

053 963 1081  
018 011 1925  
072 998 6008

087 231 7021  
info@milnex-sa.co.za

Botha Street 4  
SCHWEIZER-RENEKE

Waterberry Street,  
Waterberry Square,  
1st floor, Office 7  
POTCHEFSTROOM

C/o Welgevonden &  
Memorial Street,  
Roylglen Office Park  
KIMBERLEY

[www.milnex-sa.co.za](http://www.milnex-sa.co.za)

## WASTE MANAGEMENT STRATEGY (WMS)

THE PROSPECTING RIGHT APPLICATION COMBINED WITH A WASTE LICENCE APPLICATION OF AAA MINING CC FOR THE PROSPECTING OF DIAMONDS ALLUVIAL (DA), DIAMONDS IN KIMBERLITE (DK), DIAMONDS GENERAL (D) & DIAMONDS (DIA) ON THE REMAINING EXTENT OF THE FARM KAMEELDRIFT 285, REGISTRATION DIVISION: HOPETOWN; NORTHERN CAPE PROVINCE.



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Prepared by

Milnex CC

PO Box 1086, Schweizer-Reneke, 2780. Tel: (018) 011 1925, Fax 087 231 7021  
E-mail: [info@milnex-sa.co.za](mailto:info@milnex-sa.co.za)

## **INTRODUCTION**

Milnex CC was contracted by **AAA Mining CC** as the independent environmental consultant to undertake the Rehabilitation and Closure Plan for the Environmental Impact Assessment process for a Prospecting Right application combined with a waste licence application for Diamonds Alluvial (DA), Diamonds in Kimberlite (DK), Diamonds General (D) & Diamonds (DIA) on the remaining extent of the farm Kameeldrift 285, Registration Division: Hopetown; Northern Cape Province.

## **PURPOSE**

A Waste Management Strategy hereafter referred to as WMS is an imperative tool in achieving sustainable waste management. This plan aims to facilitate effective procedures that ensures sound handling, transportation, storage and disposal of waste that is generated as a result of the prospecting activities. The plan brings forward measures for the storage, collection and sound disposal of the waste streams that are found on site. The provisions include recovery, re-use and recycling.

This WMS should be read in conjunction with the EMPr, and includes information pertaining to the waste sorts that are present on site, available at the time of compilation of the WMS. This WMS is a dynamic plan and should be updated as the project progresses.

## **ASPECTS OF THE SITE**

The waste that is generated on site, comes from various sources that include:

- Waste derived from any concrete structures (if any)
- Hydrocarbon spills (oil, diesel, petrol, paraffin ect.) that could contaminate water, vegetation and soil, due to accidental spillage
- Wastes from a recyclable nature, such as glass, metals, wood pallets, plastic and papers
- Waste from food and alien vegetation control, that are organic
- Sewage form portable toilets
- Waste of inert nature, deriving from site clearance, pitting and trenching, such as rock and soils

## **LEGISLATIVE FRAMEWORK**

Waste management is at current governed by multiple pieces legislation, this includes:

- National Environmental Management: Waste Act (NEM:WA), 2008 (Act 59 of 2008).
- National Environmental Management: Waste Amendment Act, 2014 (Act 26 of 2014).
- The South African Constitution (Act 108 of 1996).
- Hazardous Substances Act (Act 5 of 1973).
- Environment Conservation Act (Act 73 of 1989).
- Occupational Health and Safety Act (Act 85 of 1993).
- National Water Act (Act 36 of 1998).
- The National Environmental Management Act (Act 107 of 1998).
- Municipal Structures Act (Act 117 of 1998).

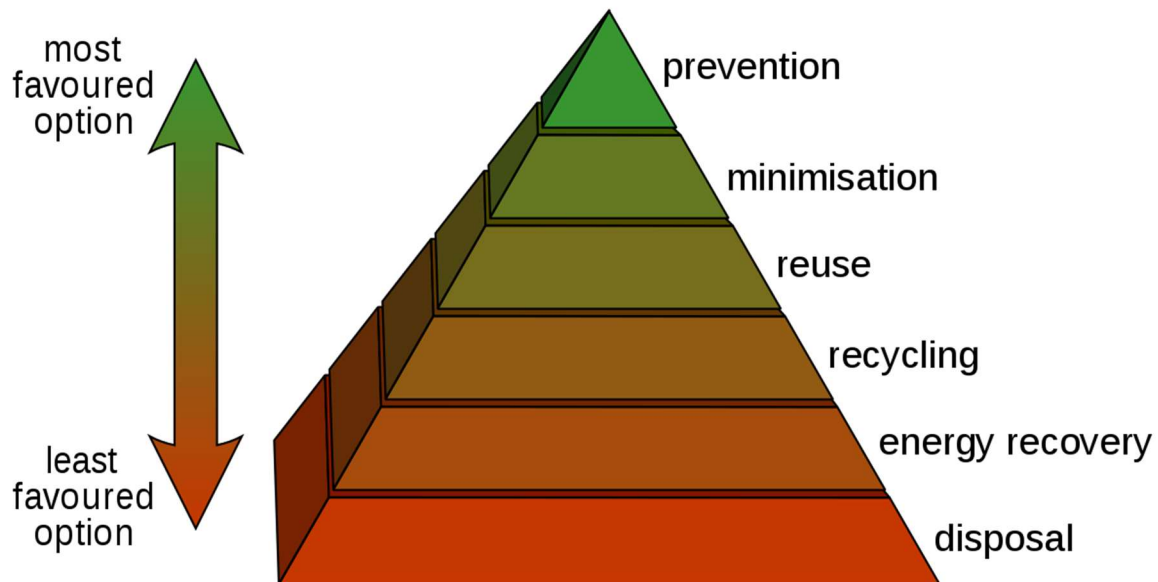
- Municipal Systems Act (Act 32 of 2000).
- Mineral and Petroleum Resources Development Act (Act 28 of 2002).
- Air Quality Act (Act 39 of 2004).

The following must also be taken into account:

- When disposing of waste, the *National Norms and Standards for the Disposal of Waste to Landfill Published in GNR 636* & *National Norms and Standards for the assessment of waste for landfill disposal Published in GNR 635*, should be taken into considered.

- When storing waste, the *National Norms and Standards for the storage of waste published in GNR 926*, should be taken into consideration.

### WASTE MANAGEMENT PRINCIPLES



**Figure 1:** The waste management hierarchy used in the National Waste Management Strategy

- The first priority is to reduce the volume of waste.
- Should reduction not be viable, it is advised to recycle the maximum possible waste.
- Should recycling not be possible, the waste in question should be disposed of in an environmentally sound manner, preferably at a licensed waste disposal site.

### CONSTRUCTION & OPERATIONAL PHASE

A detailed management plan for the handling, collection, storage, and disposal is given below. As alluded to previously prospecting activities should be measured and analyzed in order to determine whether the plan is efficient and whether further revision of the plan is required. The contractor appointed by the applicant to do the prospecting works should, before the project commences, compile a detailed method statement which indicates specific waste management practices.

### **1- Waste inventory**

- The appointed Designated Environmental Officer, or person duly appointed to implement this plan, must develop and maintain a waste inventory that reflects all waste generated during the construction and operational phase, for general and hazardous waste.
- Construction and operation method and materials should be carefully considered in view of waste reduction, re-use, and recycling opportunities
- Once the Designated Environmental Officer, or person responsible has completed the waste inventory, targets for waste minimization, re-use, recycling) should be set.

### **2- Waste handling, storage & collection**

- Each subcontractor who is appointed on this project must implement their own waste system, for example, separate waste at source.
- Portable toilets should be maintained on a daily basis.
- Septic underground storage tanks (if installed) must be strong enough to withstand external forces of the surrounding environment. The outlet on the surface should be demarcated to prevent it from any damage that may derive from the surface.
- Collection bins and hazardous waste containers should be provided by the main contractor, and should be placed strategically, for the sole purpose of storage of organic, recyclable hazardous waste.
- An area must be dedicated for the storage of all waste, before it is removed from site.
- Colour coding must be used to differentiate disposal areas for all the different waste streams.
- Hazardous waste must be secured within a bunded area, and should be constructed according to SABS requirements. The volume that is stored should not exceed 110% of the bund capacity.
- All temporary waste storage areas, should be placed in such a manner that it aims to minimize the potential for impact on the receiving environment, that include prevention of contaminated runoff, seepage and vermin control.
- Waste storage will be done in accordance with regulations and best practice guidelines, and the burning of any waste is strictly prohibited.

Vegetation that must be removed from site, should be chipped and disposed of at a registered landfill site, or should be used as mulch on site.

- The contractor's Designated Environmental Officer (DEO) should appoint a team that will be responsible for ensuring sound waste management practices and maintenance of the area. The team should be provided with training in all waste management areas and should be monitored by the DEO.

- All waste that is removed must be done by a registered subcontractor. They must supply information to the main contractor regarding how waste disposal/recycling will be achieved. The service provider should provide waste manifests for all the removals they do for at least once a month.

### **3- Waste storage areas management**

- The waste storage areas should be located well away from any water courses and must ensure minimal degradation to the receiving environment. The main storage areas should have appropriate storm water measures, separating clean and dirty storm water.

- Storage areas should be underroof, or containers should be at least sealed to prevent water from coming in.

- The collection bins on site should be maintained and cleaned on a regular basis by the main contractor.

- Inspections of bunds must be undertaken on a daily basis and it should be properly maintained. Any leaks or cracks should be repaired.

- Any rainwater that collects inside the bunded areas should be stored as hazardous waste, and should not be let free into the environment.

### **4- Disposal**

- The waste that is generated on site must be removed on a regular basis, as to prevent overfull bins. This frequency may change from time to time during the construction and operational phase, depending on the waste volumes that are generated.

- Waste that is removed must be done so by the contractor at a licensed facility. The contractor should provide proof of such disposal.

### **5- Record keeping**

- Documentation (waste manifest, certificate of issue or safe disposal) must be kept. The documents should detail the quantity, nature and fate of any regulated waste for audit purposes.

- The management of waste should form part of the monthly reporting requirements in terms of volumes generated, types, storage and final disposal.

### **6- Training**

On going training and awareness pertaining to waste management must be provided to all employees and contractors as part of the toolbox talks or on-site awareness sessions.

### **MONITORING OF WASTE MANAGEMENT ACTIVITIES**

Throughout the life of the project records must be kept of the volumes of all different waste streams that are collected and should contain the following information:

- Monthly volumes of the different waste streams collected
- Monthly volumes of the waste that is disposed of
- Monthly volumes of the waste that is recycled

This report will aid in monitoring the progress and relevance of the waste management procedures that are in place.