risk expected to be low.

In terms of benefits, the depot upgrade will provide job opportunities to the community during the construction and operation phases, an income stream for the applicant as well as additional provision of fuel supply services needed in the area by farmers.

Given the low significance of the impacts assessed and because of the fact that the likelihood of an incident occurring is very low, the socio-economic benefit of this project should be realised and the EAP recommends that this site should be developed with the proposed development.

The implementation of the design, construction and operational phase measures contained in the EMPR in **Appendix H**, will maximize the benefits and avoid/ minimize any environmental risks associated with the upgrade. It is in this case of particular importance to manage the health and safety risk associated with a potential pool fire and or exposure to hazardous liquids (diesel fuel) and fuel vapours.

There is thus adequate motivation for the Kaap Agri (Pty) Ltd fuel depot upgrade to proceed under the following recommended conditions of approval:

- The mitigation measures listed in the EMPR must be strictly implemented.
- Two mobile foam pourers of 100 kg should each be placed on the northern and southern sides of the diesel depot.
- The tanks must be installed according to the following SANS:
  - SANS 10131(2004): Above-ground storage tanks for petroleum products.
  - SANS 10 400TT (Fire Protection) 53 Sections 1-6 (The application of the National Building Regulations-Installation of Liquid Fuel Dispensing Pumps and Tanks).
  - SANS 10087-3 (2008) (English): The handling, storage, distribution and maintenance of liquefied petroleum gas in domestic, commercial, and industrial installations Part 3: Liquefied petroleum gas installations involving storage vessels of individual water capacity exceeding 500 L.
- The following plans & procedures must be produced prior to construction taking place (as per design phase requirements listed in the EMPR):
  - Stormwater Management Plan.
  - Spill Contingency Plan.
  - Fire Plan.
  - Update Emergency Response Plan.
  - Update Preventative Maintenance Plans.
- The installation of the Aboveground Storage Tanks and associated pipework must comply with the National Building Regulations and Standards Act No. 103 of 1977.
- The installation must comply with local authority bylaws and all procedures and equipment used must be in accordance with the Occupational Health & Safety Act (No. 85 of 1993).
- Upon completion of the UST installation, an engineer is to inspect and verify that the tanks and the associated infrastructure have been installed as per the design criteria described in the final BAR and to all required SABS / SANS standards and applicable legislation.
- Substantial on-site road works to provide sufficient stacking for, and circulation through the site by the fuel tankers and grain trucks. The grain trucks and fuel tankers' tracking are separated once they enter the site.
- The tank farm is located as far from the community on the opposite side of the access road as possible.

The implementation of the design, construction and operational phase measures contained in the EMPr in **Appendix H**, will maximize the benefits and minimize any environmental risks associated with the proposal. Adherence to the EMPr should be made a condition of authorization.

There is thus adequate motivation for the fuel depot expansion to proceed.

1.2.	Provide a map that that superimposes the preferred activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers. (Attach map to this BAR as Appendix B2)
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No environmental sensitivities are on or adjacent to the site. The closest watercourse to the site is the Mosselbank Rivier located 365m away from the site proposed for diesel storage. The river will not be at any risk because a bund wall will be built around the storage tanks in case of any leaks or tank failure and the watercourse is too far away for there to be any risk. The tanks are proposed above ground. Please refer to Appendix D1 for Biodiversity Overlay Map.

1.3.	Provide a summary of the positive and negative impacts and risks that the proposed activity or development and alternatives will have on the environment and community.
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The EAP has assessed the impacts associated with the fuel depot to be as follows, after mitigation:

**Table 4: Summary Tables of Construction & Operation Phase Impact Significance, After Mitigation.**

CONSTRUCTION PHASE IMPACTS & BENEFITS	
IMPACT	IMPACT SIGNIFICANCE AFTER MITIGATION
Soil & Groundwater Contamination & Pollution	Low (-)
Visual Impact	Low (-)
Dust & Noise Impact	Low (-)
Fire, Health and Safety Risk	Low - Medium (-)
Traffic, Safety and Access	Low (-)
Socio-economic benefit – creation of 20 temporary employment opportunities	Low – Medium (+)
OPERATION PHASE IMPACTS	
IMPACT	IMPACT SIGNIFICANCE AFTER MITIGATION
Soil & Groundwater Contamination & Pollution	Low - Medium (-)
Fire, Health and Safety Risk	Low - Medium (-)
Air Quality: Fuel Vapour Emissions	Low (-)
Traffic & Safety	Low (-)
Visual Impact	Low (-)
Socio-economic benefit – creation of 4 permanent employment opportunities	Low – Medium (+)
Socio-economic benefit – fuel supply to farmers and income opportunity for Kaap Agri	Medium (+)

## 2. Recommendation of the Environmental Assessment Practitioner (“EAP”)

2.1.	Provide Impact management outcomes (based on the assessment and where applicable, specialist assessments) for the proposed activity or development for inclusion in the EMPr
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The impact management, mitigation and monitoring measures (to avoid or reduce impacts) have been listed in the impact tables above under “proposed mitigation” and they have also been duplicated in the attached EMPr.

The impact management objectives, as listed in the EMPr, for each phase of the development proposal, are as follows:

The following impact management objectives and outcomes have been identified for inclusion in the EMPR:

**Planning and Design Phase:**

OBJECTIVE	OUTCOMES
Appoint an Environmental Control Officer.	The requirements of the EMPr are implemented and monitored during all phases of the development, which will promote sound environmental management on site.
Undertake a GPR Survey to Detect Existing Service Lines to be Avoided	To avoid accidental damage of service lines and fuel lines which may cause impacts to the receiving environment. Damaged water pipes may cause erosion, soil compaction and flooding, and damaged sewage pipes may cause pollution and soil contamination. Damaged fuel lines could cause contamination.
Compile a Stormwater Management Plan	To avoid contaminated stormwater from the fuel depot from flowing off site and / or polluting the soil and / or groundwater.
Compile a Spill Contingency Plan for the Fuel Depot	In the event of a diesel spill (either a large scale or small scale spill) the procedure and response plan is clear and understood by all, which results in the incident having a low environmental, health and / or safety impact.
Compile a Fire Plan for the Fuel Depot	In the event of a fire at the facility the procedure and response plan is clear and understood by all, which results in a low health and / or safety impact.
Update the Existing Emergency Response & Evacuation Plan	<ul style="list-style-type: none"> <li>➤ To compile and Emergency Response &amp; Evacuation Plan that takes into account the "on-site" and "off-site" aspects in response to a disaster event.</li> <li>➤ Ensure co-ordinated organizational and institutional arrangements. This is to prevent or reduce any of the hazards from occurring and to prepare and respond if a hazard cannot be avoided.</li> <li>➤ Guide the tactical and operational co-ordination mechanism between all the relevant stakeholders, both pro-actively and reactively.</li> <li>➤ Provide for the safety and evacuation or sheltering of the workers as well as that of the public.</li> <li>➤ The outcome of the plan should prompt emergency response and relief that will: <ul style="list-style-type: none"> <li>a) Save lives,</li> <li>b) Reduce further risk exposure,</li> </ul> </li> </ul>

	c) A reduce suffering, d) Protect property, e) Protect the environment, f) Reduce economic and social losses, and g) Provide for the safety and health of all responders;
Update Preventative Maintenance Plans	Prevent leaks, prevent health & safety risk and maintain good housekeeping
Demarcation of Working Areas & NO-GO Areas	Construction activities will be restricted to within the designated areas & NO-GO areas will be protected from disturbance.
Establishment of Site Camp and Associated Site Facilities	Before the start of the construction phase a site camp must be established with all the required ablutions, waste management infrastructure and firefighting equipment where the vehicles and equipment can be stored.
Undertake Pre-Construction ECO Visit	An ECO undertakes the first inspection prior to construction commencing to monitor the applicant's compliance to the pre-construction mitigation measures listed above and the EA.

### **Construction Phase**

OBJECTIVE	OUTCOMES
Avoid Contamination and Pollution of the Soil and Groundwater	To avoid the contamination of soil and groundwater by inappropriate waste management practises, fuel and oil spills, chemical toilet spills and inappropriate cement mixing.
Limit Noise and Dust Impacts	The surrounding environment, land users, residents and passers-by do not experience significant nuisance impacts related to dust, noise and vibration.
Limit Traffic Impacts to Existing Road Users, Pedestrians & Road Infrastructure	During the construction phase of the development while materials are being delivered to the site, damages to road infrastructure does not occur and the safety to pedestrians is not at unacceptable risk.
Reduce the Visual Impact of the Construction Phase Activities	Sensitive receptors are not significantly impacted upon by construction activities taking place.
Avoid Fire, Health & Safety Risk	Fuel delivery, storing and dispensing activities are undertaken responsibly and in in line with the National Standards so that risk of explosion or exposure to hazardous vapours and liquids is avoided.
Enhance Business & Employment Opportunities	The development provides a benefit to the local community in terms of job provision.

### **Post Construction Rehabilitation Phase**

OBJECTIVE	OUTCOMES
Rehabilitate disturbed areas and ensure environmentally sensitive closure of the construction site.	The site is neat and tidy, and all exposed surfaces are suitably covered/ stabilized. There is no construction-related waste or pollution remaining on site



## Operation Phase

OBJECTIVE	OUTCOMES
Avoid Soil & Groundwater Contamination	No soil or groundwater contamination occurs.
Avoid Air Quality Impact	Fuel vapour emissions do not cause an odour nuisance or health impacts to adjacent properties or to users of the fuel depot.
Avoid Health & Safety Impacts	The fuel depot is operated in a safe and responsible manner in line with the legislative requirements for the operation of a fuel depot.
Limit Traffic & Safety Impacts from Occurring	To ensure that any damages to the road network are maintained. To avoid traffic accidents or delays as a result of heavy traffic.
Reduce the Visual Impact of the Above Ground Tanks	Sensitive receptors are not significantly impacted upon once the upgrade has been built.
Enhance Business & Employment Opportunities	The development provides a benefit to the local community in terms of job provision.

2.2. Provide a description of any aspects that were conditional to the findings of the assessment either by the EAP or specialist that must be included as conditions of the authorisation.

### Recommended conditions of approval:

- The mitigation measures listed in the EMPr must be strictly implemented.
- Two mobile foam pourers of 100 kg should each be placed on the northern and southern sides of the diesel depot.
- The tanks must be installed according to the following SANS:
  - SANS 10131(2004): Above-ground storage tanks for petroleum products.
  - SANS 10 400TT (Fire Protection) 53 Sections 1-6 (The application of the National Building Regulations-Installation of Liquid Fuel Dispensing Pumps and Tanks).
  - SANS 10087-3 (2008) (English): The handling, storage, distribution and maintenance of liquefied petroleum gas in domestic, commercial, and industrial installations Part 3: Liquefied petroleum gas installations involving storage vessels of individual water capacity exceeding 500 L.
- The following plans & procedures must be produced prior to construction taking place (as per design phase requirements listed in the EMPr):
  - Stormwater Management Plan.
  - Spill Contingency Plan.
  - Fire Plan.
  - Update Emergency Response Plan.
  - Update Preventative Maintenance Plans.
- The installation of the Aboveground Storage Tanks and associated pipework must comply with the National Building Regulations and Standards Act No. 103 of 1977.
- The installation must comply with local authority bylaws and all procedures and equipment used must be in accordance with the Occupational Health & Safety Act (No. 85 of 1993).

- Upon completion of the UST installation, an engineer is to inspect and verify that the tanks and the associated infrastructure have been installed as per the design criteria described in the final BAR and to all required SABS / SANS standards and applicable legislation.
- Substantial on-site road works to provide sufficient stacking for, and circulation through the site by the fuel tankers and grain trucks. The grain trucks and fuel tankers' tracking are separated once they enter the site.
- The tank farm is located as far from the community on the opposite side of the access road as possible.
- Option 1 design layout is the preferred layout alternative.

### **Transport Impact Statement**

- Based on the recommendations of the TIA, the proposed operations are supported as low traffic ratings were similarly derived for Option 1 and Option 2, however, Option 1 is the preferred layout alternative.

### **Major Hazard Installation (MHI) Risk Assessment**

Although the facility is not classified as a major hazard installation, the recommended preventative and risk mitigation measures as outlined in the MHI Risk Assessment are to be applied on site.

### **Emergency Response Plan**

The recommended control measures associated with various activity hazards and risk must be implemented.

### **Noise Management Assessment and Plan**

The NIA found that noise levels from existing operations on site for the daytime rating level of noise was lower than the typical rating level for noise for an industrial district and is therefore compliant with Regulation 4 of the Western Cape Noise Control Regulations, 2013 (NCR). No recommendations are therefore provided for existing operations. However, it is recommended that during the construction phase of proposed works that there would need to be compliance with the provisions of the Noise Management Plan.

### **Dust Management Assessment and Plan**

The existing dust control measures must remain in place on site, however the findings and recommended dust mitigation measures of the Dust Management Assessment and Plan must be implemented. Where water is required for dust control purposes, municipal potable water may not be used. A complaints register and implementation progress report shall be made available as part of construction and operations.

### **Stormwater Management Plan**

Based on the recommendations of the SWMP, the proposed works are supported based on two recommendations. Firstly, that the two proposed detention ponds are constructed in order to provide sufficient stormwater drainage and flood attenuation. Secondly, that the detention ponds are maintained accordingly to the proposed schedule provided in the SWMP in order to ensure sufficient stormwater quality treatment.

2.3.	Provide a reasoned opinion as to whether the proposed activity or development should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be included in the authorisation.
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Findings from the investigation and assessment of the proposed site for development (Portion 17 of the Farm Vryheid No. 55, Klipheuwel) showed that the proposed site is a suitable location to provide additional fuel storage and supply services. This is based on the insignificant biodiversity impacts

associated with the proposed expansion, due to the previous transformation of the entire site proposed for development. Moreover, no water resources are present on or adjacent to the site, no cultural or heritage impacts are expected to occur within the proposed site for development. The site is completely transformed, is within the Klipheuwel Urban edge, aligns with the property's existing land use rights (General Industry) and is zoned for General industrial use in the Spatial Development Framework.

The most significant impact of the development proposal is the potential health and safety risk. The MHI Risk Assessment found that a major incident at the existing plant (pool fire inside common bund) will not impact on people outside the boundaries of the depot, especially towards future developments around the site. The proposed AST installation on the premises does not comprise an MHI. The diesel delivery tankers constitute MHI because a pool fire caused by the road tanker on site or a pool fire in the proposed new retaining bund could impact the public outside the boundaries of the site. However, the risk is lower than when the fuel tankers are driving on the roads due to potential collisions with vehicles. The MHI Assessment found that the proposed expansion of the site is expected to have a low societal risk as there are no MHI within reach of the worst-case major incident that can occur at this site.

The author of the MHI Risk Assessment, Dr Niemand, confirmed that even if future developments around the site take place, the health & safety risk is expected to be low as risk is a measure of the likelihood of an event and the consequence of an event. With the proposed mitigation measures implemented, the likelihood of an event occurring is exponentially low, resulting in the level of risk expected to be low.

In terms of benefits, the depot expansion will provide short- and long-term job opportunities to the community during the construction and operation phases, an income stream for the applicant, as well as additional provision of fuel supply services which are required by farmers in the area.

Given the low significance of the impacts assessed, as well as the likelihood of an incident occurring to be very low, the socio-economic benefit of this project should be realised and the EAP recommends that the proposed site be developed. Measures as stipulated in the EMP (Appendix H) must be implemented and complied with. The implementation of the design, construction and operational phase measures contained in the EMP in **Appendix H**, will maximize the benefits and avoid/ minimize any environmental risks associated with the proposed expansion. It is of particular importance to manage the health and safety risk associated with a potential pool fire and/or exposure to hazardous liquids (diesel fuel) and fuel vapours.

There is thus adequate motivation for the fuel depot expansion to proceed.

2.4.	Provide a description of any assumptions, uncertainties and gaps in knowledge that relate to the assessment and mitigation measures proposed.
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**Assumptions:**

- It is assumed that all the information provided in this report and on which the report is based is correct and valid.
- The exact impacts discussed in this report may vary once the project commences due to real life events. The impacts identified and the mitigatory measures proposed are predicted to occur with the information as per this report.
- It is assumed that the proposed mitigation measures as listed in this report and the EMP (Appendix H) will be implemented, complied with, and adhered to.
- The assessment of impacts and recommendation of mitigation measures was informed by the site-specific ecological concerns arising from the field survey and based on the assessor's working knowledge and experience with similar development projects. The degree of confidence is considered good.

### **Uncertainties:**

Upon initial consultation with a town planner however, it is evident that the storing of bulk fuel could be seen as a *noxious industry*<sup>11</sup> and not allowed within a GI 1 zone, thus rezoning to Risk Industry could be required in terms of the bylaw (to be confirmed with the local municipality Town Planning Department).

A rezoning application therefore could be required to rezone the site if the municipality does not allow the fuel storage and distribution facility to be operated under the existing General Industry 1 zoning. Engagements with the municipality are required in this regard.

### **Gaps in Knowledge:**

There are no significant gaps in knowledge for the proposed project.

2.5.	The period for which the EA is required, the date the activity will be concluded and when the post construction monitoring requirements should be finalised.	
i.	the period within which commencement must occur;	5 years
ii.	the period for which the environmental authorisation is granted and the date on which the development proposal will have been concluded, where the environmental authorisation does not include operational aspects;	N/A – The EA does include operational aspects
iii.	the period for which the portion of the environmental authorisation that deals with non-operational aspects is granted; and	5 years
iv.	the period for which the portion of the environmental authorisation that deals with operational aspects is granted.	N/A – the operation phase is permanent.

## **3. Water**

Since the Western Cape is a water scarce area explain what measures will be implemented to avoid the use of potable water during the development and operational phase and what measures will be implemented to reduce your water demand, save water and measures to reuse or recycle water.

Minimal water will be used during the construction phase. Grey water will be used where necessary.

## **4. Waste**

Explain what measures have been taken to reduce, reuse or recycle waste.

The proposed development (the installation of 5 x 83m<sup>3</sup> above ground diesel storage tanks) will not produce additional domestic waste that would need to be recycled as only a limited number of additional employees are proposed and the activity itself does not produce any waste.

## **5. Energy Efficiency**

8.1. Explain what design measures have been taken to ensure that the development proposal will be energy efficient.

N/A

<sup>11</sup>'noxious trade' may be defined as an offensive, poisonous, or potentially harmful trade, use or activity which, because of fumes, emissions, smell, vibration, noise, waste products, nature of material used, processes employed, or other cause, is considered by the City to be a potential source of danger, nuisance or offence to the general public or persons in the surrounding area.

## SECTION K: DECLARATIONS

### DECLARATION OF THE APPLICANT

**Note:** Duplicate this section where there is more than one Applicant.

I....., ID number .....in my personal capacity or duly authorised thereto hereby declare/affirm that all the information submitted or to be submitted as part of this application form is true and correct, and that:

- I am fully aware of my responsibilities in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), the Environmental Impact Assessment ("EIA") Regulations, and any relevant Specific Environmental Management Act and that failure to comply with these requirements may constitute an offence in terms of relevant environmental legislation;
- I am aware of my general duty of care in terms of Section 28 of the NEMA;
- I am aware that it is an offence in terms of Section 24F of the NEMA should I commence with a listed activity prior to obtaining an Environmental Authorisation;
- I appointed the Environmental Assessment Practitioner ("EAP") (if not exempted from this requirement) which:
  - meets all the requirements in terms of Regulation 13 of the NEMA EIA Regulations; or
  - meets all the requirements other than the requirement to be independent in terms of Regulation 13 of the NEMA EIA Regulations, but a review EAP has been appointed who does meet all the requirements of Regulation 13 of the NEMA EIA Regulations;
- I will provide the EAP and any specialist, where applicable, and the Competent Authority with access to all information at my disposal that is relevant to the application;
- I will be responsible for the costs incurred in complying with the NEMA EIA Regulations and other environmental legislation including but not limited to –
  - costs incurred for the appointment of the EAP or any legitimately person contracted by the EAP;
  - costs in respect of any fee prescribed by the Minister or MEC in respect of the NEMA EIA Regulations;
  - Legitimate costs in respect of specialist(s) reviews; and
  - the provision of security to ensure compliance with applicable management and mitigation measures;
- I am responsible for complying with conditions that may be attached to any decision(s) issued by the Competent Authority, hereby indemnify, the government of the Republic, the Competent Authority and all its officers, agents and employees, from any liability arising out of the content of any report, any procedure or any action for which I or the EAP is responsible in terms of the NEMA EIA Regulations and any Specific Environmental Management Act.

**Note:** If acting in a representative capacity, a certified copy of the resolution or power of attorney must be attached.

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Signature of the Applicant:

Date:

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Name of company (if applicable):

## DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I ....., EAPASA Registration number ..... as the appointed EAP hereby declare/affirm the correctness of the:

- Information provided in this BAR and any other documents/reports submitted in support of this BAR;
- The inclusion of comments and inputs from stakeholders and I&APs;
- The inclusion of inputs and recommendations from the specialist reports where relevant; and
- Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties, and that:
- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that may compromise my objectivity; or
  - am not independent, but another EAP that meets the general requirements set out in Regulation 13 of NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review EAP must be submitted);
- In terms of the remainder of the general requirements for an EAP, am fully aware of and meet all of the requirements and that failure to comply with any the requirements may result in disqualification;
- I have disclosed, to the Applicant, the specialist (if any), the Competent Authority and registered interested and affected parties, all material information that have or may have the potential to influence the decision of the Competent Authority or the objectivity of any report, plan or document prepared or to be prepared as part of this application;
- I have ensured that information containing all relevant facts in respect of the application was distributed or was made available to registered interested and affected parties and that participation will be facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments;
- I have ensured that the comments of all interested and affected parties were considered, recorded, responded to and submitted to the Competent Authority in respect of this application;
- I have ensured the inclusion of inputs and recommendations from the specialist reports in respect of the application, where relevant;
- I have kept a register of all interested and affected parties that participated in the public participation process; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations;

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Signature of the EAP:

Date:

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Name of company (if applicable):

## DECLARATION OF THE REVIEW EAP

I ....., EAPASA Registration number ..... as the appointed Review EAP hereby declare/affirm that:

- I have reviewed all the work produced by the EAP;
- I have reviewed the correctness of the information provided as part of this Report;
- I meet all of the general requirements of EAPs as set out in Regulation 13 of the NEMA EIA Regulations;
- I have disclosed to the applicant, the EAP, the specialist (if any), the review specialist (if any), the Department and I&APs, all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

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Signature of the EAP:

Date:

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Name of company (if applicable):

## DECLARATION OF THE SPECIALIST

**Note:** Duplicate this section where there is more than one specialist.

I ....., as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that:

- In terms of the general requirement to be independent:
  - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or
  - am not independent, but another specialist (the "Review Specialist") that meets the general requirements set out in Regulation 13 of the NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review specialist must be submitted);
- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;
- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared or to be prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.

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Signature of the EAP:

Date:

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Name of company (if applicable):



## DECLARATION OF THE REVIEW SPECIALIST

I ....., as the appointed Review Specialist hereby declare/affirm that:

- I have reviewed all the work produced by the Specialist(s):
- I have reviewed the correctness of the specialist information provided as part of this Report;
- I meet all of the general requirements of specialists as set out in Regulation 13 of the NEMA EIA Regulations;
- I have disclosed to the applicant, the EAP, the review EAP (if applicable), the Specialist(s), the Department and I&APs, all material information that has or may have the potential to influence the decision of the Department or the objectivity of any Report, plan or document prepared as part of the application; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations.

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Signature of the EAP:

Date:

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Name of company (if applicable):