

FRANCISTOWN CITY COUNCIL (PUBLIC SEWER) BYE-LAWS

(section 6*)

(27th August, 2010)

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SCHEDULE I - Sewerage Connection Fees

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1. Citation

These Bye-laws may be cited as the Francistown City Council (Public Sewer) Bye-laws.

2. Interpretation

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

"authorised officer" means a person authorised by the Council to inspect public sewers pipes or drains connected to the sewer pipes;

"Council" means the Francistown City 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 to the drains, pipes and sewers;

"foul water" means water contaminated by soil water, waste water 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, 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;

"unit" means a latrine with regards to payment of annual services fees for commercial and industrial plots; 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 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 to a sewer at a suitable invert level which the owner of the building is entitled to use and 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 is 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

(1) The Council may alter the size or course of any public sewer or discontinue and prohibit the use of the public sewer.

(2) Subject to subby-law (1), 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 sewerage 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 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 be maintained by the Council.

6. Certain matter not to be passed into sewer

(1) A person shall not throw, 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) chemicals, 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) A person who contravenes any provision of this bye-law commits an offence and is liable to fine not exceeding P100 for each day on which the offence continues.

7. Storm water not to enter public sewer

A person shall not discharge or cause or permit the discharge, directly or indirectly, of storm water into a public sewer.

8. Sewerage not to enter storm water drain

A person shall not discharge, cause or permit the discharge, directly or indirectly, of any sewerage or foul water into a storm water drain, a river, a stream or other water course, 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 subby-law (1), a person shall not 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 16; 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 sufficient supply of water is available and the Council is of the opinion that-

- (a) satisfactory provision has not been made for hygiene 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 subbye-law (1) the Council shall, within 21 days of the receipt, advise the applicant in writing whether or not the application has been granted.

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

(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 the work under subbye-law (4) the Council shall, before work commences, require the applicant to pay the cost for the drainage installation 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 in writing, and shall accord to an authorised 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 shall, at the expense of the owner of the premises served, be carried out by the Council.

(8) A person who causes a drain, pipe or sewer to be connected to a public sewer in contravention of the provisions of these Bye-laws commits an offence and is liable to a fine not exceeding P5 000, 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.

(9) Where payment made under subbye-law (5)-

- (a) exceeds the cost incurred, the Council shall repay the excess to the applicant; or
- (b) is insufficient, the balance shall be recoverable from the person for whom the work is 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 public sewer by means of a common sewer or drain.

13. Fees

(1) A person intending to connect a drainage installation on his or her premises to a public sewer shall pay a sewerage connection fee at the rates set out in Schedule I, and shall enter into a sewerage service agreement with the Council after connection of the premises to the sewerage system.

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

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

(4) Where the due date under subbye-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 rate accrued on any arrears shall be calculated from the date on which fee becomes overdue until the date of payment of the fee.

(6) In the case of change of ownership of the premises or of the postal address of any owner, the person who appears, from the 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 the 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 subbye-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 reconnection

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

(2) A re-connection fee of P100 in respect of residential property and P200 in respect of commercial or industrial property shall be payable by the owner of the 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) A person shall not obstruct any authorised 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 the Minister may consider appropriate 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 the discharge.

(2) An approval under subbye-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 to the public sewer.

(3) A person wishing to discharge trade effluent into a public sewer shall-

(a) make an application, in writing, to the Council for permission to do so;

(b) sign trade effluent agreement set out in Schedule III; and

(c) submit to the Council-

(i) the chemical composition, nature and volume of the effluent;

(ii) a description of the industrial process or trade giving rise to the effluent;

(iii) the number of persons employed on the premises; and

(iv) such other information, including the submission of samples, which the Council may consider necessary.

(4) A person permitted in terms of subbye-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 condition the Council may consider appropriate.

(5) A person who discharges or causes or permits the discharge, directly or indirectly, of trade effluent into a public sewer without prior written permission of the Council commits an offence and is liable to a fine not exceeding P5 000.

(6) Without prejudice to its rights in terms of subbye-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 the Council as a result of any damage caused to a public sewer or sewerage 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.

18. Sampling and analysis of trade effluent

The Council shall conduct regular sampling and analysis of trade effluent from the industries to ensure compliance with the discharge limits set out in Schedule IV.

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 that owner, within a reasonable time to be specified in the notice, to install, to the satisfaction of the Council, a proper and efficient fat, oil and grease interceptor for the reception of fat, oil and grease 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 authorised officer from the Council.

20. Penalties

(1) A person who commits an offence under these Bye-laws where no penalty is prescribed is liable to a fine not exceeding P5 000 and a further fine not exceeding P100 for each day on which the offence continues.

(2) A person who contravenes any provision of these Bye-laws on second or subsequent conviction commits an offence and is liable to a fine not exceeding P500 or to imprisonment not exceeding six months or to both.

(3) Subject to bye-law 18, each time the industry discharges into a sewer trade effluent that exceeds the maximum allowable concentrations of the substances included in the formula in Schedule II, the industry commits an offence and is liable to a penalty calculated using the formula set out in Schedule II.

SCHEDULE I

(bye-law 13 (1))

SEWERAGE CONNECTION FEES



TYPE OF SERVICE

CHARGES (P)

REMARKS

Connection to residential premises:

Low income (Self Help Housing Agency) SHHA

100

Perusal fee

Middle income SHHA

150

Plot owner bears the full cost of all works

Small plot less than 450 square metre

200

Large plot up to 700 square metre

400

Large plot more than 700 square metre

1 000

Multi units for example flats or town houses

2 500

Civic and community plots

2 500

Commercial plots

2 500

Industrial plots

5 000

Clearing or removal of blockage within plots

30

Flat rate

Vacuum tank (registration)

500

April to March of subsequent year

Vacuum tank (sewage dumping) from other Councils

0.5 per cubic metre

Coupons of different denominations according to vacuum tank capacity available from Council Revenue Office

Vacuum tanker services (Septic tanks) SHHA area

30 per load

Vacuum tanker services (Pit latrines)

50 per load

Vacuum tanker services Non SHHA areas

100 per load

SCHEDULE II

(bye-law 13 (2) and 20 (3))

ANNUAL SEWERAGE SERVICES FEE RATES

TABLE 1: UNIT RATES

□

TYPE OF PREMISES

CHARGES IN PULA

REMARKS

Residential

60

Annual sewerage fees

Commercial

60

Annual sewerage fees

TABLE 2: VOLUME UNIT RATES'EFFLUENT RE-USE



EFFLUENT RE-USE

CHARGES

Usage

(Pula per cubic metre)

Industrial up to 100 cubic metres per day

0.75

Industrial 100 cubic metres - 500 cubic metres per day

1.00

Industrial 500 cubic metres and above per day

1.25

Final treated effluent

1.00

TABLE 3: DAMAGE TO SEWER PIPES



REPAIR TO DAMAGED SEWER PIPES

(Per metre)

CHARGES PER METRE (Pula)

Damage to pipes per meter

500

TABLE 4: ILLEGAL CONNECTION



ILLEGAL CONNECTION

CHARGES (Pula)

Connecting to Council sewer illegally

500

CALCULATION OF PENALTY FOR NON-COMPLIANT TRADE EFFLUENT

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

In the formula:

F = Waste water penalty in Pula per cubic metre/day

B = Biological oxygen demand in excess of 5 00mg/1

S = Suspended solids in excess of 4 00mg/1

N = Fats, oil and grease in excess of 1 00mg/1

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

Additional concentrations of substances to be used in the formula to calculate the penalty may be added according to observed trends in the quality of effluent received from different industries.

SCHEDULE III

(by-law 16 (3))

TRADE EFFLUENT AGREEMENT

This Agreement is made and entered into by and between Francistown City Council (hereinafter referred to as the Council) and (hereinafter referred to as the Company).

WHEREAS:

The Council is responsible for the control and maintenance of sewers, pumping stations and sewage treatment plant. The Company is the occupier of trade premises situate at plot number The Company intend to operate a and have requested the Council to consent to the discharge of the trade effluent by the Company from the said trade premises into the sewer shown on the plan dated annexed to the agreement. The Council is willing to grant the consent subject to the terms and conditions stated in this Agreement.

It is hereby agreed as follows:

- (1) The trade effluent shall consist solely of wastewater from and the Company shall not cause the trade effluent or any surface or storm water to be discharged into the said sewer.
- (2) The Company shall cause the trade effluent to be discharged into the said sewer only in accordance with the following special conditions-
 - (a) The pH value of the trade 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 8.0.
 - (b) The solids in suspension (SS) in the trade effluent shall not exceed 1000 milligrams per litre.
 - (c) The biological oxygen demand (BODs) of the trade effluent shall not exceed 500 milligrams per litre.
 - (d) The temperature of the trade effluent at the point of entry into the sewer shall not exceed 43 degrees Celsius.
 - (e) The rate of the discharge of the trade effluent into the sewer (flow) shall not be onerous to the existing flow and shall not exceed M³/hr.
 - (f) Free layer of liquid fats, grease or oils shall not be permitted in the trade effluent.
 - (g) Solid fats shall not be permitted into the trade effluent.
 - (h) Maximum size of solids in the trade effluent shall not be larger than passing through a 15 millimetres sieve.

- (i) Solids that are able to settle in the trade effluent shall not exceed 20 milligrams per litre allowed to settle in the 1m hoff cone for 15 minutes.
 - (j) Total dissolved inorganic solids shall not exceed 3000 milligrams per litre.
 - (k) Concentration of specific substances in the trade effluent shall comply with standards issued by the Botswana Bureaus of Standards.
 - (l) Visible signs of tar or associated products or distillates bitumen or asphalt shall not be allowed.
 - (m) Pesticides, herbicide or any chlorinated hydrocarbons or their derivatives shall not be allowed into the trade effluent to be discharged into the sewer.
- (3) The trade effluent shall not contain any 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.
- (4) For the purposes of effectively complying with paragraph (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 trade 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 trade effluent; and
 - (c) a continuous chart recording apparatus to measure the flow and the pH of trade effluent being discharged into the sewer.
- (5) The Company shall at all times furnish the Council with the records made by the recording apparatus for purposes of verifying compliance to the conditions of this Agreement.
- (6) The Company shall permit the Town Clerk or authorised representative to inspect and test any works and equipment installed in connection with the trade effluent.
- (7) The Council shall conduct routine sampling of the trade effluent to ensure compliance to this Agreement.
- (8) The Council shall charge an annual maintenance fee of P to the Company 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 trade effluent in contravention to paragraph (1), (2) and (3) of this Agreement.
- (10) Failure to comply with any conditions under this Agreement will lead to the termination of this Agreement. The Company will be given 30 days notice, after which the Council will stop the flow of the trade effluent into the sewerage system.
- (11) The special conditions contained in paragraph (2) of this Agreement shall be reviewed from time to time according to the advice from the Botswana Bureau of Standards and the Department of Water Affairs.
- Signed at this day of. 20.....

SCHEDULE IV

(bye-law 18)

ACCEPTABLE/MAXIMUM DISCHARGE LIMITS INTO PUBLIC SEWER

Subject to the provision of paragraph (1) of the Trade Effluent Agreement in Schedule III, the following are the maximum permissible concentration limits of substances contained in any trade effluent to be discharged into any public sewer in the Francistown City Council administrative area.

☐
Sulphates (expressed as SO₄)
-1500.0 mg/l
Ammonia (expressed as N)
-100.0 mg/l
Sulphides (expressed as S)
-50.0 mg/l
Cyanide (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 as Cu)
-5.0 mg/l
Lead (expressed as Pb)
-5.0 mg/l
Cadmium (expressed as Cd)
-5.0 mg/l
Selenium (expressed as Se)
-5.0 mg/l
Total Chrome (expressed as Cr)
-10.0 mg/l
Iron (expressed as Fe)
-20.0 mg/l
Manganese (expressed as Mn)
-20.0 mg/l
Sodium (expressed as Na)
-500.0 mg/l
Chloride (expressed as Cl)
-500.0 mg/l
Fluoride (expressed as F)

-5.0 mg/1

Cobalt (expressed as Co)

-20.0 mg/1

Nickel (expressed as Ni)

-20.0 mg/1

Molybdenum (expressed as Mo)

-5.0 mg/1

Fats, Oil and Grease (FOG)

-100.0 mg/1

Suspended Solids

-1000.0 mg/1

Settled Solids (60 min)

-50.0 mg/1

Temperature at point of entry

-43 Degrees Celsius

Electric Conductivity

-500 mSm

Caustic Alkalinity

-2000 mg/1.