

# CENTRAL DISTRICT COUNCIL (PUBLIC SEWER) BYE-LAWS

*(under section 33)*

*(19th May, 2006)*

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S.I. 32, 2006.

## 1. Citation

These Bye-Laws may be cited as the Central District Council (Public Sewer) Bye-Laws.

## 2. Interpretation

(1) In these Bye-Laws, unless the context otherwise requires-

**"authorized officer"** means a person authorized by the Council to inspect public sewers or pipes or drains connected therewith;

**"Council"** means the Central District Council;

**"drainage installation"** means a system of drains, pipes and sewers used for the sewerage of a building, including any fitting, appliance or equipment connected thereto;

**"foul water"** means water contaminated by soil water, wastewater or trade effluent;

**"latrine"** includes a privy, urinal, earth-closet or water-closet;

**"owner"** in relation to immovable property, means the person or his or her agent receiving the rent or profits for land or premises from the occupier thereof, or a person who occupies or holds land in accordance with terms of an agreement;

**"public sewer"** means any piped sewer, ditch or water course for the passage of foul water, constructed or maintained by or vested in the Council;

**"sewer"** means a pipe conveying foulwater, forming part of the sewerage or drainage installation of a building, including any pipe connecting a drain to a public sewer;

**"soil water"** means water containing excreted matter, whether human or animal;

**"storm water"** means surface water or rain water;

**"trade effluent"** means liquid, either with or without particles of matter in suspension, which is wholly or in part produced in the course of trade, industry or research; and

**"waste water"** means used water, not being soil water, trade effluent or storm water.

(2) For the purposes of these Bye-Laws, a building shall not be deemed to have-

- (a) a public sewer available except where there exists or there is, in the course of construction within 30 metres of the site of the building, a public sewer or a sewer connecting thereto at a suitable invert level which the owner of the building is

entitled to use; or

- (b) a sufficient supply of water, except where such is laid on or where a supply can be connected from a point within 30 metres of the site of the building:

Provided that, where the distance of a public sewer or the point from which a supply of water available exceeds 30 metres, and the Council agrees to undertake the construction, at its expense, of a drain to connect to a public sewer or the laying of a pipe to the point of connection to a supply of water, the 30 metres limit shall not apply.

### **3. Duty of Council to keep map showing sewers**

The council shall keep deposited at its office for inspection by any person during normal working hours, a map showing and distinguishing each public sewer and any sewer in the course of construction within its area.

### **4. Power of Council to alter or close public sewer**

The Council may alter the size or course of any public sewer or discontinue and prohibit the use thereof:

Provided that the Council shall, at its expense, execute any work necessary to connect to another sewer, the drainage installations of the users of the sewer under alteration or discontinued.

### **5. Power of Council to agree to adopt sewer or sewage disposal works**

The Council may enter into an agreement with any person constructing or proposing to construct a sewer or sewerage disposal works, to the effect that works upon completion of the work to the satisfaction of the Council or on a specified date, the sewer or works shall be vested in and thereafter be maintained by the Council.

### **6. Certain matter not to be passed into sewer**

(1) No person shall throw or empty or permit to be thrown or emptied into a public sewer or into any drainage, installation or sewer connecting to a public sewer, any-

- (a) matter which is likely to cause damage to the fabric of the sewer or interfere with the free flow of its contents;
- (b) chemical, refuse or waste stream, or liquid which alone or in combination with the contents of the sewer, is dangerous or would cause a nuisance or be prejudicial to health;
- (c) petroleum product, carbide or calcium; or
- (d) radio active substance.

(2) Any person who contravenes any provision of this bye-law shall be guilty of an offence and liable on conviction to a fine not exceeding P500 and a further fine not exceeding P100 for each day on which the offence continues.

### **7. Storm water not to enter public sewer**

No person shall discharge or cause or permit the discharge, directly or indirectly, of storm

water into a public sewer.

#### **8. Sewage not to enter storm water drains**

No person shall discharge or cause or permit the discharge, directly or indirectly, of any sewage or foul water into a storm water drain, river, stream or other watercourse, whether natural or artificial.

#### **9. Right to connect to public sewer**

(1) Subject to the provisions of bye-law 11, an owner shall, at his or her expense, be entitled to have the drainage installation of his or her premises connected to a public sewer.

(2) Notwithstanding the provisions of sub-bye-law (1), no person shall discharge, directly or indirectly, into a public sewer, any liquid or other matter-

- (a) from a factory or trade premises or a manufacturing process except with the written permission of the Council under bye-law 17; or
- (b) the discharge of which is prohibited under these Bye-Laws or any enactment.

#### **10. Council to require connection to public sewer in certain circumstances**

Where a public sewer and a sufficient supply of water is available and the Council is of the opinion that-

- (a) satisfactory provision has not been made for the hygienic and adequate disposal of foul water; or
- (b) any cesspool, septic tank, latrine or appliance or equipment provided for the collection or disposal of foul water is defective or insufficient and likely to be prejudicial to health or a nuisance, the Council may, within a specified time and at the owner's expense, require the owner to remove any latrine or other non-waterborne system and replace it with a water closet connected to the Council's sewerage system.

#### **11. Procedure in respect of connection to public sewer**

(1) A person who requires the drainage installation on his or her premises to be connected to a public sewer shall apply in writing to the Council.

(2) Where the Council receives an application under sub-bye-law (1) it shall, within 21 days of the receipt thereof, advise the applicant in writing whether or not the application has been granted.

(3) A rejection of an application under sub-bye-law (1) shall be in writing to the applicant and shall state the reason therefor.

(4) Where an application is granted, the Council shall advise the applicant: whether or not it intends to carry out the work required on behalf of the applicant.

(5) Where the Council intends to carry out work under sub-bye-law (4) it shall, before work commences, require the applicant to pay the cost thereof estimated by the Council.

(6) Where the applicant carries out or causes to be carried out the work required, he or

she shall give to the Council reasonable notice thereof in writing, and shall accord to an authorized officer reasonable access to inspect the work.

(7) A connecting drain, pipe or sewer constructed under the preceding provisions of this bye-law shall vest in the Council, and the maintenance, repair or renewal thereof shall, at the expense of the owner of the premises served thereby, be carried out by the Council.

(8) Any person who causes a drain, pipe or sewer to be connected to a public sewer in contravention of the provisions of these Bye-Laws shall be guilty of an offence and liable on conviction to a fine not exceeding P500, and, whether proceedings have or have not been taken in respect of that offence, the Council may close the connection in question and recover from the offender any costs incurred thereby.

(9) Where a payment made under sub-bye-law (5)-

- (a) exceeds the cost incurred, the Council shall repay the excess to the applicant; and
- (b) is insufficient, the balance shall be recoverable from the person for whom the work was done.

## **12. Common sewer or drain**

The Council may, in its discretion and with the agreement of the owners concerned, permit the drainage installation of two or more buildings to connect with a public sewer by means of a common sewer or drain.

## **13. Fees**

(1) A person intending to connect shall pay a sewerage connection fee at the rates set out in the First Schedule, and shall enter into a sewerage service agreement with the Council after connection of the premises to the sewerage system.

(2) Every person connected to a public sewer shall pay an annual sewerage service fee at the rates set out in the Second Schedule.

(3) The due date for the payment of any fees shall be 30 calendar days from the date reflected on any statement sent by the Council.

(4) If the due date under sub-bye-law (3) lapses, a period of 90 calendar days shall be allowed for the payment of any fees without interest, thereafter all arrears shall be subject to an interest rate of 12 per cent per annum.

(5) The interest accrued on any arrears shall be calculated from the date on which any fee becomes overdue until the date of payment .

(6) In the case of change of ownership of the premises or of the postal address of any owner, the person who appears, from Council records to be the owner of the premises shall continue to be liable to pay the fees under these Bye-Laws unless he or she notifies the Council, in writing, of such change.

(7) The fees set out under these Bye-Laws may be revised at any time, at the discretion of the Council.

## **14. Maintenance**

(1) The Council shall be responsible for the operation and maintenance of any sewer mains within the streets and public easements.

(2) The owner shall be responsible for the maintenance of the sewer line within his or her property.

(3) Any maintenance or work carried out under sub-by-law (2) shall be at the expense of the owner.

(4) In the event that any blockage exists between a Council manhole and an inspection chamber, the Council shall be responsible for clearing the blockage at no expense to the owner.

(5) Any work carried out on the Council sewer system shall take place with the approval of the Council.

#### **15. Disconnection and re-connection**

(1) The sewer line of the owner shall be disconnected and legal action shall commence against such owner if the period of 90 calendar days referred to in bye-law 13(4) has lapsed without the owner paying the fees due under bye-law 13 (1) and (2).

(2) Re-connection fee of P50 in respect of residential property and P100 in respect of commercial or industrial property shall be payable by the owner of premises upon his or her request for the re-connection of the sewer line.

(3) The Council shall not re-connect any sewer line unless all amounts due to the Council have been paid in full, including any re-connection fees.

(4) No person shall obstruct any authorized person executing his or her duties in accordance with this bye-law.

#### **16. Discharge of trade effluent into public sewer**

(1) The Council may, subject to the written approval of the Minister and to any condition he or she may think fit to impose, grant permission in writing for the discharge into a public sewer of trade effluent from any premises or for any alteration in rate, volume, quality or nature of any such discharge.

(2) An approval under sub-by-law (1) may incur a charge for the reception and treatment of the trade effluent and for any alteration which may be necessary to a pump, sewer, sewage disposal works or machinery connected therewith.

(3) A person wishing to discharge trade effluent into a public sewer shall make an application, in writing, to the Council for permission to do so, shall sign a trade effluent agreement set out in the Third Schedule, and shall submit to the Council-

- (a) the chemical composition, nature and volume of the effluent;
- (b) a description of the industrial process or trade giving rise to the effluent;
- (c) the number of persons employed on the premises; and
- (d) such other information, including the submission of samples, which the Council may

consider necessary.

(4) A person permitted in terms of sub-bye-law (1) to discharge trade effluent into a public sewer shall, prior to any change in the nature or volume of that effluent, notify the Council in writing of the date on which the proposed change will take place and the Council may impose any additional condition it may deem necessary.

(5) Any person who discharges or causes or permits the discharge, directly or indirectly, of trade effluent into a public sewer without the prior written permission of the Council shall be guilty of an offence and liable on conviction to a fine not exceeding P500 and to such charge as the Council may, with the approval in writing of the Minister, assess for the conveyance and treatment of the effluent so discharged.

(6) Without prejudice to its rights in terms of sub-bye-law (5), the Council may recover from any person who discharges, directly or indirectly, trade effluent into a public sewer, any costs which may be incurred by it as a result of any damage caused thereby to a public sewer or sewage treatment works.

#### **17. Control of trade effluent**

The responsibility for the control of individual discharges to public sewers to ensure compliance with the Agreement shall lie with the Council which shall formulate the necessary mechanisms and regulations therefor.

#### **18. Metering and assessment of trade effluent**

The Council shall conduct regular sampling and analysis of discharges from the industries to ensure compliance with the discharge limits set out in the Fourth Schedule

#### **19. Installation of fat, oil and grease interceptors**

(1) The Council may, by written notice to the owner of a hotel, boarding house, restaurant, eating house, hair salon, bakery food-processing company, laundry or other premises from which waste-water of a fatty, oily, greasy or soapy nature is discharged into a drain or sewer, require such owner, within a reasonable time to be specified in the notice, to instal, to the satisfaction of the Council, a proper and efficient fat, oil and grease interceptor for the reception thereof prior to the waste water being discharged into the sewer or drain.

(2) A fat, oil and grease interceptor shall be equipped with a sampling port for periodical inspection purposes by an authorized official from the Council.

#### **20. Penalties**

(1) Any person found guilty of an offence against any provision of these Bye-Laws shall, where no penalty is prescribed therefore, be liable to a fine not exceeding P500 and a further fine not exceeding P100 for each day on which the offence continues.

(2) Any person who contravenes any provision of these Bye-Laws on second or subsequent conviction shall be guilty of an offence and shall be liable to a fine not exceeding P500 or to imprisonment not exceeding six months or both.

### **FIRST SCHEDULE**

(bye-law 13(1))

TYPE OF SERVICE	CHARGES (P)	REMARKS
Connection to residential Premises:		Perusal fee
Low cost	100	Plot owner bears the full Cost of all works
Medium cost	150	
High cost	200	
Multi-unit developments more than one town-house or flat on a plot)	300	
Connection to commercial Premises	300	Perusal fee Plot owner bears the full Cost of all works
Connection to industrial Premises (all types)	500	Perusal fee Plot owner bears the full Cost of all works
Clearing or removal of Blockage within plots	55	Flat rate
Vacuum tank (registration)	200	April to March of Subsequent year
Vacuum tank (sewage dumping)	5 per cubic metre	Coupons of different denominations according to vacuum tank capacity available from Council revenue office

## SECOND SCHEDULE

(bye-law 13(2))

### ANNUAL SEWERAGE SERVICES FEE RATES

TABLE 1: VOLUME UNIT RATES

TYPE OF PREMISES	CHARGES (PULA PER CUBIC METRE)	REMARKS
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Residential	0.62 per cubic metre	Annual fee will be calculated based on volume of waste water discharged, plus a basic fee of P1.05 per month
Commercial (a): Laundries, hair salons, bakeries, restaurants and garages	2.50 per cubic metre	Annual fee will be calculated based on volume and quality of waste water discharged, plus a basic fee of P2.50 per month
Commercial (b): Hotels and motels	2.00 per cubic metre	Annual fee will be calculated based on volume and quality of waste water discharged, plus a basic fee of P5.00 per month
Commercial (c): Small general dealers, bars and bottle-stores	0.85 per cubic metre	Annual fee will be calculated based on volume of waste water discharged, plus a basic fee of P1.50 per month
Institutional (a): Schools with hostel facilities and hospitals	1.20 per cubic metre	Annual fee will be calculated based on volume of waste water discharged, plus a basic fee of P2.50 per month
Institutional (b): Offices, clinics, day schools and churches	0.85 per cubic metre	Annual fee will be calculated based on volume of waste water discharged, plus a basic fee of P1.50 per month
Institution (c): Abattoirs, meat-processing industries and textile manufactures	3.50 per cubic metre	Annual fee will be calculated based on volume and quality of trade effluent discharged, plus a basic fee of P10.00 per month. In addition, they will be required to enter into a trade effluent agreement with the Council and install a pretreatment facility on their premises, where applicable.
Industrial (a): Dry manufacturing	2.00 per cubic metre	Annual fee will be calculated based on volume of effluent discharged, plus a basic fee of P10.00 per month.

**TABLE 2: VOLUME UNIT RATES - MONTHLY RESIDENTIAL USER CHARGES**

WASTE WATER QUANTITY (PER CUBIC METRE)	CHARGES	
	Usage	Basic fee

	(Pula/per cubic metre)	(Pula)
0.10	6.62	10.05
11.20	0.85	
21.30	1.11	
31.50	1.26	
51.100	1.44	2.00
101.200	1.67	
201.500	1.93	5.00
501.1000	2.07	
-1000	2.19	

**TABLE 3: VOLUME UNIT RATES - COMMERCIAL (C) AND INSTITUTIONAL (B)**

WASTE WATER QUANTITY (PER CUBIC METRE)	CHARGES	
	Usage (Pula per cubic metre)	Basic fee (Pula)
0-10	1.85	5.00 per month
11-20	1.11	
21-30	1.26	
31-50	1.44	
51-100	1.67	
101-200	1.93	
- 200	2.07	

**TABLE 4: VOLUME UNIT RATES - INDUSTRIES AND COMMERCIAL (A)**

WASTE WATER	CHARGES	
	Usage (Pula per cubic metre)	Basic fee (Pula)
Less than 500	1.50	10.00 per month
500-1000	0.81	
1001-1500	1.41	
1501-2000	1.93	
2001-2500	2.44	
2501-3000	3.04	
3001-3500	3.70	
3501-4000	4.30	
4001-4500	4.96	
4501-5000	5.56	
- 5000	6.22	

$$F = B + 1.5S + 1.3N$$

In the formula

F = Waste water concentration (Per cubic metre)

B = Biological oxygen demand in excess of 500mg/1

S = Suspended solids in excess of 400mg/1

N = Fats, oil and grease in excess of 100mg/1

\*Note: The above rates may be subject to an annual increment at the prevailing inflation rate.

### **THIRD SCHEDULE**

*(bye-law 16(3))*

#### **TRADE EFFLUENT AGREEMENT**

This Agreement is made and entered into by and between the Central District Council (herein after referred to as the Council) and ..... (herein after referred to as the Company)

Whereas:

The Council is responsible for the control and maintenance of the sewers, pumping stations and sewage treatment plant. The Company are the occupiers of trade premises situated at plot number ..... where in they intend to operate a ..... and have requested the Council to consent to the discharge of the trade effluent by them from the said trade premises into the sewer shown on the plan ..... dated ..... annexed hereto. The Council is willing to grant such consent subject to the terms and conditions stated hereunder.

It is hereby agreed as follows:

- (1) The trade effluent shall consist solely of wastewater from the ..... Manufacturing and the Company shall not cause the effluent or any surface or storm water to be discharged into the said sewer
- (2) The company shall cause the effluent to be discharged into the said sewer only in accordance with the following special conditions:
  - (a) The pH value of the effluent shall not be less than 6.0 and not more than 9.5 subject to the water received by the Company from the public water supply having a maximum pH value of 8.0
  - (b) The solids in suspension (SS) in the effluent shall not exceed 100 milligrams per litre.
  - (c) The biological oxygen demand (BOD<sub>5</sub>) of the effluent shall not exceed 500 milligrams per litre
  - (d) The temperature of the effluent at the point of entry into the sewer shall not exceed 43 degrees Celsius.
  - (e) The rate of discharge of the effluent into the sewer (flow) shall not be onerous to the existing flow and shall not exceed .....m<sup>3</sup>/hr.
  - (f) No free layer of liquid fats or oils shall be permitted in the effluent

- (g) No solid fats shall be permitted into the effluent
  - (h) Maximum size of solids in the effluent should not be larger than passing through a 15mm screen
  - (i) Settleable solids in the effluent should not exceed 20 milligrams per litre allowed to settle in the Imhoff cone for 15 minutes
  - (j) Total dissolved inorganic solids should not exceed 3000 milligrams per litre
  - (k) Concentration of specific substances in the effluent should comply with standards issued by the Botswana Bureau of Standards
  - (l) No visible signs of tar or associated products or distillates bitumen or asphalt shall be allowed
  - (m) No pesticide, herbicide or any chlorinated hydrocarbons or their derivatives shall be allowed into the effluent to be discharged into the sewer
- (3) The effluent shall not contain any substance or substances which either alone or in combination with any other matter in any sewer or the pumping station or the treatment plant would give rise to poisonous inflammable gases or obnoxious gases in such sewers or pump stations or would be deleterious either to them or to the process in use at the treatment plant
- (4) For the purposes of effectively complying with clauses 1, 2, and 5, the Company shall at their own expenses provide and maintain to the satisfaction of the Council:
- (a) An inspection chamber constructed so as to enable a sample of the effluent to be collected at any time before discharging onto the sewer
  - (b) A buffer tank for the purposes of adjusting the pH of the effluent
  - (c) A continuous chart recording apparatus to measure the flow and the pH of the effluent being discharged into the sewer
- (5) The company shall at all times furnish the Council the records made by the recording apparatus for purposes of verifying compliance to the conditions of this agreement
- (6) The company shall permit the Council Secretary or his authorized representative to inspect and test any works and equipment installed in connection with the effluent.
- (7) The Council shall conduct routine sampling of the effluent to ensure compliance to this agreement.
- (8) The Council shall charge an annual maintenance fee of P... to the Council as may be reviewed from time to time. This payment shall become due and payable on the first day of January of each year.
- (9) The Company shall pay to the Council on demand expenses incurred in connection with special cleansing of the sewer or repair of sewers or pumping machinery necessitated by discharging effluent in contravention to clauses 1, 2, and 3 of this agreement
- (10) Failure to comply with any conditions under this Agreement will lead to termination of this Agreement. The Company will be given 30 days notice, after which the Council will stop the flow of the effluent into the sewerage system.
- (11) The special conditions contained in clause 2 hereof shall be reviewed from time to time according to advice from the Botswana Bureau of Standards and the Department of Water Affairs.

Signed at .....

This ..... day of ..... 20 .....

## **FOURTH SCHEDULE**

*(bye-law 18)*

### **ACCEPTABLE /MAXIMUM DISCHARGE LIMITS INTO A PUBLIC SEWER**

Subject to the provisions of paragraph (1), the following are the maximum permissible concentration limits of substances contained in any effluent to be discharged into any public sewer in the Central District Council administrative area.

Sulphates (expressed as SO <sub>4</sub> )	-1500.0 mg/l
Ammonia (expressed as N)	-100.0 mg/l
Sulphides (expressed as S)	-50.0 mg/l
Cynide (expressed as CN)	-20.0 mg/l
Arsenic (expressed as As)	-5.0 mg/l
Boron (expressed as B)	-5.0 mg/l
Zinc (expressed as Zn)	-20.0 mg/l
Copper (expressed Cu)	-5.0 mg/l
Lead (expressed Pb)	-5.0 mg/l
Cadmium (expressed Cd)	-5.0 mg/l
Selenium (expressed as Se )	-5.0 mg /l
Total Chrome (expressed as Cr)	-10.0 mg/l
Iron (expressed Fe)	-20.0 mg/l
Manganese (expressed as Mn)	-20.0 m/l
Sodium (expressed as Na)	-500.0 mg/l
Chloride (expressed as Cl)	-500.0 mg/l
Fluoride (expressed as F)	-5.0 mg/l
Cobalt (expressed as Co)	-20.0 mg/l
Nickel (expressed as Ni)	-20.0 mg/l
Molybdenum (expressed as Mo)	-5.0 mg/1

Fats, Oils & Grease (FOG)	-250.0 mg/l
Suspended Solids	-1000.0mg/l
Settleble Solids (60 min)	-50.0 mg/l
Temperature at point of entry	-43 Degrees Celsius
Electric Conductivity	-500 mSm
Caustic Alkalinity	-2000 mg/l