ENVIRONMENTAL CONSULTING

KAAP AGRI (PTY) LTD

DUST MANAGEMENT PLAN

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

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EXECUTIVE SUMMARY

Kaap Agri (Pty) Ltd, hereafter referred to as the client, has an existing silo facility, called the Wesgraan – Klipheuwel Silo, where oats, wheat, maize, canola and grain are stored in large volumes. Grain carrier trucks as well as private farmers harvest their grains and sell them to Kaap Agri where they are stored at this facility before being taken to the mills for processing. There are 2 X 23m^3 above ground diesel storage tanks at the Wesgraan Klipheuwel Silo Facility. Kaap Agri proposes to upgrade their existing diesel depot which is situated at the existing Wesgraan Klipheuwel Silo (grain storage and distribution facility) on Portion 17 of the Farm Vryheid No 55, Klipheuwel, Western Cape Province. The proposed application is to expand the existing fuel storage capacity by an additional five horizontal 83m^3 capacity tanks. It is therefore proposed to expand the current facility (46m^3) by an additional 415m^3, to have a total combined capacity of 461m^3.

The application for Environmental Authorization is being made to the Competent Authority, namely the Provincial Department of Environmental Affairs and Development Planning ("DEA&DP") and is required as the proposed development triggers an activity which is listed in terms of the National Environmental Management Act ("NEMA") Environmental Impact Assessment ("EIA") Regulations, 2014.

As part of required public participation of the EIA process, Petroland (Pty) Ltd received comment from the City of Cape Town to submit a dust management plan 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).

In summary, the proposed expansion of the Kaap Agri Diesel Depot comprises the following to be constructed:

- 5 X 83m^3 above ground diesel storage tanks.
- Bund retaining wall.
- Separate loading and offloading points on spill containment slabs.
- Brick paved roadways.
- Raised islands (to prevent access via truck).

Developed footprint of the existing facility and associated infrastructure is 25 800m^2. The development footprint of the proposed development and associated infrastructure is approximately **2 391m^2**.

Access to/from the site is proposed 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.

The construction of the bulk earthworks, the access road and the above ground storage tanks, which include the following activities, could be of a dust generating nature:

- The excavation, loading, handling and haulage of construction materials, including gravel and sand, onto the trucks within the site.
- The back tip, spreading, grading and compaction of construction material, including gravel and sand, to create the fill, its associated slopes, the berm and the access road.
- Construction vehicles working on site.
- The delivery of construction materials on site.

To minimise the generation of dust, access roads and gravel working areas can be treated with dust supressing 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 supressing fog sprayers can be positioned on site. Lastly, hay can be worked into fill slopes.

Although the Kaap Agri (Pty) Ltd - Wesgraan – Klipheuwel Silo already has in place some dust control measures, additional measures were 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. A complaints register will be kept up to date by the client and the construction company and will be available for City scrutiny on request.

Kaap Agri (Pty) Ltd - Wesgraan – Klipheuwel Silo will also provide an implementation progress report 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.

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1 INTRODUCTION

Kaap Agri (Pty) Ltd, hereafter referred to as the client, has an existing silo facility, called the Wesgraan – Klipheuwel Silo, where oats, wheat, maize, canola and grain are stored in large volumes. Grain carrier trucks as well as private farmers harvest their grains and sell them to Kaap Agri where they are stored at this facility before being taken to the mills for processing. There are 2 X 23m^3 above ground diesel storage tanks at the Wesgraan Klipheuwel Silo Facility. Kaap Agri proposes to upgrade their existing diesel depot which is situated at the existing Wesgraan Klipheuwel Silo (grain storage and distribution facility) on Portion 17 of the Farm Vryheid No 55, Klipheuwel, Western Cape Province. The proposed application is to expand the existing fuel storage capacity by an additional five horizontal 83m^3 capacity tanks. It is therefore proposed to expand the current facility (46m^3) by an additional 415m^3, to have a total combined capacity of 461m^3.

The application for Environmental Authorization is being made to the Competent Authority, namely the Provincial Department of Environmental Affairs and Development Planning ("DEA&DP") and is required as the proposed development triggers an activity which is listed in terms of the National Environmental Management Act ("NEMA") Environmental Impact Assessment ("EIA") Regulations, 2014.

As part of required public participation of the EIA process, Kaap Agri (Pty) Ltd received comment from the City of Cape Town to submit a dust management plan 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).

This plan will include:

- Identification of possible sources of dust from the site during the construction phase
- Recommended measures to mitigate dust emissions
- Implementation schedule of mitigation measures
- Name of person responsible for implementation of measures
- Complaints register regarding dust fall

2 SCOPE OF WORK

The scope of the work of this report includes the following:

- Compile a dust management plan for Kaap Agri (Pty) Ltd - Wesgraan – Klipheuwel Silo in terms of the requirement of the City's Air Quality Management Unit in terms 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 Government Notice R.827 (November 2013).
- This includes discussions and information received from the applicant Kaap Agri (Pty) Ltd as well as the professional team.

3 LEGAL REQUIREMENTS

This dust management plan is based on the requirements listed in the:

- NEM:AQA National Dust Control Regulations Government Notice R.827 (November 2013) Section 6 (2)
- City of Cape Town Air Quality Management By-law (August 2016) Section 26

4 SITE LAYOUT

The site is situated at the existing Wesgraan Klipheuwel Silo (grain storage and distribution facility) on Portion 17 of the Farm Vryheid No 55, Klipheuwel, Western Cape Province. Please refer to the Locality Map in **figure 1** below. 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. Access to/from the site is proposed 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. The site is surrounded by an informal settlement to the north and west. The R302 is adjacent to the site to the south. Agricultural land is located to the east of the site.

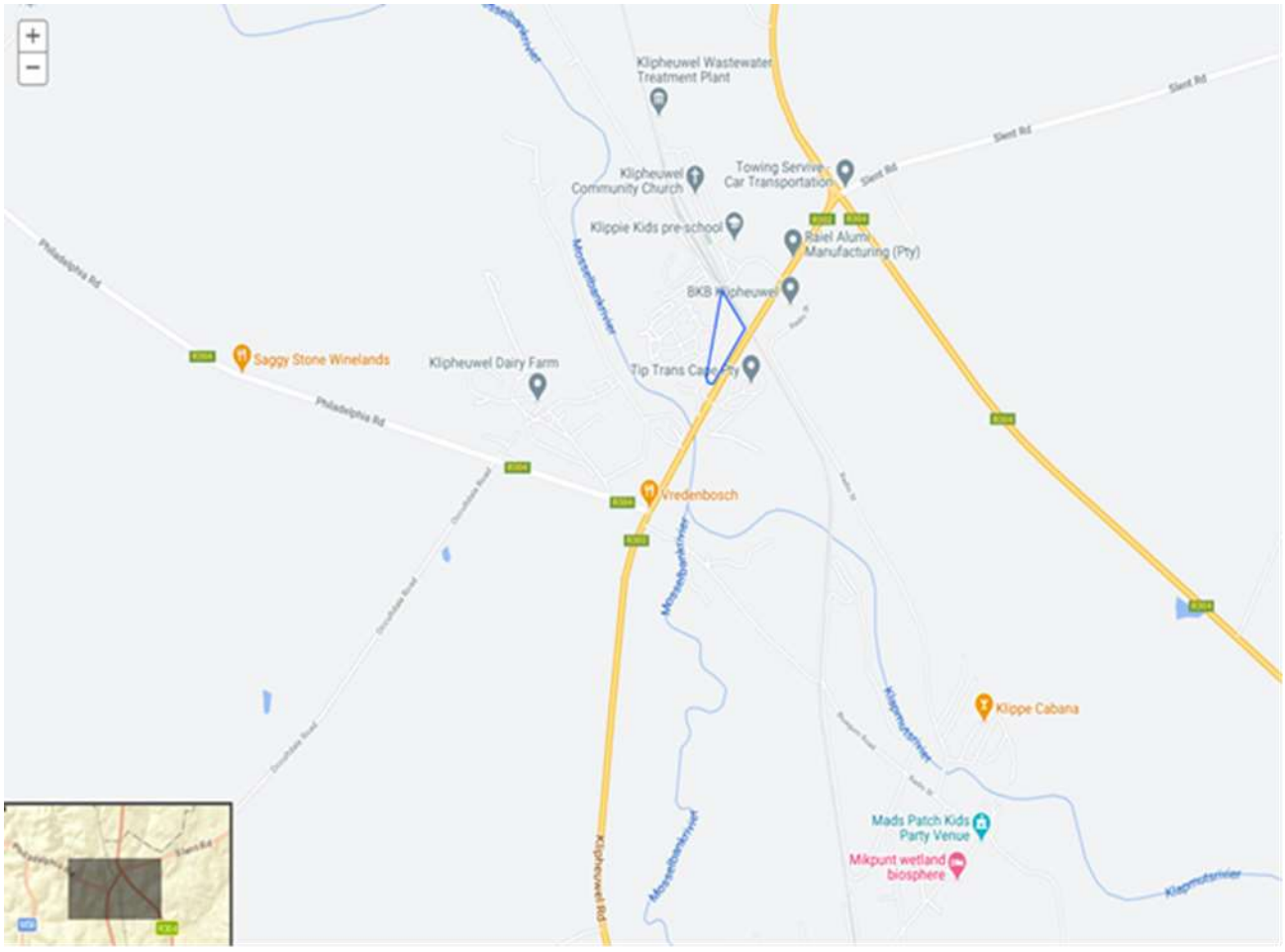

Figure 1: The location of Portion 17 of the Farm Vryheid No 55, Klipheuwel (blue triangle in centre).

5 PROJECT DESCRIPTION

The site is an operational silo facility, called the Wesgraan – Klipheuwel Silo, where oats, wheat, maize, canola and grain are stored in large volumes. Grain carrier trucks as well as private farmers harvest their grains and sell them to Kaap Agri where they are stored at this facility before being taken to the mills for processing. There are 2 X 23m^3 above ground diesel storage tanks at the Wesgraan Klipheuwel Silo Facility. The property is completely transformed and has no ecological functioning, as the site consists only of hard gravel surfaces and contains no original vegetation, no animal species and no natural watercourses. The site only supports some trees and grass along the existing stormwater infrastructure and at the entrance to the site.

In summary, the proposed expansion of the Kaap Agri Diesel Depot comprises the following to be constructed:

- 5 X 83m^3 above ground diesel storage tanks.
- Bund retaining wall.
- Separate loading and offloading points on spill containment slabs.
- Brick paved roadways.
- Raised islands (to prevent access via truck).

The development footprint of the proposed development and associated infrastructure is approximately **2 391m^2**.

The site layout plan below in **Figure 2** presents the preferred alternative development layout.

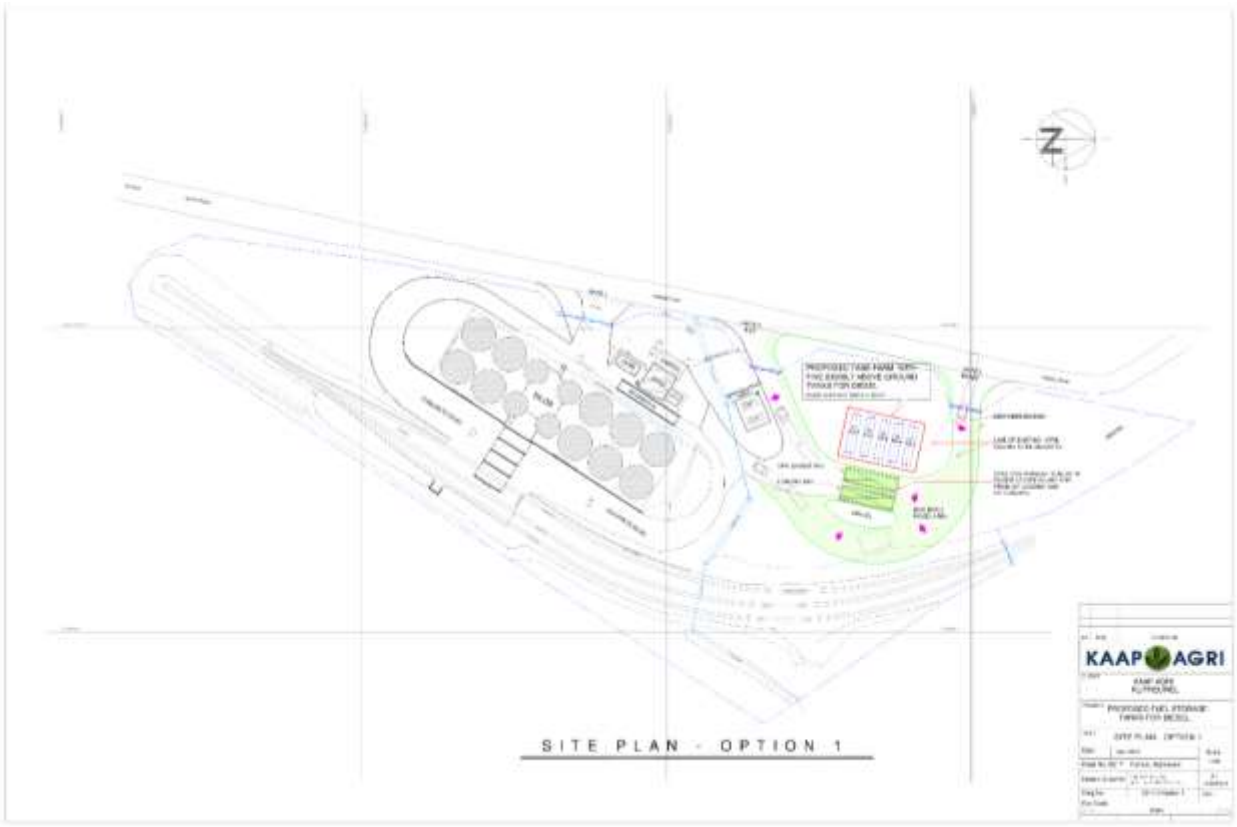

Figure 2: Site Layout Plan

6 IDENTIFICATION OF DUST SOURCES

The construction of the bulk earthworks, the access road and the above ground storage tanks, which include the following activities, could be of a dust generating nature:

- The excavation, loading, handling and haulage of construction materials, including gravel and sand, onto the trucks within the site.
- The back tip, spreading, grading and compaction of construction material, including gravel and sand, to create the fill, its associated slopes, the berm and the access road.
- Construction vehicles working on site.
- Construction vehicles utilising gravel access road(s) to and from the construction site.
- The delivery of construction materials on site.

To minimise the generation of dust, access roads and gravel working areas can be treated with dust supressing 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 supressing fog sprayers can be positioned on site. Lastly, hay can be worked into fill slopes.

Although the Kaap Agri (Pty) Ltd - Wesgraan – Klipheuwel Silo already has in place some dust control measures, additional measures were 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. A complaints register will be kept up to date by client and the construction company and will be available for City scrutiny on request.

Kaap Agri (Pty) Ltd - Wesgraan – Klipheuwel Silo will also provide an implementation progress report 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.

7 IMPLEMENTATION STRATEGY AND MITIGATION ACTIONS

7.1 CURRENT DUST MANAGEMENT

The dust control measures provided in Table 1 will be put in place at the Kaap Agri (Pty) Ltd - Wesgraan – Klipheuwel Silo.

Table 1 Current Dust Control Measures

Source	Dust Control Measures	Person Responsible
Movement of vehicles to access and exit the site.	Roads sprayed with dust suppressant (see **Appendix A** for MSDS). To be re-applied when road 'crust' is damaged or abnormal rains have washed suppressant into soil.	Client/ main contractor
Cement silos are utilised on site.	The silos are fitted with appropriate dust control systems for dust emissions abatement during bulk materials loading, unloading and transfer operations. Filters were installed to prevent excessive generation of cement dust during deliveries.	Client/ main contractor
Loading of trucks within the site.	Use of water browser to wet site floor before loading commences. No watering with municipal potable water.	Client/ main contractor
Speed limit for vehicles using the access road	A speed limit of 30hm/h was implemented for the siter access road.	Client/ main contractor

7.2 ADDITIONAL DUST MANAGEMENT

The additional dust control measures provided in **Table 2** have been identified to assist in decreasing the amount of dust fallout on the site.

Table 2 Additional Dust Control Measures

Number	Source	Dust Control Measures	Person Responsible	Implementation
1	**Construction**	All machinery generating emissions must be regularly serviced and maintained such that their emissions are acceptable.	Client and Main contractor	At all times
2	**Construction**	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 for dust emissions abatement during bulk materials loading, unloading and transfer operations.	Client and main contractor	At all times
3	**Construction**	Windblown dust and sand may generate considerable negative impacts (e.g., reduced visibility for vehicles travelling along adjacent roads and nuisance to neighbours/adjacent erven). The 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 this impact.	Client and main contractor	At all times
4	**Construction**	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.	Client and main contractor	At all times
5	**Construction**	The use of straw stabilisation or mulching of exposed sandy areas may also be considered in consultation with the ECO.	Client and main contractor	At all times
6	**Construction**	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.	Client and main contractor	At all times

Number	Source	Dust Control Measures	Person Responsible	Implementation
7	**Construction**	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. This documentation is available at the following website: *http://www.capetown.gov.za/en/Water/Documents/Water_By_Laws.pdf*	Client and main contractor	At all times
8	**Construction**	Spraying of stockpiles with a fine mist of water for 10 – 15 minutes during windy conditions. Municipal potable water will not be used.	Client and main contractor	Immediately
9	**Construction**	All vehicles transporting sand need to have tarpaulins covering their loads which will assist in any windblown sand occurring off the trucks.	Client and main contractor	At all times

7.3 CONTINGENCY ACTIONS

During windy conditions, it is possible that dust emissions may still be generated from the site. The actions provided in **Table 3** will be taken 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

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

8 DUST FALLOUT MONITORING PLAN

Dust monitoring for is not mandatory for the proposed development and as such has not formed part of this Dust Management Plan but will be put in to place should this be required during construction phase and based on authority and community feedback.

9 COMPLAINTS REGISTER

All complaints received by Kaap Agri (Pty) Ltd - Wesgraan – Klipheuwel Silo will be handled by the client and the details will be recorded in the complaint register (see **Appendix B**).

Site staff receiving complaints must complete the following procedure:

- Record contact details of complainant.
- Record details regarding complaint (including date, time and location).
- Repeat back contact and complaint details and confirm with complainant.
- Confirm and record acceptable follow up time with complainant.
- Contact one of the Directors immediately and report back.

The complainant will be contacted, and an investigation of the complaint will be initiated within 24 hours of receiving the complaint.

Once the investigation is complete, the complainant is to receive a written response outlining the procedure and findings. If requested, the findings of the investigation can be explained to the complainant either in person or over the phone.

The complaints register should be kept updated and available for City scrutiny on request.

10 CONCLUSION

Kaap Agri (Pty) Ltd - Wesgraan – Klipheuwel Silo will provide an implementation progress report 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 will also 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

APPENDIX A

Dustex Powder MSDS

APPENDIX B

Complaints Register