

12 February 2009

ESKOM Landfill - Noise Impact Scoping

Full EIA Methodology Statement for the Selected Site 5

1.1 Baseline Noise Measurements

1.1.1 The baseline survey will be based on noise measurements in accordance with SANS 10103 and 10328 Guidelines. The survey will determine the existing noise levels on the perimeter of the selected site.

1.1.2 Based on an initial assessment, the determination of the noise levels will be based on measurements at a maximum of 5 locations at or within the perimeter of the site or at probable sensitive locations.

1.1.3 10-minute Sample Noise measurements will be performed during daytime, according to legislation and the SANS guidelines.

1.1.4 All measurements will be A-weighted equivalent sound pressure levels obtained with I-time weighting or as required by SANS standards. Abnormal disturbances, such as abnormal loud noise generation in close proximity or sudden noise bursts that affect the measurement, will be discarded.

1.1.5. Potential sensitive receptors such as homesteads and residences will be identified at this stage.

1.2 Instrumentation

1.2.1 All test equipment will comply with the following international standards:

- IEC 651 & 804 – Integrating sound level meters.
- IEC 942 – Sound calibrators.

1.2.2 The following sound measuring instruments will be utilised for the measurements:

- 01dB SdB01+ Precision Impulse Integrating Sound Level Meter
- 01dB Cal01 Sound Level Calibrator
- Bruel & Kjaer 2230 Precision Impulse Integrating Sound Level Meter
- Bruel & Kjaer 4230 Sound Level Calibrator

2.1 Noise Prediction and Assessment

A report will be submitted in electronic format containing:

- Baseline noise levels at the boundary of the site.
- The date and time, locations and conditions at each test point.
- The measurement methods and instrumentation utilised, including calibration
- Extraneous factors that could influence the measurements.
- The identification of potential construction and operation noise sources
- Prediction of operation noise levels and impact on potential sensitive receptors.
- Prediction of construction noise levels and impact on potential sensitive receptors
- Prediction of noise levels and impact on potential sensitive receptors due to upgrading of internal gravel roads
- Prediction of noise levels and impact on potential sensitive receptors along transport routes
- Recommendations for mitigation methods should they be applicable.

Recommendations

It is recommended that the potential impact of noise associated with the aspects listed in Section 2.1 of this report be investigated in more detail in the EIA phase.

John R. Hassall

26 January 2009

Medupi Landfill - Noise Impact

Site Screening Motivation to Include New Proposed Sections West of Matimba Near Existing Landfill Site

Introduction

The primary procedure was to identify:

1. Areas where existing noise levels are already high, either from fixed sources (the existing Matimba or proposed new power stations and associated plant) and road and rail traffic (whether or not generated by activities at Matimba or proposed new power stations)
2. Areas where existing noise levels are low
3. Areas where there are sensitive receptors in the form of dwellings or lodges.

Current Noise Climate

The existing and proposed power stations are the only significant fixed noise sources in the area. They are also constant and continuous noise sources.

Road traffic noise is significant within 200m of the tar roads in the area.

The trains are too infrequent and irregular to be a significant noise source, as are the dirt roads in the area, with traffic flows less than 5 vehicles per hour.

Aircraft over-flights in the area are rare.

Criteria for site location

To minimise the noise impact, the preferred location is in an already noise-exposed area distant from any sensitive receptor.

The site chosen should therefore be close to one of the power stations (current or proposed) where there is continuous plant noise, including at night, and/or near trafficked roads.

On this basis I have rated the sub-sites as designated, whether or not they are in the ownership of ESKOM, as: Preferred, Less Preferred, and Neutral. After the elimination of a number of the originally proposed sites, there are no sites which could be described as undesirable from the noise impact viewpoint.

Because of their close proximity to both the existing Matimba power station and access roads, which are both existing significant noise sources, any of the sites at the proposed area 5 are preferred to a greater or lesser degree.

Site 1	Site 2	Site 3	Site 4	Site 5A	Site 5B	Site 5C	Site 5D
Neutral	Neutral	Neutral	Neutral	Preferred	Less Preferred	Less Preferred	Preferred

John R. Hassall