



MINISTRY OF ENVIRONMENT AND NDU

ENVIRONMENTAL GUIDELINE No. 16

WASTEWATER TREATMENT PLANT

1.0 Purpose of guideline

This environmental guideline for wastewater treatment plant 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

There are numerous processes that can be used to clean up wastewaters depending on the type and extent of contamination. Wastewaters can be treated by physical, chemical and biological treatment processes. There are several types of wastewater treatment plants such as activated sludge systems, rotating biological contactors (RBC). The wastewater treatment plant allows the removal of suspended solids, organic matter, bacteria, and metals before the remaining water, called effluent, is discharged back to the environment. In some cases treated wastewater may be used for irrigation.

3.0 Potential impacts

The major environmental issues associated with a wastewater treatment plant are odour, noise and water pollution. The different aspects, impacts and nuisances associated with such activities are listed below:-

Activity	Aspects	Impacts/ Nuisances
Construction phase		
Design of wastewater treatment plant	-Treatment plant incompatible with the surrounding environment -Poor design	- Aesthetics and visual impacts - Odour, Noise
Site preparation / Construction of wastewater treatment plant	- Generation of excavated soil , debris and construction wastes - Use of heavy machinery	-Dumping into barelands, water bodies and drains -Dust, noise and mud -Visual impacts
Operation phase		
Wastewater treatment activity	- Generation of solid waste, sludge and effluents - Poor operation/	- Odour -Risks of contamination of water bodies and groundwater - Flies/pests

Ministry of Environment and NDU
Environmental Guideline No. 16

	maintenance of treatment plant.	<ul style="list-style-type: none"> - Waterborne diseases - Noise - Odour
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4.0 Siting of activity

In accordance with the Planning Policy Guidance 2004 of the Ministry of Housing and Lands, prior to the setting up of the wastewater treatment plant, the following shall be ensured:-

- No development should be allowed on sensitive coastal areas including mangroves, wetlands, marine parks and conservation areas.
- No development should be permitted within a 200 m radius of a borehole or spring.

5.0 Environmental Conditions

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

- (i) The construction and operation of the wastewater treatment plant shall not cause any nuisance by way of odour, noise or other sanitary nuisances to the public and surrounding environment.
- (ii) The treated effluents discharged from the wastewater treatment plant shall meet the relevant standards promulgated under the Environment Protection Act 2002 and the Wastewater Authority Act 2000.
- (iii) Solid wastes including sludge shall be collected and disposed of as per the recommendation of competent authorities.
- (iv) 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.

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

* 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.

Ministry of Environment and NDU
Environmental Guideline No. 16

- (v) Results of effluents analysis effected by an accredited laboratory shall be submitted to the Wastewater Management Authority on a monthly basis
- (vi) 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, odour	Ministry of Health and Quality of Life
2	Effluents	Ministry of Public Utilities
3	Solid wastes	Ministry of Local Government

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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