Presentation outline

- Purpose
- Background
- Location
- Baseline Description
- Assess Impacts
- Mitigation measures and management
- Conclusion
Purpose

- To provide an overview of the environmental noise impact assessment report,
- To identify issues which must be considered in the report and
- To assist in making constructive comments about the noise impact assessment report.
Background

- Since the municipalities and provinces are the Licensing Authorities in terms of AQA, 2004
- New developments needs to go through EIA prior to AEL application, as such specialist studies on **Air Quality** as well as **Environmental Noise Impact Report** are a prerequisites.
- Noise Control is identified as section 34 of AQA therefore it implies that AQO should be able to make comments on noise impact report
- Noise Control Regulation(1992) were promulgated under ECA
- Different provinces promulgated theirs, i.e. Gauteng (1999), Free State(1998) and Western Cape(2013)
Background cont.

- All regulations agree on the measurement principles, type of the instrument to be used.

- The difference is on the definition of **Disturbing Noise**
  - **NCR and FS** defines it as background plus 7dBA.
  - **Gauteng and WC** defines it as measurements which exceed the limits in SABS Code of Practices (SANAS 0101003 of 2008). Table 2 which prescribes noise limits according to area classification, e.g. Rural, Urban, suburban, Industrial, etc.

- The other important definition is **Day**
  - SANAS 0101003 defines it as:
    - From **06:00 to 22:00 as day time**, and
    - From **22:00 to 06:00 as night time**

  This is contrary to what we are used to as day, evening and night.
Location

- Identify all noise sources from the development (including both construction noise and operational). Detail all potential noisy activities including ancillary activities such as transport and raw materials.
- Identify any noise sensitive locations likely to be affected by activities at site, e.g. residential properties, schools, churches, etc.
- Specify the times of operation for all phases and for all producing activities.
- For projects with significant potential traffic noise impact, provide detail road alignments (including road surface, topography, bridges, etc) and land use along the proposed road and measurement locations.
- Identify affected land use zoning and immediate vicinity and potentially affected areas.
Baseline Description

- Determine the existing background ($L_{A90}$) and ambient ($L_{Aeq}$) noise levels
- Determine existing road traffic noise levels
- Noise impact assessment report should provide details of all monitoring of existing ambient noise levels including:
  a) Details of equipment used for measurements
  b) Brief description of the position of equipment
  c) Statement justifying the choice of monitoring site, including procedure used to choose the site
  d) Details of the exact location of monitoring site and a description of land uses in the surrounding areas
Baseline Description cont.

e) description of dominant and background noise source at the site

f) Day (06:00 to 22:00) and night (22:00 to 06:00) assessment background level for each day of monitoring period

g) Final Rating Background Level value

h) Graphs of the measured noise levels for each day

i) record of periods of affected data (due to adverse weather and extraneous noise), methods used to exclude invalid data

j) determination of $L_{Aeq}$ noise levels from existing industry.
ASSESS IMPACTS

- Determine the project specific noise level for the site which should include:
  a) Determination of the intrusive criterion for each identified potentially affected receiver
  b) Selection and justification of the appropriate amenity criterion for each identified potentially affected receiver
  c) Determination of the amenity criterion for each receiver
  d) Determination of the appropriate sleep disturbance limit

- Maximum noise levels during night time period should be assessed to analyses affects on sleep

- Determine expected noise levels and noise character (e.g. Tonal, impulsiveness, vibration, etc) likely to be generated from noise source during:
  a) Site establishment
  b) Construction
  c) Operation
  d) Transport and others
ASSESS IMPACTS

**NOTE:** IMPACT REPORT SHOULD INCLUDE NOISE SOURCE DATA FOR EACH SOURCE IN 1/1 OR 1/3 OCTAVE BAND FREQUENCIES INCLUDING METHODS FOR REFERENCES USED TO DETERMINE NOISE SOURCE LEVELS

- Determine the noise levels likely to be received at the most sensitive locations. Potential impacts should be determined for any significant adverse meteorological conditions.

- The report should include:
  a) A plan showing the assumed location for each source for each predicted scenario
  b) A list of the number and the type of noise sources used in each predicted scenario to simulate potential significant operating condition on site
  c) Any assumption made on the predictions in terms of source height, shielding form topography, building and barriers.
Mitigation Measures and Management

- The report should determine the most appropriate mitigation measures and expected noise reduction including both noise controls and management of impacts for both construction and operational noise. This should include selecting quite equipment and construction methods, noise barriers or acoustic screens, location of stockpiles, scheduling of activities, etc.

- For traffic noise impacts, description of ameliorative measures considered should be provided, reasons for inclusion and/or exclusion and procedure used for calculation of noise levels including ameliorative measures. Where possible include problems associated with ameliorative measures.
Conclusion

- Noise Control Regulations should be promulgated by either the Minister or MEC as per section 34 of AQA to guide municipalities in controlling noise.
- AQOs should familiarize themselves with NCR so that specialist study are scrutinized and commented on.
- Training should be organized by DEA to provide for noise theory and practical in taking noise measurements for compliance monitoring.

Service Delivery should of importance hence the need for fast tracking issues listed in Schedule 4 & 5 both Part A & B of the Constitution of RSA, 1996.
THANK YOU