



MINISTRY OF ENVIRONMENT AND NDU

ENVIRONMENTAL GUIDELINE No. 22 Block making plant manufacturing up to 10,000 blocks per day

1.0 Purpose of guideline

This environmental guideline for block making plant manufacturing up to 10,000 blocks per day has been prepared by the Ministry of Environment & NDU to ensure that all environmental issues are duly taken into consideration by stakeholders.

2.0 Nature of development

A block making process consist basically of the following steps:-

- **Batching and mixing** – It consists of weighing systems which convey the right proportions of cement, aggregates and sands and water. The aggregates are then mixed.
- **Moulding of units** – The mixed aggregates are then conveyed into a block machines which uses moulds to give the blocks, the desired shape. The aggregate in the mould also undergoes compression and vibration.
- **Curing** – The blocks are then left to cure (gain strength) by the use of water sprinklers. Accelerated curing can also be carried out by the use of steam in curing chambers.
- **Storage and delivery** – After the curing process the material in the stored and ready for delivery.

3.0 Potential impacts

The major environmental issues associated with a block-making plant are noise and air pollution in the form of dust. The different aspects, impacts and nuisances associated with block making are listed below:-

Activity	Aspects	Impacts/ Nuisances
Construction phase		
- Site preparation	- Generation of excavated soil, debris and construction wastes	- Dumping into barelands and water courses and drains
- Construction of block making platform and installation of block making machine	- Use of heavy machinery	- Noise, mud ,dust, traffic - Visual impacts

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Operation phase			
Manufacture of blocks	- Filling of cement silo	- Dust emissions	
	- Introduction of cement into the manufacturing process	- Noise and vibration	
	-Use of heavy machinery including concrete loaders	- Noise and dust	
	-Compaction/compression of cement mortar	- Noise and vibration	
	- Spills of fuel from lorries or mechanical part of plant	- Risk of underground and surface water pollution	
Delivery activities	- Movement of vehicles	- Traffic impacts	
	- Loading and unloading	- Noise	
		- Dust emissions	
		- Exhaust fumes	

4.0 Siting of activity

In accordance with the Planning Policy Guidance 2004 of the Ministry of Housing and Lands, the selected site shall:-

- ◆ Satisfy a distance of up to 1 km from the settlement boundaries and sensitive land uses
- ◆ Be at least 50 m from the coastline
- ◆ Be at least 35 m from the river
- ◆ Be up to 1 km from a lake.

5.0 Environmental Conditions

The major environmental issues are **noise, air and dust pollution** and the following conditions shall be observed:

- (i) All electric motors shall be housed in soundproof enclosures to keep noise level within permissible limits as per the Environment Protection (Environmental Standards for Noise) Regulations 1997. The noise exposure limits as per the above regulation are as follows:

Industrial noise		Neighbourhood noise	
7:00 – 21:00	60*dB(A) Leq	7:00 – 18:00	60 dB(A) Leq
21:00 – 7:00	55*dB(A) Leq	18:00- 21:00	55 dB(A) Leq
		21:00 – 7:00	50 dB(A) Leq

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* A tonal character adjustment of +5 dB(A) should be applied to the measured value where the noise has a definite continuous note such as a whine or hiss.

- (ii) The site should be receded below ground level with bunds and vegetation around the site.
- (iii) Water sprinklers shall be installed all along any access road and throughout the yard and be operated to suppress dust emissions.
- (iv) The working platform including the loading area shall be concreted and kept clean at all times.
- (v) Bag filters shall be placed at the mouth of the cement silo to capture fugitive dust emissions.
- (vi) Wastewater shall be collected and disposed of.
- (vii) Solid wastes including sludge shall be collected and disposed of.
- (viii) No nuisance by way of noise dust shall be caused to the public and surrounding environment during site preparation, infrastructural works and during operation of the activity.
- (ix) The Department of Environment of the Ministry of Environment and NDU shall be informed in writing of the dates of commencement of works on site and operation of the activity for monitoring purposes.

6.0 Enforcement

Under Section 13 of the Environment Protection Act 2002, the enforcing agencies for the different environmental medium or pollutants are as follows:

S. No	Environmental media/ pollutant	Enforcing Agency
1	Noise	Ministry of Health and Quality of Life
2	Effluents	Ministry of Public Utilities
3	Solid wastes	Ministry of Local Government
4	Air pollution	Ministry of Environment

The above-mentioned enforcing agencies shall monitor compliance with the conditions falling under their purview.

7.0 Offences

Any person who fails to comply with any regulations/standards referred to in this guideline shall commit an offence and shall:

- (i) on a first conviction, be liable to a fine not exceeding 50, 000 rupees and to imprisonment for a term not exceeding two years.
- (ii) on a second or subsequent conviction, be liable to a fine not exceeding 100,000 rupees and to imprisonment for a term not exceeding 8 years.

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