

THABAZIMBI LOCAL MUNICIPALITY
DRAINAGE BY-LAW

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1. Definitions

In this by-law, unless the context otherwise indicates -

- "1-in-50-
years flood
level"** means that level reached by flood waters resulting from a storm of a frequency of 1 in 50 years;
- "adequate" or
"effective"** means
(a) adequate or effective in the opinion of the Municipality; or
(b) in relation to any document issued by the Council.
- "anti-
siphonage
pipe"** means any pipe or portion of a pipe provided for the protection, by ventilation, of the water seal of a trap against unsealing by siphonage or back pressure;
- "approved"** means approved by the Municipality in writing;
- "authorised
agent"** means any person or contractor officially authorised by the Municipality to act as the Municipality's agent;
- "building
regulations"** means the National Building Regulations and other standards or regulations made in terms of the National Building Regulations and Building Standards Act, 1977 (Act 103 of 1977);
- "cleaning
eye"** means any access opening to the interior of a discharge pipe or trap which is provided for the purposes of internal cleaning and which remains permanently accessible after completion of the drainage installation;
- "connection"** means the point where a drain is connected to the sewer connection;
- "conservancy
tank"** means a covered tank which is used for the reception and temporary retention of sewage
- "domestic
effluent"** means effluent of prescribed domestic strength characteristics in respect of chemical oxygen demand and settleable solids, being appropriate to sewage discharges from domestic premises within the jurisdiction of the Municipality, but does not include industrial effluent;

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- "drain"** means that part of a drainage installation, other than soil-water pipes, waste-water pipes, ventilation pipes and anti-siphonage pipes, of which ownership is vested in the owner of the premises and which has been laid in the ground and is used or intended to be used for conveying sewage to the sewer connection or to a common drain or a conservancy tank or septic tank which is situated on the premises;
- "drainage installation"** means an installation of which ownership is vested in the owner of the premises and includes any drain, soil-water pipe, stack, waste-water pipe, ventilation pipe, anti-siphonage pipe, soil-water fitting, waste-water fitting, mechanical appliance or any other appliance or fitting, or a combination of such drain, pipe, stack, fitting and appliance, for the collection and conveyance of sewage;
- "drainage work"** means any construction or reconstruction of, or any alteration or addition to, or any work done in connection with a drainage installation, but does not include any work undertaken solely for purposes of repair or maintenance;
- "effluent"** means any liquid, whether or not containing matter in solution or suspension;
- "Engineer"** means the professional engineer appointed by the Municipality to perform or exercise the functions, powers and duties in terms of these by-law;
- "gully"** means a pipe fitting incorporating a trap into which waste water is discharged;
- "industrial effluent"** means effluent emanating from the industrial use of water, including, for purposes of these by-law, any effluent other than domestic effluent or stormwater;
- "JASWIC"** means the Joint Acceptance Scheme for Water-Services Installation Components, which approves a list of water and sanitation installations, which list is obtainable from the Municipality;
- "manhole"** means any access chamber to the interior of a sewer provided for the purpose of maintenance and internal cleaning;
- "Municipality"** means the Thabazimbi Municipality, as established by General Notice 6770 in Provincial Gazette Extraordinary 141 of 1 October 2000 in terms of the provisions of the Local Government: Municipal Structures Act, 1998 (Act 117

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of 1998), and as provided for by section 155(1)(a) of the Constitution of the Republic of South Africa, 1996 (Act 108 of 1996), and includes any official or authorised agent to whom the Council of the Municipality has delegated the powers, functions and duties in terms of these by-law;

"owner"

means -

- (a) the person in whom from time to time is vested the legal title to the premises;
- (b) a person who receives the rent or profit of premises from a tenant or occupier of the premises, or who would receive such rent or profit if the premises were leased, whether for his or her own account or as an agent for a person entitled to the rent or profit;
- (c) where the person in whom the legal title to the premises is vested is insolvent or dead, or is under any form of legal disability whatsoever, the person in whom the administration and control of the premises is vested as curator, trustee, executor, administrator, judicial manager, liquidator or other legal representative;
- (d) in the case of premises for which a lease agreement of 30 years or more has been entered into, the lessee of
- (e) in relation to -
 - (i) a piece of land delineated on a sectional plan registered in terms of the Sectional Titles Act, 1986 (Act 95 of 1986), the developer or the body corporate in respect of the common property; or
 - (ii) a section as defined in the Sectional Titles Act, 1986, the person in whose name the section is registered under the sectional title deed, and includes the law-fully appointed agent of such a person;

"piece of land"

means -

- (a) a piece of land registered in a deeds registry as an erf, stand, lot, plot or other area or as a portion or a subdivision portion of such an erf, stand, lot, plot or area; or
- (b) a defined portion, not intended as a public place, or a piece of land which is held under surface right permit or under mining title, or which,

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being proclaimed land not held under mining title, is used for residential purposes or for purposes not incidental to mining operations;

"plumber" means a person who has passed a qualifying trade test in plumbing or has been issued with a certificate of proficiency for plumbing in terms of the Manpower Training Act, 1981 (Act 56 of 1981) as amended, or holds such other qualification as may be required under the South African Qualifications Authority Act, 1995 (Act 58 of 1995);

"premises" means any piece of land, the external surface boundaries of which are delineated on -

(a) a general plan or diagram registered in terms of the Land Survey Act, 1997 (Act 8 of 1997), or in terms of the Deeds Registries Act, 1937 (Act 47 of 1937); or

(b) a sectional plan registered in terms of

"professional engineer" means a person registered in terms of the Engineering Profession Act, 2000 (Act 46 of 2000), as a professional engineer;

"purified sewerage effluent" means the water discharged from a water purification works after purification, either into a water course or for the purposes of re-use.

"sanitary fitting" or

"sanitary appliance"

"sanitation services" has the meaning assigned to it in the Act and includes, for purposes of these by-law, water for industrial purposes and disposal of industrial effluent;

"septic tank" means a tank designed to receive sewage and to effect the adequate decomposition of organic matter in sewage by bacterial action;

"sewage" means soil water, waste water, industrial effluent and other liquid waste, whether separately or together, but does not include stormwater;

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"sewer"	means any pipe with fittings, of which ownership is vested in the Municipality, and which is designed and used or intended to be used for the conveyance of sewage, but does not include a drain;
"sewer connection"	means that part of a sewer system which is vested in the Municipality and which connects a drain to a sewer;
"soil water"	means any liquid containing human or animal excreta;
"soil-water fitting"	means any fitting used for the reception and discharge of soil water;
"soil-water pipe"	means any pipe, other than a drain, used for the conveyance of soil water with or without waste water;
"stack"	means the main vertical component of a drainage installation or any part of the installation other than a ventilation pipe;
"stormwater"	means any liquid resulting from natural precipitation or accumulation and includes rainwater, spring water and groundwater;
"tariff"	means the tariff of charges in respect of the municipality sewer service
"the Act"	means the Water Services Act, 1997 (Act 108 of 1997), as amended from time to time;
"trap"	means a pipe fitting or portion of a sanitary appliance designed to retain a water seal in position;
"ventilation pipe"	means any pipe or portion of a pipe not conveying any liquid, which pipe or portion of a pipe leads to the open air at its highest point and is used to ventilate a drainage installation in order to prevent the destruction of water seals;
"waste water"	means used water that has not been polluted by soil water or industrial effluent, but does not include stormwater;
"waste-water fitting"	means any fitting used for the reception and discharge of waste water;
"waste-water pipe"	means any pipe, other than a drain, used for the conveyance of waste water only;
"waste-water treatment"	means any water works for the purification, treatment and/or disposal of effluent;

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plant"

"Water Act" means the National Water Act, 1998 (Act 36 of 1998), as amended from time to time; and

"water seal" means the water in a trap, which serves as a barrier against the flow of foul air or gas.

2. Standard of sanitation service

Sanitation services provided by the Municipality will comply with the minimum standards set for the provision of sanitation services in terms of section 9 of the Act.

3. Scope of by-law

- (1) These by-law apply to every sewer installation and drainage installation, and in particular to the operation and maintenance of such an installation in any new building or existing building, with or without any alterations or additions to an existing sewer installation or drainage installation, whether or not required by the Municipality.
- (2) Any sewer installation and drainage installation may at any time after its completion and commissioning be subjected to such inspection, approval, tests and control as the Municipality may deem fit or require.

4 Notices

- (1) Every notice, order or other document issued or served by the Municipality in terms of these by-law is valid if signed by an official of the Municipality who is duly authorised to do so.
- (2) Any notice, order or other document issued or served in terms of these by-law on any person shall be served in the following manner:

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- (a) The notice, order or other document, or a true copy of the notice, order or document, shall be delivered personally to the person to whom it is addressed or shall be delivered at his or her last-known residence or place of business; or
 - (b) the notice, order or other document, or a true copy of the notice, order or document, shall be posted to the person to whom it is addressed at his or her last-known residence or place of business, in which case it will be deemed to have been served five days after it was posted.
- (3) In every notice, order or other document issued or served in terms of these by-law, the premises to which the notice, order or document relates will be specified, but the person for whom it is intended may be referred to as "the owner" or "the occupier" if his or her name is not known.

5. Application for water services

- (1) No person is entitled to access to water services unless
 - (a) an application has been made to the Municipality on the form prescribed in terms of the Municipality's by-law relating to credit control and debt collection; and
 - (b) the application has been approved by the Municipality.
- (2) Sanitation services rendered by the Municipality are subject to these by-law and the conditions contained in the relevant agreement.

TYPES OF SANITATION SERVICES

6. On-site sanitation services and associated services

Application

- (1) If an agreement for on-site sanitation services and associated services in accordance with subsection 6(2) exists and no municipal infrastructure in connection with the services exists for premises, the owner must immediately, with the approval of the Municipality and at his or her cost, install appropriate

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on-site sanitation services in accordance with the specifications of the Municipality.

- (2) The Municipality may specify the type of on-site sanitation services to be installed.

7. Septic tanks and treatment plants

- (1) No person may construct, install, maintain or operate a septic tank or other plant for the treatment, disposal or storage of sewage without the prior written consent of the Municipality. Such consent is granted without prejudice to any of the provisions of these by-law or any other relevant laws or by-law.
- (2) The removal and handling of any sewage sludge must be in accordance with the relevant health laws and by-law.

8. French drains

The Municipality may, at its discretion and on such conditions as it may prescribe, having regard to the quantity and nature of the effluent and the nature and permeability of the soil, permit the disposal of waste water or other effluent by means of French drains, soakage pits or other approved works.

9. Ventilated improved pit latrines

The Municipality may, at its discretion and on such conditions as it may prescribe, having regard to the nature and permeability of the soil, the depth of the water table, the size of and access to the site and the availability of a piped water supply, permit the disposal of human excrement by means of a ventilated improved pit latrine constructed and maintained in accordance with the specifications of the Municipality and located in a position indicated by the Municipality.

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10. Conservancy tanks

- (1) The Engineer may, at his/her discretion, permit the owner of premises to construct a conservancy tank and ancillary appliances for the retention of soil water or such other sewage or effluent as the Engineer may decide, and the tank and appliances must be of such capacity and be located at such level as the Engineer may prescribe.
- (2) No rainwater or storm water and no effluent other than that which the Municipality has permitted in terms of subsection (1) may be discharged into a conservancy tank.
- (3) The Municipality may, at its discretion, having regard to the position of a conservancy tank or to the point of connection for a removal vehicle, make it a condition for the emptying of the tank that the owner or user of the tank indemnifies the Municipality in writing against any sum which the municipality may become liable to pay to any person as a direct or indirect result of the rendering of the service in respect of the tank.
- (4) The Municipality is entitled to empty or to draw off part of the contents of a conservancy tank at any reasonable time on any day of the week and in such manner as it may decide, having regard to the general requirements of the service in respect of the tank and in particular to the necessity for avoiding separate or unnecessary journeys by the Municipality's removal vehicle or anyone else's removal vehicle.
- (5) Where the Municipality's removal vehicle or anyone else's removal vehicle has to traverse private premises for the emptying of a conservancy tank, the owner of the premises on which the conservancy tank is installed must -
 - (a) provide a roadway for such purpose of a width of at least 3,5 m, so hardened as to be capable of withstanding a wheel load of 4 metric tons in all weather; and
 - (b) ensure that no gateway through which the vehicle is required to pass to reach the tank is less than 3,5 m wide.

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- (6) The owner or occupier of premises on which a conservancy tank is installed must at all times maintain the tank in good working order and condition to the satisfaction of the Engineer.

11. Sewage delivered by road haulage

(1) Acceptance of sewage delivered by road haulage

The Engineer may, at his or her discretion and subject to the conditions that he or she may specify, accept sewage for disposal which is delivered by road haulage to a waste-water treatment plant of the Municipality or another site approved by the Engineer.

(2) Written permission for delivery of sewage by road haulage

- (a) No person may discharge into a waste-water treatment plant of the Municipality or another approved site sewage delivered by road haulage, except with the written permission of the Engineer and subject to the period and the conditions that may be imposed in the written permission.
- (b) The charges for any sewage delivered for disposal to the Municipality's wastewater treatment plants or to approved sites shall be assessed by the Municipality in accordance with the prescribed tariffs.

(3) Conditions for delivery of sewage by road haulage

When sewage is delivered by road haulage to a waste-water treatment plant of the Municipality or to an approved site for disposal -

- (a) the time and place of delivery must be arranged with the Engineer; and
- (b) the nature and composition of the sewage must be established to the satisfaction of the Engineer prior to the discharge of the sewage, and no person may deliver sewage that does not comply with the standards laid down in terms of these by-law.

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(4) Withdrawal of permission for delivery of sewage by road haulage

The Engineer may withdraw any permission contemplated in section 12(1) after giving the person to whom permission is granted at least 14 days' written notice of the Municipality's intention to withdraw the permission if that person.

- (a) fails to ensure that the sewage delivered conforms to the standards prescribed in Appendix A to these by-law or in the written permission; or
- (b) fails or refuses to comply with any notice lawfully served on him or her in terms of these by-law, contravenes any provisions of these by-law, or fails or refuses to comply with any condition imposed on him or her in any permission granted to him or her.

12. Connection to municipal sewer system

(1) Connection to sewer

- (a) No part of any drainage installation may extend beyond the boundary of the piece of land on which the building or part of the building served by the drainage installation is erected, provided that, where the Municipality considers it necessary or expedient to do so, the Municipality may permit the owner to lay a drain, at the owner's own expense, through an adjoining piece of land on submission of proof of registration of the appropriate servitude or of a notarial deed of joint drainage, as the Municipality may require.
- (b) As soon as the Municipality has provided a sewer connection, the owner must connect the drain to the sewer at his or her own expense.
- (c) Any alternative or additional sewer connection required by the owner is subject to the approval of the Engineer and must be effected at the owner's expense in accordance with the standards and specifications of the Engineer.
- (d) Except as may be otherwise authorised by the Municipality in writing, no person other than a plumber or an official duly authorised by the

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Engineer to do so may install a sewer connection to a sewer. Any such sewer connection must be installed in accordance with the specifications of the Engineer.

- (e) No person may permit any substance whatsoever, other than clean water for testing purposes, to enter a drainage installation before the drainage installation has been connected to the sewer.
- (f) The Engineer may authorise and approve, at his or her sole discretion, the conveyance of sewage from two premises or more by means of a common drain to the sewer connection.
- (g) After the completion of every drainage installation and after the completion of any alteration to a drainage installation, the plumber responsible for the execution of the work must submit to the building inspection section of the Municipality a certificate certifying that the work was completed to the standards set out in the building regulations, these by-law and any other relevant law or by-law.

13. Disconnection of drainage installations and conservancy or septic tanks

- (1) If an existing on-site sanitation system is no longer required for the storage or treatment of sewage, or if permission for the storage or treatment is withdrawn, the owner must cause the system to be disconnected and to be either completely removed or completely filled with earth or other suitable material, provided that the Engineer may require a tank to be otherwise dealt with or may permit the tank to be used for some other purpose, subject to the conditions the Engineer may consider necessary, regard being had to all the circumstances of the case.
- (2) After all the requirements of the building regulations in regard to disconnection have been complied with and, at the request of the owner, the Engineer shall issue a certificate to the effect that -

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- (a) the disconnection has been completed in terms of the building regulations; and
- (b) any charges levied in respect of the disconnected portion of the drainage installation will cease to be levied with effect from the first day of the month following the issue of the certificate, provided that until the certificate is issued by the Engineer any such charges shall continue to be levied.
- (3) When a drainage installation is disconnected from a sewer, the Engineer shall seal the opening made and shall recover from the owner the cost of the work in terms of section 42.
- (4) Any person who without the permission of the Municipality breaks or removes or causes or permits the breakage or removal of a seal installed in terms of subsection (3) is guilty of an offence under these by-law.
- (5) Where a drainage system is connected to or disconnected from the sewer system during the month, the charge, excluding the fixed charge of every erf, stand, premises or other area, which has or has no improvements or which can be connected to a sewer in the opinion of the Municipality, shall be calculated as if the connection had been made on the first day of the month following the month in which the connection or disconnection was effected.

14. Materials to be used in sanitation to be authorised

- (1) No person may, without the prior written authority of the Municipality, install or use a pipe or fitting in a drainage or sewer installation within the Municipality's area of jurisdiction, unless the pipe or fitting is included in the schedule of approved sanitation pipes and fittings that is compiled by the Municipality.
- (2) Application for the inclusion of a pipe or fitting in the schedule referred to in subsection (1) must be made on the form prescribed by the Municipality.

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- (3) A pipe or fitting may be included in the schedule referred to in subsection (1) if -
 - (a) the pipe or fitting bears the standardisation mark of the SABS in respect of the relevant SABS specification issued by the SABS; or
 - (b) the pipe or fitting bears a certification mark issued by the SABS to certify that the pipe or fitting complies with an SABS mark specification or a provisional specification issued by the SABS, provided that no certification marks are issued for a period exceeding two years; or
 - (c) the pipe or fitting has been issued with a JASWIC acceptance certificate.
- (4) The Municipality may, in respect of any pipe or fitting included in the schedule referred to in subsection (1), impose such additional conditions as it may deem necessary in respect of the use or method of installation of the pipe or fitting.
- (5) A pipe or fitting shall be removed from the schedule referred to in subsection (1) if -
 - (a) the pipe or fitting no longer complies with the criteria upon which its inclusion in the schedule was based; or
 - (b) the pipe or fitting is no longer suitable for the purpose for which its use was accepted for inclusion in the schedule.
- (6) A current schedule as referred to in subsection (1) shall be available for inspection at the office of the Municipality at any time during the Municipality's working hours.
- (7) The Municipality may sell copies of the schedule referred to in subsection (1) at the prescribed charge.

15. Drainage work that does not satisfy the requirements

- (1) Where a drainage installation that has been constructed or drainage work that has been carried out fails to comply in any respect with any of the provisions of the building regulations or these by-law, the owner must, notwithstanding the fact that he or she may have received approval for the plans for the installation or work in terms of the

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building regulations or previous by-law, carry out, on receiving written notice from the Municipality, the repairs, replacements, alterations or maintenance work in respect of the installation or work within the period specified in the notice.

- (2) When, in the opinion of the Municipality, a nuisance exists owing to the emission of gas from a trap or sanitary fitting or any other part of a drainage installation, the Municipality may require the owner, at his or her expense, to take such action as may be necessary to prevent the recurrence of the nuisance.
- (3) Where any sewage, after being discharged into a drainage installation, enters or overflows a soil-water fitting or wastewater fitting connected to the drainage installation or leaks out somewhere from the drainage installation, whether by reason of surcharge, back pressure or any other circumstance, the Municipality may, by notice in writing, require the owner to carry out within the period specified in the notice the work necessary to abate and to prevent any recurrence of the entry, overflow or leakage of sewage.
- (4) Instead of serving the notice contemplated in subsection (1) or (3), or where such a notice has not been complied with within the period prescribed in the notice, the Municipality may, without prejudice to its right to also prosecute the person or body to whom the notice was directed because of an infringement of the building regulations or these by-law -

(a) proceed itself to carry out such alterations, removals or other work as it may deem necessary for compliance with the provisions of the building regulations or these by-law; and

(b) recover, in terms of section 42, the cost of the alterations, removals or other work from the owner by the ordinary process of law.

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16. Prohibited construction and work

- (1) Any person who, without the prior consent in writing of the Municipality-
- (a) erects or causes to be erected any building or other structure over a sewer or pipe vested in the Municipality or constructed under the authority of the Engineer;
 - (b) excavates, opens up or removes or causes to be excavated, opened up, or removed the ground under or near to such a sewer or pipe;
 - (c) makes or causes to be made any opening into such a sewer or pipe for the purpose of discharging sewage into the sewer or pipe or for another purpose; or
 - (d) damages or destroys or causes to be damaged or destroyed such a sewer or pipe or any works or things in connection with the sewer or pipe, is guilty of an offence.
- (2) Where an offence in terms of subsection (1) has been committed, the Municipality may alter, demolish or otherwise deal with the building or structure that has been erected, fill in and make good any damage caused, or close any opening in the sewer or pipe, as the Municipality may think fit, and the expenses incurred shall, together with a fine, be recovered from the offender in a competent court.

17. Maintenance

Where any part of a drainage installation is used by two owners or more or two occupiers or more, they are jointly and severally liable in terms of this section for the maintenance and repair of the drainage installation.

The owner of the premises must ensure that all sewer manholes on the premises are permanently visible and accessible.

18. Sewer blockages

- (1) No person may cause or permit such an accumulation of grease, oil, fat, solid matter or any other substance in any trap, tank or fitting as to cause the blockage or ineffective operation of the trap, tank or fitting.

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- (2) When the owner or occupier of premises has reason to believe that a blockage has occurred in any drainage installation on the premises, he or she must take immediate steps to have the blockage cleared or removed.
- (3) When the owner or occupier of premises has reason to believe that a blockage has occurred in the sewer system, he or she must immediately inform the Municipality of the blockage.
- (4) The Engineer is entitled at his or her discretion to clear or remove, whether or not at the request of the owner of the premises, a blockage from a drainage installation and to recover the cost of the clearing or removal from the owner in accordance with section 42.
- (5) Should the clearing or removal by the Municipality of any blockage in a sewer or drainage installation necessitate the removal or the disturbance of any paving, lawn or other artificial surfacing on any premises, the Municipality is not liable for the reinstatement of the paving, lawn or other artificial surfacing.
- (6) The owner of any premises is responsible for ensuring that all cleaning eyes and manholes on the premises are at all times visible.
- (7) Should any drainage installation on any premises overflow as a result of an obstruction in the sewer, and should the Engineer be reasonably satisfied that the obstruction was caused by objects emanating from the drainage installation, the owner of the premises served by the drainage installation is liable for the cost of clearing or removing the blockage, and the Municipality may recover the cost from the owner in accordance with section 42.
- (8) Where a blockage has been cleared or removed from a drain or portion of a drain that serves two pieces of land or more, the charge for the clearing or removal of the blockage is recoverable in equal proportions from each of the owners of the pieces of land, provided that the owners are jointly and severally liable for the whole charge.

19. Interference with or damage to sewers, waste-water treatment plants, etc

Any damage caused to the Municipality's sewers or any part of its sewers or to the Municipality's waste-water treatment plants through, or in consequence of, non-

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compliance with or contravention of any provision of the building regulations or these by-law shall be rectified or repaired by the Municipality at the expense of the person responsible for the non-compliance or contravention or for causing or permitting the non-compliance or contravention, and the cost of rectifying or repairing the damage shall be determined by the Engineer.

20. Entry onto premises

- (1) An officer authorised by the Municipality has the right to enter upon any premises at any reasonable time in order to take samples of or test sewage or industrial effluent or to carry out any inspection or work in connection with a drainage installation that the Municipality may deem necessary.
- (2) In respect of an officer entering on premises for the purposes of subsection (1), the owner or occupier of the premises is guilty of an offence under these by-law if he or she -
 - (a) denies the officer entry to the premises or causes or permits any other person to deny the officer entry;
 - (b) obstructs the officer in the performance of the officer's duties or causes or permits the officer to be so obstructed;
 - (c) withholds information that is required by the officer to carry out the officer's duties or causes or permits any other person to withhold such information; or
 - (d) knowingly gives the officer false information or causes or permits any other person to give the officer such information.

21. Mechanical food-waste or other disposal units

- (1) No person may incorporate into a drainage installation a mechanical food-waste or other disposal unit or garbage grinder that has a power capacity in excess of 1 kW, except with the written permission of the Engineer and subject to the conditions that may be imposed in the written permission.
- (2) The Engineer may require the owner or occupier of any premises on which a food-waste or other disposal unit or a garbage grinder has been installed, or

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- the owner of such a unit or grinder, to remove, repair or replace the unit or grinder if, in the opinion of the Engineer, the unit or grinder is functioning inefficiently or is impairing the functioning of the Municipality's sewer system.
- (3) The owner or occupier referred to in subsection (2) must, upon removal of a unit or grinder, notify the Municipality within 14 days of the removal.
- (4) The charges as prescribed in the applicable tariff must be paid in respect of the discharge of a food-waste or other disposal unit or garbage grinder referred to in subsection (1).

22. Grease traps

A grease trap of the approved type, size and capacity must be provided instead of a gully to take the discharge of waste water from every sink or other fitting in -

- (a) a building in respect of which the waste water is disposed of in French drains or other similar works; and
- (b) any place where, in the opinion of the Municipality, the discharge of grease, oil and fat is likely to cause an obstruction in the flow in the sewers or drains or to cause an interference with the proper operation of a waste-water treatment plant.

23. Industrial grease traps

- (1) Industrial effluent that contains or, in the opinion of the Municipality, is likely to contain grease, oil, fat or inorganic solid matter in suspension must, before the effluent is allowed to enter any sewer, be passed through one or more tanks or chambers of an approved type, size and capacity designed to intercept and retain the grease, oil, fat or solid matter.
- (2) Oil, grease or any other substance that is contained in any industrial effluent or other liquid and that gives off an inflammable or noxious vapour at a temperature of or exceeding 20 °C must be intercepted and retained in a tank or chamber so as to prevent entry of the oil, grease or substance into the sewer.

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- (3) A tank or chamber referred to in subsection (1) must comply with the following requirements:
- (a) The tank or chamber must be -
 - (i) of adequate capacity;
 - (ii) constructed of hard, durable materials; and
 - (iii) watertight when completed.
 - (b) The water seal of the discharge pipe of the tank or chamber must be not less than 300 mm in depth.
 - (c) The tank or chamber must be provided with such a number of manhole covers as may be adequate for the effective removal of grease, oil, fat and solid matter.
- (4) A tank or chamber referred to in subsection (1) must be cleaned regularly to remove grease, oil, fat and solid matter, and the person discharging effluent into the tank or chamber must maintain a register in which the following must be recorded and appear:
- (a) The dates on which the tank or chamber was cleaned;
 - (b) the name of the company employed to clean the tank or chamber; and
 - (c) a certificate from the cleaning company certifying that the tank or chamber has been cleaned and stating the manner in which the contents of the tank or chamber were disposed of.

24. Mechanical appliances for lifting sewage

- (1) Every person must, before installing any mechanical appliance for the raising or transfer of sewage in terms of the building regulations, apply in writing to the Engineer for permission to install the appliance, and application must be made on the form included in the Municipality's specifications for the design of pump stations.
- (2) The form prescribed in subsection (1) must be completed by a professional engineer who is fully conversant with the mechanical details of the appliance, and the undertaking annexed to the form must be signed by the owner of the premises.

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- (3) The application form referred to in subsection (1) must be accompanied by drawings prepared in accordance with the relevant provisions of the building regulations, and the drawings must show -
 - (a) details of the compartment containing the appliance, the sewage storage tank, the stilling chamber and the position of the appliance, tank and chamber; and
 - (b) the position of the drains, ventilation pipes, rising main and the sewer connection.
- (4) Notwithstanding any permission given in terms of subsection (1), the Municipality is not liable for any injury or damage to life or property caused by the use or malfunctioning of an appliance or by any other condition arising from the installation or operation of the appliance, which appliance must be designed by a professional engineer who remains liable.
- (5) Every mechanical appliance installed for the raising or transfer of sewage must be specifically designed for that purpose and must be fitted with a discharge pipe, sluice valves and non-return valves located in approved positions.
- (6) Unless otherwise permitted by the Engineer, two mechanical appliances for the raising or transfer of sewage must be installed, and each appliance must be controlled so that one will begin to function automatically and immediately in the event of the failure of the other.
- (7) Every mechanical appliance forming part of a drainage installation must be located and operated in such a manner as not to cause any nuisance through noise or smell or otherwise, and every compartment containing such an appliance must be ventilated effectively.
- (8) The maximum discharge rate from any mechanical appliance and the times between which the discharge may take place must be as prescribed by the Engineer who may, at any time, require the owner of the premises to install such fittings and regulating devices as may be necessary to ensure that the prescribed maximum discharge rate is not exceeded.
- (9) (a) Except where sewage storage space is incorporated as an integral part of a mechanical appliance, a sewage storage tank must be provided in conjunction with the appliance.

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- (b) Every sewage storage tank required in terms of paragraph (a) must meet the following requirements:
- (i) The sewage storage tank must be constructed of hard, durable materials and must be watertight, and the internal surfaces of the walls and floor of the tank must be rendered smooth and impermeable.
 - (ii) The sewage storage tank's storage capacity below the level of the inlet must be equal to the quantity of sewage that can be discharged into the tank within a period of 24 hours or 900 litres, whichever is the greater quantity.
 - (iii) The sewage storage tank must be designed so that the maximum proportion of its sewage content is emptied during each discharge cycle of the mechanical appliance.
- (10) If a mechanical appliance consists of a pump, the starting mechanism must be set for pumping to commence when the volume of sewage contained in the storage tank is equal to not more than one fifth of the tank's storage capacity.
- (11) When required by the Engineer, a stilling chamber must be installed between the outlet of the mechanical appliance and the connecting drain or sewer connection, as the case may be, and such a chamber must have a depth of not less than 1 500 mm.
- (12) Every storage tank and stilling chamber must be provided with a ventilation pipe in accordance with the Engineer's specifications.

25. Swimming pools

No water from a swimming pool may, without the prior written permission of the Municipality, be discharged directly or indirectly over or into any road, gutter or stormwater drain of which ownership is vested in the Municipality. The backwash water from a swimming pool may be discharged into the drainage system on the premises on which the pool is situated.

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26. Protection from ingress of flood waters

Where a development is situated in the 1-in-50-years flood plain, the top level of all service access holes, inspection chambers and gullies must be above the 1-in-50-years flood level.

27. Stormwater not to enter sewers

No person may discharge or cause or permit to be discharged any substance other than sewage into a drainage installation.

28. Sewage or other pollutants not to enter stormwater drains

- (1) The owner or occupier of any piece of land on which steam or any liquid, other than potable water, is stored, processed or generated must provide all the facilities necessary to prevent any discharge, leakage or escape of such liquid into any street, stormwater drain or watercourse, except where, in the case of steam, the Municipality has specifically permitted such a discharge.
- (2) Where the hosing down or the flushing by rainwater of an open area on any private premises is, in the opinion of the Municipality, likely to cause the discharge of objectionable matter into a street gutter, stormwater drain, river, stream or other watercourse, whether natural or artificial, or to contribute to the pollution of such a watercourse, the Municipality may instruct the owner of the premises to take, at his or her cost, the measures, by way of the owner's alteration of the drainage installation or roofing of the area, it may consider necessary to prevent or minimize the discharge or pollution.

INDUSTRIAL EFFLUENT

29. Permission to discharge industrial effluent

- (1) No person may discharge or cause or permit to be discharged into any sewer any industrial effluent or other liquid or substance other than soil water or waste water without the written permission of the Municipality first being obtained, and then only in strict compliance with all of the conditions of the permission.

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- (2) Every person must, before discharging any industrial effluent into a sewer, apply in writing to the Municipality for permission to discharge the effluent and must thereafter furnish such additional information and submit such samples as the Municipality may require.
- (3) The Municipality may, at its discretion, grant permission for the discharge of industrial effluent from any premises into any sewer, having regard to the capacity of the sewers, the mechanical appliance used for the conveyance of the sewage or the waste-water treatment plant, whether or not the plant is vested in the Municipality, subject to the conditions that the Municipality deems fit to impose, including the payment of any charge determined in terms of the tariff.
- (4) Any person to whom permission has been granted in terms of subsection (3) to discharge industrial effluent into a sewer must, before doing anything or causing or permitting anything to be done that may result in a change in the quantity of the discharge or nature of the effluent, notify the Municipality in writing of the date on which the proposed change will take place and of the nature of the proposed change.
- (5) Any person who discharges or causes or permits to be discharged any industrial effluent into a sewer without having first obtained permission to do so in terms of subsections (3) and (4) is guilty of an offence and liable -
 - (a) in addition to any penalties, to such charge as the Municipality may assess for the conveyance and treatment of the effluent so discharged; and
 - (b) for any damage caused as a result of the unauthorised discharge.
- (6) Without prejudice to its rights in terms of subsection (5) or section 35(2)(c), the Municipality is entitled to recover from any person who discharges into a drain or sewer any industrial effluent or any substance that is prohibited or restricted in terms of section 35 or that has been the subject of an order issued in terms of section 35(2) all costs, expenses or charges incurred or to be incurred by the Municipality as a result of any or all of the following:
 - (a) Injury to people or damage to the sewer, to any waste-water treatment

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plant or mechanical appliance or to any property whatsoever, which injury or damage is as a result of the breakdown, either partial or complete, of any waste-water treatment plant or mechanical appliance, whether under the control of the Municipality or not; or

- (b) a prosecution in terms of the Water Act, or any action against the Municipality consequent on a partial or complete breakdown of any waste-water treatment plant or mechanical appliance caused directly or indirectly by the discharge, including fines and damages which may be imposed or awarded against the Municipality.
- (7) (a) Owing to a change in circumstances arising from a change in the method of sewage treatment or the introduction of new, revised, stricter or other standards by the Municipality or in terms of the Water Act, or as a result of any amendment to these by-law or for any other reason, the Municipality may from time to time or at any time -
- (i) review, amend, modify or revoke any permission given or any conditions attached to such a permission;
 - (ii) impose new conditions for the acceptance of industrial effluent into the sewer; and
 - (iii) prohibit the discharge of any or all of the industrial effluent into the sewer.
- (b) The Municipality shall give adequate written notice in advance of its intention in terms of paragraph (a) to review, amend, modify or revoke the permission or conditions, to impose new conditions or to prohibit the discharge, provided that on the expiration of the period of such notice the previous permission or conditions, as the case may be, fall away and the new or amended conditions, if any, apply immediately.

30. Control of industrial effluent

- (1) The owner or occupier of any premises from which industrial effluent is discharged into a sewer must provide adequate facilities such as overflow level detection devices, standby equipment, overflow catch-pits or other

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- appropriate means to effectively prevent the accidental discharge into a sewer, whether through the negligence of operators, power failure, failure of equipment or control gear, overloading of facilities, spillage during loading or unloading or for any other like reason, of any substance that is prohibited or restricted or has properties outside the limits imposed by these by-law.
- (2) If the owner or occupier of any premises on which industrial effluent originated intends treating the effluent before discharging it, he or she must obtain the prior written permission of the Engineer.
- (3) The Municipality may, by notice served on the owner or occupier of premises from which industrial effluent is discharged, require the owner or occupier to, without prejudice to any other provision of these by-law, do all or any of the following:
- (a) The owner or occupier must subject the effluent, before it is discharged into the sewer, to such pre-treatment as will ensure that the effluent at no time fails to conform in all respects with the requirements of section 35(1), or the owner or occupier must modify the effluent cycle of the industrial process to an extent and in a manner which, in the opinion of the Municipality, is necessary to enable the waste-water treatment plant receiving the effluent, whether the plant is under the control of the Municipality or not, to produce treated effluent that complies with any standards which may be laid down in respect of waste water treatment plants in terms of the Water Act.
 - (b) The owner or occupier must restrict the discharge of effluent to certain specified hours and restrict the rate of discharge to a specified maximum and must install at his or her own expense such tanks, appliances and other equipment as, in the opinion of the Municipality, may be necessary or adequate for compliance with the restrictions.
 - (c) The owner or occupier must install a separate drainage installation for the conveyance of industrial effluent and must discharge the effluent into the sewer through a separate connection as directed by the Municipality, and the owner or occupier must refrain from discharging the industrial effluent through any drainage installation intended or used for the

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conveyance of domestic sewage or from discharging any domestic sewage through the separate installation for industrial effluent.

- (d) The owner or occupier must construct, at his or her own expense, in any drainage installation conveying industrial effluent to the sewer, one or more inspection, sampling or metering chambers of such dimensions and materials and in such positions as the Municipality may prescribe.
- (e) The owner or occupier must pay, in respect of the industrial effluent discharged from the premises, such charge as may be determined in terms of the tariff, provided that where, owing to the particular circumstances of a case, the actual chemical oxygen demand (COD) or permanganate value (PV) and the concentration of metals of the effluent cannot be assessed by means of the method of assessment prescribed by the SABS, the Engineer may adopt an alternative method of assessment that reflects the said value, and the Engineer shall accordingly determine the charge payable in terms of the tariff.
- (f) The owner or occupier must provide all information that may be required by the Engineer to enable the Engineer to determine the charges payable in terms of the tariff.
- (g) For the purposes of paragraph (f), the owner or occupier must provide and maintain, at his or her own expense, a meter measuring the total quantity of water which is drawn from any borehole, spring or other natural source of water, excluding that of the Municipality, and which is used on the property and discharged as industrial effluent into the sewer.

31. Prohibited discharges

- (1) No person may discharge or cause or permit the discharge or entry into any sewer of any sewage, industrial effluent or other liquid or substance which -
 - (a) in the opinion of the Engineer, may be offensive to or may cause a nuisance to the public;
 - (b) is in the form of steam or vapour or has a temperature exceeding 44 °C at the point where it enters the sewer;
 - I has a pH value less than 6,0 or greater than 10,0;

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- (d) contains any substance whatsoever that is likely to produce or emit explosive, flammable, poisonous or offensive gases or vapours in any sewer;
- (e) contains a substance having a flashpoint of less than 93 °C or which emits a poisonous vapour at a temperature below 93 °C;
- (f) contains any material whatsoever, including oil, grease, fat or detergents, that is capable of causing interference with the proper operation of a waste-water treatment plant and the Municipality's sewer system;
- (g) shows any visible signs of tar or associated products or distillates, bitumens or asphalts;
- (h) contains a substance in such concentration as is likely in the final, treated effluent from a waste-water treatment plant to produce an undesirable taste after sterilisation or an undesirable odour or colour, or excessive foam;
- (i) exceeds any of the limits or concentrations of substances given in Appendix A to these by-law, provided that the Municipality may approve greater limits or concentrations for such period or on such conditions as it may specify after consideration of the effect of dilution in the sewer and of the effect of such industrial effluent or other liquid or substance on the sewer or on any sewage treatment process if the Municipality is satisfied that in the circumstances the discharge of the industrial effluent or other liquid or substance will not -
 - (i) harm or damage any sewer, mechanical appliance, waste-water treatment plant or equipment;
 - (ii) prejudice the use of sewage effluent for re-use; or
 - (iii) adversely affect any waters into which purified effluent is discharged, or any land or crops irrigated with the purified effluent; and
- (j) contains any substance whatsoever, which, in the opinion of the Engineer -
 - (i) is not amenable to treatment at a waste-water treatment plant and which causes or may cause a breakdown or inhibition of the normal

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- sewage treatment processes;
- (ii) is or may be amenable to treatment only to such degree as to prevent the final, treated effluent from the waste-water treatment plant from satisfactorily complying in all respects with any requirements imposed in terms of the Water Act; or whether listed in the relevant appendix to these by-law or not, either alone or in combination with other matter may -
- (aa) generate or constitute a toxic substance detrimental to the health of persons who are employed at the waste-water treatment plant or who enter the Municipality's sewers or manholes in the course of their duties;
- (bb) be harmful to sewers, waste-water treatment plants or land used for the disposal of purified sewage effluent; or
- (cc) adversely affect any of the processes whereby sewage is purified or any re-use of purified sewage effluent.

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- (2) (a) Any person who receives from an official duly authorized thereto by the Municipality a written order instructing him or her to stop discharging into the sewer any substance referred to in subsection (1) must immediately stop such discharge.
- (b) Any person who contravenes the provisions of subsection (1) or who fails to comply with an order issued in terms of paragraph (a) is guilty of an offence.
- (c) Notwithstanding the provisions of paragraph (b), if any person fails to comply with the terms of an order served on him or her in terms of paragraph (a) and if the discharge is in the opinion of the Engineer likely to cause damage to any sewer or mechanical or other appliance or to seriously prejudice the efficient operation of any waste-water treatment plant, the Municipality may, after further written notice, refuse to permit the discharge of the industrial effluent into the sewer until the industrial effluent complies in all respects with the Municipality's requirements as prescribed in terms of these by-law. Any person who has been refused such permission to discharge industrial effluent into a sewer must immediately stop the discharge and, if he or she fails to do so, the Municipality may prevent him or her from proceeding with the discharge.

CHARGES FOR ALL SERVICES

32. Prescribed tariffs and charges for sanitation services

- (1) All charges payable in respect of sanitation services, including but not restricted to connection charges, fixed charges or any additional charges or interest, shall be set by the Municipality from time to time in accordance with -
- (a) its rates and tariff policy;
- (b) any relevant by-law; and
- (c) any regulations under national or provincial legislation.

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- (2) Charges may differ for the different categories of customers and users of services and according to the types and levels of services, the quantity of services, the infrastructure requirements and the geographic areas.
- (3) The Municipality may, in addition to the tariffs or charges determined for sanitation services actually provided, levy a monthly fixed charge, an annual fixed charge or a once-off fixed charge where sanitation services are available, whether or not such services are consumed.

33. Payment for sanitation services

The owner or occupier of any premises with whom an agreement for water services has been entered into in terms of section 5 is liable for payment of all sanitation charges in accordance with the Municipality's by-law relating to credit control and debt collection.

34. Charges in respect of services associated with on-site sanitation services

The operation and maintenance of on-site sanitation systems and all costs pertaining to such operation and maintenance remain the responsibility and liability of the owner of the premises. The Municipality will not, under normal circumstances, render such operation and maintenance services. Should the Municipality, however, approve its rendering of such services -

- (a) charges in respect of the removal or collection of conservancy tank contents and night soil or the emptying of ventilated improved pit latrines cover all the operating and

maintenance costs for the removal of the pit contents, the transportation to a disposal site, the treatment of the contents to achieve a sanitary condition and the final disposal of any solid residues;

- (b) charges in respect of the removal or collection of conservancy tank contents and night soil or the emptying of ventilated improved pit

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latrines are based on the volume removed by vacuum tank or otherwise;
and

- (c) the Municipality may charge a prescribed fixed charge if the volume of the conservancy tank contents or night soil or the contents of the ventilated improved pit latrines cannot be quantified.

35. Measurement of quantity of domestic effluent discharged

- (1) The quantity of domestic effluent discharged shall be determined by a percentage of the water supplied by the Municipality, provided that where the Engineer is of the opinion that such a percentage in respect of specific premises is excessive, having regard to the purposes for which the water is consumed on those premises, the Municipality may reduce the percentage applicable to those premises to a figure which, in its opinion and in the light of the available information, reflects the proportion between the likely quantity of sewage discharged from the premises and the quantity of water supplied.
- (2) Where premises are supplied with water from a source other than or in addition to the Municipality's water supply system, including abstraction from a river or borehole, the quantity of domestic effluent discharged shall be determined as a percentage of the total water used on the premises as may be reasonably estimated by the Municipality.

36. Metering and assessment of the volume and composition of industrial effluent

- (1) The quantity of industrial effluent discharged into the sewage disposal system shall -
 - (a) where a measuring device is installed, be determined by the quantity of industrial effluent discharged from the premises as measured by means of that measuring device; or
 - (b) until such time as a measuring device is installed, be determined by a percentage of the water supplied by the Municipality to that premises.

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- (2) (a) The Municipality may require the owner or occupier of any premises to incorporate, in such a position as the Municipality may determine, in any drainage installation conveying industrial effluent to a sewer, any control meter or gauge or other device of an approved type and in the control of the Municipality for the purpose of ascertaining to the satisfaction of the Municipality the tempo, volume and/or composition of the industrial effluent.
- (b) It is an offence for any person to bypass, open, break into or otherwise interfere with or to damage any meter, gauge or other device referred to in paragraph (a), provided that the Municipality may at its discretion enter into an agreement with any person discharging industrial effluent into a sewer to establish an alternative method of assessing the quantity and tempo of effluent discharged.
- (3) The Municipality is entitled to install and maintain a meter, gauge or other device referred to in subsection (2) at the expense of the owner of the premises on which it is installed.
- (4) Where premises are supplied with water from a source other than or in addition to the Municipality's water supply system, including abstraction from a river or borehole, the quantity of industrial effluent discharged shall be determined as a percentage of the total water used on the premises as may be reasonably estimated by the Municipality.
- (5) The owner of any premises on which there is situated a borehole used for a water supply for trade or industrial purposes must -
- (a) register the borehole with the Municipality;
 - (b) provide the Municipality with full particulars of the discharge capacity of the borehole; and
 - (c) if the Municipality has reason to doubt the reliability of the particulars given, carry out at the expense of the owner or occupier, such tests on the discharge capacity of the borehole as may, in the opinion of the Municipality, be necessary for the purposes of these by-law.

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- (6) Where a portion of the water supplied to the premises forms part of the end product of a manufacturing process or is lost by reaction or evaporation during the manufacturing process or for any other reason, the Municipality may on application reduce the assessed quantity of industrial effluent.
- (7) In respect of any premises from which industrial effluent is discharged, the following conditions are applicable in connection with and to the calculation of charges payable to the Municipality for the treatment of industrial effluent:
- (a) In respect of the application of the charges, wherever a person other than the owner occupies the property, the word "owner" refers to the owner of the property. The occupier of the property or, where charges are concerned, the owner and occupier, are jointly and severally liable for the charges, but the Municipality shall in the first instance levy the charge against the occupier. The owner remains liable for all actions on his or her property.
- (b) The owner of any premises from which industrial effluent is discharged must, in addition to any other charges provided for in these by-law or in any other law or by-law, pay to the Municipality a charge calculated in accordance with the provisions of these by-law in respect of each cycle during which the discharge takes place, which charge must be paid within 30 calendar days after the Municipality has rendered an account for the charge. Where the full amount of the charge is not paid to the Municipality within 30 calendar days, a surcharge equal to the outstanding balance is payable to the Municipality.
- (c) In respect of any premises from which industrial effluent is discharged, each owner or occupier must conduct the prescribed tests on the industrial effluent according to a regular schedule as provided for in the permission to discharge industrial effluent and must report the results of the tests to the Municipality.
- (d) The Municipality may conduct random compliance tests on the industrial effluent to correlate those of the industry. If discrepancies are found between the values of the industry and those of the Municipality,

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the values of the Municipality shall be taken as correct after consultation with the industry involved. Further tests may be requested by the Municipality to determine the values for the industrial effluent discharge formula, which tests shall all be conducted at the cost of the industry.

(e) The average of the values of the different analysis results of tests done on 24-hourly composite or snap samples of industrial effluent, taken during the period of charge, shall be used to determine the treatment charges payable.

(f) In the absence of a complete daily set of 24-hourly composite or snap samples, the average of not less than two values of the sampled effluent, taken during the period of charge, shall be used to determine the industrial effluent charges payable.

(g) The total system values for the treatment charges shall remain constant initially for a period of one month but in any case for a period of not more than 12 months from the date of commencement of the charges. After expiry of the period values may be amended or revised from time to time depending on such changes in the analysis results or further samples as may be determined from time to time, provided that the Municipality may at its discretion in any particular case levy the minimum charges prescribed in paragraph (k) without taking any samples.

(h) When, in terms of paragraph (d), the Municipality takes a sample, one half of the sample shall be made available to the owner or occupier.

(i) For the purpose of calculating the quantity of effluent discharged from each point of discharge of effluent, the total quantity of water consumed on the premises shall be allocated to the several points of discharge as accurately as is reasonably practicable after consultation between the Municipality and the owner or occupier of the premises.

(j) The costs of conveying and treating sewage and/or industrial effluent shall be determined by the Municipality and shall apply with effect from the date determined by the Municipality.

(k) At the discretion of the Municipality, the charges for industrial effluent may be changed to a fixed monthly charge. The Municipality shall

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determine the minimum charge, taking into consideration the effluent strengths and the volume of the effluent.

(l) When an inspection of the premises conducted by the municipality reveals non-compliance with these by-law, the Municipality may give a written order for the rectification of the situation that is causing the non-compliance. The rectification must be executed diligently. If, at the time of a subsequent re-inspection, nothing has been done to rectify the situation, or no extension of time for the rectification has been requested from the Municipality in writing, an inspection fee shall be levied by the Municipality over and above the treatment charges or the disincentive charges. On receipt of an order on a third inspection the order may include a notice of cancellation of the permission to discharge industrial effluent and a date may be given for the connection to the Municipality's sewers to be sealed off.

38. Reduction in the quantity determined in terms of sections 39 and 40(1)(a)

- (1) A person is entitled to a reduction in the quantity determined in terms of sections 39 and 40(1)(a) in the event that the quantity of water on which the percentage is calculated was measured during a period when water was wasted or a leakage went undetected, provided that the person demonstrates to the satisfaction of the Municipality that the water was not discharged into the sewage disposal system.
- (2) For the purposes of this section, a reduction in the quantity is based on the quantity of water lost through leakage or wastage during the leakage period.
- (3) For the purposes of this section, the leakage period is either the period of measurement immediately prior to the date of the repair of the leak or the period of measurement during which the leak is repaired, whichever period results in the greater reduction in the quantity.
- (4) For the purposes of this section, the quantity of water lost is calculated as the consumption for the leakage period less the average consumption

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for the same length of time, which average consumption shall be based on the preceding three months' consumption. In the event of no consumption history being available, the average water consumption shall be determined by the Municipality, after due consideration of all relevant information.

- (5) No reduction in the quantity shall be made in terms of subsection (1) if the loss of water resulted directly or indirectly from the consumer's failure to comply with these or other by-law or his or her contravention of these or other by-law.

39. Other work

Where any work other than that for which a fixed charge has been determined by the Municipality is done by the Municipality, the Municipality is entitled in terms of these by-law to recover the costs from the person in respect of whom the work was done, and a sum to be determined by the Municipality may be included in such costs to cover all expenditure reasonably incurred by the Municipality.

40. Offences and penalties

(1) Penalties

Subject to any provisions of the Water Act in which an offence is explicitly specified, any person contravening or failing to comply with any provisions of these by-law or any written conditions laid down in these by-law is guilty of an offence, and such a person is, for every day the offence continues after the date on which he or she has been given written notice to perform or discontinue an act, deemed guilty of a separate offence and is on conviction liable to any or all of the following penalties:

- (a) A fine not exceeding R5 000;
- (b) a fine not exceeding R5 000 or, in default of payment, imprisonment for a period not exceeding 12 months; or
- (c) imprisonment for a period not exceeding 12 months.

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(2) Indemnification from liability

Neither an employee of the Municipality nor any person, body, organisation or corporation acting on behalf of the Municipality is liable for any damages arising from any omissions or act done or committed in good faith and in the course of his or her duties, as the case may be.

Short title

Schedule 1

Notice 8 of 1991 CONSOLIDATED BY-LAW SUPPLEMENTARY TO THE NATIONAL BUILDING REGULATIONS AND BUILDING STANDARDS ACT, 1977, AND THE REGULATIONS PROMULGATED THERE UNDER

Notice 1443 of 1978 STANDARD DRAINAGE BY-LAW

Notice 3822 of 1992 BUILDING AND SEWAGE BY-LAW; SECTION C, SEWERAGE

Appendix A

LIMITS OF CONCENTRATION OF CERTAIN SUBSTANCES

(i)

Parameter	Allowed specification
Permanganate value (PV) not exceeding	1 400 ml/ℓ
pH within range of	6,0 - 10,0
Electrical conductivity not greater than	300 mS/m at 20 °C
Caustic alkalinity (expressed as CaCO ₃)	2 000 mg/ℓ
Substance not in solution (including fat, oil, grease, waxes and like substances)	2 000 mg/ℓ
Substances soluble in petroleum ether	500 mg/ℓ
Sulphides, hydrosulphides and polysulphides (expressed as S)	50 mg/ℓ
Substances from which hydrogen cyanide can be liberated in the drainage installation, sewer or sewage treatment works (expressed as HCN)	20 mg/ℓ

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Formaldehyde (expressed as HCHO)	50 mg/ℓ
Non-organic solids in suspension	100 mg/ℓ
Chemical oxygen demand (COD)	5 000 mg/ℓ
All sugars and/or starch (expressed as glucose)	1 500 mg/ℓ
Available chlorine (expressed as Cl)	100 mg/ℓ
Sulphates (expressed as SO ₄)	1 800 mg/ℓ
Fluorine - containing compounds (expressed as F)	5 mg/ℓ
Anionic surface active agents	500 mg/ℓ

(ii) METALS

Group 1:

Metal	Expressed as
Manganese	Mn
Chromium	Cr
Copper	Cu
Nickel	Ni
Zinc	Zn
Iron	Fe
Silver	Ag
Cobalt	Co
Tungsten	W
Titanium	Ti
Cadmium	Cd

The total collective concentration of all metals in Group 1 (expressed as indicated above) in any sample of effluent may not exceed 50 mg/ℓ, nor may the concentration of any individual metal in any sample exceed 20 mg/ℓ.

Group 2:

Metal	Expressed as
Lead	Pb
Selenium	Se
Mercury	Hg

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The total collective concentration of all metals in Group 2 (expressed as indicated above) in any sample of effluent may not exceed 10 mg/ℓ, nor may the concentration of any individual metal in any sample exceed 5 mg/ℓ.

(iii) OTHER ELEMENTS

Element	Expressed as
Arsenic	As
Boron	B

The total collective concentration of all elements (expressed as indicated above) in any sample of effluent may not exceed 20 mg/ℓ.

(iv) RADIOACTIVE WASTE

Radioactive waste or isotopes: Such concentration as may be laid down by the South African Nuclear Energy Corporation or any State department.

Notwithstanding the requirements set out in this Appendix, the Municipality reserves the right to limit the total mass of any substance or impurity discharged per 24 hours into the sewers from any premises.

NOTE: The method of testing in order to ascertain the concentration of any substance referred to here shall be the test normally used by the Municipality for these purposes. Any person discharging any substance referred to in this Appendix shall obtain the details of the appropriate test from the Municipality.

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Appendix B

**FORM OF APPLICATION FOR PERMISSION TO DISCHARGE INDUSTRIAL EFFLUENT INTO
THE MUNICIPALITY'S SEWER**

(Please complete the application in block capitals.)

I, _____ (name),
the undersigned, duly authorised to sign on behalf of

("the applicant"), hereby apply in terms of the Sanitation By-law of the Municipality for permission to discharge industrial effluent into the Municipality's sewer on the basis of the facts stated herein.

PART I

1. NATURE OF THE BUSINESS OR UNDERTAKING:

**2. NAME OR STYLE UNDER WHICH THE BUSINESS OR UNDERTAKING IS
CONDUCTED:**

3. POSTAL ADDRESS OF THE BUSINESS OR UNDERTAKING:

4. PHYSICAL STREET ADDRESS OF THE BUSINESS OR UNDERTAKING:

ERF NO OR FARM PORTION: _____ TOWNSHIP OR FARM:

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5. IF THE BUSINESS OR UNDERTAKING IS CONDUCTED BY A COMPANY OR CLOSED CORPORATION, STATE THE NAME OF THE SECRETARY AND, IF IT IS A PARTNERSHIP, STATE THE NAMES OF THE PARTNERS:

6. IS THIS A NEW OR ESTABLISHED BUSINESS OR UNDERTAKING: _____

7. DESCRIPTION OF INDUSTRIAL OR TRADE PROCESS BY WHICH THE EFFLUENT WILL BE PRODUCED:

8. INFORMATION RELATING TO EMPLOYEES:

Office

Factory

(1) Total number of daily employees (not included in (4))

(2) Number of shifts worked per day

(3) Number of days worked per week

(4) Number of persons resident on the premises

(5) Is a canteen provided? (Yes/No)

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PART II

FACTS RELATING TO THE CONSUMPTION OF WATER

1. TOTAL NUMBER OF LITRES OF WATER CONSUMED IN SIX MONTHS:

Meter No Meter No Meter No Total

Water purchased from the Municipality

Water from a borehole or other source

1

Water entering with raw materials

Section of plant served by meter

TOTAL A

2. WATER CONSUMPTION

(1) Industrial kℓ/month

(i) Quantity of water in product

(ii) Quantity of water lost by evaporation

(iii) Quantity of water used as boiler make-up

(iv) Quantity of water for other uses (cooling, gardens, etc)

TOTAL B _____

(2) Domestic use kℓ/month

(i) Total number of employees (Allow 1 kℓ per person per month)

(ii) Total number of employees permanently resident on the premises, eg in hostels (Allow 3 kℓ per person per month)

TOTAL C _____

3. EFFLUENT DISCHARGED INTO SEWER

(1) Metered volume (if known) kℓ/month

(2) Estimated unmetered volume (see below*) kℓ/month

(3) Estimated rate of discharge

(4) Period of maximum discharge (eg 07:00 to 08:00)

* If no effluent meter is installed on the premises, the estimated volume of

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unmetered effluent discharged into the sewer is calculated as follows:

$$A - (B + C) = \dots\dots\dots k\ell/\text{month}$$

PART III

INFORMATION REGARDING NATURE OF INDUSTRIAL EFFLUENT

Information required concerning the chemical and physical characteristics of the effluent to be discharged:

- (1) Maximum temperature of effluent (°C)
- (2) pH value (pH)
- (3) Nature and amount of settleable solids
- (4) Organic content (expressed as chemical oxygen demand)
- (5) Maximum total daily discharge (kℓ)
- (6) Maximum rate of discharge (kℓ/hr)
- (7) Periods of maximum discharge (eg 07:00 to 08:00)
- (8) If any of the substances specified in the table below or their salts are formed on the premises, place a cross in the space in which the substance is written and, if possible, state the average concentration of this substance that is likely to be present in any effluent.

ELEMENTS	COMPOUNDS	OTHER SUBSTANCES
Arsenic mg/ℓ	Ammonium mg/ℓ	Grease and/or oil mg/ℓ
Boron mg/ℓ	Nitrate mg/ℓ	Starch and/or sugars mg/ℓ
Cadmium mg/ℓ	Sulphate mg/ℓ	Synthetic detergents mg/ℓ
Chromium mg/ℓ	Sulphide mg/ℓ	Tar and/or tar oils mg/ℓ
Cobalt mg/ℓ	Other (Specify) mg/ℓ	Volatile solvents mg/ℓ
Copper mg/ℓ	Other (Specify) mg/ℓ	
Cyanide mg/ℓ		
Iron mg/ℓ		
Lead mg/ℓ		
Manganese mg/ℓ		
Mercury mg/ℓ		

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Nickel mg/ℓ
Selenium mg/ℓ
Titanium mg/ℓ
Tungsten mg/ℓ
Zinc mg/ℓ
Other (Specify) mg/ℓ

(9) Furnish any further information about the kind or character, the chemical composition, concentration or other properties peculiar to the industrial effluent on a separate sheet and attach it to this form.

PART IV

CONDITIONS FOR THE ACCEPTANCE OF INDUSTRIAL EFFLUENT

This application will only be granted on the applicant's undertaking that the applicant will abide by, observe and comply with the following terms and conditions, and any further special conditions that the Engineer may think fit to impose in any particular case:

1. The applicant must annex to this form descriptions of and a statement setting out the dimensions of the grease and oil traps, screens, dilution and neutralising tanks and any other provision made by the applicant for the treatment of the effluent before it is discharged into the sewer.
2. The applicant must submit to the Municipality, if requested to do so, plans showing the reticulation systems on the applicant's premises for water and industrial effluent.
3. The applicant must, in addition to complying with the provisions of the Municipality's Sanitation By-law as they relate to the protection of the Municipality's employees, sewers and treatment plants from damage, comply with any direction concerned with such protection that is given to the applicant by the Engineer, whether verbally or in writing, for the purpose of ensuring the applicant's compliance with the by-law.

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4. The applicant must notify the Municipality of any material change in the nature or quantity of the industrial effluent specified in this application or in any of the facts furnished by the applicant in the application. The applicant must notify the Municipality as soon as possible after the applicant becomes aware of the material change, or at least 14 days before anything is done to cause the material change.
5. The applicant must, within 30 days from the date of signature of this application, obtain an accurately representative sample of not less than 5 litres of the industrial effluent which is to be discharged into the sewer, which sample must be free of domestic sewage. The applicant must submit one half of the sample to the Municipality for analysis and must also submit to the Engineer a report on the sample compiled by an analyst appointed by the applicant. In the case of a newly established business or undertaking, the 30-day period may be extended by the Municipality for a period not exceeding six months or for further extended periods that the Municipality may, at its discretion, permit from time to time in writing.
6. The applicant hereby declares and guarantees that the information furnished by the applicant in this form, or otherwise in connection with this application, is, to the best of the applicant's knowledge and belief, in all respects correct.
7. The applicant agrees that the said information, being in all respects correct, forms the basis on which this application will be granted by the Municipality.

Thus done and signed at by the applicant on this day
of 20....

.....
Signature of the applicant

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Capacity of the applicant:

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Appendix C

INDUSTRIAL EFFLUENT DISCHARGE FORMULA

1. The additional industrial effluent charge for the disposal of high-strength sewage into waste-water treatment plants shall be determined in accordance with the following formula:

Where T_c = extraordinary treatment cost to consumer

Q_c = waste-water volume discharged by consumer in kilolitres

t = unit treatment cost of waste water in rand per kilolitre

COD_c = total chemical oxygen demand (COD) of waste water discharged by consumer in milligrams per litre and is inclusive of both the biodegradable and non-biodegradable portion of the COD

COD_d = total COD of domestic waste water in milligrams per litre

P_c = orthophosphate concentration of waste water discharged by consumer in milligrams of phosphorus per litre

P_d = orthophosphate concentration of domestic waste water in milligrams of phosphorus per litre

N_c = ammonia concentration of waste water discharged by consumer in milligrams of nitrogen per litre

N_d = ammonia concentration of domestic waste water in milligrams of nitrogen per litre

a = portion of the costs directly related to COD

b = portion of the costs directly related to the removal of phosphates

c = portion of the costs directly related to the removal of nitrates

□

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Different terms	Value
t	R0,82/kℓ
COD _d	600 mg/ℓ
P _d	10 mg/ℓ
N _d	25 mg/ℓ
a	0,6
b	0,25
c	0,15

Penalty charges

2. Penalties for the exceeding of the prescribed limits shall be determined by the Municipality from time to time in accordance with the Water Act and the applicable regulations.