

## **NOISE EMISSION MANAGEMENT PLAN**

### **I. Objective**

The physical presence of the construction site will result in a disruption of the noise environment. The objective of this plan is therefore to propose measures that will allow avoiding or reducing these nuisances.

### **II. General Conditions**

#### A. Scope of Application

Noise baseline under Arise Ivoire HSE team responsibilities  
Applicable to all sub-contractors regarding noise measures

#### B. Definition

Receiver / receptors: A receiver corresponds to any form of nocturnal human occupation (e.g. base-life, home, hotel, health center).

#### C. Measures

#### **ARISE Ivoire team:**

No noise baseline is available. So noise measurements will be carrying out at sensitive receptors closest to the construction activities beforehand in order to establish a reference level: See figure in annex for the proposed noise station in relation with some of closest sensitive receptor.

**In case of multiple complaints**, a noise monitoring at sensitive receptors will be implemented to confirm actual construction-related noise levels. Appropriate measures based on the results recorded will be taken if necessary.

#### **Sub-contractors (SCs):**

- Well-maintained equipment and construction and transportation methods adopted not emit noise pollution above the thresholds in table below.

## Noise level guidelines for off-site receptors

Period	Industrial and commercial zones	Residential, institutional, educational <sup>(1)</sup>
Daytime (07:00 to 22:00)	70 dBA	55 dBA
Nighttime (22:00 to 07:00)	70 dBA	45 dBA
<i><sup>(1)</sup> In particular teaching, care and rest facilities</i>		

(Source: Environmental, Health and Safety (EHS) Guidelines, IFC, 2007)

## Noise levels for various working environment

Location/activity	Equivalent level LAeq, 8h	Maximum LAmax, fast
Heavy industry (no demand for oral communication)	85 dBA	110 dBA
Light industry (decreasing demand for oral communication)	50-65 dBA	110 dBA
Open offices, control rooms, service counters, or similar	45-50 dBA	-
Individual offices (no disturbing noise)	40-45 dBA	-

(Source: Environmental, Health and Safety (EHS) Guidelines, IFC, 2007)

- Respect ambient noise thresholds and night-time rest hours in the nearest receiving areas for all work generating high noise emissions (e.g. pile driving, blasting, rock clearing, drilling, percussion drilling).
- Locate stationary and noisy equipment (such as generators and compressors) are located as far as possible from receptors (e.g., worker rest areas, residential areas and environmentally sensitive areas).
- Orient such equipment away from receivers as far as possible so that the noise moves away from sensitive reception areas. If it is impossible to place stationary equipment away from receivers, install noise reduction equipment on the noisiest machines.
- Limit construction works to daytime hours where reasonable and feasible. Engines and on-site activities will not be undertaken outside of the daytime construction

hours. Non-noisy generating works can be undertaken where works are not adjacent to residential receivers.

- **In case of multiple complaints**, a noise monitoring at sensitive receptors will be implemented to confirm actual construction-related noise levels. Appropriate measures based on the results recorded will be taken if necessary. This could be performed in collaboration with ARISE Ivoire.
- Noise levels outside of the site boundaries. Noise impacts should not exceed the levels presented in the table below or result in a maximum increase in background levels of 3 dBA at the nearest receptor location off-site.

<b>Monitoring indicators</b>	Number of complaints about noise emissions, Number of non-compliance observed, registered and treated, Results of noise measurements.
<b>Reference documents</b>	-
<b>Registers</b>	Maintenance logs for vehicles and equipment
<b>Procedure approved by</b>	
<b>Emission/last revision date</b>	