

DWAf MODEL WATER SERVICES BY-LAWS

(ADOPTED BY RESOLUTION OF THE MUNICIPAL COUNCIL OF ...)

The Municipality of (“the municipality”) hereby publishes the Water Services By-Laws set out below. They have been promulgated by the municipality in terms of section 156(2) of the Constitution of the Republic of South Africa, 1996 and in accordance with section 13(a) of the Local Government: Municipal Systems Act, 2000 (Act 32 of 2000).

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CHAPTER 1: DEFINITIONS

1. Definitions

For the purpose of these by-laws, any word or expressions to which a meaning has been assigned in the Water Services Act, 1996 (Act No 108 of 1996), the Local Government: Municipal Systems Act, 2000 (Act No 32 of 2000) or the National Building Regulations made in terms of the National Building Regulations and Building Standards Act, 1977 (Act No 103 of 1977) shall bear the same meaning in these by-laws and unless the context indicates otherwise and a word in any one gender shall be read as referring also, to the other two genders—

“accommodation unit” in relation to any premises, means a building or section of a building occupied or used or intended for occupation or use for any purpose;

“account” means an account rendered for municipal services provided;

“Act” means the Water Services Act, 1997 (Act No 108 of 1997), as amended from time to time;

“agreement” means the contractual relationship between the municipality and a customer, whether written or deemed as provided for in the municipality’s by-laws relating to credit control and debt collection;

“approved” means approved by the municipality in writing;

“area of supply” means any area within or partly within the area of jurisdiction of the municipality to which a water service is are provided;

“authorised agent” means—

- (a) any person authorised by the municipality to perform any act, function or duty in terms of, or to exercise any power under, these by-laws;
- (b) any person to whom the municipality has delegated the performance of certain rights, duties and obligations in respect of providing water supply services; or
- (c) any person appointed by the municipality in a written contract as a service provider for the provision of water services to customers on its behalf, to the extent authorised in such contract;

“average consumption” means the average consumption of a customer of a municipal service during a specific period, and is calculated by dividing the total measured consumption of that municipal service by that customer over the preceding three months by three;

“best practicable environmental option” means the option that provides the most benefit or causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term;

“borehole” means a hole sunk into the earth for the purpose of locating, abstracting or using subterranean water and includes a spring;

“Building Regulations” means the National Building Regulations made in terms of the National

Building Regulations and Building Standards, 1977 (Act No 103 of 1977) as amended;

“charges” means the rate, charge, tariff, flat rate or subsidy determined by the municipal council;

“cleaning eye” means any access opening to the interior of a discharge pipe or trap provided for the purposes of internal cleaning;

“combined installation” means a water installation used for fire-fighting and domestic, commercial or industrial purposes;

“commercial customer” means any customer other than domestic consumer and indigent customers, including, without limitation, business, industrial, government and institutional customers;

“connecting point” means the point at which the drainage installation joins the connecting sewer;

“connecting sewer” means a pipe owned by the municipality and installed by it for the purpose of conveying sewage from a drainage installation on a premises to a sewer beyond the boundary of those premises or within a servitude area or within an area covered by a way-leave or by agreement;

“connection” means the point at which a customer gains access to water services;

“connection pipe” means a pipe, the ownership of which is vested in the municipality and installed by it for the purpose of conveying water from a main to a water installation, and includes a “communication pipe” referred to in SANS 0252 Part I;

“conservancy tank” means a covered tank used for the reception and temporary retention of sewage and which requires emptying at intervals;

“customer” means a person with whom the municipality has concluded an agreement for the provision a municipal service as provided for in the municipality’s by-laws relating to credit control and debt collection;

“determined” means determined by the municipality or by any person who makes a determination in terms of these laws;

“domestic consumer” means a customer using water for domestic purposes;

“domestic purposes” in relation to the supply of water means water supplied for drinking, ablution and culinary purposes to premises used predominantly for residential purposes;

“drain” means that portion of the drainage installation that conveys sewage within any premises;

“drainage installation” means a system situated on any premises and vested in the owner thereof and which is used for or intended to be used for or in connection with the reception, storage, treatment or conveyance of sewage on that premises to the connecting point and includes drains, fittings, appliances, septic tanks, conservancy tanks, pit latrines and private pumping installations forming part of or ancillary to such systems;

“drainage work” includes any drain, sanitary fitting, water supplying apparatus, waste or other pipe or any work connected with the discharge of liquid or solid matter into any drain or sewer or otherwise connected with the drainage of any premises;

“dwelling unit” means an interconnected suite of rooms, including a kitchen or scullery, designed for occupation by a single family, irrespective of whether the dwelling unit is a single building or forms part of a building containing two or more dwelling units;

“effluent” means any liquid whether or not containing matter in solution or suspension;

“engineer” means the engineer of the municipality, or any other person authorised to act on his behalf;

“emergency” means any situation that poses a risk or potential risk to life, health, the environment or property;

“environmental cost” means the cost of all measures necessary to restore the environment to its condition prior to an incident resulting in damage;

“estimated consumption” means the consumption that a customer, whose consumption is not measured during a specific period, is deemed to have consumed, that is estimated by taking into account factors that are considered relevant by the municipality and which may include the consumption of water services by the totality of the users of a service within the area where the service is rendered by the municipality, at the appropriate level of service, for a specific time;

“fire installation” means a potable water installation that conveys water for fire-fighting purposes only;

“french drain” means a soil soak pit for the disposal of sewage and effluent from a septic tank;

“high strength sewage” means industrial sewage with a strength or quality greater than standard domestic effluent in respect of which a specific charge as calculated in accordance with Schedule C may be charged;

“household” means a family unit, as determined by the municipality as constituting a traditional household by taking into account the number of persons comprising a household, the relationship between the members of a household, the age of the persons who are members of it and any other factor that the municipality considers to be relevant;

“illegal connection” means a connection to any system, by means of which water services are provided that is not authorised or approved by the municipality;

“industrial effluent” means effluent emanating from the use of water for industrial purposes and includes for purposes of these by-laws any effluent other than standard domestic effluent or stormwater;

“industrial purposes” in relation to the supply of water means water supplied to any premises which constitutes a factory as defined in the General Administrative Regulations, published in terms of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993);

“installation work” means any work done in respect of a water installation, including construction, rehabilitation, improvement and maintenance;

“interest” means interests as may be prescribed by the Minister of Justice in terms of section 1 of the Prescribed Rate of Interest Act, 1975 (Act No 55 of 1975);

“manhole” means any access chamber to the interior of the sewer provided for the purpose of maintenance and internal cleaning;

“main” means a pipe, other than a connection pipe, of which the ownership vests in the municipality and which is used by it for the purpose of conveying water to a customer;

“measuring device” means any method, procedure, process, device, apparatus or installation that enables the quantity of water services provided to be quantified and includes any method, procedure or process whereby the quantity is estimated or assumed;

“meter” means a water meter as defined by the regulations published in terms of the Trade Metrology Act, 1973 (Act No 77 of 1973) or, in the case of water meters of a size greater than 100 mm, a device that measures the quantity of water passing through it, including a pre-paid water meter;

“municipality” means—

- (a) the ... municipality, a local / district municipality established in terms of section 12 of the Structures Act and its successors-in-title; or
- (b) subject to the provisions of any other law and only if expressly or impliedly required or permitted by these by-law the municipal manager in respect of the performance of any function, or the exercise of any duty, obligation, or right in terms of these by-laws or any other law; or
- (c) an authorised agent of the ... municipality;

“municipal council” means a municipal council as referred to in section 157(1) of the Constitution of the Republic of South Africa, 1996;

“municipal manager” means the person appointed by the by the municipal council as the municipal manager of the municipality in terms of section 82 of the Local Government Municipal Structures Act, 1998 (Act No 117 of 1998) and includes any person to whom the municipal manager has delegated a power, function or duty but only in respect of that delegated power, function or duty;

“municipal services” means, for purposes of these by-laws, services provided by a municipality, including refuse removal, water supply, sanitation, electricity services and rates or any one of the above;

“occupier” means a person who occupies any (or part of any) land, building, structure or premises and includes a person who, for someone else’s reward or remuneration allows another person to use or occupy any (or any part of any) land, building structure or premises;

“on-site sanitation services” means any sanitation services other than water borne sewerage disposal through a sewerage disposal system;

“owner” means—

- (a) the person in whose name the ownership of the premises is registered from time to time or his agent;
- (b) where the registered owner of the premises is insolvent or dead, or for any reason lacks legal

capacity, or is under any form of legal disability, that has the effect of preventing him from being able to perform a legal act on his own behalf, the person in whom the administration and control of such premises is vested as curator, trustee, executor, administrator, judicial manager, liquidator or other legal representative;

- (c) where the municipality is unable to determine the identity of the owner, a person who has a legal right in, or the benefit of the use of, any premises, building, or any part of a building, situated on them;
- (d) where a lease has been entered into for a period of 30 (thirty) years or longer, or for the natural life of the lessee or any other person mentioned in the lease, or is renewable from time to time at the will of the lessee indefinitely or for a period or periods which, together with the first period of the lease, amounts to 30 years, the lessee or any other person to whom he has ceded his right title and interest under the lease, or any gratuitous successor to the lessee;
- (e) in relation to—
 - (i) a piece of land delineated on a sectional plan registered in terms of the Sectional Titles Act, 1986 (Act No 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 (Act No 95 of 1986), the person in whose name such section is registered under a sectional title deed and includes the lawfully appointed agent of such a person; or
 - (iii) a person occupying land under a register held by a tribal authority or in accordance with a sworn affidavit made by a tribal authority;

“person” means any person, whether natural or juristic and includes, but is not limited to, any local government body or like authority, a company or close corporation incorporated under any law, a body of persons whether incorporated or not, a statutory body, public utility body, voluntary association or trust;

“plumber” means a person who has passed a qualifying Trade Test in Plumbing or has been issued with a certificate of proficiency in terms of the Manpower Training Act, 1981 (Act No 56 of 1981) or such other qualification as may be required under national legislation;

“pollution” means the introduction of any substance into the water supply system, a water installation or a water resource that may make the water harmful to health or environment or impair its quality for the use for which it is normally intended;

“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, 1927 (Act No 9 of 1927), or in terms of the Deeds Registries Act, 1937 (Act No 47 of 1937);
- (b) a sectional plan registered in terms of the Sectional Titles Act, 1986 (Act No 95 of 1986); or
- (c) a register held by a tribal authority or in accordance with a sworn affidavit made by a tribal authority;

“professional engineer” means a person registered in terms of the Engineering Profession Act, 2000 (Act No 46 of 2000) as a professional engineer;

“public notice” means publication in the media including one or more of the following:

- (a) publication of a notice, in the official languages determined by the municipal council:
 - (i) in any local newspaper or newspapers circulating in the area of supply of the municipality;
 - (ii) in the newspaper or newspapers circulating in the area of supply of the municipality determined by the municipal council as a newspaper of record; or
 - (iii) on the official website of the municipality;
 - (iv) by means of radio broadcasts covering the area of supply of the municipality;
- (b) displaying a notice in or at any premises, office, library or pay-point of either the municipality, or of its authorised agent, to which the public has reasonable access; and
- (c) communication with customers through public meetings and ward committee meetings;

“SANS” means the South African National Standard;

“sanitation services” has the same meaning assigned to it in terms of the Act and includes for purposes of these by-laws the disposal of industrial effluent;

“sanitation system” means the structures, pipes, valves, pumps, meters or other appurtenances used in the conveyance through the sewer reticulation system and treatment at the sewage treatment plant under the control of the municipality and which may be used by it in connection with the disposal of sewage;

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

“service pipe” means a pipe which is part of a water installation provided and installed on any premises by the owner or occupier and which is connected or to be connected to a connection pipe to serve the water installation on the premises;

“shared consumption” means the consumption by a customer of a municipal service during a specific period, that is calculated by dividing the total metered consumption of that municipal service in the supply zone where the customer’s premises are situated for the same period by the number of customers within the supply zone, during that period;

“sewage” means waste water, industrial effluent, standard domestic effluent and other liquid waste, either separately or in combination, but shall not include stormwater;

“sewer” means any pipe or conduit which is the property of or is vested in the municipality and which may be used for the conveyance of sewage from the connecting sewer and shall not include a drain as defined;

“standpipe” means a connection through which water supply services are supplied to more than one person;

“standard domestic effluent” means domestic effluent with prescribed strength characteristics as

determined by the municipality in respect of chemical oxygen demand and settleable solids as being appropriate to sewage discharges from domestic premises within the jurisdiction of the municipality, but shall not include industrial effluent;

“stormwater” means water resulting from natural precipitation or accumulation and includes rainwater, subsoil water or spring water;

“terminal water fitting” means water fitting at an outlet of a water installation that controls the discharge of water from a water installation;

“trade premises” means premises upon which industrial effluent is produced;

“trap” means a pipe fitting or portion of a sanitary appliance designed to retain water seal which serves as a barrier against the flow of foul air or gas, in position;

“unauthorised service” means the receipt, use or consumption of any municipal service which is not in terms of an agreement with, or approved by, the municipality;

“water fitting” means a component of a water installation, other than a pipe, through which water passes or in which it is stored;

“water installation” means the pipes and water fittings which are situated on any premises and ownership thereof vests in the owner thereof and used or intended to be used in connection with the use of water on such premises, and includes a pipe and water fitting situated outside the boundary of the premises, which either connects to the connection pipe relating to such premises or is otherwise laid with the permission of the municipality;

“water services” means water supply services and sanitation services;

“water services intermediaries” has the same meaning as that assigned to it in terms of the Act;

“water supply services” has the same meaning assigned to it in terms of the Act and includes for purposes of these by-laws water for industrial purposes and fire extinguishing services;

“water supply system” means the structures, aqueducts, pipes, valves, pumps, meters or other apparatus relating thereto of which the ownership vests in the municipality and which are used or intended to be used by it in connection with the supply of water, and includes any part of the system; and

“working day” means a day other than a Saturday, Sunday or public holiday.

CHAPTER 2: APPLICATION, PAYMENT AND TERMINATION

Part 1: Application

2. Application for Water Services

(1) No person shall be provided with access to water services unless application has been made to, and approved by, the municipality on the form prescribed in terms of the municipality's by-laws relating to credit control and debt collection.

(2) Water services rendered to a customer by the municipality are subject to the

municipality's by-laws relating to credit control and debt collection, these by-laws and the conditions contained in the relevant agreement.

3. Special Agreements for Water Services

The municipality may enter into a special agreement for the provision of water services with an applicant in accordance with the municipality's by-laws relating to credit control and debt collection.

4. Change in Purpose for which Water Services are Used

Where the purpose for, or extent to which, any municipal service is changed, the customer must promptly advise the municipality of the change and enter into a new agreement with the municipality.

Part 2: Charges

5. Prescribed Charges for Water Services

(1) All applicable charges payable in respect of water services, including but not restricted to the payment of connection charges, fixed charges or any additional charges or interest will be set by the municipal council in accordance with—

- (a) its Rates and Tariff policy;
- (b) any by-laws in respect thereof; and
- (c) any regulations in terms of national or provincial legislation; but

(2) Differences between categories of customers, users of services, types and levels of services, quantities of services, infrastructural requirements and geographic areas, may justify the imposition of differential charges;

6. Availability Charges for Water Services

The municipal council may, in addition to the charges determined for water services that have been actually provided, levy a monthly fixed charge, an annual fixed charge or only one fixed charge where water services are available, whether or not such services are consumed.

Part 3: Payment

7. Payment for Water Services

The owner, occupier and customer shall be jointly and severally liable and responsible for payment of all water services charges and water services consumed by a customer, in accordance with the municipality's by-laws relating to credit control and debt collection.

Part 4: Termination, Limitation and Disconnection

8. Termination of Agreement for the Provision of Water Services

A customer may terminate an agreement for the provision of water services in accordance with the municipality's by-laws relating to credit control and debt collection.

9. Limitation and or Disconnection of Water Services Provided

(1) The engineer may restrict or discontinue water supply services provided in terms of these by-laws—

- (a) on failure to pay the determined charges on the date specified, in accordance with and after the procedure set out in the municipality's by-laws relating to credit control and debt collection has been applied;
- (b) at the written request of a customer;
- (c) if the agreement for the provision of services has been terminated in accordance with the municipality's by-laws relating to credit control and debt collection;
- (d) the building on the premises to which services were provided has been demolished;
- (e) if the customer has interfered with a restricted or discontinued service;
- (f) in an emergency or emergency situation declared in terms of the municipality's by-laws relating to credit control and debt collection; or
- (g) if the customer has interfered, tampered or damaged or caused or permitted interference, tampering or damage to the water supply system of the municipality for the purposes of gaining access to water supply services after notice by the municipality;

(2) The engineer may disconnect sanitation services provided in terms of these by-laws—

- (a) at the written request of a customer;
- (b) if the agreement for the provision of sanitation services has been terminated in accordance with the municipality's by-laws relating to credit control and debt collection; or
- (c) the building on the premises to which services were provided has been demolished.

(3) The municipality shall not be liable for any damages or claims that may arise from the limitation or disconnection of water services provided in terms of subsections (1) and (2), including damages or claims that may arise due to the limitation or disconnection of water services by the municipality in the bona fide belief that the provisions of subsections (1) and (2) applied.

CHAPTER 3: SERVICE LEVELS

10. Service Levels

(1) The municipal council may, from time to time, and in accordance with national policy, but subject to principles of sustainability and affordability, by public notice, determine the service levels it is able to provide to customers.

(2) The municipal council may in determining service levels differentiate between types of customers, domestic customers, geographical areas and socio-economic areas.

(3) The following levels of service may, subject to subsection (1), be provided by the municipality on the promulgation of these by-laws:

(a) Communal water supply services and on-site sanitation services—

- (i) constituting the minimum level of service provided by the municipality;
- (ii) consisting of reticulated standpipes or stationery water tank serviced either through a network pipe or a water tanker located within a reasonable walking distance from any household with a Ventilated Improved Pit latrine located on each premises with premises meaning the lowest order of visibly demarcated area on which some sort of informal dwelling has been erected;
- (iii) installed free of charge;
- (iv) provided free of any charge to consumers; and
- (v) maintained by the municipality.

(b) Yard connection not connected to any water installation and an individual connection to the municipality's sanitation system—

- (i) consisting of an un-metered standpipe on a premises not connected to any water installation and a pour-flush toilet pan, wash-trough and suitable toilet top structure connected to the municipality's sanitation system;
- (ii) installed free of charge;
- (iii) maintained by the municipality.

(c) a metered pressured water connection with an individual connection to the municipality's sanitation system—

- (i) installed against payment of the relevant connection charges;
- (ii) provided against payment of prescribed charges; and
- (iii) with the water and drainage installations maintained by the customer.

CHAPTER 4: CONDITIONS FOR WATER SUPPLY SERVICES

Part 1: Connection to Water Supply System

11. Provision of Connection Pipe

(1) If an agreement for water supply services in respect of premises has been concluded and no connection pipe exists in respect of the premises, the owner shall make application on the prescribed form and pay the determined charge for the installation of such a pipe.

(2) If an application is made for water supply services which are of such an extent or so situated that it is necessary to extend, modify or upgrade the water supply system in order to supply water to the premises, the municipality may agree to the extension provided that the owner shall pay for the cost of the extension, as determined by the engineer.

(3) Only the engineer may install a connection pipe but the owner or customer may connect the water installation to the connection pipe.

(4) No person may commence any development on any premises unless the engineer has installed a connection pipe and meter.

12. Location of Connection Pipe

(1) A connection pipe provided and installed by the engineer shall—

- (a) be located in a position determined by the engineer and be of a suitable size as determined by the engineer;
- (b) terminate at—
 - (i) the boundary of the land owned by or vested in the municipality, or over which it has a servitude or other right; or
 - (ii) at the outlet of the water meter or isolating valve if it is situated on the premises.

(2) The engineer may at the request of any person agree, subject to such conditions as the engineer may impose, to a connection to a main other than that which is most readily available for the provision of water supply to the premises; provided that the applicant shall be responsible for any extension of the water installation to the connecting point designated by the municipality and for obtaining at his cost, any servitudes over other premises that may be necessary.

(3) An owner must pay the determined connection charge in advance before a water connection can be effected.

13. Provision of Single Water Connection for Supply to Several Customers on the Same Premises

(1) Notwithstanding the provisions of section 12, only one connection pipe to the water supply system may be provided for the supply of water to any premises, irrespective of the number of accommodation units, business units or customers located on such premises.

(2) Where the owner, or the person having the charge or management of any premises on which several accommodation units are situated, requires the supply of water to such premises for the purpose of supply to the different accommodation units, the engineer may, in its discretion, provide and install either—

- (a) a single measuring device in respect of the premises as a whole or any number of such accommodation units; or
- (b) a separate measuring device for each accommodation unit or any number thereof.

(3) Where the engineer has installed a single measuring device as contemplated in subsection (2) (a), the owner or the person having the charge or management of the premises, as the case may be—

- (a) must install and maintain on each branch pipe extending from the connection pipe to the different accommodation units—
 - (i) a separate measuring device; and
 - (ii) an isolating valve; and
 - (iii) will be liable to the municipality for the charges for all water supplied to the premises through such a single measuring device, irrespective of the different quantities consumed by the different customers served by such measuring device.

(4) Where premises are supplied by a number of connection pipes, the engineer may require the owner to reduce the number of connection points and alter his water installation accordingly.

14. Disconnection of Water Installation from the Connection Pipe

The engineer may disconnect a water installation from the connection pipe and remove the connection pipe on termination of an agreement for the provision of water supply services in accordance with the municipality's by-laws relating to credit control and debt collection.

Part 2: Standards

15. Quantity, Quality and Pressure

Water supply services provided by the municipality must comply with the minimum standards set for the provision of water supply services in terms of section 9 of the Act.

16. Testing of Pressure in Water Supply Systems

The engineer may, on application by an owner and on payment of the determined charge, determine and furnish the owner with the amount of the pressure in the water supply system relating to his premises over such period as the owner may request.

17. Pollution of Water

An owner must provide and maintain approved measures to prevent the entry of any substance, which might be a danger to health or adversely affect the potability of water or affect its fitness for use, into—

- (a) the water supply system; and
- (b) any part of the water installation on his premises.

18. Water Restrictions

(1) The municipality may for purposes of water conservation or where, in its opinion, drought conditions prevail are imminent, by public notice—

- (a) prohibit or restrict the consumption of water in the whole or part of its area of jurisdiction—
 - (i) in general or for specified purposes;
 - (ii) during specified hours of the day or on specified days; and
 - (iii) in a specified manner; and
- (b) determine and impose—
 - (i) a restriction on the quantity of water that may be consumed over a specified period;
 - (ii) charges additional to those determined in respect of the supply of water in excess of a restriction contemplated in subsection (1)(b)(i); and
 - (iii) a general surcharge on the determined charges in respect of the supply of water; and
- (c) impose restrictions or prohibitions on the use or manner of use or disposition of an appliance by means of which water is used or consumed, or on the connection of such appliances to the water installation.

(2) The municipality may restrict the application of the provisions of a notice contemplated by subsection (1) to specified areas and categories of customers or users of premises, and activities, and may permit deviations and exemptions from, and the relaxation of, any of its provisions where there is reason to do so.

(3) The municipality—

- (a) may take, or by written notice require a customer at his own expense to take, such measures, including the installation of measurement devices and devices for restricting the flow of water, as may in its opinion be necessary to ensure compliance with a notice published in terms of subsection (1); or
- (b) may, subject to notice, and for such period as it may consider fit, restrict the supply of

water to any premises in the event of a contravention of these by-laws that takes place on or in such premises or a failure to comply with the terms of a notice published in terms of subsection (1); and

- (c) shall where the supply has been discontinued, restore it only when the determined charge for discontinuation and reconnecting the supply has been paid.

19. Specific Conditions of Supply

(1) Notwithstanding the undertaking in section 15, the granting of a supply of water by the municipality shall not constitute an undertaking by it to maintain at any time or any point in its water supply system—

- (a) an uninterrupted supply, subject to the provisions of regulations 4 and 14 of Regulation 22355 promulgated in terms of the Act on 8 June 2003; or
- (b) a specific pressure or rate of flow in such supply other than requires in terms of regulation 15(2) of Regulation 22355 promulgated in terms of the Act on 8 June 2003.

(2) The engineer may, subject to the provisions of subsection (1)(b), specify the maximum pressure to which water will be supplied from the water supply system.

(3) If an owner of customer requires—

- (a) that any of the standards referred to in subsection (1); or
- (b) a higher standard of service than specified in section 15;

be maintained on his premises, he or she shall take the necessary steps to ensure that the proposed water installation is able to meet such standards.

(4) The engineer may, in an emergency, interrupt the supply of water to any premises without prior notice.

(5) If in the opinion of the engineer the consumption of water by a customer adversely affects the supply of water to another customer, he may apply such restrictions as he may consider fit, to the supply of water to customer in order to ensure a reasonable supply of water to the other customer and must inform that customer about the restrictions.

(6) The municipality shall not be liable for any damage to property caused by water flowing from any water installation that is left open when the water supply is re-instated, after an interruption in supply.

(7) Every steam boiler, hospital, industry and any premises which requires, for the purpose of the work undertaken on the premises, a continuous supply of water shall have a storage tank, which must comply with the specification for water storage tanks as stipulated in SANS 0252 Part 1, with a capacity of not less than 24 hours water supply calculated as the quantity required to provide the average daily consumption, where water can be stored when the continuous supply is disrupted.

(8) No customer shall resell water supplied to him by the municipality except with the

written permission of the municipality, which may stipulate the maximum price at which the water may be resold, and may impose such other conditions as the municipality may deem fit.

Part 3: Measurement

20. Measuring of Quantity of Water Supplied

(1) The engineer must provide a measuring device designed to provide either a controlled volume of water, or an uncontrolled volume of water, to a customer.

(2) The municipality must, at regular intervals, measure the quantity of water supplied through a measuring device designed to provide an uncontrolled volume of water.

(3) Any measuring device and its associated apparatus through which water is supplied to a customer by the municipality, shall be provided and installed by the engineer, shall remain its property and may be changed and maintained by the engineer when he consider it necessary to do so.

(4) The engineer may install a measuring device, and its associated apparatus, at any point on the service pipe.

(5) If the engineer installs a measuring device on a service pipe in terms of subsection (4), he may install a section of pipe and associated fittings between the end of its connection pipe and the meter, and that section shall form part of the water installation.

(6) If the engineer installs a measuring device together with its associated apparatus on a service pipe in terms of subsection (4), the owner shall—

- (a) provide a place satisfactory to the engineer in which to install it;
- (b) ensure that unrestricted access is available to it at all times;
- (c) be responsible for its protection and be liable for the costs arising from damage to it, excluding damage arising from normal fair wear and tear;
- (d) ensure that no connection is made to the pipe in which the measuring device is installed between the measuring device and the connection pipe serving the installation;
- (e) make provision for the drainage of water which may be discharged from the pipe, in which the measuring device is installed, in the course of work done by the engineer on the measuring device; and
- (f) not use, or permit to be used on any water installation, any fitting, machine or appliance which causes damage or which, in the opinion of the engineer, is likely to cause damage to any meter.

(7) No person other than the engineer shall:

- (a) disconnect a measuring device and its associated apparatus from the pipe on which they are installed;

- (b) break a seal which the engineer has placed on a meter; or
- (c) in any other way interfere with a measuring device and its associated apparatus.

(8) If the engineer considers that, a measuring device is a meter whose size is unsuitable because of the quantity of water supplied to premises, he may install a meter of a size that he considers necessary, and may recover the determined charge for the installation of the meter from the owner of the premises.

(9) The municipality may require the installation, at the owner's expense, of a measuring device to each dwelling unit, in separate occupancy, on any premises, for use in ascertaining the quantity of water supplied to each such unit; but where controlled volume water-delivery systems are used, a single measuring device may otherwise be used for more than one unit.

21. Quantity of Water Supplied to Customer

(1) For the purposes of ascertaining the quantity of water that has been measured by a measuring device that has been installed by the engineer and that has been supplied to a customer over a specific period, it will, for the purposes of these by-laws, be presumed except in any criminal proceedings, unless the contrary is proved, that—

- (a) the quantity, where the measuring device designed to provide an uncontrolled volume of water, is the difference between measurements taken at the beginning and end of that period;
- (b) the quantity, where the measuring device designed to provide a controlled volume of water, is the volume dispensed by the measuring device;
- (c) the measuring device was accurate during that period; and
- (d) the entries in the records of the municipality were correctly made; and
- (e) if water is supplied to, or taken by, a customer without having passed through a measuring device, the estimate by the municipality of the quantity of that water shall be presumed, except in any criminal proceedings, to be correct unless the contrary is proved.

(2) Where water supplied by the municipality to any premises is in any way taken by the customer without the water passing through any measuring device provided by the municipality, the municipality may, for the purpose of rendering an account, estimate, in accordance with subsection (3), the quantity of water supplied to the customer during the period that water is so taken by the customer.

(3) For the purposes of subsection (2), an estimate of the quantity of water supplied to a customer shall, as the municipality may decide, be based either on—

- (a) the average monthly consumption of water on the premises recorded over three succeeding measuring periods after the date on which an irregularity referred to in subsection (2) has been discovered and rectified, or

(b) the average monthly consumption of water on the premises during any three consecutive measuring periods during the twelve months immediately before the date on which an irregularity referred to in subsection (2) was discovered.

(4) Nothing in these by-laws shall be construed as imposing on the municipality an obligation to cause any measuring device installed by the engineer on any premises to be measured at the end of every month or any other fixed period, and the municipality may charge the customer for an average consumption during the interval between successive measurements by the measuring device.

(5) Until the time when a measuring device has been installed in respect of water supplied to a customer, the estimated or shared consumption of that customer during a specific period, must be based on the average consumption of water supplied to the specific supply zone within which the customer's premises are situated.

(6) Where in the opinion of the engineer it is not reasonably possible or cost effective to measure water that is supplied to each customer within a determined supply zone, the municipality may determine a tariff or charge based on the estimated or shared consumption of water supplied to that supply zone.

(7) The municipality must within seven days, on receipt of a written notice from the customer and subject to payment of the determined charge, measure the quantity of water supplied to the customer at a time, or on a day, other than that upon which it would normally be measured.

(8) If a contravention of subsection (7) occurs, the customer must pay to the municipality the cost of whatever quantity of water was, in the opinion by the municipality, supplied to him.

22. Special Measurement

(1) If the engineer requires, for purposes other than charging for water consumed, to ascertain the quantity of water which is used in a part of a water installation, may, by written notice, advise the owner concerned of his intention to install a measuring device at any point in the water installation that he may specify.

(2) The installation of a measuring device referred to in subsection (1), its removal, and the restoration of the water installation after such a removal shall be carried out at the expense of the municipality.

(3) The provisions of sections 20(5) and 20(6) shall apply, insofar as they may be applicable, in respect of a measuring device that has been installed in terms of subsection (1).

23. No reduction of Amount Payable for Water Wasted

A customer shall not be entitled to a reduction of the amount payable for water wasted or lost in a water installation.

Part 4: Audit

24. Water Audit

- (1) The municipality may require a customer, within one month after the end of a financial year of the municipality, to undertake a water audit at his own cost.
- (2) The audit must at least involve and report—
- (a) the amount of water used during the financial year;
 - (b) the amount paid for water for the financial year;
 - (c) the number of people living on the stand or premises;
 - (d) the number of people permanently working on the stand or premises;
 - (e) the seasonal variation in demand through monthly consumption figures;
 - (f) the water pollution monitoring methods;
 - (g) the current initiatives for the management of the demand for water;
 - (h) the plans to manage their demand for water;
 - (i) a comparison of the report with any report that may have been made during the previous three years;
 - (j) estimates of consumption by various components of use; and
 - (k) a comparison of the above factors with those reported in each of the previous three years, where available.

Part 5: Installation Work

25. Approval of Installation Work

- (1) If an owner wishes to have installation work done, he or she must first obtain the municipality's written approval; provided that approval shall not be required in the case of water installations in dwelling units or installations where no fire installation is required in terms of SANS 0400, or in terms of any Municipal by-laws, or for the repair or replacement of an existing pipe or water fitting other than a fixed water heater and its associated protective devices.
- (2) Application for the approval referred to in subsection (1) shall be made on the prescribed form and shall be accompanied by—
- (a) the determined charge, if applicable; and
 - (b) copies of the drawings as may be determined by the municipality, giving information in the form required by Clause 4.1.1 of SANS Code 0252: Part I;
 - (c) a certificate certifying that the installation has been designed in accordance with SANS Code 0252: Part I by a professional engineer.

(3) Authority given in terms of subsection (1) shall lapse at the expiry of a period of twenty-four months.

(4) Where approval was required in terms of subsection (1), a complete set of approved drawings of installation work must be available at the site of the work at all times until the work has been completed.

(5) If installation work has been done in contravention of subsection (1) or (2), the municipality may require the owner—

- (a) to rectify the contravention within a specified period;
- (b) if work is in progress, to cease the work; and
- (c) to remove all such work which does not comply with these by-laws.

26. Persons Permitted to do Installation and Other Work

(1) Only a plumber, a person working under the control of a plumber, or another person authorised in writing by the municipality, shall be permitted to:

- (a) do installation work other than the replacement or repair of an existing pipe or water fitting;
- (b) replace a fixed water heater or its associated protective devices;
- (c) inspect, disinfect and test a water installation, fire installation or storage tank;
- (d) service, repair or replace a back flow preventer; or
- (e) install, maintain or replace a meter provided by an owner in a water installation.

(2) No person shall require or engage a person who is not a plumber to do the work referred to in subsection (1).

(3) Notwithstanding the provisions of subsection (1) the municipality may permit a person who is not a plumber to do installation work on his own behalf on premises owned and occupied solely by himself and his immediate household, provided that such work must be inspected and approved by a plumber at the direction of the engineer.

27. Provision and Maintenance of Water Installations

(1) An owner must provide and maintain his water installation at his own cost and except where permitted in terms of section 96, must ensure that the installation is situated within the boundary of his premises.

(2) An owner must install an isolating valve at a suitable point on service pipe immediately inside the boundary of the property in the case of a meter installed outside the boundary, and in the case of a meter installed on the premises at a suitable point on his service pipe.

(3) Before doing work in connection with the maintenance of a portion of his water installation, which is situated outside the boundary of his premises, an owner shall obtain the

written consent of the municipality or the owner of the land on which the portion is situated, as the case may be.

28. Technical Requirements for a Water Installation

Notwithstanding the requirement that a certificate be issued in terms of section 25, all water installations shall comply with SANS 0252 Part 1 and all fixed electrical storage water heaters shall comply with SANS 0254.

29. Use of Pipes and Water Fittings to be Authorised

(1) No person shall, without the prior written authority of the engineer, install or use a pipe or water fitting in a water installation within the municipality's area of jurisdiction unless it is included in the Schedule of Approved Pipes and Fittings as compiled by the municipality.

(2) Application for the inclusion of a pipe or water fitting in the Schedule referred to in subsection (1) must be made on the form prescribed by the municipality.

(3) A pipe or water fitting may be not be included in the Schedule referred to in subsection (1) unless it—

- (a) bears the standardisation mark of the South African Bureau of Standards in respect of the relevant SANS specification issued by the Bureau;
- (b) bears a certification mark issued by the SANS to certify that the pipe or water fitting complies with an SANS Mark specification or a provisional specification issued by the SANS, provided that no certification marks shall be issued for a period exceeding two years; or
- (c) is acceptable to the municipality.

(4) The municipality may, in respect of any pipe or water fitting included in the Schedule, impose such additional conditions, as it may consider necessary in respect of the use or method of installation.

(5) A pipe or water fitting shall be removed from the Schedule if it—

- (a) no longer complies with the criteria upon which its inclusion was based; or
- (b) is no longer suitable for the purpose for which its use was accepted.

(6) The current Schedule shall be available for inspection at the office of the municipality at any time during working hours.

(7) The municipality may sell copies of the current Schedule at a determined charge.

30. Labelling of Terminal Water Fittings and Appliances

All terminal water fittings and appliances using or discharging water shall be marked, or have included within its packaging, the following information:

- (a) the range of pressure in kPa over which the water fitting or appliance is designed to

operate.

- (b) The flow rate, in litres per minute, related to the design pressure range, provided that this information shall be given for at least the following pressures: 20 kPa, 100kPa and 400 kPa.

31. Water Demand Management

(1) In any water installation where the dynamic water pressure is more than 200 kPa at a shower control valve, and where the plumbing has been designed to balance the water pressures on the hot and cold water supplies to the shower control valve, a shower head with a maximum flow rate of greater than 10 litres per minute must not be installed.

(2) The maximum flow rate from any tap installed on a wash hand basin must not exceed 6 litres per minute.

Part 6: Communal Water Supply Services

32. Provision of Water Supply to Several Consumers

(1) The engineer may install a communal standpipe for the provision of water supply services to several consumers at a location it considers appropriate, provided that a majority of consumers, who in the opinion of the engineer, constitute a substantial majority, and to whom water services will be provided by the standpipe, has been consulted by him or the municipality.

(2) The engineer may provide communal water supply services through a communal installation designed to provide a controlled volume of water to several consumers.

Part 7: Temporary Water Supply Services

33. Water Supplied from a Hydrant

(1) The engineer may authorise a temporary supply of water to be taken from one or more fire hydrants specified by it, subject to such conditions and for any period that may be prescribed by him and payment of such applicable charges, including a deposit, as may be determined by the municipal council from time to time.

(2) A person who wishes to obtain a temporary supply of water referred to in subsection (1) must apply for such a water supply service in terms of section (2) and must pay a deposit determined by the municipal council from time to time.

(3) The engineer shall provide a portable water meter and all other fittings and apparatus necessary for the temporary supply of water from a hydrant.

(4) The portable meter and all other fittings and apparatus provided for the temporary supply of water from a hydrant remain the property of the municipality and must be returned to the municipality on termination of the temporary supply. Failure to return the portable meter and all other fittings and apparatus shall result the imposition of penalties determined by the municipality from time to time.

Part 8: Boreholes

34. Notification of Boreholes

(1) No person may sink a borehole on premises situated in a dolomite area, and before sinking a borehole a person must determine if the premises on which the borehole is to be sunk are situated within a dolomite area.

(2) The municipality may, by public notice, require—

- (a) the owner of any premises within any area of the municipality upon which a borehole exists or, if the owner is not in occupation of such premises, the occupier to notify it of the existence of a borehole on such premises, and provide it with such information about the borehole that it may require; and
- (b) the owner or occupier of any premises who intends to sink a borehole on the premises, to notify it on the prescribed form of its intention to do so before any work in connection sinking it is commenced.

(3) The municipality may require the owner or occupier of any premises who intends to sink a borehole, to undertake an environmental impact assessment of the intended borehole, to the satisfaction of the municipality, before sinking it.

(4) The municipality may by notice to an owner or occupier or by public notice, require an owner or occupier who has an existing borehole that is used for water supply services to—

- (a) obtain approval from it for the use of a borehole for potable water supply services in accordance with sections 6, 7 and 22 of the Act; and
- (b) impose conditions in respect of the use of a borehole for potable water services.

Part 9: Fire Services Connections

35. Connection to be Approved by the Municipality

(1) The engineer shall be entitled in his absolute discretion to grant or refuse an application for the connection of a fire extinguishing installation to the municipality's main.

(2) No water shall be supplied to any fire extinguishing installation until a certificate that the municipality's approval in terms of section 25 has been obtained and that the installation complies with the requirements of these and any other by-laws of the municipality, has been submitted.

(3) If in the engineer's opinion a fire extinguishing installation, which he has allowed to be connected to the municipality's main, is not being kept in proper working order, or is otherwise not being properly maintained, or is being used for purpose other than fire fighting, the he shall be entitled either to require the installation to be disconnected from the main or itself to carry out the work of disconnecting it at the customer's expense.

36. Special Provisions

The provisions of SANS 0252-1 shall apply to the supply of water for fire fighting purposes.

37. Dual and Combined Installations

All new buildings erected after the commencement of these by-laws, must comply with the following requirements in relation to the provision of fire extinguishing services:

- (a) If boosting of the system is required, a dual pipe system must be used, one for fire extinguishing purposes and the other for general domestic purposes.
- (b) Combined installations shall only be permitted where no booster pumping connection is provided on the water installation. In such cases a fire hydrant must be provided by the municipality, at the customer's expense, within 90 metres of the property to provide a source of water for the fire tender to use in extinguishing the fire.
- (c) Combined installations where a booster pumping connection is provided, shall only be permitted when designed and certified by a professional engineer.
- (d) All pipes and fittings must be capable of handling pressures in excess of 1 800 kPa, if that pressure could be expected when boosting takes place and must be capable of maintaining their integrity when exposed to fire conditions.

38. Connection Pipes for Fire Extinguishing Services

(1) After the commencement of these by-laws, a single connection pipe for both fire (excluding sprinkler systems) and potable water supply services shall be provided by the engineer.

(2) The engineer shall provide and install, at the cost of the owner a combination meter on the connection pipe referred to in (1).

(3) A separate connection pipe shall be laid and used for every fire sprinkler extinguishing system unless the engineer gives his approval to the contrary.

(4) A connection pipe must be equipped with a measuring device that will not obstruct the flow of water while the device is operating.

39. Valves and Meters in Connection Pipes

Every connection pipe to a fire extinguishing installation must be fitted with valves and a measuring device which shall be:

- (a) supplied by the engineer at the expense of the customer;
- (b) installed between the customer's property and the main; and
- (c) installed in such position as may be determined by the engineer.

40. Meters in Fire Extinguishing Connection Pipes

The engineer shall be entitled to install a water meter in any connection pipe used solely for fire extinguishing purposes and the owner of the premises shall be liable for all costs in so doing if it appears to the municipality that water has been drawn from the pipe for purposes other than for the purpose of extinguishing a fire.

41. Sprinkler Extinguishing Installation

A sprinkler installation may be installed directly to the main, but the municipality may not be deemed to guarantee any specified pressure at any time.

42. Header Tank or Double Supply from Main

(1) The customer must install a header tank at such elevation as will compensate for any failure or reduction of pressure in the municipality's main for its sprinkler installation, unless this installation is provided with a duplicate supply from a separate main.

(2) The main pipe leading from a header tank to the sprinkler installation may be in direct communication with the main, provided that the main pipe must be equipped with a reflux valve which, if for any reason the pressure in the main fails or is reduced, will shut off the supply from the main.

(3) Where a sprinkler installation is provided with a duplicate supply from a separate main, each supply pipe must be equipped with a reflux valve situated within the premises.

43. Sealing of Private Fire Hydrants

(1) Except where a system is a combined system with a combination meter, all private hydrants and hose-reels must be sealed by the municipality and the seals must not, except for the purposes of opening the hydrant or using the hose when there is a fire, be broken by any person other than by the municipality in the course of servicing and testing.

(2) The customer must give the municipality at least 48 hours notice prior to a fire extinguishing installation being serviced and tested.

(3) The cost of resealing hydrants and hose-reels shall be borne by the customer except when the seals are broken by the municipality's officers for testing purposes.

(4) Any water consumed through a fire installation or sprinkler system shall be paid for by the customer at the charges determined by the municipality.

CHAPTER 5: CONDITIONS FOR SANITATION SERVICES

Part 1: Connection to Sanitation System

44. Obligation to Connect to Sanitation System

(1) All premises on which sewage is produced must be connected to the municipality's sanitation system if a connecting sewer is available or if it is reasonably possible or cost effective

for the municipality to install a connecting sewer, unless approval for the use of on-site sanitation services was obtained in accordance with section 98.

(2) The municipality may, by notice, require the owner of premises not connected to the municipality's sanitation system to connect to the sanitation system.

(3) An owner of premises, who is required to connect those premises to the municipality's sanitation system in accordance with subsection (1), must inform the municipality in writing of any sanitation services, provided by the municipality on the site, which will no longer be required as a result of the connection to the sanitation system.

(4) The owner will be liable for any charge payable in respect of sanitation services on the site, until an agreement for rendering those services has been terminated in accordance with the municipality's by-laws relating to credit control and debt collection.

(5) If the owner fails to connect premises to the sanitation system after having had a notice in terms of subsection (2) from the municipality, notwithstanding any other action that it may take in terms of these by-laws, may impose a penalty determined by it.

45. Provision of Connecting Sewer

(1) If an agreement for sanitation services in respect of premises has been concluded in accordance with the municipality's by-laws relating to credit control and debt collection and no connecting sewer exists in respect of the premises, the owner shall make application on the prescribed form, and pay the tariffs and charges determined by the municipality for the installation of a connecting sewer.

(2) If an application is made for sanitation services which are of such an extent or so situated that it will become necessary to extend, modify or upgrade the sanitation system in order to provide sanitation services to any premises, the municipality may agree to the extension only if the owner pays or undertakes to pay for the cost, as determined by the engineer, of the extension, modification or upgrading of the services.

(3) Only the engineer may install or approve an installed connecting sewer; but the owner or customer may connect the sanitation installation to the connection pipe.

(4) No person may commence any development on any premises unless the engineer has installed a connecting sewer.

46. Location of Connecting Sewer

(1) A connecting sewer that has been provided and installed by the engineer must—

(a) be located in a position determined by the engineer and be of a suitable size determined by the engineer; and

(b) terminate at—

(i) the boundary of the premises; or

(ii) at the connecting point if it is situated on the premises.

(2) The engineer may at the request of the owner of premises, approve, subject to any conditions that he may impose, a connection to a connecting sewer other than one that is most readily available for the provision of sanitation services to the premises; in which event the owner shall be responsible for any extension of the drainage installation to the connecting point designated by the municipality and for obtaining, at his own cost, any servitude over other premises that may be necessary.

(3) Where an owner is required to provide a sewage lift as provided for in terms of the Building Regulations, or the premises are at a level where the drainage installation cannot discharge into the sewer by gravitation, the rate and time of discharge into the sewer be subject to the approval of the municipality.

(4) The owner of premises must pay the connection charges and tariffs determined by the municipality before a connection to the connecting sewer can be effected.

47. Provision of One Connecting Sewer for Several Consumers on Same Premises

(1) Notwithstanding the provisions of section 46 only one connecting sewer to the sanitation system may be provided for the disposal of sewage from any premises, irrespective of the number of accommodation units of consumers located on such premises.

(2) Notwithstanding subsection (1), the municipality may authorise that more than one connecting sewer be provided in the sanitation system for the disposal of sewage from any premises comprising sectional title units or if, in the opinion of the municipality, undue hardship or inconvenience would be caused to any consumer on such premises by the provision of only one connecting sewer.

(3) Where the provision of more than one connecting sewer is authorised by the municipality under subsection (2), the tariffs and charges for the provision of a connecting sewer is payable in respect of each sewage connection so provided.

48. Interconnection Between Premises

An owner of premises must ensure, unless he has obtained the prior approval of the municipality and complies with any conditions that it may have imposed, that no interconnection exists between the drainage installation on his premises and the drainage installation on any other premises.

49. Disconnection of Connecting Sewer

The engineer may disconnect a drainage installation from the connection pipe and remove the connection pipe on the termination of an agreement for the provision of water supply services in accordance with the municipality's by-laws relating to credit control and debt collection.

Part 2: Standards

50. Standards for Sanitation Services

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

Part 3: Methods for Determining Charges

51. Measurement of Quantity of Domestic Effluent Discharged

(1) As from 1 July 2003, the quantity of domestic effluent discharged shall be determined as a percentage of water supplied by the municipality; provided that where the municipality is of the opinion that such a percentage in respect of specific premises is excessive, having regard to the purposes for which 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 must be a percentage of the total water used on those premises that is reasonably estimated by the municipality.

52. Measurement of Quantity and Determination of Quality of Industrial Effluent Discharged

(1) The quantity of industrial effluent discharged into the sanitation system must be determined—

- (a) where a measuring device is installed, by the quantity of industrial effluent discharged from the premises as measured by that measuring device; or
- (b) until the time that a measuring device is installed, by a percentage of the water supplied by the municipality to those premises.

(2) The municipality may require the owner of any premises to incorporate 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 composition of the effluent.

(3) The municipality may install and maintain any meter, gauge or 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 will be a percentage of the total water used on those premises reasonably estimated by the municipality.

(5) Where a portion of the water supplied to the premises forms part of the end product of any manufacturing process or is lost by reaction or evaporation during the manufacturing process

or for any other reason, the municipality may on application by the owner reduce the assessed quantity of industrial effluent.

(6) The municipality may at its discretion enter into an agreement with any person discharging industrial effluent into the sanitation system, establishing an alternative method of assessing the quantity and tempo of effluent so discharged.

(7) Charges relating to the quality of industrial effluent will be based on the formula for industrial effluent discharges as prescribed in Schedule CA.

(8) The following conditions apply in respect of the assessment of the quality of industrial effluent discharged:

- (a) each customer must conduct the prescribed tests, on a regular schedule as provided for in the approval to discharge industrial effluent, and report the results to the municipality;
- (b) the municipality may conduct random compliance tests to correlate with those used in subsection (a) and, if discrepancies are found, the values of the municipality shall, except for the purpose of criminal proceedings, be presumed to be correct and further tests may be required by the municipality to determine, at the cost of the customer, the values for the formula;
- (c) the average of the values of the different analysis results of 24 hourly composite or snap samples of the effluent, taken during the period of charge, will be used to determine the quality charges payable;
- (d) 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, will be used to determine the charges payable;
- (e) in order to determine the strength (Chemical oxygen demand, suspended solids concentration, Ammonia concentration, and ortho-phosphate concentration) in the effluent as well as the concentration of Group 1 and 2 metals, pH value and conductivity, the municipality will use the tests normally used by municipalities for these respective purposes. Details of the appropriate test may be ascertained from the municipality or the SANS. Test results from a laboratory, accredited by the municipality, will have precedence over those of the municipality;
- (f) the formula is calculated on the basis of the different analysis results of individual snap or composite samples and the period of treatment for calculation shall not be less than one full 24-hour period; unless evidence, is submitted to the municipality that a lesser period is actually applicable;
- (g) the terms of the disincentive formula cannot assume a negative value;
- (h) the total system values for quality charges shall remain constant for an initial period of one month, but in any case not longer than twelve months from the date of commencement of these charges, after the expiry of which time they 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 in its discretion in any particular case, may levy the minimum charges prescribed in subsection (7)(l) without taking any samples;

- (i) whenever the municipality takes a sample, one half of it must be made available to the customer;
- (j) for the purpose of calculating of 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;
- (k) the costs of conveying and treating industrial effluent shall be determined by the municipality and shall apply with effect from a date determined by the municipality; and
- (l) in the discretion of the municipality, the charges for industrial effluent may be changed to a fixed monthly charge determined by taking into consideration the effluent strengths, the volume and the economic viability of micro and small industries.

53. Reduction in the Measured Quantity of Effluent Discharged

(1) A person shall be entitled to a reduction in the quantity of effluent discharged, as determined in terms of sections 51 and 52, where the quantity of water, on which a percentage is calculated, was measured during a period where water was wasted or a leakage went undetected, if the consumer demonstrates to the satisfaction of the municipality that the water was not discharged into the sanitation system.

(2) The reduction in the quantity shall be based on the quantity of water lost through leakage or wastage during the leak period.

(3) The leak period shall be either the measuring period immediately prior to the date of repair of the leak, or the measurement period during which the leak is repaired, whichever results in the greater reduction in the quantity.

(4) The quantity of water lost shall be calculated as the consumption for the leak period less the average consumption, based on the preceding 3 (three) months, for the same length of time. In the event of no previous history of consumption being available, the average water consumption will be determined by the municipality, after taking into account all information that is considered by it to be relevant.

(5) There shall be no reduction in the quantity if a loss of water, directly or indirectly, resulted from a consumer's failure to comply with these or other by-laws.

54. Charges in Respect of "On-Site" Sanitation Services

Charges in respect of the removal or collection of conservancy tank contents, night soil or the emptying of pits will cover all the operating and maintenance costs arising from the removal of the pit contents, its transportation to a disposal site, the treatment of the contents to achieve a

sanitary condition and the final disposal of any solid residues and are payable by the owner.

Part 4: Drainage Installations

55. Installation of Drainage Installations

An owner must provide and maintain his drainage installation at his own expense, unless the installation constitutes a basic sanitation facility as determined by the municipality, and except where otherwise approved by the municipality, must ensure that the installation is situated within the boundary of his premises.

(1) The municipality may prescribe the point in the sewer, and the depth below the ground, at which any drainage installation is to be connected and the route to be followed by the drain to the connecting point and may require the owner not to commence the construction or connection of the drainage installation until the municipality's connecting sewer has been laid.

(2) Any drainage installation that has been constructed or installed must comply with any applicable specifications in terms of the Building Regulations and any standard prescribed in terms of the Act.

(3) No person shall permit the entry of any liquid or solid substance whatsoever, other than clean water for testing purposes, to enter any drainage installation before the drainage installation has been connected to the sewer.

(4) Where premises are 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.

(5) After the completion of any drainage installation, or after any alteration to any drainage installation is completed, 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-laws and any other relevant law or by-laws.

(6) No rainwater or storm-water, and no effluent other than an effluent that has been approved by the municipality, may be discharged into a drainage installation.

56. Disconnection of Drainage Installations

(1) Except for the purpose of carrying out maintenance or repair work, no drainage installation may be disconnected from the connection point.

(2) Where any part of a drainage installation is disconnected from the remainder because it will no longer be used, the disconnected part must be destroyed or entirely removed from the premises on which it was used, unless the municipality approves otherwise.

(3) When a disconnection has been made after all the requirements of the Building Regulations in regard to disconnection have been complied with, the engineer must upon the request of the owner, issue a certificate certifying that the disconnection has been completed in terms of the Building Regulations and that any charges raised in respect of the disconnected

portion of the drainage installation shall cease to be levied from the end of the month preceding the first day of the month following the issue of such certificate.

(4) When a drainage installation is disconnected from a sewer, the engineer must seal the opening caused by the disconnection and may recover the cost of doing so from the owner of the premises on which the installation is disconnected.

(5) Where a drainage system is connected to or disconnected from the sewer system during a month, charges will be calculated as if the connection or disconnection were made on the first day of the month following the month in which the connection or disconnection took place.

57. Maintenance of Drainage Installations

(1) An owner must provide and maintain his drainage installation at his own cost.

(2) Where any part of a drainage installation is used by two or more owners or occupiers, they shall be jointly and severally liable for the maintenance of the installation.

(3) The owner of any premises must ensure that all manholes and cleaning eyes on the premises are permanently visible and accessible.

58. Technical Requirements for Drainage Installations

All drainage installations shall comply with SANS code 0252 and the Building Regulations.

59. Drains

(1) Drains passing through ground which in the opinion of the engineer is liable to movement, shall be laid on a continuous bed of river sand or similar granular material not less than 100 mm thick under the barrel of the pipe and with a surround of similar material and thickness, and the joints of such drains must be flexible joints approved by the engineer.

(2) A drain or part of it may only be laid within, or either passes under or through a building, with the approval of the engineer.

(3) A drain or part of it which it is laid in an inaccessible position under a building may not bend or be laid at a gradient.

(4) If a drain passes through or under a wall, foundation or other structure, adequate precautions shall be taken to prevent the discharge of any substance to the drain.

60. Sewer Blockages

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

(2) When the owner or occupier of premises has reason to believe that a blockage has occurred in any drainage installation in or on it, he shall take immediate steps to have it cleared.

(3) When the owner or occupier of premises has reason to believe that a blockage has occurred in the sewer system, he shall immediately inform the municipality.

(4) Where a blockage occurs in a drainage installation, any work necessary for its removal must be done by, or under the supervision of, a plumber.

(5) Should any drainage installation on any premises overflow as a result of an obstruction in the sewer, and if the municipality is reasonably satisfied that the obstruction was caused by objects emanating from the drainage installation, the owner of the premises served by the drainage installation shall be liable for the cost of clearing the blockage.

(6) Where a blockage has been removed from a drain or portion of a drain which serves two or more premises, the owners are jointly and severally liable for the cost of clearing the blockage.

(7) Where a blockage in a sanitation system has been removed by the engineer and the removal necessitated the disturbance of an owners paving, lawn or other artificial surface neither the engineer nor the municipality shall be required to restore them to their previous condition and shall not be responsible for any damage to them unless caused by the wrongful act or negligence of the engineer.

61. Grease Traps

A grease trap of an approved type, size and capacity must be provided in respect of all premises that discharge sewage to on-site sanitation systems or where, in the opinion of the municipality, the discharge of grease, oil and fat is likely to cause an obstruction to the flow in sewers or drains, or to interference with the proper operation of any waste-water treatment plant.

62. Industrial Grease Traps

(1) The owner or manufacturer must ensure that industrial effluent which contains, or which, in the opinion of the municipality is likely to contain, grease, oil, fat or inorganic solid matter in suspension shall, before it is allowed to enter any sewer, be passed through one or more tanks or chambers, of a type, size and capacity designed to intercept and retain such grease, oil, fat or solid matter, that is approved by the engineer.

(2) The owner or manufacturer must ensure that oil, grease or any other substance which is contained in any industrial effluent or other liquid and which 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 its entry of into the sewer.

(3) A tank or chamber as referred to in subsection (2) must comply with the following requirements:

- (a) It shall be of adequate capacity, constructed of hard durable materials and water-tight when completed;
- (b) the water-seal of its discharge pipe shall be not less than 300 mm in depth; and
- (c) shall be provided with sufficient such number of manhole covers for the adequate and effective removal of grease, oil fat and solid matter.

(4) Any person discharging effluent to a tank or chamber must remove grease, oil, fat or

solid matter regularly from the tank or chamber and must maintain a register recording—

- (a) the dates on which the tank or chamber was cleaned;
- (b) the name of any the person employed by him to clean the tank or chamber or, if he cleaned it himself, that fact that he did so; and
- (c) a certificate from the person employed to clean it 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, or, if he cleaned it himself, his own certificate to that effect.

63. Mechanical Appliances for Lifting Sewage

(1) The owner of any premise must obtain the approval of the engineer before installing any mechanical appliance for the raising or transfer of sewage in terms of the Building Regulations.

(2) Approval must be applied for by a professional engineer and must be accompanied by drawings prepared in accordance with the relevant provisions of the Building Regulations and must show details of the compartment containing the appliance, the sewage storage tank, the stilling chamber and their position, and the position of the drains, ventilation pipes, rising main and the sewer connection.

(3) Notwithstanding any approval given in terms of subsection (1), the municipality shall not be liable for any injury, loss or damage to life or property caused by the use, malfunctioning or any other condition arising from the installation or operation of a mechanical appliance for the raising or transfer of sewage unless the injury or damage be caused by the wrongful intentional or negligent act or negligence of an employee of the municipality.

(4) Every mechanical appliance installed for the raising or transfer of sewage shall be specifically designed for the purpose and shall be fitted with a discharge pipe, sluice valves and non-return valves located in approved positions.

(5) Unless otherwise permitted by the engineer, such mechanical appliances shall be installed in duplicate and each such appliance shall be so controlled that either will immediately begin to function automatically in the event of failure of the other.

(6) Every mechanical appliance forming part of a drainage installation shall be located and operated so as to not cause any nuisance through noise or smell or otherwise, and every compartment containing any such appliance must be effectively ventilated.

(7) The maximum discharge rate from any mechanical appliance, and the times between which the discharge may take place, shall be as determined by the engineer who may, at any time, require the owner to install such fittings and regulating devices as may in his opinion, be necessary to ensure that the determined maximum discharge rate shall not be exceeded.

(8) 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 such appliance.

(9) Every sewage storage tank required in terms of paragraph (a) must—

- (a) be constructed of hard, durable materials and must be watertight and the internal surfaces of the walls and floor must be smooth and impermeable;
- (b) have a storage capacity below the level of the inlet equal to the quantity of sewage discharged there into it in 24 hours or 900 litres, whichever is the greater quantity; and
- (c) be so designed that the maximum of its sewage content shall be emptied at each discharge cycle of the mechanical appliance.

(10) Every storage tank and stilling chamber shall be provided with a ventilation pipe in accordance with the engineer's specifications.

Part 5: On-Site Sanitation Services and Associated Services

64. Installation of On-Site Sanitation Services

If an agreement for on-site sanitation services in respect of premises has been concluded, or if it is not reasonably possible or cost effective for the municipality to install a connecting sewer, the owner must install sanitation services specified by the municipality, on the site unless the service is a subsidised service that has been determined by the municipality in accordance with section 10 of the municipality's Credit Control and Debt Collection Bylaw.

65. Ventilated Improved Pit Latrines

(1) The municipality may, 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, approve the disposal of human excrement by means of a ventilated improved pit (VIP) latrine.

(2) A ventilated improved pit latrine must have—

- (a) a pit of 2 m³ capacity;
- (b) lining as required;
- (c) a slab designed to support the superimposed loading; and
- (d) protection preventing children from falling into the pit;

(3) A ventilated improved pit latrine must conform to the following specifications:

- (a) the pit must be ventilated by means of a pipe, sealed at the upper end with durable insect proof screening fixed firmly in place;
- (b) the ventilation pipe must project not less than 0.5 m above the nearest roof, must be of at least 150 mm in diameter, and must be installed vertically with no bend;
- (c) the interior of the closet must be finished smooth so that it can be kept in a clean and hygienic condition. The superstructure must be well-ventilated in order to allow the free flow of air into the pit to be vented through the pipe;
- (d) the opening through the slab must be of adequate size as to prevent fouling. The rim

must be raised so that liquids used for washing the floor do not flow into the pit. It shall be equipped with a lid to prevent the egress of flies and other insects when the toilet is not in use;

- (e) must be sited in a position that is independent of the dwelling unit;
- (f) must be sited in positions that are accessible to road vehicles having a width of 3.0 m in order to facilitate the emptying of the pit;
- (g) in situations where there is the danger of polluting an aquifer due to the permeability of the soil, the pit must be lined with an impermeable material that is durable and will not crack under stress; and
- (h) in situations where the ground in which the pit is to be excavated is unstable, suitable support is to be given to prevent the collapse of the soil.

66. Septic Tanks and Treatment Plants

(1) The municipality may, on such conditions as it may prescribe, approve the disposal of sewage or other effluent by means of septic tanks or other on-site sewage treatment plants.

(2) A septic tank or other sewage treatment plant on a site must not be situated closer than 3 metres to any dwelling unit or to any boundary of the premises on which it is situated.

(3) Effluent from a septic tank or other on-site sewage treatment plant must be disposed of to the satisfaction of the municipality.

(4) A septic tank must be watertight, securely covered and provided with gas-tight means of access to its interior adequate to permit the inspection of the inlet and outlet pipes and adequate for the purpose of removing sludge.

(5) A septic tank serving a dwelling unit must—

- (a) have a capacity below the level of the invert of the outlet pipe of not less than 500 litres per bedroom, subject to a minimum capacity below such an invert level of 2 500 litres;
- (b) have an internal width of not less than 1 metre measured at right angles to the direction of the flow;
- (c) have an internal depth between the cover and the bottom of the tank of not less than 1,7 metre; and
- (d) retain liquid to a depth of not less than 1,4 metre.

(6) Septic tanks serving premises other than a dwelling unit must be designed and certified by a professional civil engineer registered as a member of the engineering Council of South Africa.

(7) No rain water, storm-water, or effluent other than that approved by the municipality may be discharged into a septic tank.

67. French Drains

(1) The municipality may, on such conditions as it may prescribe having regard to the quantity and the nature of the effluent and the nature of the soil as determined by the permeability test prescribed by the South African Bureau of Standards, approve the disposal of waste-water or other effluent by means of french drains, soakage pits or other approved works.

(2) A french drain, soakage pit or other similar work shall not be situated closer than 5 m to any dwelling unit or to any boundary of any premises on which it is situated, nor in any such position that will, in the opinion of the municipality, cause contamination of any borehole or other source of water which is, or may be, used for drinking purposes, or cause dampness in any building.

(3) The dimensions of any french drain, soakage pit or other similar work shall be determined in relation to the absorbent qualities of the soil and the nature and quantity of the effluent.

(4) French drains serving premises other than a dwelling house must be designed and certified by a professional Civil engineer registered as a member of the engineering Council of South Africa.

68. Conservancy Tanks

(1) The municipality may, on such conditions as it may prescribe; approve the construction of a conservancy tank and ancillary appliances for retention of sewage or effluent.

(2) No rain water, storm-water, or effluent other than approved by the municipality may be discharged into a conservancy tank.

(3) No conservancy tank must be used as such unless—

- (a) the invert of the tank slopes towards the outlet at a gradient of not less than 1 in 10;
- (b) the tank is gas and water tight;
- (c) the tank has an outlet pipe, 100 mm in internal diameter, made of wrought iron, cast iron or other approved material, and except if otherwise approved by the municipality, terminating at an approved valve and fittings for connection to the municipality's removal vehicles;
- (d) the valve and fittings referred to in paragraph (c) or the outlet end of the pipe, as the case may be, are located in a chamber that has hinged cover approved by the engineer and which is situated in a position required by the municipality;
- (e) access to the conservancy tank must be provided by means of an approved manhole fitted with a removable cast iron cover placed immediately above the visible spigot of the inlet pipe.

(4) The municipality may, having regard to the position of a conservancy tank or of the

point of connection for a removal vehicle, require the owner or customer to indemnify the municipality, in writing, against any liability for any damages that may result from rendering of that service as a condition for emptying the tank.

(5) Where the municipality's removal vehicle has to traverse private premises for the emptying of a conservancy tank, the owner shall provide a roadway at least 3,5 m wide, so hardened as to be capable of withstanding a wheel load of 4 metric tons in all weather, and shall ensure that no gateway through which the vehicle is required to pass to reach the tank, shall be less than 3,5 m wide for such purposes.

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

69. Operation and Maintenance of On-Site Sanitation Services

The operation and maintenance of on-site sanitation services and all costs pertaining to it remains the responsibility of the owner of the premises, unless the on-site sanitation services are subsidised services determined in accordance with the municipality's by-laws relating to credit control and debt collection.

70. Disused Conservancy and Septic Tanks

If an existing conservancy tank or septic tank is no longer required for the storage or treatment of sewage, or if permission for its use is withdrawn, the owner must either cause it to be completely removed or to be completely filled with earth or other suitable material, provided that the engineer may require a tank to be dealt with in another way, or approve its use for other purposes, subject to any conditions specified by him.

Part 6: Industrial Effluent

71. Approval to Discharge Industrial Effluent

(1) No person shall discharge or cause or permit industrial effluent to be discharged into the sanitation system except with the approval of the municipality.

(2) A person must apply for approval to discharge industrial effluent into the sanitation system of the municipality on the prescribed form attached as Schedule B to these by-laws.

(3) The municipality may, if in its opinion the capacity of the sanitation system is sufficient to permit the conveyance and effective treatment and lawful disposal of the industrial effluent, for such period and subject to such conditions it may impose, approve the discharge of industrial effluent into the sanitation system.

(4) Any person who wishes to construct or cause to be constructed, a building which shall be used as a trade premises, must at the time of lodging a building plan in terms of section 4 of the National Building Regulations and Building Standards No. 103 of 1977, also lodge applications for the provision of sanitation services and for approval to discharge industrial effluent.

72. Withdrawal of Approval to Discharge Industrial Effluent

(1) The municipality may withdraw any approval to a commercial customer, who has been authorised to discharge industrial effluent into the sanitation system, upon giving 14 (fourteen) days notice, if the customer—

- (a) fails to ensure that the industrial effluent discharged conforms to the industrial effluent standards prescribed in Schedule A of these by-laws or the written permission referred to in section 71;
- (b) fails or refuses to comply with any notice lawfully served on him in terms of these by-laws, or contravenes any provisions of these by-laws or any condition imposed in terms of any permission granted to him; or
- (c) fails to pay the charges in respect of any industrial effluent discharged.

(2) The municipality may on withdrawal of any approval—

- (a) in addition to any steps required by in these by-laws, and on 14 (fourteen) days' written notice, authorise the closing or sealing of the connecting sewer of the said premises; and
- (b) refuse to receive any industrial effluent until it is satisfied that adequate steps to ensure that the industrial effluent that is to be discharged conforms to the standards required by in these by-laws.

73. Quality Standards for Disposal of Industrial Effluent

(1) A commercial customer, to whom approval has been granted must ensure that no industrial effluent is discharged into the sanitation system of the municipality unless it complies with the standards and criteria set out in Schedule A.

(2) The municipality may, in giving its approval, relax or vary the standards in Schedule A, provided that it is satisfied that any relaxation represents the best practicable environmental option.

(3) In determining whether relaxing or varying the standards in Schedule A represents the best practicable environmental option a municipality must consider—

- (a) whether the commercial customer's undertaking is operated and maintained at optimal levels;
- (b) whether technology used by the commercial customer represents the best available to the commercial customer's industry and, if not, whether the installation of the best technology would cause the customer unreasonable expense;
- (c) whether the commercial customer is implementing a programme of waste minimisation that complies with national waste minimisation standards set in accordance with national legislation;
- (d) the cost to the municipality of granting the relaxation or variation; and

(e) the environmental impact or potential impact of the relaxation or variation.

(4) Test samples may be taken at any time by a duly qualified sampler to ascertain whether the industrial effluent complies with Schedule A or any other standard laid down as a requisition for granting an approval.

74. Conditions for the Discharge of Industrial Effluent

(1) The municipality may on granting approval for the discharge of industrial effluent, or at any time that it considers appropriate, by notice, require a commercial customer to—

- (a) subject the industrial effluent to such preliminary treatment as in the opinion of the municipality will ensure that the industrial effluent conforms to the standards prescribed in Schedule A before being discharged into the sanitation system;
- (b) install equalising tanks, valves, pumps, appliances, meters and other equipment which, in the opinion of the municipality, will be necessary to control the rate and time of discharge into the sanitation system in accordance with the conditions imposed by it;
- (c) install for the conveyance of the industrial effluent into the sanitation system at a given point, a drainage installation separate from the drainage installation for other sewage and may prohibit a commercial customer from disposing of his industrial effluent at any other point;
- (d) construct on any pipe conveying his industrial effluent to any sewer, a service access hole or stop-valve in such position and of such dimensions and materials as the municipality may prescribe;
- (e) provide all information that may be required by the municipality to enable it to assess the tariffs or charges due to the municipality;
- (f) provide adequate facilities including, but not limited to, level or overflow detection devices, standby equipment, overflow catch-pits, or other appropriate means of preventing a discharge into the sanitation system in contravention of these by-laws;
- (g) cause any meter, gauge or other device installed in terms of this section to be calibrated by an independent authority at the cost of the commercial customer at such intervals as may be required by the municipality and copies of the calibration must to be forwarded to it by the commercial customer; and
- (h) cause industrial effluent to be analyzed as often, and in whatever manner, may be determined by the municipality and provide it with the results of these tests when they are completed.

(2) The cost of any treatment, plant, work or analysis, which a person may be required to carry out, construct or install in terms of subsection (1), shall be borne by the commercial customer concerned.

(3) If industrial effluent that neither complies with the standards in Schedule A nor has received the approval of the municipality, is discharged into the sanitation system, the

municipality must be informed and the reasons for it, within twelve hours of the discharge.

Part 7: Sewage Delivered by Road Haulage

75. Acceptance of Sewage Delivered by Road Haulage

The engineer may, in his discretion, and subject to such conditions as he may specify, accept sewage for disposal that is delivered to the municipality's sewage treatment plants by road haulage.

76. Approval for Delivery of Sewage by Road Haulage

(1) No person shall deliver sewage by road haulage in order to discharge it into the municipality's sewage treatment plants by except with the approval of the engineer and subject to any conditions, and any times, that may on reasonable grounds be imposed by him.

(2) The charges for any sewage delivered for disposal to the municipality's sewage treatment plants shall be assessed by the municipality in accordance with the prescribed tariffs of charges.

77. Withdrawal of Permission for Delivery of Sewage by Road Haulage

The engineer may withdraw any approval, given in terms of section 75, after giving at least 14 (fourteen) days written notice of his intention to do so, if a person who has been allowed to discharge sewerage by road haulage—

- (a) fails to ensure that the sewage conforms to the standards prescribed either in Schedule A, or as a condition of approval; or
- (b) fails or refuses to comply with any notice served on him in terms of these by-laws or contravenes any provision of these by-laws or any condition has been imposed on him as a condition of approval; and
- (c) fails to pay all the charges applicable to the delivery of sewage.

78. Conditions for Delivery of Sewage by Road Haulage

When sewage is to be delivered by road haulage—

- (a) the time and place when delivery is to be made shall be arranged in consultation with the engineer; and
- (b) the engineer must be satisfied before a delivery can take place, that the sewerage is of a nature suitable for road haulage and that the delivery would comply with the provisions, of these by-laws.

Part 8: Other Sanitation Services

79. Stables and Similar Premises

The municipality may approve the connection of a drainage installation to stables,

cowsheds, dairies, kennels, other premises for the accommodation of animals, and tanneries, subject to the payment of all applicable charges and the fulfilment of any condition that the municipality may impose; but approval will be given only if—

- (a) the floor of the premises is paved by impervious materials that are approved by the municipality and graded to a silt trap, grease trap or gully of adequate capacity; and
- (b) every part of the floor of the premises is covered by a roof, or another protective device, in a way that adequately prevents the entry of rain or storm water into the drainage installation.

80. Mechanical Food–Waste or Other Disposal Units

The municipality may approve the connection or incorporation of a mechanical waste food, disposal which and any disposal unit or garbage grinder, into a drainage installation that has a capacity in excess of 500W, subject to the payment of all applicable charges and to any condition that the municipality may impose, but approval will be given only if—

- (a) a water meter is installed by the municipality;
- (b) the engineer is satisfied that the municipality's sewerage and sewage treatment system will not be adversely affected; and
- (c) the installation or incorporation is installed in conformity with the municipality's by-laws relating to electricity.

Part 9: Installation Work

81. Approval of Installation Work

(1) If an owner wishes to have installation work done, he must first obtain the municipality's written approval.

(2) Application for the approval referred to in subsection (1) must be made on the prescribed form and shall be accompanied by—

- (a) a charge determined by the municipality, if a charge is determined, and
- (b) copies of all drawings that may be required and approved by the municipality;
- (c) a certificate by a professional engineer certifying that the installation has been designed in accordance with any applicable SANS Codes.

(3) Approval given in terms of subsection (1) shall lapse after 24 (twenty-four) months.

(4) When approval has been given in terms of subsection (1), a complete set of the drawings that have been required and approved by the municipality must be available for inspection at the site at all reasonable times until the work has been completed.

(5) If installation work has been done in contravention of subsections (1) or (2), the municipality may require the owner—

- (a) to rectify the contravention within a specified time;
- (b) if work is in progress, to cease the work; and
- (c) to remove all work that does not comply with these by-laws.

82. Persons Permitted to do Installation and Other Work

(1) No person who is not a plumber, or working under the control of a plumber, shall be permitted to—

- (a) do installation work other than the replacement or repair of an existing pipe or sanitation fitting;
- (b) inspect, disinfect and test a drainage installation, fire installation or storage tank;
- (c) service, repair or replace a back flow preventer; or
- (d) install, maintain or replace a meter provided by an owner in a drainage installation.

(2) No person shall require or engage a person who is not a plumber to do the work referred to in subsection (1).

(3) Notwithstanding the provisions of subsections (1) and (2), the municipality may permit a person, who is not a plumber, to do installation work at his own premises if they are occupied by himself or his own household, but if permission is given, the work must be inspected and approved by a plumber under the direction of or who has been nominated by, the engineer.

83. Use of Pipes and Water Fittings to be Authorised

(1) No person shall, without the prior written authority of the engineer, install or use a pipe or water fitting in a water installation within the municipality's area of jurisdiction unless it is included in the Schedule of Approved Pipes and Fittings compiled by the municipality.

(2) Application for the inclusion of a pipe or water fitting in the Schedule referred to in subsection (1) must be made on the form prescribed by the municipality.

(3) A pipe or water fitting may be included in the Schedule referred to in subsection (1) if—

- (a) it bears the standardisation mark of the South African Bureau of Standards in respect of the relevant SANS specification issued by the Bureau; or
- (b) it bears a certification mark issued by the SANS to certify that the pipe or water fitting—
 - (i) complies with an SANS Mark specification; or
 - (ii) a provisional specification issued by the SANS;
- (c) it is included in the list of water and sanitation installations accepted by JASWIC.
- (d) No certification marks shall be for a period exceeding two years.

(4) The municipality may impose any additional condition that it considers necessary as relating to the use, or method of installation, of any pipe or water fitting included in the Schedule.

(5) A pipe or sanitation fitting must be removed from the Schedule if it—

- (a) no longer complies with the criteria upon which its inclusion was based; or
- (b) is no longer suitable for the purpose for which its use was accepted.

(6) The current Schedule must be available for inspection at the office of the municipality at any time during working hours.

(7) The municipality may sell copies of the current Schedule at a charge determined by it.

84. Testing of Drainage Installations

(1) No drainage installation, or any part of one, shall be connected to on-site sanitation services nor shall, the municipality's sanitation system be connected to an existing approved installation, unless any one or more of the following tests have been applied in the presence, and to the satisfaction, of the engineer, before the draining installation has been enclosed:

- (a) the interior of every pipe or series of pipes between two points of access shall be inspected throughout its length by means of a mirror and a source of light, and, during the inspection, a full circle of light must appear to the observer, and the pipe or series of pipes must be seen to be unobstructed;
- (b) a smooth ball having a diameter 12mm less than the nominal diameter of the pipe shall, when inserted at the higher end of the pipe, roll down without assistance or interruption to the lower end;
- (c) after all openings to the pipe or series of pipes to be tested, after having been plugged or sealed and after all traps associated with them have been filled with water, air shall be pumped into the pipe or pipes until a manometric pressure of 38mm of water is indicated, after which the pressure must remain greater than 25mm of water for a period of at least 3 (three) minutes without further pumping; and
- (d) all parts of the installation are subjected to and withstand an internally applied hydraulic test pressure of not less than a 3m head of water for a period of not less than 10 minutes.

(2) If the municipality has reason to believe that any drainage installation or any part of it has become defective, it may require the owner of any premises to conduct any or all of the tests prescribed in subsection (1) and, if the installation fails to pass any test, or all the tests, to the satisfaction of the municipality, the municipality may by notice require the owner to take all reasonable measures that may be necessary to enable the installation to satisfy any or all of them.

85. Water Demand Management

(1) Notwithstanding the provisions of sections 92 and 113, no flushing urinal that is not user-activated shall be installed or continue to operate in any water installation. All flushing urinals that are not user-activated installed prior to the commencement of these regulations must be converted to user-activated urinals within two years of the commencement of these by-laws.

(2) No cistern, and related pan designed to operate with such cistern, shall be installed with a cistern capacity of greater than 9 litres and all cisterns not intended for public use shall be fitted with flushing devices allowing interruptible or multiple flushes, provided that such flushing device shall not be required in cisterns with a capacity of 4,5 litres or less.

CHAPTER 6: WATER SERVICES INTERMEDIARIES

86. Registration

The municipality may by public notice require water services intermediaries or classes of water services intermediaries to register with the municipality in a manner specified in the public notice.

87. Provision of Water Services

(1) Water services intermediaries must ensure that water services, including basic services as determined by the municipal council, are provided to such persons it is obliged to provide with water services.

(2) The quality, quantity and sustainability of water services provided by a water services intermediary must meet any minimum standards prescribed in terms of the Act and must at least be of the same standards as provided by the municipality to customers.

88. Charges for Water Services Provided

(1) A water services intermediary may not charge for water services at a price which does not comply with any norms and standards prescribed under the Act and any additional norms and standards as may be set by the municipality.

(2) A water services intermediary must provide subsidised water services, as determined by the municipal council in terms of the municipality's by-laws relating to credit control and debt collection from time to time, and provided by the municipality to customers at a price that is the same or less than the charges at which the municipality provides such services.

NOTE: The Water services Act defines a water services intermediary as "*any person who is obliged to provide water services to another in terms of a contract where the obligation to provide water services is incidental to the main object of that contract*". The following elements must therefore be present before a person is a water services intermediary, that is–

- (a) There must be an obligation to provide water services;
- (b) The obligation must exist in terms of a contract, whether specifically agreed or implied; and
- (c) The obligation to provide water services is not the main reason why a contract exists between the parties.

Farmers, mines, flat owners or sectional title body corporates may be water services intermediaries.

CHAPTER 7: UNAUTHORISED WATER SERVICES

89. Unauthorised Services

(1) No person may gain access to water services unless it is in terms of an agreement entered into with the municipality for the rendering of those services.

(2) The municipality may, irrespective of any other action it may take against such person in terms of these by-laws by written notice order a person who is using unauthorised services to—

- (a) apply for such services in terms of sections 2 and 3; and
- (b) undertake such work as may be necessary to ensure that the customer installation through which access was gained complies with the provisions of these or any other relevant by-laws.

90. Interference with Infrastructure for the Provision of Water Services

(1) No person other than the municipality shall manage, operate or maintain infrastructure through which water services are provided.

(2) No person other than the municipality shall effect a connection to infrastructure through which water services are provided.

(3) The municipality may recover any costs associated with repairing damage caused as a result of a contravention of subsections (1) and (2). The costs recoverable by the municipality is the full cost associated with repairing the damage and includes, but is not restricted to, any exploratory investigation, surveys, plans, specifications, schedules of quantities, supervision, administration charge, the use of tools, the expenditure of labour involved in disturbing or rehabilitation of any part of a street or ground affected by the repairs and the environmental cost.

91. Obstruction of Access to Infrastructure for the Provision of Water Services

(1) No person shall prevent or restrict the physical access of the municipality to infrastructure through which water services are provided.

(2) If a person contravenes subsection (1), the municipality may—

- (a) by written notice require such person to restore access at his own expense within a specified period; or
- (b) if it is of the opinion that the situation is a matter of urgency, without prior notice restore access and recover the cost from such person.

(3) The costs recoverable by the municipality is the full cost associated with restoring access and includes, but is not restricted to, any exploratory investigation, surveys, plans, specifications, schedules of quantities, supervision, administration charge, the use of tools, the expenditure of labour involved in disturbing or rehabilitation of any part of a street or ground affected by restoring access and the environmental cost.

92. Waste of Water

(1) No customer shall permit—

- (a) the purposeless or wasteful discharge of water from terminal water fittings;
- (b) pipes or water fittings to leak;
- (c) the use of maladjusted or defective water fittings; or
- (d) an overflow of water to persist.

(2) An owner shall repair or replace any part of his water and sanitation installation which is in such a state of disrepair that it is either causing or is likely to cause an occurrence listed in subsection (1).

(3) If an owner fails to take measures as contemplated in subsection (2), the municipality shall, by written notice, require the owner to comply with the provisions of subsection (1).

(4) The municipality may, by written notice, prohibit the use by a customer of any equipment in a water or sanitation installation if, in its opinion, its use of water is inefficient. Such equipment shall not be returned to use until its efficiency has been restored and a written application to do so has been approved by the municipality.

93. Unauthorised and Illegal Discharges

(1) No person may discharge or cause or permit any sewage to be discharged directly or indirectly into a storm water drain, river, stream or other watercourse, whether natural or artificial.

(2) The owner or occupier of any premises on which steam or any liquid other than potable water, is stored, processed or generated shall provide all facilities necessary to prevent any discharge or leakage of such liquid to any street, storm water drain or watercourse, whether natural or artificial, except where, in the case of steam, the municipality has approved such discharge.

(3) Where the hosing down or flushing by rainwater of an open area on any premises is in the opinion of the municipality is likely to cause the discharge of objectionable matter into any street, storm water drain, river, stream or other watercourse, whether natural or artificial, or to cause or contribute towards the pollution of any such watercourse, the municipality may, by notice, require the owner of the premises to take reasonable measures to prevent or minimise such discharge or pollution.

(4) No person may discharge or cause or permit the discharge of—

- (a) any substance, including storm water, other than sewage, to be discharged into a drainage installation;
- (b) of water from any swimming pool directly or indirectly over any road or into a gutter, storm water drain, watercourse, open ground or private premises other than the premises of the owner of such swimming pool;

-
- (c) water from artificial fountains, reservoirs or swimming pools situated on premises into a drainage installation, without the approval of the municipality and subject to the payment of relevant charges and such conditions as the municipality may impose;
- (d) any sewage, industrial effluent or other liquid or substance which—
- (i) in the opinion of the engineer may be offensive to or may cause a nuisance to the public;
 - (ii) is in the form of steam or vapour or has a temperature exceeding 44° C at the point where it enters the sewer;
 - (iii) has a pH value less than 6.0;
 - (iv) contains any substance of whatsoever nature likely to produce or release explosive, flammable, poisonous or offensive gases or vapours in any sewer;
 - (v) contains any substance having an open flashpoint of less than 93°C or which releases a poisonous vapour at a temperature below 93° C;
 - (vi) contains any material of whatsoever nature, including oil, grease, fat or detergents capable of causing obstruction to the flow in sewers or drains or interference with the proper operation of a sewerage treatment works;
 - (vii) shows any visible signs of tar or associated products or distillates, bitumens or asphalts;
 - (viii) contains any substance in such concentration to produce an undesirable taste after chlorination or an undesirable odour or colour, or excessive foam;
 - (ix) has either a greater PV or COD (Chemical Oxygen Demand) value, a lower pH value, or a higher caustic alkalinity or electrical conductivity than specified in Schedule A, without the prior approval and subject to the payment of relevant charges and such conditions as the municipality may impose;
 - (x) contains any substance which in the opinion of the engineer—
 - (aa) cannot be treated at the sewage treatment work to which it could be discharged; or
 - (bb) will negatively affect the treatment processes at the sewage treatment work to which it could be discharged or
 - (cc) will negatively impact on the ability of the sewage treatment work to produce discharges that meet the waste water discharge standards set in terms of the National Water Act, 1998 (Act No 36 of 1998), or
 - (xi) either alone or in combination with other substance may—
 - (aa) generate or constitute a toxic substance dangerous to the health of persons employed at the sewage treatment works or entering the council's sewers or manholes in the course of their duties; or
-

- (bb) be harmful to sewers, treatment plant or land used for the disposal of treated waste water; or
- (cc) adversely affect any of the processes whereby sewage is treated or any re-use of sewage effluent.

(5) No person shall cause or permit the accumulation of grease, oil, fat or solid matter in any drainage installation that will adversely affect its effective functioning.

(6) The municipality may, notwithstanding any other actions that may be taken in terms of these by-laws, recover from any person who discharges industrial effluent or any substance which is unauthorised or illegal all costs incurred, by the municipality as a result of such discharges, including costs that result from—

- (a) injury to persons, damage to the sanitation system; or
- (b) a prosecution in terms of the National Water Act, 1998 (Act No 36 of 1998).

94. Illegal Re-Connection

A customer whose access to water supply services have been restricted or disconnected, who intentionally reconnects to services or who intentionally or negligently interferes with infrastructure through which water supply services are provided, shall on written notice be disconnected.

95. Interference with Infrastructure

(1) No person may unlawfully and intentionally or negligently interfere with infrastructure through which the municipality provides municipal services.

(2) If a person contravenes subsection (1), the municipality may—

- (a) by written notice require such person to seize or rectify the interference at his own expense within a specified period; or
- (b) if it is of the opinion that the situation is a matter of urgency, without prior notice prevent or rectify the interference and recover the cost from such person.

96. Pipes in Streets or Public Places

No person shall for the purpose of conveying water or sewage derived from whatever source, lay or construct a pipe or associated component on, in or under a street, public place or other land owned by or under the control of any municipality, except with the prior written permission of the municipality and subject to such conditions as it may impose.

97. Use of Water from Sources Other than the Water Supply System

(1) No person shall use or permit the use of water obtained from a source other than the water supply system, other than rain water tanks which are not connected to the water installation, except with the prior approval of the engineer, and in accordance with such conditions as it may impose, for domestic, commercial or industrial purposes.

(2) Any person desiring the consent referred to in subsection (1) shall provide the engineer with evidence satisfactory to it that the water referred to in subsection (1) complies, whether as a result of treatment or otherwise, with the requirements of SANS 241: Drinking Water, or that the use of such water does not or will not constitute a danger to health.

(3) Any consent given in terms of subsection (1) may be withdrawn if, in the opinion of the engineer —

(a) a condition imposed in terms of subsection (1) is breached; or

(b) the water quality no longer conforms to the requirements referred to in subsection (2).

(4) The engineer may take samples of water obtained from a source, other than the water supply system and cause the samples to be tested for compliance with the requirements referred to in subsection (2).

(5) The determined charge for the taking and testing of the samples referred to in subsection (4) above shall be paid by the person to whom consent was granted in terms of subsection (1).

(6) If water obtained from a borehole or other source of supply on any premises is used for a purpose which gives rise to the discharge of such water or a portion thereof into the municipality's sewerage system, the municipality may install a meter in the pipe leading from such borehole or other source of supply to the point or points where it is so used.

(7) The provisions of section 20 shall apply insofar as they may be applicable in respect of the meter referred to in subsection (4).

98. Use of On-Site Sanitation Services Not Connected to the Sanitation System

(1) No person shall use or permit the use of on-site sanitation services not connected to the municipality's sanitation system except with the prior approval of the engineer, and in accordance with such conditions as it may impose, for domestic, commercial or industrial purposes.

(2) Any person desiring the consent referred to in subsection (1) shall provide the engineer with evidence satisfactory to it that the sanitation facility is not likely to have a detrimental effect on health or the environment.

(3) Any consent given in terms of subsection (1) may be withdrawn if, in the opinion of the engineer—

(a) a condition imposed in terms of subsection (1) is breached; or

(b) the sanitation facility has a detrimental impact on health or the environment.

(4) The engineer may undertake such investigations as he or she may deem necessary to determine if a sanitation facility has a detrimental impact on health or the environment.

(5) The person to whom consent was granted in terms of subsection (1) shall be liable for the costs associated with an investigation undertaken in terms of subsection (2) if the result of

the investigation indicates that the sanitation facility has a detrimental impact on health or the environment.

CHAPTER 8: NOTICES

99. Power to Serve and Compliance with Notices

(1) The municipality may, by written notice, order an owner, customer or any other person who fails, by act or omission, to comply with the provisions of these by-laws, or to fulfil any condition imposed in it, to rectify his failure within a period specified in the notice, which period shall not be less than thirty days except where a notice is issued in terms of section 18, when the period shall not be less than seven days.

(2) If a person fails to comply with a written notice served on him by the municipality in terms of these by-laws within the specified period, it may take such action that in its opinion is necessary to ensure compliance, including—

- (a) undertaking the work necessary itself and recovering the cost of such action or work from that owner, consumer or other person;
- (b) restricting or discontinuing the provision of services; and
- (c) instituting legal proceedings.

(3) A notice in terms of subsection (1) must—

- (a) give details of any provision of the by-laws that has not been complied with;
- (b) give the owner, consumer or other person a reasonable opportunity to make representations and state his case, in writing, to the municipality within a specified period, unless the owner, consumer or other person was given such an opportunity before the notice was issued;
- (c) specify the steps that the owner, consumer or other person must take to rectify the failure to comply;
- (d) specify the period within which the owner, consumer or other person must take the steps specified to rectify such failure; and
- (e) indicate that the municipality—
 - (i) may undertake any work that is necessary to rectify a failure to comply with a notice and the cost to the municipality of rectification may be recovered from the owner, consumer or other person who has failed to comply with it; and
 - (ii) may take any other action that it considers necessary for ensuring compliance.

(4) In the event of an emergency the municipality may, without prior notice to anyone, undertake the work required by subsection (3)(e)(i) and recover the costs from a person who, but for the emergency, would have to be notified in terms of subsection (1).

(5) The costs recoverable by the municipality in terms of subsections (3) and (4) are the full

costs associated with that work and includes, but are not restricted to, any exploratory investigation, surveys, plans, specifications, schedules of quantities, supervision, administration charge, the use of tools, the expenditure of labour involved in disturbing or rehabilitation of any part of a street or ground affected by the work and the environmental cost.

CHAPTER 9: APPEALS

100. Appeals Against Decisions of the Municipality

(1) A customer may appeal in writing against a decision of, or a notice issued by, the municipality in terms of these by-laws.

(2) An appeal in terms of subsection (1) must be made in writing and lodged with the municipality within 14 (fourteen) days after a customer became aware of the decision or notice and must—

- (a) set out the reasons for the appeal; and
- (b) be accompanied by any security determined by the municipality for the testing of a measuring device, if it has been tested.

(3) An appeal must be decided by the municipality within 14 (fourteen) days after an appeal was lodged and the customer must be informed of the outcome in writing, as soon as possible thereafter.

(4) The decision of the municipality is final.

(5) The municipality may condone the late lodging of appeals or other procedural irregularities.

CHAPTER 10: OFFENCES

101. Offences

(1) Subject to subsection (2), any person who—

- (a) obstructs or hinders the municipality in the exercising of the powers or performance of functions or duties under these by-laws;
- (b) uses, tampers or interferes with municipal equipment, the water supply system, sanitation system and reticulation network or consumption of services rendered;
- (c) contravenes or fails to comply with a provision of these by-laws other than a provision relating to payment for municipal services;
- (d) fails to comply with the terms of a notice served upon him in terms of these by-laws;

is guilty of an offence and liable on conviction to a fine or in default of payment to imprisonment for a period not exceeding 6 months and in the case of any continued offence, to a further fine not exceeding R50, or in default of payment, to imprisonment not exceeding one day for every day during the continuance of such offence, after a written notice has been issued by the municipality

and served on the person concerned requiring the discontinuance of such an offence.

(2) No person shall be liable to imprisonment if he is unable to afford to pay a fine, and shall instead be liable to a period of community service.

(3) Any person committing a breach of the provisions of these by-laws shall be liable to recompense the municipality for any loss or damage suffered or sustained by it in consequence of the breach.

CHAPTER 11: DOCUMENTATION

102. Signing of Notices and Documents

A notice or document issued by the municipality in terms of these by-laws and signed by a staff member of the municipality shall be deemed to have been duly issued and must on its mere production be accepted by a court as prima facie evidence of that fact.

103. Service of Notices

(1) Any notice, order or other document that is served on any person in terms of these by-laws must, subject to the provisions of the Criminal Procedure Act 1977 (Act 51 of 1977), be served personally, falling which it may be regarded as having been served—

- (a) when it has been left at a person's village, place of residence, or business or employment in the Republic, with a person apparently over the age of sixteen years;
- (b) when it has been posted by registered or certified mail to a person's last known residential address or business address in the Republic and an acknowledgement of posting thereof from the postal service is obtained;
- (c) if a person's address in the Republic is unknown, when it has been served on that person's agent or representative in the Republic in a manner provided for in subsections (a), (b) or (d); or
- (d) if that person's address and agent or representative in the Republic is unknown, when it has been placed in a conspicuous place on the property or premises, if any, to which it relates.

(2) Any legal process is effectively and sufficiently served on the municipality when it is delivered to the municipal manager or a person in attendance at the municipal manager's office.

(3) When any notice or other document must be authorised or served on the owner, occupier of any property, or of any person who holds a right over, or in respect of it, it is sufficient if that person is described in the notice or other document as the owner, occupier or holder of the right over or in respect of, the property, and shall not be necessary to name him.

(4) Where compliance with a notice is required within a specified number of working days, the period that is required shall commence on the date when the notice is served or when it has first been given in any other way contemplated in these by-laws.

104. Authentication of Documents

(1) Every order, notice or other document requiring authentication by the municipality shall be sufficiently authenticated, if it is signed by the municipal manager, by a duly authorised officer of the municipality or by the Manager of the municipality's authorised agent.

(2) Authority to authorise, as envisaged in subsection (1) must be conferred by a resolution of the municipality, by a written agreement or by a bylaw.

105. Prima Facie Evidence

In legal proceedings by or on behalf of the municipality, a certificate reflecting an amount of money as being due and payable to the municipality, shall, if it is made under the hand of the municipal manager, or of a suitably qualified employee of the municipality who is authorised by the municipal manager or the Manager of the municipality's authorised agent, shall upon its mere production constitute prima facie evidence of the indebtedness.

CHAPTER 12: GENERAL PROVISIONS

106. Responsibility for Compliance with these By-Laws

(1) The owner of premises is responsible for ensuring compliance with these by-laws in respect of all or any matters relating to water and the installation and maintenance of sanitation.

(2) The customer is responsible for compliance with these by-laws in respect of matters relating to the use of any water and the installation and maintenance of sanitation.

107. Provision of Information

An owner, occupier, customer or person within the area of supply of the municipality must provide the municipality with accurate information requested by the municipality that is reasonably required by the municipality for the implementation or enforcement of these by-laws.

108. Power of Entry and Inspection

(1) The municipality may enter and inspect any premises for any purpose connected with the implementation or enforcement of these by-laws, at all reasonable times, after having given reasonable written notice to the occupier of the premises of the intention to do so.

(2) Any entry and inspection must be conducted in conformity with the requirements of the Constitution of South Africa, 1996, and any other law and, in particular, with strict regard to decency and order, respect for a person's dignity, freedom and security, and personal privacy.

(3) The municipality may be accompanied by an interpreter and any other person reasonably required to assist the authorised official in conducting the inspection.

(4) A person representing the municipality must, on request, provide his identification.

109. Indemnification from Liability

Neither employees of the municipality nor any person, body, organisation or corporation

acting on behalf of the municipality is liable for any damage arising from any omission or act done in good faith in the course of his duties unless the damage is caused by a wrongful and intentional act or negligence.

110. Exemption

(1) The engineer may, in writing exempt an owner, customer, any other person or category of owners, customers, ratepayers, users of services from complying with a provision of these by-laws, subject to any conditions it may impose, if he or she is of the opinion that the application or operation of that provision would be unreasonable, provided that the engineer shall not grant exemption from any section of these by-laws that may result in—

- (a) the wastage or excessive consumption of water supply services;
- (b) significant adverse effects on public health, safety or the environment;
- (c) the non-payment for services;
- (d) the Act, or any regulations made in terms of it, being not complied with.

(2) The municipality may at any time after giving written notice of at least thirty days, withdraw any exemption given in terms of subsection (1).

111. Conflict of Law

If there is any conflict between these by-laws and any other by-laws of the municipality, these by-laws will prevail.

112. Transitional Arrangements

(1) Installation work authorised by the municipality prior to the commencement date of these by-laws or authorised installation work in progress on that date shall be deemed to have been authorised in terms of these by-laws; and the municipality may, for a period of 90 (ninety) days after the commencement of these by-laws, authorise installation work in accordance with the by-laws that regulated that work immediately prior to the promulgation of these by-laws.

(2) Any reference in these by-laws to a charge determined by the municipal council shall be deemed to be a reference to a charge determined by the municipal council under the laws repealed by section 114, until the effective date of any applicable charges that may be determined by the municipal council in terms of these by-laws, or by-laws relating to credit control and debt collection, and any reference to a provision in the laws repealed by section 114 shall be deemed to be a reference to a corresponding provision in these by-laws.

(3) Any approval, consent or exemption granted under the laws repealed by section 114 shall, save for the provisions of subsection (3), remain valid.

(4) No customer shall be required to comply with these by-laws by altering a water installation or part of it which was installed in conformity with any laws applicable immediately prior to the commencement of these by-laws; provided that if, in the opinion of the engineer, the installation, or part, is so defective or in a condition or position that could cause waste or undue

consumption of water, pollution of the water supply or a health hazard, the engineer may by notice require the customer to comply with the provisions of these by-laws.

113. Repeal of Existing Municipal Water Services By-laws

The provisions of any by-laws relating to water supply and sanitation services by the municipality are hereby repealed insofar as they relate to matters provided for in these by-laws.

114. Short Title and Commencement

(1) These by-laws are called the Water Services By-laws of the ... municipality.

(2) The municipality may, by notice in the Provincial Gazette, determine that provisions of these by-laws, listed in the notice, do not apply in certain areas within its area of jurisdiction listed in the notice from a date specified in the notice.

(3) Until any notice contemplated in subsection (2) is issued, these by-laws are binding.

SCHEDULE A: LIMITS OF CONCENTRATION OF SUBSTANCES THAT MAY BE DISCHARGED TO THE MUNICIPALITY'S SANITATION SYSTEM

Parameter	Allowed Specification
PV-not exceed	1 400 ml/l
Ph within range	6,0 - 10,0
Electrical conductivity— not greater than	500 m S / 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, hydro-sulphides 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
Formaldehyde (expressed as HCHO)	50 mg / l
Non— organic solids in suspension	100 mg / l
Chemical oxygen demand (CO)	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

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 the effluent, shall not exceed 50 mg / l, nor shall the concentration of any individual metal in a

sample exceed 20 mg / l.

Group 2:

Metal	Expressed as
Lead	Pb
Selenium	Se
Mercury	Hg

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

OTHER ELEMENTS

Element	Expressed as
Arsenic	As
Boron	B

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

RADIO-ACTIVE WASTES

Radio-active wastes or isotopes: Such concentration as may be laid down by the Atomic Energy Board or any national or Department:

Provided that, notwithstanding the requirements set out in this Part, the municipality reserves the right to limit the total mass of any substance or impurity discharged per 24 hours into the sanitation system from any premises.

METHOD OF TESTING

The method of testing in order to ascertain the concentration of any substance in this Schedule, shall be the test normally used by the municipality for these purposes. Any person discharging any substance referred to in this Schedule shall ascertain the details of the appropriate test from the municipality.

SCHEDULE B: APPLICATION FORM FOR THE DISCHARGE OF INDUSTRIAL EFFLUENT TO THE MUNICIPALITY’S SANITATION SYSTEM

(Please complete application in block capitals)

I (name): _____

the undersigned, duly authorised to set on behalf of

and hereinafter referred to as the applicant, hereby apply in terms of the Water Services By-laws of the municipality for approval to discharge industrial effluent into the municipality's sanitation system in accordance with the information provided herein.

PART I

1. NATURE OF THE BUSINESS OR INDUSTRY CONCERNED:

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

3. POSTAL ADDRESS OF THE BUSINESS OR INDUSTRY:

4. PHYSICAL STREET ADDRESS:

ERF NO OR FARM PTN: _____ TOWNSHIP OR FARM: _____

5. If the business or industry 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: _____

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

8. INFORMATION RELATING TO EMPLOYEES:

	Office	Factory
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? :		

PART II

INFORMATION 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 borehole or other source				
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 (e.g. cooling, gardens, etc)
TOTAL B	-----

- (2) Domestic use kl/Month
- (i) Total number of employees (Allow 1 kilolitre/person/month)
- (ii) Total number of employees permanently resident on the premises eg. hostels (Allow 1 kilolitre/person/month)
- TOTAL C -----

3. EFFLUENT DISCHARGE INTO SANITATION SYSTEM

- (1) Metered volume (if known)kl/ Month
- (2) Estimated un-metered volume (see below*)kl/ Month
- (3) Estimated rate of discharge

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

* In the event that no effluent meter is installed on the premises, the estimated volume of un-metered effluent discharge to sewer is calculated as follows:

A - (B + C) =Kilolitre /Month

PART III

INFORMATION REGARDING THE COMPOSITION OF INDUSTRIAL EFFLUENT

Information relating to 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 (kilolitres)
- (6) Maximum rate of discharge (kilolitres / hr)
- (7) Periods of maximum discharge, (e.g. 7:00 am to 8:00 am)
- (8) If any of the substances or their salts, specified in the table, are formed on the premises, a cross must be placed in the space in which the substance appears, and, if possible, the average concentration of this substance likely to be present in any effluent must also be stated.

TABLE

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	Sulphide	mg/l	Synthetic detergents mg/l
Chromium	mg/l	Sulphate	mg/l	Tar and / or tar oils mg/l
Cobalt	mg/l	Others (Specify)	mg/l	Volatile Solvents mg/l
Copper	mg/l			Others (Specify) mg/l
Cyanide	mg/l			
Iron	mg/l			
Lead	mg/l			
Manganese	mg/l			
Mercury	mg/l			
Nickel	mg/l			
Selenium	mg/l			
Tungsten	mg/l			
Titanium	mg/l			
Zinc	mg/l			
Other (Specify)	mg/l			

- (9) Any further information as to kind or character, chemical compositions, concentrations or other properties peculiar to the industrial effluent to be furnished on a separate sheet and attached hereto.

PART IV

CONDITIONS RELATING TO THE ACCEPTANCE OF INDUSTRIAL EFFLUENT

1. The applicant shall attach descriptions and a statement of the dimensions of grease and oil traps, screens, dilution and neutralising tanks and any other provision made for the treatment of the effluent prior to discharge to the sanitation system.
2. The applicant shall submit to the municipality, if requested, plans showing the reticulation systems on his premises for water and industrial effluent.
3. The applicant shall, in addition to complying with the provisions of the municipality's Water Services By-laws aimed at the protection of its employees, sewers and treatment plant from damage, comply with any direction concerned with such protection given by the engineer verbally or in writing for the purpose of ensuring the applicant's compliance with the said by-laws.
4. The applicant shall notify the municipality, as soon as possible after he becomes aware thereof, or at least 14 days before anything is done to cause material alteration in the nature or quantity of the industrial effluent specified in this application or in any of the facts stated by him therein.

5. The applicant shall, within 30 days from the date of signature of this application, procure an accurately representative sample of not less than 5 litre of the industrial effluent to be discharged into the sewer, which sample shall be free of domestic sewage, and shall submit one half thereof to the municipality for analysis and also submit to the engineer a report on the sample made by an analyst appointed by him: Provided that in the case of a newly established industry the period specified may be extended by the municipality for a period not exceeding six months or such further extended periods as the municipality in its discretion may approve.

6. The applicant hereby declares and warrants that the information given by him in this form, or otherwise, in connection with this application is, to the best of his knowledge and belief, in all respects correct.

7. The applicant agrees that the said information, being in all respects correct, shall form the basis on which this application is granted by the municipality.

Thus done at by the applicant this day of
 20

.....
 Signature and capacity of the applicant

SCHEDULE C: FORMULA FOR THE CALCULATION OF EFFLUENT DISCHARGE CHARGES

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

$$T_c = Q_c t \left[a \left(\frac{COD_c - COD_d}{COD_c} \right) + b \left(\frac{P_c - P_d}{P_d} \right) + c \left(\frac{N_c - N_d}{N_d} \right) \right]$$

- Where T_c = Extraordinary Treatment Cost to Consumer
 Q_c = Waste water Volume discharged by consumer in kl
 t = Unit Treatment cost of waste water in R/kl
 COD_c = Total COD of waste water discharged by consumer in milligrams/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 = Ortho-phosphate concentration of waste water discharged by consumer in milligrams phosphorus per litre
 P_d = Ortho-phosphate concentration of domestic waste water in milligrams 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

Different terms	Value
T	R0.82/kl
COD_d	600 mg/l
	10 mg/l
N_d	25 mg/l
A	0.6
B	0.25
C	0.15