# COUNTRY TOWNS SEWERAGE BY-LAWS 1952

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WESTERN AUSTRALIA

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COUNTRY TOWNS SEWERAGE ACT 1948

# COUNTRY TOWNS SEWERAGE BY-LAWS 1952

# PART I

# Citation

[Heading inserted in Gazette 27 February 1981 p.825.]

1. These by-laws may be cited as the Country Towns Sewerage By-laws  $1952^{1}$ .

[By-law 1 inserted in Gazette 3 January 1992 p.32.]

Interpretation

[Heading inserted in Gazette 27 February 1981 p.825.]

- 2. In these by-laws unless the contrary intention appears
  - "Anti-siphonage vent" or "back vent" means any vent pipe from an individual trap to the open air, or to a main or branch vent pipe having for its purpose the prevention of loss of water seal in the trap.

# "Book of forms" means ----

- (a) in relation to a notice or certificate, a book of approved forms of notice and certificate; and
- (b) in relation to a multi-entry plumbing certificate, a book of approved forms of multi-entry plumbing certificate,

as referred to in by-law 18G (1).

- "Bore", "diameter" or "size" in reference to any pipe means the internal diameter thereof.
- "Building" means any building used as a work place, residence, place of business, place of amusement, or a place of human habitation, or used for the storage of food intended for human consumption, but does not include outbuildings unless such are used for any of the above purposes or are provided with plumbing fixtures.
- "Certificate" means a certificate of completion and compliance under by-law 18B.
- "Combined pipe system" means that type of plumbing installation in which disconnector traps are omitted and both soil and waste pipes are connected directly to the drain or to a common pipe taking both soil and waste discharges, and in which a common system of venting is used for all classes of pipe.
- "Combined waste pipe" means any pipe which receives the discharge from both soil and waste fixtures and conveys the same to the drain. Combined waste pipes are connected directly to the drain and are used only in connection with the "combined pipe system."
- "Disconnector trap" means a trap for isolating or disconnecting waste pipes from the drain and soil pipes, and for providing inlet ventilation to the waste pipe or pipes discharging into it.

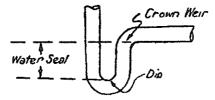
"Domestic wastewater" means all faecal matter, urine, household slops and household liquid refuse.

"Drain" has the same meaning as property sewer.

- "Emergency work" means work that must be carried out immediately by a licensed plumber to prevent —
  - (a) the entry into the Corporation's sewerage system of any substance or matter that is likely to hinder or prevent the proper functioning of that system; or
  - (b) the escape from the Corporation's sewerage system of foul air or offensive matter.
- "External W.C." means any closet which is entered solely from an area of not less than 9 square feet open to the sky.
- "Educt Vent" means an opening or pipe for the exit of air from a soil pipe, waste pipe, combined waste pipe or drain.
- "Flat" means a suite of rooms used or intended or adapted for use as a separate habitation and comprised in a building containing one or more similar suites.
- "Industrial waste" means the liquid, solid or gaseous refuse from any business, industry, warehouse or manufacturing premises other than domestic wastewater, stormwater, or unpolluted water.
- "Inspector" means any person appointed by the Corporation for the purpose of these by-laws or to administer the said by-laws.
- "Interceptor Trap" (or "Boundary Trap") means a trap situated on the drain at some point between the sewer and the lowest inlet to the drain, for the purpose of preventing the passage of air or gases from the sewer to the drain.
- "Induct Vent" means an opening or pipe, for the admission of air to a soil pipe, waste pipe, combined waste pipe or drain.

- "Internal Closet" means any closet which is entered from or has an opening into any building. Internal closet means any closet other than an external closet as herein defined.
- "Licensed plumber" means a person who holds a Water Supply and Sanitary Plumber's Licence granted under by-law 11.
- "Multi-entry plumbing certificate" means a certificate under by-law 18E.
- "Multi-entry work" means ----
  - (a) emergency work; and
  - (b) maintenance, repair or replacement work of a kind described in each book of forms of multi-entry plumbing certificate.
- "Notice" means a notice of intention to commence work under by-law 18A.
- "Notified work" means work described in a notice.
- "Public House" means any building in respect of which a publican's licence, an hotel licence, a wine and beer licence, or wayside house licence is held under any Act regulating the sale of intoxicating liquor.
- "Property" for the purposes of these by-laws includes either house, building, tenement, land or premises.
- "Relief Vent" means any vent which is connected below the level of the lowest fixture for the purpose of relieving the main vent.
- "Separate Pipe System" means that type of plumbing installation in which separate pipes are provided for soil and waste discharges and for the ventilation of soil and waste fixtures, and in which all waste pipes are connected to the drain through a disconnector trap.
- "Soil Pipe" means any pipe which conveys the discharge from water closets, slop hoppers, urinals, mortuaries, or operating theatres to the drain.

- "Slop Hopper" means any fixture, other than a closet pan or urinal, used for the discharge of soil or urine waters and provided with flushing apparatus.
- "Stack" means any vertical line of soil waste, combined waste or vent piping with its offset if any.
- "The Act" means the Country Towns Sewerage Act 1948, and any amendment thereof.
- "Trap" means any fitting designed to retain a quantity of water for the purpose of preventing the passage of air or gases through such fitting.
- "Waste Pipe" means any pipe which conveys the discharge from any fixture, other than water closets, slop hoppers, urinals, mortuaries, or operating theatres, to a disconnector trap in the case of "The Separate Pipe System" or directly to the drain in the case of the "Combined Pipe System."
- "Water Seal" (or "Trap Seal") means the vertical distance between the dip and the crown weir of a trap, as shown in sketch.



- "working day" means a day of the week other than a Saturday, Sunday, public holiday or public service holiday.
- "Yard Gully" means a drainage trap which is used externally and fitted with a basin top and grating.

[By-law 2 amended in Gazette 28 June 1985 p.2334; 29 June 1988 p.2128; 22 December 1989 p.4624; 3 January 1992 p.32; 29 December 1995 pp.6314 and 6315.]

# PART II

Protection of Water, Grounds, Works, etc., from Trespass and Injury

#### Trespassing Prohibited

**3.** No person shall trespass within the fenced-off ground adjacent to or reserved for Sewerage Works nor enter without proper authority any Sewerage Work not open to the public.

# Dogs Prohibited

4. No person shall permit any dog of which he is the owner to trespass on any portion of the ground in the vicinity of any sewerage works.

#### Disposal of Refuse, etc.

5. No person shall leave loose paper or other refuse on any portion of the grounds in the vicinity of any reservoir or works, except in the receptacles provided therefor.

#### Posting or Distribution of Bills, etc.

6. No person shall post or distribute bills, advertisements, or other notices on any portion of any reservoir or works, or on any portion of the works or ground in the vicinity thereof.

# Nuisances

7. No person shall commit a nuisance on any portion of the grounds in the vicinity of any reservoir or works.

# Protection of Works from Injury

8. No person shall in the vicinity of any works carry on or cause to be carried on any mining or quarrying operation, or make any excavation of any sort, or cause any explosion so as to injure any waterworks, sewerage works, sewers, drains, pipes, or fittings whatsoever.

#### PART III

# Licences and Permits

# Sewerage or Drainage Work shall be done only by Licensed Water Supply and Sanitary Plumbers

**9.** No person shall carry out any work in connection with sewerage or drainage on any premises or in connection with any fitting or apparatus connected therewith unless he shall have been duly licensed by the Corporation as a "Licensed Water Supply and Sanitary Plumber."

[By-law 9 amended in Gazette 29 December 1995 p.6314.]

# Penalties for doing Work without a Water Supply and Sanitary Plumber's Licence

10. Any person who contravenes by-law 9 commits an offence and is liable to a penalty of \$2 000.

[By-law 10 amended in Gazette 14 October 1988 p.4173.]

Description and Scope of Licence

11. The condition upon which licences shall be issued by the Corporation are: —

- (a) The Corporation may grant a licence to a person as a water supply and sanitary plumber if
  - the applicant has obtained the certificate of a Board of Examiners appointed by the Corporation or has successfully completed such examinations as the Corporation may require in the subjects set out in by-law 13 of these by-laws; and
  - (ii) the Corporation is satisfied that the applicant is a fit and proper person to hold a licence and is more than 21 years of age.

- (aa) Where an applicant has neither obtained the certificate mentioned in subparagraph (i) of paragraph (a) of this by-law nor successfully completed the examinations mentioned in that subparagraph, the Corporation may issue a provisional licence under such terms and conditions as it considers advisable.
- (b) Such licences shall be issued subject to the by-laws or any special conditions that the Corporation may determine.
- (c) The holder of a Water Supply and Sanitary Plumber's Licence may carry out any sewerage plumbing or drainage work within any Sewerage Area constituted pursuant to the provisions of the Act, and only plumbers holding such licences shall do or cause to be done, plumbing or drainage work within areas open for sewerage house connections.

[By-law 11 amended in Gazette 17 August 1966 p.2219; 21 July 1978 p.2653; 29 December 1995 pp.6310 and 6314.]

# **Conditions of Licence**

- 12. (1) Every holder of a licence from the Corporation
  - (a) shall execute such works in accordance with the provisions of the Act and of these by-laws, and of any special directions or orders given or issued by the Inspector; and
  - (b) shall execute such works in a thorough and tradesmanlike manner to the satisfaction of the Inspector as expeditiously as practicable; and
  - (c) shall obtain permission from the person or authorities concerned when necessary for the execution of such works on, over, or through any private property, or any streets, roads, parks, reserves, or other public places or properties; and
  - (d) shall pay any fees demanded by any Municipality or other local authority for opening any street, road, or thoroughfare, or otherwise in connection with such work; and

- (e) shall restore any part of any street, road, or thoroughfare interfered with by such work to the satisfaction of the local authority having control thereof, upon the completion of such work; and
- (f) shall restore any other property interfered with by such work to the satisfaction of the Inspector; and
- (g) shall, in the execution of such work, take such proper and necessary precautions that no accident or damages or unnecessary inconvenience may be directly or indirectly occasioned thereby.

(2) Every licence granted by the Corporation shall be subject to suspension or cancellation, as the Corporation may determine when, in the opinion of the Corporation, the holder thereof has failed to comply with the conditions of such licence. Such suspension or cancellation shall not prejudice the Corporation's right to take any other proceedings against the holder of such licence which the Corporation is by law authorized to take.

[By-law 12 amended in Gazette 29 December 1995 pp.6314 and 6315.]

Examination — Water Supply and Sanitary Plumbers

13. (1) Subject to the provisions of these by-laws, every applicant for a licence as a water supply and sanitary plumber shall pass such examinations as the Corporation may require with respect to the following subjects, namely: —

- (a) All branches of the plumber's trade, including a knowledge of all materials used by the plumber or drainer.
- (b) Water supply, sewerage and drainage work, including the proper disposal of pipes, fittings, etc., for hot water installations.
- (c) A knowledge of these by-laws, and the construction of all water supply and sewerage apparatus and appliances required thereby; and a knowledge of the by-laws of local authorities in the sewerage area.

(d) The general principles of sanitary and water supply plumbing work.

(2) Every candidate shall demonstrate his practical ability as a sanitary plumber and drainer and provide evidence that he has served not less than 5 years at the trade and may be required to submit samples of work done by himself, and also to do any specified plumbing or drainage work.

(3) The appropriate fee specified in item 1 of Part V of Schedule C shall be payable by every person who applies to sit an examination referred to in sub-bylaw (1).

[By-law 13 inserted in Gazette 21 July 1978 p.2653; amended in Gazette 29 June 1988 p.2128; 29 December 1995 p.6314.]

Candidates holding Licences from other Authorities

14. Candidates holding licences issued by other authorities may be exempted from such portions of the examinations as the Corporation may think fit.

[By-law 14 amended in Gazette 29 December 1995 p.6314.]

Annual Fee for Licence

# Licence fees

15. (1) The fee set out in item 2 of Part V of Schedule C is the fee payable for the issue of a water supply and sanitary plumber's licence per quarter of the year (or part thereof) for which the licence is issued.

(2) The fee set out in item 3 of Part V of Schedule C is the fee payable for the renewal of a water supply and sanitary plumber's licence.

[By-law 15 inserted in Gazette 29 June 1990 p.3242.]

# **Renewal of Licences**

16. Every licence issued by the Corporation under these by-laws shall be current only to 30 June next following the date of issue and may be renewed each year for a period of 12 months expiring on 30 June in the next succeeding year, and the holder of a Water Supply and Sanitary Plumber's Licence shall apply for a renewal thereof and pay the necessary fee prior to the expiration of the period for which his existing licence is current.

[By-law 16 inserted in Gazette 30 June 1960 p.1954; amended in Gazette 29 December 1995 p.6314.]

List of Licensed Plumbers shall be Published

17. A list of licensed water supply and sanitary plumbers shall be made available at the offices of the Corporation.

[By-law 17 amended in Gazette 29 December 1995 p.6311.]

Penalties for Breaches of By-laws by Plumbers

18. (a) Any licensed water supply and sanitary plumber who shall refuse either by himself or by those employed by him to give any needful or proper information required by an officer of the Corporation shall be guilty of an offence and liable on conviction to a fine not exceeding \$40.

(b) Any licensed water supply and sanitary plumber who commits a breach of any of these by-laws may be required by the Corporation to show cause why his licence should not be suspended or cancelled.

(c) Any water supply and sanitary plumber whose licence has been suspended shall not be relicensed as a licensed water supply and sanitary plumber until the term of his suspension has expired, or the Corporation has directed the reinstatement of his licence.

[By-law 18 amended in Gazette 29 December 1995 pp.6311 and 6314.]

b. 18A

# **Notification of Work**

18A. (1) Subject to by-laws 18E and 18I, a licensed plumber shall not carry out or cause to be carried out any work in connection with sewerage or drainage which is connected, or is intended to connect to the Corporation's works unless the licensed plumber has lodged with the Corporation a notice of intention to commence work not less than 2 working days before commencement of the work.

Penalty: \$500.

(2) A notice of intention to commence work shall be in a form approved by the Corporation, legibly completed and signed by the licensed plumber who is to carry out the work.

(3) The Corporation may refuse to accept for lodgement a notice that does not comply with sub-bylaw (2).

- (4) A licensed plumber who lodges a notice
  - (a) is responsible for the performance of the notified work whether the work is carried out by that licensed plumber or by another person under the direction and supervision of that licensed plumber; and
  - (b) shall ensure that the notified work is carried out in accordance with these by-laws.

Penalty for contravention of paragraph (b): \$2 000.

[By-law 18A inserted in Gazette 22 December 1989 p.4624; amended in Gazette 21 September 1990 p.4954; 29 December 1995 p.6315.]

# **Certification of work**

18B. (1) Within 7 working days of completing notified work the licensed plumber shall lodge with the Corporation —

(a) a certificate of completion and compliance in respect of the notified work; and

(b) in the case of a property sewer installation, a diagram or diagrams of the completed work in such form or forms as the Corporation may require.

Penalty: \$1 000.

(1a) Where the Corporation provides plan sheets for the preparation of diagrams under sub-bylaw (1) (b), the appropriate fee set out in Part VIII of Schedule C is payable in respect of the provision of those sheets.

(2) A certificate of completion and compliance shall be in a form approved by the Corporation, legibly completed and signed by the licensed plumber responsible for the notified work.

(3) The licensed plumber shall give a copy of a certificate lodged under sub-bylaw (1) to the owner or occupier of the property on which the notified work was carried out within 7 working days of completing that work.

Penalty: \$500.

[By-law 18B inserted in Gazette 22 December 1989 p.4624; amended in Gazette 29 June 1990 p.3242; 29 December 1995 p.6315.]

# Alteration, withdrawal or cancellation of notice

18C. (1) If after the commencement of notified work a licensed plumber wishes to alter or withdraw the notice lodged in respect of that work, the licensed plumber shall —

- (a) lodge with the Corporation
  - (i) the certificate that corresponds to the notice, duly completed in accordance with the instructions set out in the book of forms; and
  - (ii) in the case of alteration, a fresh notice complying with by-law 18A (2);

and

(b) give a copy of the certificate that corresponds to the notice to the owner or occupier of the premises concerned.

(2) Where notified work is not to be commenced the licensed plumber shall cancel the notice in respect of that work by lodging with the Corporation the certificate that corresponds to the notice, duly completed in accordance with the instructions set out in the book of forms.

(3) A licensed plumber who fails to comply with any of the requirements of sub-bylaw (1) or (2) in relation to the alteration, withdrawal or cancellation of a notice commits an offence.

Penalty: \$500.

[By-law 18C inserted in Gazette 22 December 1989 pp.4624-5; amended in Gazette 29 December 1995 p.6315.]

#### Work taken over by another licensed plumber

18D. (1) Where notified work has been commenced by a licensed plumber other than the licensed plumber named in the notice (in this by-law called "the first licensed plumber") is to take over and complete the work, the first licensed plumber shall withdraw the notice in the manner set out in by-law 18C (1) (a) (i) and (b).

(2) The licensed plumber taking over the work referred to in sub-bylaw (1) shall —

- (a) lodge with Corporation a fresh notice advising the Corporation of the change of licensed plumber;
- (b) provide the Corporation with written confirmation of the change of licensed plumber from the owner or occupier of the premises on which the work was carried out; and
- (c) within 7 working days of completing the work, lodge a certificate in respect of the work carried out, including any work carried out but not certified by the first licensed plumber.

(3) A licensed plumber who fails to comply with a requirement of sub-bylaw (1) or (2) commits an offence.

Penalty: \$500.

[By-law 18D inserted in Gazette 22 December 1989 p.4625; amended in Gazette 29 December 1995 p.6315.]

#### **Multi-entry plumbing certificates**

18E. (1) Notwithstanding by-law 18A, a licensed plumber is not required to lodge a notice before commencing multi-entry work but upon completion of such work shall —

- (a) enter the details of the work in a multi-entry plumbing certificate; and
- (b) lodge with the Corporation
  - (i) the multi-entry plumbing certificate; and
  - (ii) in the case of any property sewer installation, a diagram or diagrams of the completed work in such form or forms as the Corporation may require,

within one month of the date of completion of the work first described in that certificate.

Penalty: \$500.

(2) A multi-entry plumbing certificate shall be in a form approved by the Corporation, legibly completed and signed by the licensed plumber responsible for the work described in that certificate.

[By-law 18E inserted in Gazette 22 December 1989 p.4625; amended in Gazette 29 December 1995 p.6315.]

# **Directions by Corporation as to work**

18F. (1) Where the Corporation is of the opinion that a licensed plumber —

 has not commenced notified work within 12 months of the date of lodgement of a notice and has not withdrawn or cancelled that notice under by-law 18C;

- (b) has commenced notified work or multi-entry work but has failed to complete that work within a reasonable time; or
- (c) has carried out notified work or multi-entry work that is not in accordance with these by-laws,

the Corporation may, by notice in writing given to the licensed plumber or the owner or occupier of the property concerned, direct the person so notified to ensure that the work is commenced, completed or otherwise carried out within such time and subject to such conditions as are specified in the notice.

(2) The Corporation may by further notice in writing vary or cancel a notice given under sub-bylaw (1).

(3) A person who fails to comply with a direction contained in a notice given under sub-bylaw (1), or in such a notice as varied under sub-bylaw (2), commits an offence.

Penalty: \$1 000 and if the offence is a continuing one a further fine of \$50 for every day or part of a day during which the offence continues after notice of the offence has been given by or on behalf of the Corporation to the offender.

(4) Where a notice under sub-bylaw (1), or such a notice as varied under sub-bylaw (2), is not complied with, the Corporation may refuse permission for connection of the work to the Corporation's works.

(5) A person convicted of an offence under sub-bylaw (3) shall, in addition to any penalty incurred under that sub-bylaw, pay any expense, loss or damage incurred by the Corporation in consequence of the offence.

(6) The appropriate fee set out in item 3 of Part 1 of Schedule C is payable by the person to whom a notice is given under sub-bylaw (1) for the inspection of work commenced, completed or otherwise carried out in accordance with that notice.

[By-law 18F inserted in Gazette 22 December 1989 p.4625; amended in Gazette 29 December 1995 pp.6311 and 6315.]

# Forms

**18G.** (1) A licensed plumber may obtain a book of the approved forms of notice and certificate, or multi-entry plumbing certificate from the Corporation on payment of the appropriate fee set out in Part VI of Schedule C.

(2) A licensed plumber shall comply with any instructions contained in a book of forms in relation to the completion and place of lodgement of a notice, certificate or multi-entry plumbing certificate.

Penalty: \$100.

[By-law 18G inserted in Gazette 22 December 1989 p.4625; amended in Gazette 29 December 1995 p.6315.]

# False or misleading statements

**18H.** A licensed plumber in completing a notice, certificate or multientry plumbing certificate shall not make a statement or give any information which the licensed plumber knows is false or misleading in a material particular.

Penalty: \$1 000.

[By-law 18H inserted in Gazette 22 December 1989 p.4625; erratum in Gazette 23 February 1990 p.1260.]

#### Exemption

**18I.** (1) The Corporation may, by notice in writing given, as far as is practicable, to every licensed plumber, exempt a type or types of work specified in the notice from the notification and certification requirements of by-laws 18A and 18B.

(2) The Corporation may by further notice in writing vary or cancel a notice given under sub-bylaw (1).

[By-law 18I inserted in Gazette 22 December 1989 p.4626; amended in Gazette 29 December 1995 p.6315.]

# Testing and inspection of work

19. (1) Property sewers or apparatus in connection with sewerage or drainage shall not be used until the work has been tested by the licensed plumber responsible for the work, or by a person under the direction and supervision of that licensed plumber, to ensure compliance with these by-laws.

(2) An inspector may inspect or test work carried out by, or under the direction and supervision of, a licensed plumber, and for this purpose a licensed plumber shall —

- (a) immediately report to the Corporation work that is ready for inspection or testing; and
- (b) ensure that every facility is made available to an inspector for conducting an inspection or test of the work.

[By-law 19 inserted in Gazette 21 September 1990 p.4954; amended in Gazette 29 December 1995 p.6315.]

[20. Repealed in Gazette 22 December 1989 p.4626.]

Damage to Pipes shall be Reported

**21.** Damage caused by licensed water supply and sanitary plumbers or their employees to water, sewer, gas, or other pipes shall be reported forthwith to the authority concerned, and immediate steps shall be taken to have repairs effected, and the cost of same shall be defrayed by such plumber.

# Plumber to report certain matters

**21A.** A licensed plumber shall immediately report to the Corporation anything found by, or brought to the attention of, the plumber, in the course of carrying out plumbing work, that is likely to result in the entry into the Corporation's sewerage system of any substance or

# b. 19

matter likely to hinder or prevent the proper functioning of that system.

Penalty: \$2 000.

[By-law 21A inserted in Gazette 22 December 1989 p.4626; amended in Gazette 29 December 1995 p.6315.]

Statement to be Signed

[Heading inserted in Gazette 30 June 1960 p.1954.]

**22.** Prior to issue of any licence, the person to whom the same is to be issued shall sign a statement that he accepts the licence subject to and in conformity with the conditions thereof and with these by-laws and that he will conform and comply therewith.

[By-law 22 inserted in Gazette 30 June 1960 p.1954.]

[23. Repealed in Gazette 30 June 1960 p.1954.]

Change of Address shall be Notified

**24.** Every licensed water supply and sanitary plumber shall, within 48 hours of any change in his address, give notice in writing thereof to the Corporation.

[By-law 24 amended in Gazette 29 December 1995 p.6314.]

# PART IV

# Sewerage — Plumbing and House Connections

Procedure for connections to Sewer

25. When a sewer is completed and ready for use, action may be taken under sections 35 and 36 of the Act.

# Proof of Connections having been made

**26.** The certificate of such officer as the Corporation may appoint, in writing, shall be *prima facie* evidence that water-closet or water-closets, or drains, appliances, apparatus and connections have been provided, or the works, matters, and things have been performed, as the case may be, and *prima facie* evidence as to the amount of costs, expenses, and interest recoverable in respect thereof.

[By-law 26 amended in Gazette 29 December 1995 p.6314.]

Work carried out under System of Deferred Payment

27. If any owner wishes to avail himself of the provisions of the Act regarding deferred payments, and the Corporation has approved of his doing so, he shall sign an agreement to pay the costs incurred by the Corporation in relation to such works, in not more than 24 quarterly instalments, with interest at the prescribed rate per annum on the amount remaining to be paid added to each instalment. But the said owner may at any time pay to the Corporation such portion as then remains unpaid of such costs and expenses, together with interest thereon, at the said rate, to the date of such payment. In the event of any of the instalments or interest not being paid within 14 days after the due date thereof, the whole amount then unpaid shall, if the Corporation so desires, become due, payable and recoverable with interest as prescribed by the said principal or any amending Act.

[By-law 27 amended in Gazette 29 December 1995 p.6314.]

# Maintenance by Minister

28. In the event of the Corporation carrying out the work or providing such water closet or water closets and such drains, appliances, apparatus and connections, the owner or occupier is legally liable for the cost of repairs and maintenance, but the Corporation shall, for a period of 12 months from the date of completion of the said work, and without charging the owner or occupier therefor, carry out any work of maintenance and repair which in the opinion of the Corporation is necessary, and which is not, in the opinion of the Corporation, occasioned by any neglect or wilful act of the owner or occupier.

[By-law 28 amended in Gazette 29 December 1995 p.6314.]

# Plans required for Property Sewerage and Fees for Preparation and Examination of Plans

# [Heading inserted in Gazette 28 June 1985 p.2334.]

**29.** (1a) The notice required by section 41A of the Act to be given before the construction alteration of a building shall be in the form set out in Schedule B, and the fee prescribed under that section for examining the plans required to be submitted under that section and for making or modifying connections as mentioned in that section is as set out in Part II of Schedule C except that, where a like fee is payable under section 43A of the *Country Areas Water Supply Act 1947*, no further fee applies under this sub-bylaw.

(1b) The owner or occupier of an existing dwelling who proposes to have constructed or altered any property sewer, or to have fixtures on that property connected to, or other work of a sanitary nature carried out for connection to, the Corporation's sewerage system shall —

- (a) give notice of that connection in the form of an approved form; and
- (b) furnish with the notice 2 copies of a plan in a form acceptable to the Corporation showing the location of the building in relation to the boundaries of the land and showing the location and level of the proposed fixtures.

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[(1) repealed]

(2) The fees to be paid in respect of proposals to carry out plumbing works —

- (a) are set out in items 1 and 2 of Part 1 of Schedule C; and
- (b) will be assessed and are payable at the time of lodgment of a notice under sub-bylaw (1b).

(3) For the purposes of the fees charged under this by-law "major fixtures" include water closets, slop hoppers, urinal outlets, bidets and industrial waste traps.

[By-law 29 inserted in Gazette 27 February 1981 p.825; amended in Gazette 28 June 1985 p.2334; 14 July 1987 p.2651; 29 June 1988 p.2128; 22 December 1989 p.4626; 29 December 1995 p.6315.]

#### Plan to remain the Property of Owner

**30.** The plan supplied by the Corporation shall be produced, whenever required during the progress of the work, to an Inspector or other officer of the Corporation. Any special instruction which may be written on the plan shall be strictly adhered to.

[By-law 30 amended in Gazette 29 December 1995 p.6314.]

[**31**. Repealed in Gazette 14 July 1987 p.2658.]

Work Incidental to Sewerage Installations

**32.** Any work of a structural nature in connection with a new building and additions or alterations to existing building, which is not part of either the actual plumbing or drainage installation but which is necessary in order to conform with these by-laws shall be carried out by the owner. This provision applies to lighting, ventilation, approaches and floors to water closets, slop hoppers, urinals, baths and similar conveniences.

# Use of Drains

**33.** Either the owner or the occupier of any sewered property shall discharge into the sewerage system all faecal matter, urine, household slops, and household liquid refuse from such property and such other polluted water from stables, washing areas, manure bins, basements, cellars, and roofed yards and, subject to these by-laws in regard thereto, such industrial waste as may be authorized by the Corporation.

[By-law 33 amended in Gazette 29 June 1988 p.2128; 29 December 1995 p.6311.]

# Infectious Disease

**34.** Solid or liquid discharge from patients suffering from typhoid fever or any other infectious or contagious disease shall not be emptied into any sewer or drain from any hospital, institution, or other private or public building, unless such discharge has been thoroughly disinfected.

#### Prohibited Discharges

**35.** The deposition or discharge of any of the following substances into any drain or into any sewer shall be an offence against these by-laws, *viz*: —

- (a) Any animal matter, other than as mentioned in by-law 33, fleshing, wool, hair, dead animal, grease, dust, ashes, rubbish, garbage, offal, vegetable and fruit or their parings, rags, oil, fat, mud, sand, gravel or like substance, or any other substance, which is, in the opinion of the Corporation, liable to be injurious to any part of the sewerage system or to officers or agents of the Corporation engaged in the operation or maintenance of the same.
- (b) Any petrol or other inflammable or explosive substance, whether solid, liquid, or gaseous.
- (c) Any rain, roof, surface, river or floodwaters, except by special permission in writing from the Corporation.

- (d) The contents of any nightsoil cart, cesspool or privy unless special permission in writing from the Corporation is obtained.
- (e) Any industrial waste or any substance which has an acid reaction to litmus paper.
- (f) Any industrial waste which is above the temperature of 100 degrees Fahrenheit, or such lower temperature as may be prescribed by the Corporation, having regard to the special circumstances of any particular case.
- (g) Any liquid which contains such percentage of common salt, or of any other mineral, salt, acid, or gas, as is, in the opinion of the Corporation, injurious to, or liable to form compounds injurious to, any part of the sewerage system or to officers or agents of the Corporation engaged in the operation or maintenance of the same.

[By-law 35 amended in Gazette 29 June 1988 p.2130; 29 December 1995 pp.6311 and 6314.]

Industrial Waste

[Heading inserted in Gazette 29 June 1988 p.2128.]

**36.** (1) (a) No industrial waste shall be discharged into a sewer unless —

- (i) a written permit has been granted by the Corporation; and
- (ii) an agreement has been executed by the applicant for the permit containing a covenant to agree with the conditions of the permit.

(b) Where a permit has not been granted under sub-bylaw (1) to the occupier of a property from which industrial waste is discharged directly or indirectly into any sewer of the Corporation, the Corporation may by its officers, servants, agents, or workmen enter upon the property and every part thereof and carry out such works as may be necessary in order to prevent the discharge of such industrial waste into its sewer. Any expense incurred by the Corporation in carrying out such works shall be payable by the occupier and may be recovered in addition to any penalty for which he may be liable.

(2) An application for permission to discharge industrial wastes from a property into a sewer shall —

- (a) be made in writing;
- (b) set out
  - the processes of manufacture from which industrial waste is to be discharged into the Corporation's sewer;
  - (ii) the nature of the industrial waste from every such process;
  - (iii) the estimated maximum rate of discharge of industrial waste from every such process;
  - (iv) the hours of the day during which discharge of industrial waste from every such process will normally take place; and
  - (v) estimated maximum daily discharge of such industrial waste into the Corporation's sewer;

and

- (c) be accompanied by detailed plans of the apparatus to be used for the treatment of the industrial waste and by such other information regarding the nature, quantity, rates, and times of discharge as may be required by the Corporation.
- (3) It is a condition of a permit granted under sub-bylaw (1)
  - (a) That if at any time in the opinion of the Corporation
    - the quantity, quality, or rate of the discharge of the industrial waste is not in compliance with the terms, provisions, or conditions of the permit;

- the occupier is not fully and faithfully performing and observing the terms, provisions, and conditions of the permit and of these by-laws;
- (iii) the treatment apparatus is not in efficient working order; or
- (iv) any other breach of the permit has been made,

the Corporation may serve a notice upon the occupier of the property —

- (v) specifying the matter or matters in respect of which a breach has taken place, or as to which the occupier is in default, or concerning which there is any complaint by the Corporation;
- (vi) requiring the occupier to rectify the breach to the satisfaction of the Corporation, within a period stated in the notice from the date of service of the notice, and in a manner specified in the notice; and
- (vii) stating that if the requirements of the notice have not been complied with on the expiration of the period specified in the notice, the permit is automatically terminated and without further or other notice from the Corporation is deemed to be at an end except as to the covenants on the part of the occupier to the performed, and as to the power of entry of the Corporation's officers, and the occupier shall not be entitled to any compensation whatever in connection therewith.
- (b) The Corporation shall be the sole judge as to the quality, quantity, and rate of discharge of such industrial waste and as to whether such quality, quantity, or rate complies with the conditions of the said permit and of the by-laws, and its decision in regard thereto shall be final and conclusive.
- (c) The maximum daily quantity of wastes, including, where there is a common discharge, both industrial waste and ordinary domestic wastewater which may pass from any property into a sewer of the Corporation, the maximum rate

of discharge of such wastes, the size and capacity of the drain for conveying such wastes from the property to such sewer, and the hours during which such flow shall be permitted shall be determined by the Corporation.

- (d) Before discharge into any sewer of the Corporation, all such industrial waste shall be passed through such apparatus or machinery, and shall be subjected to such treatment as the Corporation may determine, and all such apparatus or machinery shall be approved in type and general arrangement by the Corporation, but the occupier shall determine the size, capacity, and details of the apparatus or machinery necessary to provide treatment in compliance with the requirements of the said permit and of this by-law.
- (e) The occupier shall notify the Corporation, in writing, of his desire to make any change in any process of trade or manufacture which may in any way affect
  - (i) the nature of the industrial waste from any process of trade or manufacture, or
  - (ii) the quality, quantity, or rate of discharge of such industrial waste from any such process of trade or manufacture, or
  - (iii) the hours of the day and the days of the week during which industrial waste is to be discharged from any such process —

and no alteration or addition to the apparatus or machinery or to the method of treatment shall be made without the approval, in writing, of the Corporation.

(f) In all cases of change of the occupancy of any property from which is discharged industrial waste which the Corporation has agreed to admit into its sewer, the occupier shall prior to such change give not less than 30 days' notice thereof, in writing to the Corporation, and in default of such notice he shall remain liable for all charges and all other moneys payable to the Corporation under the said permit or terms of this by-law, which may after the change of occupancy be incurred in connection with the discharge of such trade waste.

- (g) The said permit shall not be assigned or transferred except by permission, in writing, from the Corporation.
- (h) Any person who, before obtaining a permit from the Corporation, has entered into the occupation of any property from which has been discharged industrial waste which the Corporation has permitted a previous occupier to admit into a sewer, is not permitted to discharge industrial waste into a sewer unless —
  - (i) the Corporation has first permitted the assignment or transfer of the permit under which industrial waste was admitted into a sewer; or
  - (ii) the Corporation has granted a fresh permit to the incoming occupier to admit into a sewer industrial waste from that property.
- (ha) A person referred to in paragraph (h) who discharges directly or indirectly industrial waste into a sewer before obtaining the permission of the Corporation or obtaining a fresh permit shall, in addition to any penalties prescribed in these by-laws, be liable for all amounts in respect of the discharge of industrial waste owing at the time that person entered into occupation of the property, as well as such amounts as would have been payable in respect of any discharge of industrial waste after that time if that person had obtained a permit to discharge industrial waste.
- (hb) Neither the payment of an amount referred to in paragraph (ha) nor the acceptance of that amount by the Corporation shall in any way constitute permission to admit industrial waste into a sewer.
- (i) Any authorized officer, servant, agent, or workman of the Corporation shall be at liberty at any time and from time to time to enter upon the property and every part thereof for the purpose of ascertaining whether the quality, quantity, or rate of discharge of industrial waste complies with the conditions of the said permit and of the by-laws for the

for any other purpose set forth in this by-law.

- (j) All apparatus for the treatment of industrial waste in accordance with this by-law, shall be cleansed and maintained by the occupier at his own expense so that it operates efficiently at all times and does not cause a nuisance.
- (k) Notwithstanding the permission or approval of the Corporation, the occupier of any property shall be solely liable for and in respect of
  - (i) any accident or damage, loss or injury directly or indirectly arising out of or resulting from the discharge of industrial waste from the said property into any sewer of the Corporation, and the occupier shall agree to hold harmless and keep indemnified the Corporation against all claims and demands for such damage, loss, or injury of any description made or suffered by the workmen of the Corporation or any person or persons whomsoever, and
  - (ii) all damage or injury occasioned or done to any sewer of the Corporation or any property belonging to the Corporation or any person whomsoever by reason of such discharge failing to comply with the terms, conditions, and provisions of the said permit or of the by-laws, and the Corporation shall be at liberty at the expense in all things of the occupier to repair, remedy, and make good all such damage or injury as aforesaid, and the Corporation shall certify the cost and expense thereof, and such certificate shall be final and conclusive as to such amount which shall be paid forthwith to the Corporation.
- (1) The Corporation may when thought necessary, without payment of any compensation therefor, exclude from its sewers all industrial waste from any property during the repairing, examination, or maintenance of the said sewers

or the carrying out by the Corporation of any works in connection therewith.

- [(m) deleted]
- (n) For the purpose of calculating the amount payable, pursuant to the preceding subparagraph, the volume of industrial waste admitted into any sewer of the Corporation shall be determined by any of the following methods as directed from time to time by the Corporation: —
  - (i) Measurement by an approved meter of the volume of industrial waste discharged.
  - (ii) Measurement by an approved meter of the volume of industrial waste and ordinary domestic wastewater discharged, and deducting an allowance for ordinary domestic wastewater as hereinafter provided.
  - (iii) Measurement or assessment of the total volume of water supplied to the property and multiplying such volume by a factor determined by an officer of the Corporation by measuring or assessing the water supplied to the property over such a period, being not less than 2 weeks, as may be directed by the Corporation, and
    - (a) measuring or assessing the industrial waste discharged to the sewer over the same period, and dividing the volume of industrial waste so determined by the volume of water supplied, or
    - (b) measuring or assessing the volume of industrial waste and domestic wastewater discharged during the same period, and deducting an allowance for ordinary domestic wastewater as hereinafter provided, and dividing the volume of industrial waste so determined by the volume of water supplied.
  - (iv) Measurement or assessment of the portion of the water supplied to the property and not discharged to the sewer, and deducting this amount together with any allowance for ordinary domestic wastewater as

hereinafter provided, from the total amount of water supplied to the property.

(v) From information supplied by, the occupier, in accordance with subparagraph (2):

Provided that for the purpose of any calculation or determination to be made under this subparagraph, the volume of water supplied to any property shall include water supplied from the Corporation's mains and water from any other source.

Where an occupier considers that the Corporation's determination of the volume of industrial waste being discharged to any sewer of the Corporation is in excess of the actual volume so discharged, the Corporation may upon the receipt of written application by the said occupier carry out such measurements as it considers practicable and necessary to determine the volume of industrial waste discharged, and all costs incurred by the Corporation in so doing shall be borne by the occupier unless the volume then determined is at least 10% less than the Corporation's determination.

- (o) Notwithstanding any other provision of this by-law, the occupier of any property from which industrial waste is discharged into any sewer of the Corporation shall if and where directed by the Corporation install any or all of the following: —
  - (i) Approved meters or devices for measuring the volume or rate of discharge.
  - (ii) Approved chambers for sampling and measurement of the industrial waste discharged.
  - (iii) Approved meters or devices for measuring the volume of water supplied to the property from any source other than the Corporation's mains, where any portion of such water is discharged to any sewer of the Corporation.

Notwithstanding anything contained in this by-law, the Corporation may from time to time, at its own expense, install such meters or devices as in its opinion may be necessary for the measurement of water, domestic wastewater, or industrial waste, and at any time may remove such meters or devices.

- (p) All meters or devices installed by or for the occupier for the purposes of paragraph (o) shall at all times be readily accessible to the officers of the Corporation, and shall be maintained in correct adjustment and working condition by it. The occupier shall on demand, make available to the Corporation all charts and records of discharge as may be required, and shall preserve for this purpose such charts and records for a period of 18 months.
- (q) If in the opinion of the Corporation any approved meter or other approved measuring device installed in any property shall at any time be found to be out of repair or in an inefficient state or condition or to have registered incorrectly or to have ceased to register, then the Corporation may adjust the charge in respect of the period from the last preceding reading as follows: —
  - (a) If a reading was recorded for the corresponding period of the previous year, the charge may be calculated upon the basis of the daily discharge equal to the average daily discharge during such corresponding period of the previous year, or
  - (b) if no reading was recorded for the corresponding period of the previous year, the charge may be calculated upon the basis of the daily discharge equal to the average daily discharge during the period covered by the first reading after the meter or measuring device as aforesaid has been put into good repair and in an efficient state and condition, or another meter or other measuring device has been fixed in its place, or
  - (c) the Corporation may carry out such measurements as are considered necessary to determine the relationship, which the quantity registered by the

meter or other measuring device bears to the correct quantity:

Provided that in any such case the charge may be adjusted upon such other basis as is mutually agreed upon between the Corporation and the occupier of the property from which industrial waste is discharged.

- (r) The Corporation may at any time give 12 months' notice of the termination of the said permit, and immediately upon the expiration of such period of 12 months the said permit shall, save, and except for the covenants on the part of the occupier to be performed and as to the power of entry by the Corporation's officers as hereinafter set forth, be at an end.
- Upon termination and ending of the said permit whether by (s) notice given, pursuant to the provisions of this subparagraph or otherwise, the occupier shall at its own expense in all things and to the satisfaction of the Corporation disconnect the pipe or pipes used to discharge industrial waste into the sewer of the Corporation, and put an end to the further entry or discharge of the said industrial waste into the said sewer and in default of the occupier so doing within a period of 7 days from the date of termination of the said permit or such further period as the Corporation may allow, the Corporation by its officers, servants, agents, or workmen may enter upon the said property, and at the cost and expense in all things of the occupier disconnect such pipe or pipes and put an end to the further entry of industrial waste to such sewer, and the amount of such cost and expense shall be certified by the Corporation, and its certificate shall be final and conclusive as to the amount thereof, and such amount shall be paid forthwith by the occupier.
- (t) A written permit to discharge industrial waste granted by the Corporation shall remain in operation until —
  - (i) the permit is terminated under this sub-bylaw;
  - (ii) the permit is surrendered by the holder of the permit; or

(iii) there is a change of occupancy of the property from which it is permitted to discharge that industrial waste, unless the Corporation permits the assignment or transfer of the permit.

[By-law 36 amended in Gazette 29 June 1988 pp.2129-30; 28 June 1991 p.3283; 29 December 1995 pp.6311-12, 6314 and 6315.]

- 37. (1) Any person who ---
  - (a) discharges directly or indirectly or causes, permits or allows to be so discharged from any property occupied by him into a sewer of the Corporation any industrial waste, unless the Corporation has granted that person a permit to admit such industrial waste into the sewer under by-law 36;
  - (b) discharges directly or indirectly or causes, permits or allows to be so discharged industrial waste into a sewer of the Corporation otherwise than in conformity with the terms and conditions of a permit granted by the Corporation under by-law 36; or
  - (c) where the permit granted under by-law 36 held by that person has been terminated, continues to discharge industrial waste directly or indirectly or to cause, permit or allow industrial waste to be so discharged into a sewer of the Corporation,

commits an offence.

Penalty: \$200 and \$20 for each day or part of a day during which the offence continues after notice of the offence has been given by or on behalf of the Corporation to the offender.

(2) A person convicted of an offence under sub-bylaw (1) shall, in addition to any penalty incurred under that by-law, pay any expense, loss or damage incurred by the Corporation in consequence of the offence.

[By-law 37 inserted in Gazette 29 June 1988 p.2130; amended in Gazette 29 December 1995 p.6315.]

**37A.** Notwithstanding by-laws 36 and 37, where the Corporation has, before the coming into operation of the *Country Towns Sewerage Amendment By-laws 1988*<sup>1</sup>, entered into an agreement with an occupier of a property from which industrial waste is discharged to allow the trade waste to be discharged into a sewer, that agreement shall continue to have effect according to its terms until such time as the Corporation requires the occupier to surrender the agreement and to obtain a permit and enter into a further agreement in accordance with by-law 36.

[By-law 37A inserted in Gazette 29 June 1988 p.2130; amended in Gazette 29 December 1995 p.6315.]

## Steam Exhaust

**38.** No steam exhaust, blow-off, or drip pipe shall be connected with any drain or any soil, waste, or combined waste pipe.

#### Sub-soil Water

**39.** (1) Upon written application, the Corporation may grant permission in writing to any person to discharge sub-soil water into any drain or into any sewer of the Corporation.

(2) Every such permission shall be subject to such terms and conditions as may be imposed in such permit.

[By-law 39 amended in Gazette 29 December 1995 p.6314.]

## Fittings, etc., to be Above Flood Level

**40.** (1) No inlets or openings shall be placed, or, if already placed, shall be permitted to remain placed in such positions that any extraneous water, due to rise of sub-soil water level, or from any river, bay, gully or creek, or any other source, whether in flood or otherwise, may gain access to the Corporation's sewers.

(2) Without in any way limiting the generality of paragraph (1) of this by-law in areas liable to be flooded or affected by rise of sub-soil water level, no person shall place in position for use any fitting, fixture,

or apparatus having an inlet or opening into any drain or into any sewer of the Corporation unless the inlet or opening is above a level fixed by the Corporation for the particular district or locality; such level providing a safe margin above the highest known sub-soil water level or flood level.

[By-law 40 amended in Gazette 29 December 1995 pp.6314 and 6315.]

Inspection — Tests — Maintenance

[41. Repealed in Gazette 21 September 1990 p.4954.]

### Corporation may require certain tests

42. The Corporation may, by notice in writing given, as far as is practicable to every licensed plumber, require work carried out by, or under the direction and supervision of, a licensed plumber to be tested by the application of the water test in accordance with by-law 43, the smoke test in accordance with by-law 44, or any other test that the Corporation considers necessary and specifies in the notice.

[By-law 42 inserted in Gazette 21 September 1990 p.4954; amended in Gazette 29 December 1995 p.6315.]

43. Water Test — (1) The water test shall be applied to either the drainage or plumbing systems and their fittings in their entirety or in sections, and shall be applied by hermetically sealing all openings below the top of the section to be tested. The system shall then be filled with water to the highest point of the section, or, if considered necessary, to such additional height as the responsible officer may order, and every joint, fitting and pipe carefully examined for leaks.

(2) In testing stoneware or concrete drains a loss allowance at the rate of  $2\frac{1}{2}$ % per hour of the capacity of the drain under test and at 5 feet head shall be permitted.

44. Smoke Tests — The smoke test shall be applied by forcing into the system thick smoke to a pressure of one inch of water by means of a

smoke test apparatus, closing all openings at which smoke appears and keep up the pressure for 5 minutes after last opening is closed. Every joint or pipe shall then be carefully examined for leaks.

45. Equipment — The equipment, material, power and labour necessary for a test required under by-law 42 shall be furnished by the licensed plumber responsible for the work to be tested.

[By-law 45 amended in Gazette 21 September 1990 p.4954.]

**46.** Defective Works — Any materials, pipes, bends, junctions, fittings, fixtures, and apparatus found to be defective shall be removed and replaced by sound ones, and all defective joints made tight and every part of the work shall be made to conform to the by-law and shall be subject to the approval of the Corporation.

[By-law 46 amended in Gazette 29 December 1995 p.6312.]

[47. Repealed in Gazette 22 December 1989 p.4626.]

48. Maintenance by Occupier — Every silt trap, grease trap, oil trap or neutraliser, and such other appliance as the Corporation may direct, shall be maintained by the owner or occupier at his own expense and shall be cleaned at such intervals as may be necessary to ensure that such trap or appliance operates in an efficient and hygienic manner.

[By-law 48 amended in Gazette 29 December 1995 p.6314.]

#### Authorization of materials, fittings and fixtures

49. (1) A material, fitting or fixture, other than a fixture of a kind described in Part 1 of Schedule D, shall not be connected to the works of the Corporation unless —

- (a) it is a product that
  - (i) is manufactured or supplied under a StandardsMark licence or a Water-Mark licence granted by the Standards Association of Australia as a water or

sanitary plumbing product intended for use in plumbing installations; and

 (ii) bears, or the packaging of which, bears the StandardsMark or Water-Mark, as appropriate, of the Standards Association of Australia and the product or its packaging complies with such other marking requirements as are set out in the "Manual of Authorization Procedures for Plumbing and Drainage Products, SAA MP52 - 1988", published by that Association;

 $\mathbf{or}$ 

(b) it is the same as a material, fitting or fixture that is currently authorized for such connection by the Coordinator under sub-bylaw (5) and complies with any conditions as to marking imposed under that sub-bylaw.

(2) Notwithstanding compliance with sub-bylaw (1) (a), a material, fitting or fixture of a kind described in Part 2 of Schedule D shall not be connected to the works of the Corporation.

(3) Every application for authorization of a material, fitting or fixture for connection to the works of the Corporation shall be made in writing in a form acceptable to the Coordinator and shall be accompanied by —

- (a) 2 copies of drawings in a form acceptable to the Coordinator;
- (b) unless exempted by the Coordinator, a sample of the material, fitting or fixture; and
- (c) the application fee set out in item 1 of Part VII of Schedule C.

(4) The Coordinator may, by notice in writing, require the applicant to provide details of test results and such other information as may be needed for the purpose of determining a particular application.

(5) The Coordinator may, by notice in writing, give or refuse to give authorization to any material, fitting or fixture for connection to the works of the Corporation or may give such authorization subject to such conditions as the Coordinator thinks fit.

(6) The Coordinator may, by notice in writing, vary, add to or remove conditions imposed under sub-bylaw (5).

(7) Where the Coordinator examines drawings submitted under sub-bylaw (3) (a) or tests, inspects, or evaluates a material, fitting or fixture for the purpose of assessing its suitability for authorization, the fee set out in item 2 of Part VII of Schedule C is payable by the applicant for the examination, test, inspection or evaluation.

(8) In addition to the fee payable under sub-bylaw (7), the applicant shall pay the reasonable costs of travel and accommodation incurred by the Coordinator in carrying out a test, inspection or evaluation.

[By-law 49 inserted in Gazette 22 December 1989 pp.4632-3; amended in Gazette 29 December 1995 pp.6312, 6315 and 6316.]

[49A, 50. Repealed in Gazette 22 December 1989 p.4632.]

**51.** Workmanship — All work shall be executed in a thorough and workmanlike manner to the satisfaction of the Corporation.

[By-law 51 amended in Gazette 29 December 1995 p.6314.]

**52.** Protection of Workmen, etc. — Adequate precautions shall be adopted by the person carrying out the work, to prevent injury to workmen, property, or the public, and the Corporation shall not be responsible for any injury arising from the inadequacy of such precautions.

[By-law 52 amended in Gazette 29 December 1995 p.6314.]

53. Concrete — Concrete, unless otherwise ordered, shall consist of one part Portland cement, 2 parts clean, sharp sand and 4 parts hard metal, shingle or gravel not exceeding  $1\frac{1}{2}$  inches gauge and shall be thoroughly mixed with clean water to such consistence as ordered or approved by the Corporation.

[By-law 53 amended in Gazette 29 December 1995 p.6312.]

54. Cement Mortar — Cement mortar, unless otherwise ordered, shall consist of one part Portland cement, and 2 parts clean, sharp sand properly mixed with an approved proportion of clean water.

55. Use of Concrete — Concrete shall be used in any of the following cases: —

- (1) Gully basins as specified in by-laws 85 and 86.
- (2) Around the top of educt vent and induct vent pipe sockets.
- (3) Around interceptor trap covers and tops of disconnector or other shafts.
- (4) Under and around bends rising vertically off oblique branches, and under bases of all drainage traps.
- (5) Around drains where such drains are, in the opinion of the Inspector, liable to be affected by tree roots.
- (6) Drains under buildings as provided in by-law 79.
- (7) Around drains having insufficient cover as provided for in by-law 77.
- (8) Floors under plumbing fixtures, where specified.

56. Cement Rendering — Wherever any concrete work is exposed the surface shall be rendered in cement mortar.

### Drainage — General

**57.** Separate or Combined Drains — (a) Every house shall be separately drained unless a combined drain is ordered or approved by the Corporation.

(b) Owners desiring to have the drainage of their properties combined shall sign a request for a combined drain, and if approved by the Corporation, they shall complete the prescribed agreement as required by the Corporation and comply with any other provision that the Corporation may require from time to time.

[By-law 57 amended in Gazette 29 December 1995 p.6314.]

**58.** Size of Drains — Every drain shall be of adequate size for the drainage of the property to be served in accordance with the requirements of by-law 117, with a minimum diameter of four (4) inches.

**59.** Materials — All drain pipes, bends, junctions and fittings used shall be of glazed stoneware, concrete, cast iron or other authorized material, provided that the Corporation may prohibit the use of any of the materials aforesaid where the circumstances or conditions are considered unfavourable by it.

[By-law 59 amended in Gazette 22 December 1989 p.4633; 29 December 1995 pp.6312-13.]

[60. Repealed in Gazette 22 December 1989 p.4633.]

**61.** Interceptor Traps — Where shown on plan supplied by the Corporation, an interceptor trap shall be fixed in the drain laid from any property to the sewer. Such trap shall be fixed as near as practicable to the boundary, and wherever practicable shall be within the boundaries of the property. If ordered, an approved inspection chamber shall be provided for the trap.

[By-law 61 amended in Gazette 29 December 1995 p.6314.]

**62.** Inspection Chambers — All drains shall wherever shown on plan, join in an inspection chamber at least 3 feet long by 2 feet wide, fitted with a closed cover. The portions of the drains crossing the floor of the inspection chamber shall be connected either in a straight line or by curved junctions in the floor of the chamber.

**63.** Inspection Openings — (a) Every line of drain shall be provided with an approved inspection opening at each junction not provided with an inspection chamber, at each change of direction, at each fitting, and in no case at greater than 60 feet intervals, and in paved areas a loose slab shall be provided vertically over the inspection opening.

(b) The area of an inspection opening shall be not less than the area of the drain for a line of drain 6 feet long or under; or where the distance between inspection openings is 6 feet or under; but for lines over 6 feet, the opening shall be not less than 12 inches long by the diameter of pipes.

**64.** Gratings — (a) Every inlet to a drain other than from a water closet shall be effectively protected by approved gratings of ample area.

(b) The aggregate area of the apertures in any grating covering a ventilation opening shall not be less than the sectional area of the pipe or drain ventilated by such grating.

(c) Every opening for ventilation shall at all times be kept by the occupier perfectly free from obstruction.

**65.** Drain Openings not in Use — (a) The ends of all drains not immediately connected with the plumbing fixtures shall be securely closed with watertight imperishable materials.

(b) If such drains be of stoneware or concrete, a stoneware, castiron or other approved disc may be cemented in; if of wrought iron a plug may be screwed on the end; if of cast-iron, a cast-iron plug may be caulked in with lead.

**66.** Inserting Junctions — (a) Where it becomes necessary to insert a junction in an existing line of drain, a suitable length of drain shall

be removed, and the junction, with an inspection opening on either side dropped back into position, and the line tested in the usual manner.

(b) Junctions in existing metal pipes shall not be made unless an approved closure pipe is used in each case.

#### Basement and Cellar Drainage

#### Fixtures

67. (1) No sink, trap, water-closet, urinal, or other fixture or apparatus shall be laid or fitted in any cellar or basement or on any floor below ground level unless the following conditions are complied with: —

- (a) The consent, in writing, of the Corporation shall be first obtained, and shall be subject to revocation at any time as hereinafter provided.
- (b) The owner shall submit such information as may be required by the Corporation and shall undertake, in writing, on an approved form, to accept all liability for damage that may occur, and shall also give to the Corporation any indemnity in reference thereto that the Corporation may require.
- (c) The ventilation of such cellar or basement shall be in accordance with by-laws 168 to 171 inclusive; and
- (d) such other conditions as may be required by the Corporation, having regard to the special circumstances of the case.
- (2) If on on any subsequent inspection
  - (a) the light or ventilation is found not to be in accordance with these by-laws; or
  - (b) the fixtures and their surroundings are not being kept, in the opinion of the Corporation, in a sanitary condition; or

(c) the purpose for which such cellar, basement, or floor below ground level is used is found to have been changed,

then the said consent may be revoked by the Corporation, and upon and after the expiration of 14 days from the date of such revocation — if the defect has not been remedied — such closet, urinal, or other fixture shall be disconnected from the Corporation's sewers.

[By-law 67 amended in Gazette 29 December 1995 pp.6313, 6314 and 6315.]

**68.** Risk of Back Flow — Where such cellar, basement, or floor below ground level is at such a level as may, in the opinion of the Corporation, involve risk of back flow in the event of the sewer becoming overcharged, the sewage from all fixtures therein shall be raised by ejector, siphon, or other approved mechanical appliance to such height as ordered, and discharged into the sewer as and where directed.

# [By-law 68 amended in Gazette 29 December 1995 p.6314.]

**69.** Seepage Drains — In no case shall seepage drains from cellars, basements, or any floor below ground level, be discharged into a sewer without the consent of the Corporation. Where such discharge is permitted, the seepage shall be raised by ejector, siphon or other approved mechanical appliance to such height as ordered and discharged into the sewer as and where directed.

[By-law 69 amended in Gazette 29 December 1995 p.6314.]

# Polluted Areas

# Connection

70. The Corporation may by notice in writing require any owner or occupier of any land to which section 35 of the Act applies to connect with the sewer of the Corporation in accordance with these by-laws any stables, cowsheds, dairies, market-places, abattoirs, areas for washing vehicles, or other polluted areas upon such land.

[By-law 70 amended in Gazette 29 December 1995 p.6314.]

## Conditions Governing Connection

71. No such connection shall be made unless the following conditions have been complied with: —

- (a) The place to be connected, if of an area greater than 20 square yards, shall be so roofed as to prevent the entry of rainwater from it to the sewers, and in no case shall rainwater be permitted to discharge on to such place from adjoining surfaces.
- (b) The property to be connected shall be paved with approved bricks on edge or bluestone pitchers, both set in cement mortar, or with concrete or other approved materials, and graded to the satisfaction of the Inspector.
- (c) The drain from any such place shall be provided with an approved silt trap with a removable grating.

## Laying Drains, Etc.

#### **Pipe Trenches**

72. (a) The trench for the drain from any property shall be so dug as to meet the Corporation's sewer at the position provided, or to be provided, for the connection, in accordance with the drainage plan.

(b) The material from the trench shall be so placed as to cause the least possible obstruction and inconvenience to the public, and proper barriers and lights shall be maintained by the licensed plumber where necessary, to guard against accident during the progress of the work.

(c) In refilling the trench, selected filling shall first be deposited around and over the pipe to a depth of 12 inches and carefully consolidated, after which the remainder of the trench shall be filled in, in layers, and rammed or flooded as ordered or approved by the Inspector.

(d) No stone shall be used in refilling until earth or gravel has been placed over the pipe to a depth of 12 inches, or more if directed.

(e) On no account shall any water, sand, earth, or other prohibited discharge be allowed to enter the sewer during the progress of the work.

(f) On completion of refilling the surface shall be restored as nearly as possible to the same condition as it was before operations were commenced, unless the owner, in writing, otherwise requires.

[By-law 72 amended in Gazette 29 December 1995 p.6315.]

### Position and Line

73. Every drain shall be laid and every fitting or apparatus connected therewith shall be fitted in the position shown on drainage plan or as directed by the Inspector. As far as possible, all drains shall be laid in straight lines; where changes of direction occur they shall be made —

- (a) by oblique junction;
- (b) by suitably curved pipes, with inspection opening; or
- (c) by a suitably curved pipe, with an inspection opening on each straight pipe next adjoining the curve; or
- (d) in inspection chambers.

74. Oblique Junctions — Where any drain joins another drain or sewer the junction shall be made obliquely at any angle not greater than 45 degrees with the direction of flow of such drain or sewer.

75. Connection to Sewer — The disc stopper at the point of connection to the sewer shall be carefully removed so as not to injure the socket or allow debris or other matter to get into the sewer.

76. Gradients -(1) All drains shall be laid on an even grade and, except by permission of the Corporation, or where shown on drainage plans, such gradients shall, in no case, be less than the following: -

4-inch diameter	1 in 40
6-inch diameter	1 in 60
9-inch diameter	1 in 90

(2) Where the grades of drains are steeper than 1 in 15, concrete anchor blocks shall be placed at intervals of not more than 30 feet. The block shall have a minimum width of 12 inches along the pipe, and of such thickness that there shall be 3 inches of concrete above and below the pipe and shall extend at least 9 inches into the virgin ground at each side of the trench.

(3) Where the drains are laid at a grade less than provided for in paragraph 1, approved provision shall be made for regular and efficient flushing where ordered by the Corporation.

[By-law 76 amended in Gazette 29 December 1995 p.6314.]

#### Depth of Drains

77. Drains of stoneware or concrete pipes, unless bedded on and encased in concrete, of not less than 4 inches thickness over any part of the drain, shall be laid at a depth to the top of the socket of the pipe, of not less than the following: —

- (a) In public thoroughfare, rights-of-way, or other places subject to vehicular traffic, 2 feet.
- (b) In private property not subject to vehicular traffic, 1 foot.

No person, being the owner or occupier of any land through which any drain runs shall alter the surface over or in the vicinity of any drain so as to deprive it of the minimum depth of cover specified by the preceding paragraph, or to affect the stability of its foundation, unless he shall encase the drain as may be approved by the Corporation. Notice, in writing, shall be given to the Corporation before the work is proceeded with.

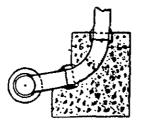
[By-law 77 amended in Gazette 29 December 1995 p.6314.]

## Laying Drains

**78.** (1) All pipes shall be laid to such lines and grades as may be shown on the approved plans or as may be directed by the Inspector, and except where otherwise ordered by the Inspector, holes shall be cut in the bottom of the pipe trench to receive the sockets of the pipes, and all the pipes shall be carefully bedded with the barrel on the solid ground.

(2) In the case of clay or rock bottomed trenches, or where directed by the Inspector, the pipes shall be bedded up to the horizontal diameter on sand or other approved material, so that there shall be at least three inches of the bedding material below the barrel of the pipe, at any point.

(3) Bends rising vertically shall be protected as shown in sketch.



(4) In water charged ground or where the foundation is bad the drain shall be formed of cast-iron, stoneware, or concrete pipes as directed by the Inspector, but in all cases such pipes shall be supported on pile and keel foundations, the keel to be 6 inches by 2 inches jarrah and the piles 4 inches by 4 inches jarrah at not more than 3 feet centre, and driven to a depth ordered by the Inspector.

(5) In cases where it is considered that the drains are likely to be damaged by fibrous roots, the pipes, if stoneware or concrete, shall be bedded on and encased in 4 inches of concrete over any part of the

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drain, but in vertical shafts concrete or stoneware pipes shall not be used if the height from the under side of bend exceeds 4 feet, and in such cases cast-iron pipes shall be used.

**79.** Drains Under Buildings — (1) Every drain shall be so constructed as not to pass under any building, except in any case where any other mode of construction is impracticable; and if in any case a drain shall be so constructed as to pass under any building, such drain shall be laid in direct line for the whole distance beneath such building, and of such depth that there shall be a distance equal at least to a full diameter thereof between the top of such drain at its highest point and the surface of the ground under such building.

(2) The drain pipe in any such case shall be of cast-iron and joined with lead as is usual with water pipes as required for water supply purposes, or of stoneware or concrete bedded in and surrounded with concrete at least 6 inches thick. All drains carried through walls shall have a space of 3 inches left over the pipe.

(3) Stoneware or concrete pipes brought up inside a building for the purpose of connecting a water closet, slop hopper, shall be surrounded with 4 inches of concrete, but the height of such pipes to be brought up from the drain shall not exceed 4 feet, and if the height exceeds 4 feet, cast-iron pipes shall be used.

### Joints - Drainage

80. Stoneware and Concrete Pipes — Joints of stoneware and concrete pipes shall be filled in solidly with cement mortar or with other approved material, neatly splayed off to an angle of 45 degrees. After each joint is made the interior of the joint shall be wiped clear of surplus mortar.

81. Cast-Iron Pipes — All joints in cast-iron pipes must be stemmed with approved gaskets and so filled and caulked with lead or other approved materials so as to make them gas and water-tight. Joints between cast-iron and stoneware or concrete pipes shall be made as for those between stoneware or concrete pipes. 82. Trapping of Inlets -(1) Every inlet to any drain other than inlets provided for ventilation in accordance with the by-law, shall be provided with an approved trap.

(2) No inlets to any drain connecting directly with a sewer shall be constructed within a building, other than such inlets necessary for the apparatus of any water closet, urinal, slop hopper, or other approved fixtures, unless in the case of the combined pipe system.

83. Water Seal — Every drainage trap shall have a water seal of 2 inches in depth.

84. Provision of Yard Gullies — (1) A yard gully shall be provided where practicable in the yard of every property, as near as practicable to the kitchen or back door, with a tap placed over it at a height of not less than 2 feet, unless other approved provision is made for taking household liquid wastes.

(2) No yard gully shall be situated within a building or outbuilding or under any roof or covered way.

(3) In cases where it is impracticable to install a yard gully, a slop hopper or cleaner's sink shall be provided on each floor of the building.

85. Details of Yard Gullies and Silt Trap Basins -(1) Yard gullies may be fitted with stoneware basin tops, spigot and faucet and grating, the basin top being in one piece with the trap jointed thereto and surrounded with concrete.

(2) The basin top may be constructed in concrete, which shall surround the gully and extend from 6 inches below the surface to 3 inches above surface level.

(3) The inside diameter of the basin top shall be 16 inches, the outside 24 inches diameter, and the depth from top of basin to grating shall be 6 inches.

(4) The wastes shall discharge in all cases below the grating.

86. Kerbing to Yard Gullies, etc. -(1) Stoneware yard gully basins and the tops of silt traps provided with stoneware basins shall be so surrounded with an approved impervious kerbing of concrete or other approved material as to prevent the access of surface water to the drains, and if directed, the wall at the rear of a gully or silt trap, if of brick or stone, shall be cement rendered to the height of the tap over same, and, if of wood, the wall shall be provided with an approved galvanised sheet iron apron.

(2) Rainwater pipes shall not be connected to or discharge into any gully or fixture connected with the Corporation's sewers.

(3) Gullies or pits for the disposal of road drainage, or for the disposal of storm water from any roof, yard, or vacant land shall not be connected with any sewer or drain under the control of the Corporation.

[By-law 86 amended in Gazette 29 December 1995 pp.6314 and 6315.]

87. Sealed Disconnector Traps — When approved by the Inspector, sealed disconnector traps may be affixed inside or outside a building or outbuilding, but in such cases breather pipes or fresh air inlets equal in area to the waste pipe or pipes discharging into the trap shall be taken to such height as directed, and, where the trap is inside, shall be led to the outside of the building or outbuilding. The material for such breather pipes shall be the same as for vent pipes. Inspection openings to such traps shall be sealed with screwed plugs, or as otherwise approved by the Inspector.

88. Provision of Grease, Petrol and Oil Traps — Wastes from the following fixtures and areas shall first discharge into an approved apparatus for retaining objectionable matter, that is to say: —

- (a) Every fixture or area from which petrol, benzine, or other inflammable or explosive substance, or grease, oil or greasy or oily matter, is likely to be discharged or conveyed into waste, combined waste, or soil pipes or into drains;
- (b) Every sink in all food-packing houses, butchers' shops, lard rendering establishments, hotels, restaurants, boarding

(c) Such other fixtures, areas, or apparatus as the Corporation may direct.

[By-law 88 amended in Gazette 29 December 1995 p.6314.]

**89.** Construction of Grease Traps — (1) Grease traps shall be fixed outside buildings or outbuildings wherever practicable.

(2) External grease traps shall be constructed of glazed stoneware, brick in cement, or other approved material.

(3) Internal grease traps shall be constructed of copper or other approved material, and, if directed, fixed upon a tray.

(4) The outlet from any grease trap shall be connected to a disconnector trap.

(5) The occupier of any property in which a grease trap is fixed shall cleanse and maintain such grease trap so that it operates efficiently at all times and does not cause a nuisance.

**90.** Grease Trap Ventilation — Every internal grease trap, and all external grease traps which are within 20 feet of any door, window, or other opening into a building, shall have approved independent provision made for inlet and outlet ventilation as provided for waste pipes in by-law 105.

**91.** Size of Grease Trap — (1) The dimensions of grease trap to be provided shall be such as to ensure the retention of all grease entering such trap.

(2) The minimum size for grease traps serving either kitchen sinks or mechanical dishwashers shall be as follows: —

(a) The capacity of the grease trap below the level of the invert of the outlet shall be not less than the total capacity of either the sinks or dishwashers served, and in accordance with the Corporation's type drawings.

- (b) The height from the top of the outlet of grease trap to the vent take off shall not be less than 4 inches.
- (c) The difference in level between invert of inlet and invert of outlet shall be not less than one inch.

(3) The capacity of a sink shall be measured to the overflow level, or, in the event of there being no overflow, to the top of the sink.

(4) The capacity of a dishwasher shall be taken as the capacity of the sump or water container.

[By-law 91 amended in Gazette 29 December 1995 p.6315.]

**92.** Outlet Pipes from Grease Traps — The outlet pipe from any grease trap shall be at least one size larger than the size of pipe which has a cross sectional area equivalent to the total area of incoming waste pipes and except by special permission no outlet pipe shall be less than  $2\frac{1}{2}$  inches in diameter.

**93.** Construction of Petrol and Oil Traps -(1) Petrol and oil traps shall be constructed in accordance with the Corporation's type drawings.

(2) Every such trap shall be connected to a disconnector trap and shall be provided with independent ventilation in accordance with the provisions of by-law 90 for grease trap ventilation.

[By-law 93 amended in Gazette 29 December 1995 p.6315.]

94. Construction of Silt Traps — Silt traps shall be constructed in accordance with the Corporation's type drawings.

[By-law 94 amended in Gazette 29 December 1995 p.6315.]

## Ventilation

**95.** Vents on Main House Drain -(1) The main drain shall be ventilated at its upper end by a pipe ventilator erected vertically and such ventilator may be a soil or combined waste vent pipe.

(2) If the drain is provided with an interceptor trap there shall be in addition a ventilator pipe connected to the interceptor trap shaft, and in such cases there shall, wherever practicable, be a difference in height of not less than 6 feet between the tops of the vents at the upper and lower end of the drain, respectively.

(3) A ventilator pipe shall also be provided on the sewer side of the interceptor trap.

96. Vents or Branch Drains — Branch drains need not be vented if the drainage traps are within 15 feet from the main house drain measured along the line of pipes including the drop, if any, from the centre line of the main drain to the centre line of the outlet side of the water seal.

97. Size of Drainage Vents — Drainage vent pipes shall be of not less than 4 inch diameter in the case of educt vents and not less than 3 inch diameter in the case of induct vents, with the provision that, where more than one educt vent is provided, the vent on the longest line of drain shall be of not less than 4 inch diameter and all others not less than 3 inch. Every such vent pipe shall be provided with approved educt or induct cowl.

**98.** Materials, etc., for Drainage Vents — (1) Drainage vent pipes, situated wholly outside buildings or outbuildings, shall be of cast-iron, galvanised wrought iron, galvanised sheet iron or other approved material above ground, and of stoneware or other approved material beneath the surface of the ground.

(2) Galvanised sheet iron vent pipes shall not be of less gauge than 20 for 3 inch and 4 inch diameter pipes and 18 for 6 inch diameter pipes, but where, in the opinion of the Inspector, they are liable to injury, the first 6 feet above the ground shall be of cast-iron or other approved material.

(3) Drainage vent pipes, inside a building or outbuilding, shall, unless otherwise approved, be of cast-iron of soil pipe strength, or of galvanised wrought iron, copper or brass as specified in by-law 49A.

(4) All galvanised sheet iron vent pipes shall be double galvanised with longitudinal joints grooved, welded or riveted, and circumferential joints riveted and soldered.

**99.** Vent Supports — (a) Unattached posts shall be of not less than four inches by four inches (4in. x 4in.), rough dressed jarrah, properly strutted with four-inch by two-inch (4in. x 2in.) struts and sole pieces.

The struts and sole pieces shall be bolted to post, and post shall be let into the ground to a depth of one quarter  $(\frac{1}{4})$  its length.

The struts shall extend from sole pieces to one-third  $(\frac{1}{3})$  of the length of post above ground at an angle to post of twenty-five (25) degrees.

(b) Vent post attached to buildings shall be of not less than four-inch by four-inch (4in. x 4in.) dressed jarrah, properly secured to top and bottom plates of building with half-inch ( $\frac{1}{2}$  in.) bolts of required length.

100. Materials for Soil, Waste and Combined Waste Vents — (1) Vent pipes for soil, waste or combined waste pipes shall be cast-iron, galvanised wrought iron, lead, solid drawn copper or brass, except that, where the vent pipe is entirely outside a building, grooved sheet copper or grooved, welded or riveted double galvanised sheet iron vent pipes may be used, but sheet copper or sheet galvanised iron vent pipes shall not be used at a level lower than 2 feet above the level of the highest fixture served thereby.

(2) Lead vent pipes shall be of not less than 7 pound lead for use with water closets, urinals, or slop sinks and of not less than 6 pound lead for use with other fixtures.

(3) Solid drawn copper or brass vent pipes shall comply with the requirement of by-law 132 for waste, combined waste or soil pipes.

(4) External vent pipes of sheet copper or galvanised sheet iron shall be of a gauge not less than the following: —

1½ inch, 2-inch and 2½ inch diameter	22 gauge
3-inch and 4-inch diameter	20 gauge
6-inch diameter	18 gauge

(5) Galvanised sheet iron vents shall be coated in the inside with approved bituminous coating and painted on the outside to colour required by owner.

101. Vents in Outbuildings — Galvanised sheet iron vent pipes may be used inside external water closets, stables or open outbuildings but, where liable to damage, shall be protected as directed by Inspector.

102. Soil Vent Pipes — In all cases the upward extension from the soil or combined waste pipe for ventilation shall pass in as direct a manner as possible above, and, if necessary, through the roof.

103. Length of Unvented Waste Pipes — Except as provided in by-laws 121, 204, and 205, waste pipes need not be ventilated unless they exceed 10 feet in length provided that —

- (a) there is only one fixture attached to the waste pipe, and
- (b) the water seal of the trap is not reduced by siphonage or other cause.

104. Anti-Siphonage Vents — (1) Loss of water seal in trap shall be prevented by proper ventilation in accordance with the requirements of by-law 118.

(2) Such anti-siphonage vents from fixtures shall be carried up in accordance with by-law 105, or joined to the branch or main vent above the level of the fixture, unless special permission to the contrary is granted.

(3) These vent pipes shall connect to the waste, combined waste or soil pipe on the opposite of the water seal to the fixture at a point not

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more than 2 feet from the crown of the trap, provided that the seal of the trap is not affected.

(4) If the vent is connected in close proximity to the crown of the trap, it must be so arranged that no fouling shall occur by the discharge from the fixture.

(5) No other fixture shall be connected to the soil, combined waste or waste pipe at any point between the anti-siphonage pipe and the trap which it serves.

105. Height of Vents — (1) Every vent pipe extending upwards from a soil, drain or combined waste pipe shall be carried not less than 6 feet higher than any door, window, or other opening into a building, within a distance of 30 feet thereof, and except as otherwise provided in by-law 107, every educt vent shall be carried at least 18 feet above ground level and 6 feet above the level of the eaves or coping.

(2) Every vent pipe extending upwards from a waste pipe shall be carried 4 feet above any door, window, or other opening into a building, within 20 feet thereof, and in any case at least 2 feet above the level of the eaves or coping.

(3) Subject to the foregoing, any vent pipe which extends into a gable of a building shall be carried at least 2 feet above the point of intersection with the roof.

(4) Where necessary, in the opinion of the Corporation, vents shall be carried to such additional heights as may be required to effectually prevent the escape of foul air into any building within the vicinity.

(5) Vent pipes shall, where necessary, be provided with sufficient clips or stays to support them effectively.

[By-law 105 amended in Gazette 29 December 1995 p.6314.]

106. Chimneys and Cavity Walls — No chimney or cavity walls shall be used as a ventilator to any drain, soil, combined waste or waste pipe.

107. Vents near Chimneys — (1) Vents shall, as far as possible, be kept away from chimneys and ventilating air shafts.

(2) Where a ventilator pipe terminates 10 feet or more from a chimney opening or ventilating air shaft, the requirement of by-law 105, shall apply, but where the distance is less than 10 feet the vent pipe shall, provided it is at least 18 feet long, terminate not less than 2 feet below or 6 feet above the top of such chimney or air shaft.

108. Vent Pipe Grades — (1) All vertical line of vent pipe shall connect, full size, at their bases with a soil, waste, combined waste or drain pipe, and shall extend in undiminished size above the roof or be connected to the soil, waste, combined waste or vent stack, in compliance with the requirements of by-law 118 on a grade of not less than 1 in 40.

(2) All offsets shall be at a grade of not less than 45 degrees to the horizontal.

(3) Vent pipes shall not be used as waste or soil pipes.

109. Combining of Vents — Vent pipes may be branched into a soil or waste pipe, above the level of the highest fixture; provided that in the case of the Separate Pipe System, soil vents are branched into soil pipes and waste vents into waste pipes only.

110. Galvanised Sheet Iron Vent Branches — Where a junction is made to a galvanised iron, soil, or waste vent pipe, the method of joining shall be by means of an approved welded joint, and in accordance with the Corporation's standard drawings.

[By-law 110 amended in Gazette 29 December 1995 p.6315.]

111. Pipe Clips, etc. -(1) There shall be at least one pipe hook or clip to each 6 feet length of vent pipe.

(2) For cast iron or wrought iron pipe, approved coated wrought iron clips, and for copper, brass or galvanised sheet iron pipe, 1½ inch by 14-gauge band clips of the same material as the pipe shall be provided or approved pipe hooks shall be provided.

(3) Wherever it is necessary to fix pipes clear of the wall, approved extension clips shall be used.

(4) Clips, in the case of cast-iron pipes, shall be placed tight up against the bead or underside of the collar.

112. Attachment to Walls — (1) Where a galvanised sheet iron pipe, with or without offset, is carried up above the brick wall of a building or outbuilding, it shall be secured by a galvanised wrought iron clip, leaded into the wall near the top, or by other approved means.

(2) All band iron clips of vent pipes to brick walls shall be fastened with nuts and bolts, leaded in, or for cavity walls by means of T-headed bolts passed through the brick joints and turned at right angles to the joints, or by other approved means.

113. Supporting of Vents — Wherever a vent pipe, with offset, exceeds 9 feet in length above the offset, it shall be stayed, as directed, with  $\frac{1}{2}$  inch galvanised wrought iron piping, provided that an unsupported length of 15 feet, above the highest clip of straight vent pipe, without offset, shall be permitted.

114. Vents Adjoining High Buildings — (1) In any case in which a building is erected next to an existing building of less elevation and any windows of the new building are located within 30 feet of any existing vent stack on the lower building, the owner of such new building shall defray the cost of such alterations to the vents of the previously existing building as necessary to conform with by-law 105.

(2) The owner of the lower or existing building shall make such alterations upon the receipt of money, or security therefor sufficient for the purpose, from the owner of the new or higher building, or shall permit at the request of the owner of the new or higher building the making of such alteration by the owner of such new or higher building. 115. — Down and Relief Venting — (a) Down Venting — in special cases, which must be approved, by the Inspector, vent pipes may be installed on the "down venting" principle. That is, the vent pipe from the fixture trap may be taken below level of the fixture and under the floor to an external wall or into pipe duct and then carried up in accordance with the requirement of by-law 118. An approved fitting shall be provided at the lowest point of such vent for the purpose of draining off any water of condensation collected therein.

(b) Relief Venting — Relief vents on soil and waste pipes shall be provided where shown on plan and comply with by-law 118.

### Capacities of Soil, Waste, and Vent Pipes

## Fixture Units

116. For the purpose of determining the size of any waste, soil or vent pipe, the following equivalent fixture units shall be adopted, unless otherwise directed: —

Fixture	Nominal Outlet Diameter inches	Fixture Units
One lavatory basin	11⁄2	1
For each lavatory basin over 20 served by such pipe	-	½ for each basin
One kitchen sink (up to six inch depth to overflow) .	2	3
One bath (with or without overhead shower)	∫ 1½	4
	1 2	6
One wash trough set with common tap	2	5
One urinal or group of urinals draining to a common		
trap	2	3
One slop hopper	3	4
One shower compartment	2	3
One water closet	4	5
Groups of fixtures contained in one apartment —		
Bath and lavatory basin	-	6
Bath, lavatory basin, and shower	-	6
Bath, lavatory basin, shower and water closet	-	6
Bidets	$1\frac{1}{2}$	1
Bedpan and bottle slop sink	3	4
Glass and teapot washers	$1\frac{1}{2}$	1

Fixture	Nominal Outlet Diameter inches	Fixture Units
Foot baths	$\frac{1}{2}$	2
Dishwashers	2	6
Cleaner's and caretaker's sinks	<b>2</b>	3

For fixtures, other than those shown, the equivalent fixture units to be adopted shall be determined by the Corporation.

[By-law 116 amended in Gazette 29 December 1995 p.6314.]

117. Sizes of Soil, Waste, Combined Waste and Drain Pipes — The sizes of soil, waste, combined waste and drain pipes, computed in accordance with the method set out in Schedule "A" shall be not less than the sizes, determined on the basis of the total number of fixture units drained, or likely to be drained, in accordance with the following table: —

	Pe	ermissible M	aximum nun	aber of Fixture	Units	
Diameter of	Grade not less than					
Pipe	* Minimum Permissible Grade	1 in 40†	1 in 12‡	1 in 4§	Vertical stacks	
inches						
1½	6		6	8	9	
2	9		12	17	24	
$2\frac{1}{2}$	14		20	28	36	
3	20		30	40	50	
4	100	100	150	210	260	
6	420	490	820	1,150	1,400	

\*See by-law 135. †Corresponds to 88<sup>1</sup>/<sub>2</sub>° Fittings. ‡Corresponds to 85° Fittings. §Corresponds to 75° Fittings.

Provided that ---

(a) waste, combined waste, soil and drain pipes shall not be diminished in the direction of flow;

- (b) the diameter of trap, waste, combined waste, or soil pipe receiving the discharge from any fixture shall in no case be less than the nominal outlet diameter of such fixture, nor shall any soil pipe be less than 3 inches in diameter.
- not more than 2 closet pans shall discharge into any 3-inch graded soil pipe;
- (d) for the purpose of this section, offsets in vertical stacks may be treated as though vertical, provided the length of offset does not exceed 5 feet measured horizontally;
- (e) where 45-degree fittings are used throughout for connections to any stack the "permissible maximum number of fixture units for vertical stacks" in the table may be increased by 50%;
- (f) no more than one-half of the total permissible number of fixture units for a vertical stack, in accordance with the table, shall be connected to such stack in any 8-foot length thereof;
- (g) soil, combined waste and waste pipes shall be as direct and free from bends as practicable; where bends are unavoidable, approved provision shall, if necessary, be made to safeguard fixtures connected immediately above or below such bends.

**118.** Sizes of Vents — (1) Length of Vent — For the purposes of this by-law, the length of any vent shall be defined as follows: —

- (a) Length of main vent shall be the height of the building, in storeys, above the floor on which are situated the lowest fixtures served by such vent.
- (b) Length of branch vent shall be the height of the building in storeys, above the floor on which are situated the lowest fixtures served by such vent, plus an additional storey for each 12 feet, or part of 12 feet, in the length of the branch vent, measured horizontally from the main vent to the fixtures in question.

(2) Main and Branch Vents — The sizes of main and branch vents, computed in accordance with the method set out in Schedule "A," shall not be less than the sizes determined from —

- (a) the size of soil, combined waste, and waste pipe or stack to be vented;
- (b) the total number of fixture units served by the main vent, or by that portion of the branch vent under consideration; and
- (c) the length of vent; in accordance with following table: —

Minimum Permissible Sizes of Main or Branch Vents (inches)

Diameter of Soil	Total No. of				Total 1	Length o	of Vent i	n Storeys	s: —		
or Waste Pipe (Inches)	Fixture Units Served	1	2	3	4	5	6	7	8	9	10 and over
114	Up to — 8 14	1¼ 1¼	1¼ 1¼	1¼ 1½	1½	1½					
2	Up to 12 18 36	1½ 1½ 1½	1½ 1½ 1½	1½ 1½ 1½	1½ 2 2	2 2 2	2 2 2	2 2 2			
21⁄2	Up to 6 12 24 36 54	1½ 1½ 1½ 1½ 1½	1% 1% 1% 1% 1%	1½ 1½ 1½ 1½ 1½	1½ 1½ 1½ 2 2	1½ 2 2 2 2	2 2 2 2 2 <sup>1</sup> ⁄2	2 2 21⁄4 21⁄4 21⁄4	2½ 2½ 2½ 2½ 2½	21% 21⁄2 21⁄2 21⁄2 21⁄2 21⁄2	2½ 2½ 2½ 2½ 2½
3	Up to 12 18 24 30 42 60 75	1½ 1½ 2 2 2 2 2 2 2	11/2 2 2 2 2 2 2 21/2	2 2 2 2½ 2½ 2½	2 21/2 21/2 21/2 21/2 21/2 21/2	2 244 244 244 244 244 244 244	2 2½ 2½ 2½ 2½ 2½ 3	2 2½ 2½ 2½ 2½ 3 3	2 21⁄2 21⁄2 21⁄2 3 3 3 3	2 2½ 2½ 3 3 3	2½ 2½ 2½ 3 3 3 3
4	Up to	2 2 2½ 2½ 2½ 2½ 2½ 2½ 3	2 2½ 2½ 2½ 2½ 2½ 2½ 3 3	2 2½ 2½ 2½ 2½ 2½ 3 3 3	2½ 2½ 2½ 2½ 3 3 3 3	2½ 2½ 2½ 3 3 3 3 3	2½ 2½ 3 3 3 3 4	2½ 2½ 3 3 3 3 3 4	21/2 21/2 3 3 3 3 4 4	21/2 3 3 3 3 3 3 4 4	21/2 3 3 3 3 3 3 4 4
6	Up to 600 1,300 2,100	4 4 4	4 5 5	4 5 5	4 5 5	5 5 5	5 5 6	5 5 6	5 5 6	5 6 6	5 6 6

Provided that --

- no vent shall be less than 1¼ inches in diameter, and in no case shall a main or branch vent have a diameter less than one-half that of the soil, or waste pipe which it serves;
- (ii) for 2-inch and 2½ inch waste pipes the main or branch vent shall have a diameter of not less than 1½ inches;
- (iii) no branch vent need be larger in diameter than the soil, or waste pipe which it serves.

(3) Individual Anti-siphonage Vents — The sizes of individual anti-siphonage vents shall be not less than the sizes determined from the diameter of the fixture trap served, in accordance with the following table: —

Diameter of Fixture Trap	Minimum permissible size of Anti-Siphonage Vent	Diameter of Fixture Trap	Minimum permissible size of Anti-Siphonage Vent
inches	inches	inches	inches
		21/2	2
11/2	1¼	3	2
2	11/2	4	2

## Plumbing — General

119. Waste Pipes — Separate waste pipes shall be provided for each of the following classes of polluted water, *viz.*: —

- (a) Dirty water from baths, sinks, lavatory basins, and wash troughs and other waters containing a small proportion of either soap or dirt.
- (b) Greasy water from kitchen and scullery sinks or other fixtures, in such cases where grease traps are ordered or required.

120. Soil Pipes — Except as provided in by-law 121, soil pipes shall be provided for soil water from closets and other waters containing

faecal matter and for urinal waters from slop hoppers and urinals, and, where directed, for discharges from operating theatres and mortuaries.

121. Combined Pipe System — The Corporation may, if it thinks fit, approve of the adoption of the combined pipe system for plumbing installations, subject to the following conditions and such other conditions as it may think necessary in any particular case: —

- (a) An interceptor or boundary trap shall be provided in the house drain as per by-law 61.
- (b) All fixture traps shall be vented as per by-law 118.
- (c) In order to prevent fouling of traps as much as possible by the discharge from water closets, slop hoppers and urinals, in the event of a blockage in the combined waste pipe — the waste pipe from baths and shower compartments or other fixtures, as determined, shall be branched into the combined waste stack.

[By-law 121 amended in Gazette 29 December 1995 pp.6313 and 6314.]

122. Connections to Drain - (1) All waste pipes shall discharge under the grating of a yard gully or into a disconnector trap.

(2) All soil pipes, including those for urinals and slop hopper must be connected direct to the drain.

123. Flashings, etc. — Unless otherwise directed all troughs, sinks and other plumbing fixtures which are placed less than 3 inches from any wall except those provided with wall skirtings of not less than three inches in height, as part of the fixture shall be flashed with 4lb. lead, 24-gauge copper, bronze, brass, nickel, silver, or monel metal or other approved material. All such flashings shall be turned up the walls at least 3 inches, properly secured and made water tight or cover flashed and made watertight except where the walls are tiled, when the flashing shall be carried up at least one-quarter inch behind the tiles. Baths and other plumbing fixtures having turned up flanges for use against tiled walls in lieu of sheet metal flashing shall be rigidly and properly supported in approved manner to prevent settlement, and the flange shall lap at least one-quarter (¼) inch behind the tiles or other approved wall surface, which shall be brought hard down on the surface of the fixture.

124. Internal Cocks — Cocks delivering water shall not be fixed internally unless a sink, lavatory basin or other approved fixture, or a properly drained impervious floor is provided underneath.

125. Sheet Metal Bends and Offsets — All sheet metal bends and offsets, for flush and vent pipes, shall be bent or pressed. Mitred elbows will not be permitted.

126. Pipes Through Roof — In all cases where a vent, waste, combined waste or soil pipe passes through any roof a suitable collar worked out of 4lb. sheet lead shall be soldered or otherwise fixed to the pipe and also the roof in such a manner as shall make the roof perfectly watertight.

### Soil, Combined Waste and Waste Pipes

**127.** General — All lines of soil, combined waste and waste pipes shall be as direct as possible.

128. Materials — Soil, Combined Waste and Waste Pipes — Except by permission of the Corporation no material shall be used for soil pipes, other than cast-iron, 7lb. lead, brass, stoneware, concrete or ceramic ware, and for waste pipes, other than wrought iron, cast-iron, 6lb. lead, brass, copper, stoneware, concrete or ceramic ware.

[By-law 128 amended in Gazette 29 December 1995 p.6314.]

[129 – 132. Repealed in Gazette 22 December 1989 p.4633.]

133. Use of Lead Pipes — Lead pipes shall not be used where liable to be damaged.

134. Lead Pipes -(1) Lead pipes shall be supported by tacks or lugs wiped on in pairs to the pipes.

(2) Such tacks shall be not more than the following distances apart from centre to centre: —

4in. vertical pipe	2ft. 6in. centres.
4in. horizontal pipes	2ft. centres.

(3) For pipe less than 4 inches diameter the distance between the centres of tacks or lugs shall be not more than 3 feet and 2 feet 3 inches respectively.

(4) The dimensions of the tacks or lugs shall be as follows: ---

Diam. of pipe.

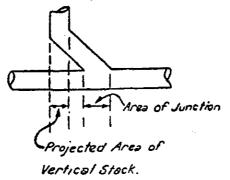
4 inches	8 inches by $\frac{1}{4}$ inch.
3 inches	6 inches by $\frac{3}{16}$ inch.
2 inches	4 inches by $\frac{1}{8}$ inch.
1½ inches	3 inches by $\frac{1}{8}$ inch.

135. Minimum Permissible Gradient — The following are the minimum gradients to be adopted for soil or waste pipes: —

Diameter of Pipe	Minimum Gradient	Diameter of Pipe	Minimum Gradient
inches	inches	inches	inches
		3	1 in 30
11/2	1 in 50	4	1 in 40
2	1 in 20	6	1 in 60
21⁄2	1 in 25		

136. Junctions -(1) Where a waste stack is branched into a graded waste, the branch fitting shall have an angle of not less than 45 degrees to the graded pipe and the length of the branch of the fitting

shall be such that the vertical projection of the attached stack will be wholly outside of the area of the junction with the graded pipe.



(2) Where a soil stack is branched into a graded soil pipe or drain it shall enter the same on the horizontal at an angle of 45 degrees.

137. Sealing of Pipes — Wherever a fixture is abolished, the soil, combined waste, waste vent and water supply pipes to such fixture shall be removed, or, if allowed by the Corporation to remain, the end of the pipes shall be sealed with a screwed plug. Cast-iron pipe may have the end securely closed with a wiped joint; stoneware pipe may have a stoneware disc cemented in.

[By-law 137 amended in Gazette 29 December 1995 p.6314.]

138. Pipe Clips, etc. — There shall be at least one pipe hook or clip to each 6 feet length of soil, combined waste, or waste pipe, in accordance with the provisions of by-laws 111 and 112 for vent pipes.

139. Concealment of Pipes -(1) All soil, combined waste, waste, and main vent pipes and traps shall be reasonably accessible at all times for inspection and convenience of repairing.

(2) In hospitals and similar institutions, all soil, waste, combined waste and main vent pipes, where practicable, shall be fixed on the outside of external walls or in pipe ducts having a minimum width of 2 feet, and minimum area of 9 square feet (measured clear of all pipes or other obstructions), and shall be so arranged as to facilitate inspection and maintenance at all times. Such pipe ducts shall be provided with access doors so placed as to permit ready inspection of every straight line of waste, combined waste, soil, or main vent pipe.

(3) In buildings other than hospitals or similar institutions, if soil, waste, combined waste, or main vent pipes are concealed within pipe duct or recesses in walls, such pipe duct or recess shall be provided with approved means of access, or, have at least one of its sides constructed of woodwork, brickwork in lime mortar, or other approved material, so constructed and fixed as to be capable of being removed independently of, and without damage to, any other part of the structure and provided with inspection opening so placed as to allow of ready inspection and cleaning of every straight line of soil, combined waste, or main vent pipe.

(4) Branch and anti-siphonage vent pipes may be concealed in hollow walls, or may be built in lime mortar in wall chases, provided the pipes and fittings are made of brass or copper in accordance with the requirements of by-law 132 for soil, waste and combined waste pipes.

(5) All inspection or access openings to concealed pipes shall be finished throughout with smooth surfaces, and shall be of such size and shape as to permit the entrance of cleaning tools, as required, to the pipe.

(6) For the purposes of this by-law a straight line of soil, combined waste, waste or main vent pipe shall be taken to include any offset or deviation from the straight line of not more than 45 degrees and not more than 3 feet in length.

140. Concealed Standing Wastes — Concealed standing wastes shall not be permitted.

141. Painting — Except by permission of the Inspector, no painting shall be done on any part of the plumbing installation until after the work has been inspected and approved by the Inspector.

142. Provision for Inspection and Cleaning — Inspection and cleaning eyes shall be provided on all soil, combined waste, and waste pipes in such positions as will provide access for proper inspection and cleaning of the entire length of the pipe.

143. Inspection Openings on Soil Pipes, etc. — In all cases where the vertical stack of soil or combined waste pipe provided for closets 6 feet or more above ground level, measured from floor level of water closet to ground level at foot of stack, an inspection opening, 8 inches in length and of sufficient width to take a 4 inch testing plug and having a cover fixed to a flange with non-corrodible bolts or studs, shall be provided near the foot of the stack.

144. Washers for Inspection Openings — Inspection opening to soil, combined waste and waste pipes shall be provided with insertion cloth, or other approved washers.

145. Joints — Plumbing — Stoneware, Concrete or Cast-iron Pipes — Joints of stoneware, concrete or cast-iron pipes shall be made in accordance with the requirements of by-laws 80 and 81 or by other approved methods.

146. Lead Pipe — All joints in lead pipe shall be plumber's wiped joints.

147. Wrought Iron Pipe — The screwed ends and sockets of wrought iron pipes shall be so formed, and the threads so cut, that the ends of the pipes shall butt against each other when screwed home in the sockets; bends, junctions, and similar fittings shall be similarly formed and screwed, so that when the pipe ends are screwed home, the bore will be continuously uniform and without breaks or pockets. The burr shall be neatly filed off on the inner edge of all pipe ends. All screwed joints shall be made with approved jointing material.

148. Wrought Iron Pipe to Lead Pipe — All joints between wrought iron and lead pipes shall be made by means of brass unions screwed to iron and wiped to lead.

149. Brass or Copper Pipes — Joints on brass or copper pipes shall be made by means of brazing to the satisfaction of the Corporation or in accordance with the Australian standard specification for "Compression joints and copper alloy screwed fittings for standard copper tubes", or by other approved means.

[By-law 149 amended in Gazette 29 December 1995 p.6314.]

150. Lead Pipe to Cast-Iron Pipe — The connection of lead pipes to traps to cast-iron pipes shall be made by means of brass sleeves; the brass sleeve shall be lined with and connected to the lead pipe or trap by means of a wiped joint and connected to the cast-iron by inserting the sleeve in socket thereof and making the joint in the same way as in cast-iron pipe.

**151.** Sheet-Iron Pipe to Cast-Iron Pipe — All connections of galvanised sheet iron to cast-iron pipes shall be made with molten lead, lightly but tightly caulked into the cast-iron socket.

**152.** Sheet-Iron Pipe to Wrought-Iron Pipe — Galvanised sheet-iron pipes shall be connected to wrought-iron pipes by means of brass unions or thimble soldered to the sheet-iron and screwed to the wrought-iron.

153. Sheet-Iron Pipe to Lead Pipe — Connections of sheet-iron pipes to lead pipes shall be made by means of brass thimbles wiped to the lead pipe and soldered to the sheet-iron pipe.

154. Welded Joints — Welded Joints may be permitted provided the method of welding and a sample of the work is submitted to the Corporation for its approval.

[By-law 154 amended in Gazette 29 December 1995 p.6313.]

**155.** Connections of Closet Pan or Slop Hopper Traps to Soil Pipe or Drain — Connection of an external closet pan or slop hopper to a drain or soil pipe shall be made by means of a bituminous jointing material, consisting of a mixture of approved bitumen and finely graded inert

mineral filler in equal proportions, filled in solidly into faucet of soil drain pipe and neatly splayed off at an angle of 45 degrees, or by other approved method. In the case of internal closet pan or slop hopper traps the joint shall be of metallic-ceramic type, but in approved position the closet pan or slop hopper trap may connect direct to the cast-iron and a cement joint used, similar to that for stoneware or concrete as provided in by-law 80.

156. — Cistern Flush Pipe to Closet Pan — (1) The flush pipe from cistern shall be connected to the water closet pan by an approved lead cap piece of not less than 4 lb. lead, packed with red lead or other approved material, or construction may be made by other approved method.

(2) The cap piece shall be jointed to galvanised sheet-iron, copper, brass, or drawn steel pipe by means of a soldered joint and to lead flush pipe by wiped or soldered joint.

(3) The connection of the flush pipe to cistern shall be by means of a brass union, wiped to lead pipe or soldered to sheet-iron pipe or by other approved method.

(4) Copper or brass pipe shall be connected to cistern by means of a brass ring, with nut, brazed to pipe or by other approved means.

157. Vent Pipe to External Closet Pan -(1) Vent pipe shall be connected to the vent horn of the water closet trap by an approved lead cap piece with red lead packing or by other approved methods.

(2) The cap piece shall be jointed to copper or brass pipe by means of a soldered joint and to lead pipe by a soldered or wiped joint.

(3) In the case of an internal closet pan the joint shall be of the metallic-ceramic type or approved equivalent.

**158.** — Outlet Fittings to Fixtures — (1) Connections between outlet fittings and such fixtures as baths, sinks, basins, troughs, etc., when the latter are constructed of cast-iron, plate-iron, ceramic ware, or concrete shall be made with locknuts.

(2) The outlet fittings shall in all cases be connected to the waste pipe by means of a union.

(3) When approved fixtures are made of sheet metal lighter than 20-gauge soldered connections may be used in lieu of locknuts.

**159.** Waste Pipes to Troughs — Connections of waste pipes to washtroughs shall be made as provided hereunder: —

- (a) Cement troughs, unless otherwise permitted, shall have approved outlet fittings cast-in during manufacture of trough.
- (b) Sheet metal troughs shall be connected to the waste pipe in compliance with the requirements of by-law 158.
- (c) For wooden troughs, lead, copper, or brass waste pipes shall be connected in compliance with by-law 158, or shall have flanges connected to the waste pipes in accordance with the provisions of the by-law, and fastened to the underside of the trough with copper tacks, and the waste pipe shall then be turned over inside the trough, and the plug casting bedded over it with red lead putty and screwed to the trough with brass wood-screws.
- (d) Where wrought-iron or other screwed pipes are used, the plug shall be connected to the trough by means of a locknut in lieu of flange.

### Fixture Traps

160. Fixtures to be Trapped — (1) Every fixture shall be effectively trapped unless otherwise permitted, in writing, by the Corporation.

(2) Separate traps shall be provided for each fixture, except lavatory basins or sinks which may be connected in pairs, provided that they are situated in detached outbuildings, open verandahs, in well ventilated sanitary blocks, and provided that the length of the waste pipe between the 2 fixtures shall not exceed 3 feet.

[By-law 160 amended in Gazette 29 December 1995 p.6314.]

161. Position of Traps — The traps in each case shall be placed, unless otherwise directed, as near the outlet of fittings as possible.

162. Form of Trap — The "P" form of trap shall be used in preference to the "S" form where, in the opinion of the Inspector, it is equally suitable for the situation.

163. Materials — Traps for fixtures other than closet pans, slop hoppers or urinals, shall be of copper, brass or lead. All lead traps shall be of the weights specified in by-law 128 for lead pipes.

**164.** Depth of Water Seal — Every trap shall have a water seal of 2 inches.

165. Gratings — Non-corrodible outlet gratings, of approved design and material, shall be provided for all urinals and slop hoppers, and for all fixtures not discharging faecal matter.

### Water Closets, Slop Hoppers, Urinals and Flushing Apparatus

166. — Provision of Water Closets — (1) At least one water closet, approved by the Corporation shall be provided for each house, building, or land required by notice from the Corporation to be connected with the Corporation's sewer, and for each flat as defined in paragraph (2) of this by-law.

(2) In every licensed victualler's property, restaurant, boarding house, lodging house, school, shop, factory, office, public building, or building used for public entertainment, water closet and urinal accommodation shall be provided in accordance with the requirements of either the *Health Act 1911*, or *Factories and Shops Act 1920*<sup>3</sup>, or of any regulations made thereunder; provided that, in any property, other than a house or flat, which is not provided for in any of the Acts aforesaid, separate water closet accommodation shall be provided for males and females, one water closet for each 10 or portion of 10 persons for whom water closet accommodation is required. (3) Water closets and urinals shall be so placed, either within or outside the building, as to ensure the due observance of decency and to be easily accessible to the occupiers of such building.

(4) After the date fixed by notice from the Corporation to the owner of any house, building, or land, requiring him to connect the same with the Corporation's sewer, or after such further time as shall be allowed by the Corporation for the purpose of such connection, no privy closet, other than a water closet approved by the Corporation shall be used in such house or building or upon such land.

[By-law 166 amended in Gazette 29 December 1995 pp.6314 and 6315.]

167. Airlocks for Water Closets — (a) Except as provided in paragraph (b) no water closet, within a building shall be entered directly from any room used for human habitation or for the manufacture, preparation or storage of food for human consumption, or used as a factory, workshop or work place. In cases where such closet would otherwise be directly entered an ante-chamber or airlock shall be provided for any such room, having a floor area of not less than 20 square feet and lighted and ventilated in accordance with the provisions of by-law 169. A hall, passage, lobby, or staircase may be considered as an airlock, provided it has a floor area of not less than 20 square feet and complies with the requirements of by-law 169.

(b) The airlock may be omitted when a water closet within any building is entered from a bedroom provided that by-law 168 is complied with in regard to lighting but the ventilation shall be so arranged that a current of air is in circulation through the water closet independently of the room from which it opens off and the door of the closet shall be fitted with an approved self-closing device.

(c) No airlocks shall be required where ventilation in accordance with by-law 171 is provided to closets and/or urinals.

168. Lighting and Ventilation of Water Closets — Except as provided in by-law 170, every water closet apartment within a building shall comply with the following conditions, viz. —

(a) One of its sides shall be an external wall of such building, abutting on to a street or lane, or an open space within the

property having a width of not less than 4 feet and an area of not less than the following: —

For first storey above floor level of open space 36 sq. feet. For second storey above floor level of open space 72 sq. feet. For all other storeys above floor level of open space 100 sq. feet.

- (b) Each water closet shall be provided with a window in such external wall, having a clear light area of not less than 2 square feet per closet pan and capable of being opened.
- (c) Each water closet shall be provided with direct ventilation to the open air from a point near the ceiling level. Such ventilation shall be provided by a vent or vents, carried as direct to the open air as is practicable and boxed throughout, and having a minimum clear area at any point of not less than 24 square inches per closet pan.
- (d) Glazed louvres may be used in lieu of windows and ventilators, subject to their providing a clear light area of not less than 2 square feet per closet pan and a clear ventilation area of not less than 24 square inches per closet pan. The position of a louvre shall be as laid down in paragraph (c).

169. Lighting and Ventilation of Airlocks — (1) Each airlock shall be —

- (a) provided with a window on an external wall, having a clear area of not less than 2 square feet for each 100 square feet, or part of 100 square feet, of floor area of airlock; or
- (b) separately lighted by electricity and provided with a switch within the airlock.

(2) Every airlock shall be provided with direct ventilation to the open air from a point near ceiling level. Such ventilation shall be provided by a vent, or vents, carried as direct to the open air as is practicable, and boxed throughout, and having a minimum clear area at any point of not less than 24 square inches for every 100 square feet, or part of 100 square feet, of floor area or airlock.

### Alternative Methods of Lighting and Ventilating

170. Water Closets and Airlocks — (1) Subject to the approval in writing of the Corporation first being obtained, water closets and airlocks in buildings, other than hospitals and similar institutions, may be ventilated by one of the following methods, instead of by the method set out in by-laws 168 and 169, *viz.*: —

 (a) (i) In buildings up to 4 storeys in height (measured from the floor of the lowest water closet to be so ventilated) the water closet apartments and airlocks may abut on to a ventilating shaft, open to the sky and carried to such height as may be necessary to prevent the deflection of wind currents down the shaft by neighbouring structures. No rooms, other than water closets, airlocks, bathrooms, urinals, and slop hopper apartments may open on to such shaft.

The area of such ventilating shafts, and the maximum number of water closets, urinals, or slop hoppers to be served by any one such shaft, shall be in accordance with the following table: —

Height of Ventilating Shaft in Storeys	Minimum Area of Ventilating Shaft	Maximum permissible number of Closet Pans or Urinals on any Vent Shaft
1 or 2	16 sq. feet	4
3 or 4	1st and 2nd storeys16 sq feet3rd storey20 sq feetTop storey24 sq. feet	10

No dimension of such ventilating shaft shall be less than 4 feet.

(ii) In buildings in which such ventilating shaft is 3 or 4 storeys in height, a ventilating duct, having a clear area of not less than 2 square feet, shall be carried from the bottom of the ventilating shaft to an external wall and shall be boxed throughout.

- (iii) Every water closet or airlock which abuts a ventilating shaft as aforementioned shall have a window, capable of being opened to such shaft, with an effective class area at least equal to one-fifth of the floor area of the apartment with a minimum of 4 square feet, and in addition shall be provided with ventilating openings to the ventilating shaft having a total clear area at any point of not less than 50 square inches per closet pan.
- (iv) Where water closets are situated in a basement or cellar, in addition to the abovementioned requirements, there shall be provided a ventilating duct, carried through the roof, and fitted with an approved cowl designed either to give a positive up draught or down draught in the duct, at the option of the owner. Such ventilating duct and cowl shall be capable of changing the air in each water closet or airlock served by it at least 6 times per hour, when subject to a wind velocity of 4 miles per hour, the inside and outside temperatures being equal. Ventilating duct shall be 24 square inches for each closet pan served by the said duct.
- (b) The water closet may be ventilated by a mechanical system of exhaust ventilation in compliance with the requirements of the by-law 171.

(2) Every water closet permitted by the Corporation to be ventilated in accordance with this by-law shall be separately lighted by electricity and provided with a separate switch within the compartment.

[By-law 170 amended in Gazette 29 December 1995 p.6314.]

171. Mechanical Ventilation of Water Closets -(1) Every system of mechanical ventilation shall be approved by the Corporation, and be capable of changing the air contents of the water closets served at least 6 times per hour.

(2) In every such case, the ventilating fan, and the power unit operating same, shall be in duplicate, unless the main air shaft shall in the opinion of the Corporation, be designed to act as an efficient natural vent in the event of the mechanical equipment failing.

(3) Upon completion, the owner or his representative shall carry out such tests of the ventilating system as the Corporation may deem necessary.

(4) Such mechanical system shall be operated continuously and maintained in good working order and condition, under the direction of a properly qualified person.

(5) Any such mechanical system shall be open to inspection by the officers of the Corporation at all reasonable times, and shall be subject to such tests as the Corporation shall from time to time direct.

(6) Subject to the requirements of by-law 139, air shafts may be used, also, as pipe shafts.

(7) The failure, for a period longer than 48 hours, of any such ventilating system to operate efficiently, or to fulfil the requirements of this by-law, shall be an offence against these by-laws.

[By-law 171 amended in Gazette 29 December 1995 p.6314.]

172. Floors, Walls, etc., for Water Closets and Slop Hoppers --

(1) In water closet or slop hopper apartments within a building, unless the floors are constructed of concrete of not less than 4 inches thickness, or of other approved impervious material, graded as directed, safes of lead, or of other approved impervious material in accordance with the requirements of by-laws 214, 215 and 217 shall be provided.

(2) In wooden water closets the bottom plates and plinths shall be of approved hardwood and the frame shall be securely fastened to the floor and made rigid, without attachment to fences.

(3) The floor of every external water closet shall be constructed of concrete or other approved impervious material not less than 4 inches thick, and shall have a slope of one-half inch to each foot towards the door.

(4) Closets for different sexes shall not adjoin each other, unless separated by a wall of brick, stone or concrete of approved thickness, such wall may be the wall of one closet or common to both.

(5) The door of every external closet or urinal shall be properly screened at least 6 feet high, and reaching to the ground; and if required a screen shall be fixed to prevent the closet or urinal being visible from overlooking windows.

(6) Any closet for the use of females shall have a separate entrance behind such screen, and such entrance shall not be within 12 feet, from the entrance of any closet intended for the use of males.

173. Fixing Closet Pan -(1) On Concrete floors or floors of tiles set in concrete, the closet pan shall be securely fixed with brass screws to approved lead dowels set in the floor or by other approved means. Where pans are fixed on wooden floors such floors shall be covered with lead or approved composition.

(2) The base of the pan shall be secured with brass screws to a raised block covered with lead or composition finishing 1¼ inches above floor level and the block shall not extend beyond the base of the pan.

[174, 175. Repealed in Gazette 22 December 1989 p.4633.]

176. Flushing apparatus — (1) Approved apparatus shall be provided for the effective application of water to the closet pan, and for the efficient flushing and cleansing of the pan, and the removal therefrom of any solid or liquid matter which may, from time to time, be deposited therein.

(2) Subject to sub-bylaws (3) and (4), approved apparatus referred to in sub-bylaw (1), shall be so constructed, fitted and placed as to supply water for use in the pan without any direct connection from the pan to any water service pipe upon the property.

(3) Subject to sub-bylaw (4), all approved apparatus referred to in sub-bylaw (1) installed on or after 1 January 1993 for use with closet pans shall be of the 6/3 litre dual-flush type.

(4) If any approved apparatus referred to in sub-bylaw (1) and installed before 1 January 1993 for use with a closet pan (in this sub-bylaw called **"the old apparatus"**) is to be replaced and the closet pan with which the old apparatus is used cannot be efficiently cleansed with approved apparatus of the 6/3 litre dual-flush type, approved apparatus referred to in sub-bylaw (1) other than a 6/3 litre dual-flush apparatus may be installed by way of replacement for the old apparatus.

[By-law 176 amended in Gazette 22 December 1989 p.4623; 3 January 1991 p.32; 31 December 1992 p.6416.]

177. Flushing Cisterns — (1) Flushing cisterns shall be fixed at such height as will effectually flush the pan, but except by special permission no cistern shall be fixed at a less height, measured from top of seat to bottom of cistern, than 5 feet where 1% inch flush pipe is used or 4 feet when  $1\frac{1}{2}$  inch flush pipe is used.

(2) There shall be a distance of at least 9 inches between top of cistern and ceiling of closet.

[(3) repealed]

(4) Bearers for cement flushing cisterns with storage capacity; with a span of over 3 feet 6 inches, 4 inch by 3 inch dressed jarrah shall be used; or with a span of 3 feet 6 inches or less, 4 inch by 2 inch may be used.

(5) Cisterns fixed on iron brackets shall be provided with 4 inch by one inch dressed jarrah cleats with chamfered edges.

(6) Cistern brackets shall be approved galvanised iron or black iron painted and secured to wall and cleats with quarter-inch bolts of required length.

(7) Water supply pipes to cisterns shall be adequate to fill any cistern at the rate of not less than one gallon per minute when one other tap on the service is turned full on.

[By-law 177 amended in Gazette 22 December 1989 p.4623.]

178. Flush Pipes — (1) Flush pipes to closet pans shall be of brass, copper, 6lb. lead or drawn galvanised steel, of not less than 22 gauge, or other approved material, and shall have a minimum diameter of 1% inches.

(2) When liable to injury by the closet pan seat, flush pipes shall be fitted with an approved buffer and buffer block.

**179.** Flushing Apparatus Other than Cisterns — Flush valves shall be provided with a fullway stop cock fixed in such position as to be easily accessible.

[By-law 179 amended in Gazette 22 December 1989 p.4633.]

180. Storage Tanks — (1) Provision for the storage of water for flushing purposes shall be made in schools, hotels, hospitals, public institutions and other buildings when directed and whenever flushing valves are installed.

(2) The storage tank shall have a capacity of not less than 10 gallons for each water closet, slop hopper or urinal stall and any other approved fixture required to be flushed, with a minimum of 50 gallons when directed by the Corporation.

(3) Where the capacity of a tank exceeds 50 gallons it shall be fitted with a fullway valve on the main feed to valves.

(4) Flush valves installed in private residences and self-contained flats shall be provided with independent storage tanks.

(5) In no case shall plumbing fixtures be served with water from a storage tank supplying a hot water system, unless the supply is taken off at a point in the cistern where it will not lessen the storage capacity required for the plumbing fixtures.

(6) Unless otherwise approved by the Inspector, the storage tanks shall be placed on the roof over a flat or gutter, or in an accessible place

between the ceiling and the roof, in which latter case a safe of galvanised iron, lead, or other approved impervious material, with at least a 1½ inch overflow, shall be fixed under the storage tank.

(7) Every storage tank shall be provided with an approved cover.

(8) The head of water measured vertically from the top water level of storage tanks to the level of the point of discharge into a cistern shall be not less than 10 feet, but the head in the case of discharge into a flush valve shall be such that the flush valve will operate to the test required by the Corporation.

(9) The water supply pipes from storage tanks to cisterns shall be not less than the following diameters: —

For 1 or 2 cisterns	¾ inch diameter.
For 3 to 6 cisterns	1-inch diameter.
For 7 to 25 cisterns	1½ inch diameter.
For 26 to 50 cisterns	2-inch diameter.

(10) Where more than 50 cisterns are supplied, or where more than 10 cisterns are subject to a head of less than 20 feet, measured vertically from the top water level of the storage tank to the level of the point of discharge into the cistern, the case shall be submitted to the Corporation for decision.

(11) Where the head of water supply from the storage tank to the flushing cistern is less than 20 feet, a low pressure ball valve shall be provided to the cistern.

(12) The water supply pipes from storage tanks to flush valves shall not be less than the sizes determined from —

(a) the available head measured vertically, in storeys, from the level of the first flush valve served by the portion of supply pipe under consideration to the normal water level of the storage tank; and (b) the total number of flush valves served by that portion of the supply pipe under consideration; in accordance with the following table: —

Available Head in	Diameter of portion of Supply	of Flush Val portion of Sup	nissible number ves served by ply Pipe under leration
Storeys	reys Pipe under consideration Galvanised Wrought-iron Pipe	Wrought-iron	Copper or Brass Pipe
1	inches 1½ 2	1 10	2 15
	2½	30	50
	3	100	150
2	1½	2	3
	2	15	30
	2½	50	150
	3	100	150
3	1½	2	4
	2	25	50
	2½	100	150
4 or more	1½	2	6
	2	40	100
	2½	100	150

(13) Where the flush valves to be supplied exceed the maximum number above stated, or where more than 20 flush valves are subject to an available head of less than 20 feet, the case shall be submitted to the Corporation for special investigation. The overflow from a storage tank shall be not less than  $1\frac{1}{2}$  inches in diameter.

[By-law 180 amended in Gazette 29 December 1995 pp.6314-15.]

181. Venting Closet Pans, Slop Hoppers and Urinals — (1) Unless otherwise directed or permitted, every closet pan, slop hopper, or urinal which is not connected directly to a drain, shall discharge into a soil ventilator pipe or combined waste ventilation pipe except in the case where there are no other fixtures connected to the soil pipe or combined

waste pipe in which case discharge will be permitted into a soil pipe or combined waste pipe without extension as a ventilator pipe, provided the fixture is ventilated by an anti-siphonage vent in accordance with the requirement of by-laws 104 and 118.

(2) Except as hereinafter provided every internal closet pan, slop hopper or urinal and every external closet pan, slop hopper, or urinal, the outlet of which is over 10 feet from vented drain, or if siphonage occurs, shall be ventilated by an anti-siphonage vent in accordance with by-laws 104 and 118: Provided that the installation of an anti-siphonage vent shall be optional if —

- (a) The outlet of fixture is within 2 feet 6 inches of soil vent pipe or combined waste pipe;
- (b) no closet pan, slop hopper, bath, wash-troughs or group of other fixtures of total discharge rate exceeding 8 fixture units is connected to such soil pipe or combined waste stack at a higher level; and
- (c) no siphonage occurs.

182. Grouped External Closets — Where there are 2 or more external water closet pans grouped and connected directly to a drain, the drain shall be separately ventilated for every group of not more than 3 pans with vents in accordance with the requirements of by-law 118, for branch vents, or each closet pan may be ventilated by means of an anti-siphonage vent in accordance with the requirements of by-laws 104 and 118.

183. Urinals — General — Every restaurant, boarding-house, lodging-house, school, shop, factory, office, public building, or building used for public entertainment and any premises licensed under the *Licensing Act 1911*, shall be provided with urinal accommodation in accordance with the requirements of either the *Health Act 1911*, or *Factories and Shops Act 1920*<sup>3</sup>, and of any regulation made thereunder.

184. Internal Urinals — The position, approaches, arrangement of lighting, ventilation, etc., for internal urinals shall comply as nearly as possible with the provisions as to internal water closets, but the

ventilation shall be such that at least 50 square inches clear opening for each stall shall be provided.

185. Details of Construction, etc. — (1) Unless otherwise approved by the Corporation only round-backed stall type urinals of approved design, and constructed of approved impervious materials, shall be used.

(2) The soil pipe shall be of lead, pottery-ware, or glass enamelled or coated cast-iron, or other approved material and shall be kept as short and free from bends as practicable.

[By-law 185 amended in Gazette 29 December 1995 pp.6314-15.]

186. Treatment of Floors — The floor in front of a urinal shall be covered with approved impervious material for a width of not less than 1ft. 6in., and graded to drain to urinal.

**187.** Impervious Materials for Internal Urinals — For the purposes of this division the following materials shall be deemed impervious: —

- (a) For urinals Glazed fire clay or salt glazed stoneware.
- (b) For floors in front of urinals Cement mortar composed of equal parts of cement and sand, glazed tiles set in cement mortar, marble and slate.

**188.** Hose Taps for Urinals — Every public urinal shall be provided with a tap suitable for hosing of floors.

189. External Urinals — (1) External urinals shall be constructed in an approved position of approved slabs of slate or other impervious material and channels. (2) The slabs shall be fixed against a brick or concrete wall in an approved manner, and shall be at a height of at least 4 feet from the floor.

(3) All fastenings shall be of brass, and channels shall be of stoneware 6 inches wide, of semicircular section and graded with an even fall to outlet of half an inch to the foot.

(4) An outlet shall be provided for each 10 feet of channel or part thereof.

(5) The floor in front of every urinal shall consist of approved impervious materials for a width of one foot 6 inches as provided in by-law 186 and shall be graded towards the channel with a fall of one inch to the foot.

**190.** Flushing Apparatus — Flushing cisterns fitted with a chain or other approved apparatus operated by hand shall be fixed on all urinals unless automatic flushing cisterns are permitted or directed by the Corporation.

[By-law 190 amended in Gazette 29 December 1995 pp.6314-15.]

**191.** Flushing Cisterns — (1) The discharge from a urinal flushing apparatus shall be not less than one gallon for each urinal stall, or for every 2 feet width of slab back urinal.

(2) The height of a cistern shall, unless otherwise permitted, be at least 6 feet 6 inches from the floor to the bottom of the cistern.

(3) The cistern shall be so fixed that the ball cock is accessible.

(4) A separate stop-tap shall be provided for each urinal cistern.

**192.** Flush Pipes — (1) Flush pipes for urinals shall be constructed of copper or brass of the following diameters: —

For 1-gallon cistern ¾ inch internal diameter. For 2 gallon cistern 1-inch internal diameter. For 3-gallon cistern 1¼-inch internal diameter. (2) Where permission is given to install cisterns of greater capacity the size of the flush pipes shall be fixed by the Corporation.

(3) (a) If the discharge pipe from the cistern used is <sup>3</sup>/<sub>4</sub> inch in diameter, one spreader only shall be permitted.

(b) If the pipe used is 1-inch in diameter, 2 spreaders shall be permitted.

(c) If the pipe used is 1¼ inches in diameter, 3 spreaders shall be permitted.

(4) Saddle or bridge pieces shall be of approved diameter where same are necessary, and flush pipe clips, bolts, and screws used in fixing flush pipes and cisterns shall be of brass or copper.

(5) Where wall urinals are permitted the distance between spreaders shall not exceed 2 feet unless approved by the Inspector.

[By-law 192 amended in Gazette 29 December 1995 pp.6314-15.]

193. Flush Valves for Urinals -(1) Every urinal flush valve shall be supplied from a storage tank which shall comply with the requirements of by-law 180.

(2) Urinal flush valves may be supplied from a storage tank serving water closets, or to the supply pipes therefrom, provided that the above storage capacity shall be provided in addition to that required for the water closets.

(3) A full-way stop-cock shall be provided for each flush valve in such a position as to be easily accessible.

**194.** Slop Hoppers — Slop hoppers shall be made in one piece of approved impervious material and provided with approved flushing apparatus of 2 gallon capacity similar to that set out for water closets in by-laws 176 and 180 inclusive.

**195.** Ventilation, Light, etc. — The position, approaches, arrangement of light, and ventilation of slop hopper appointments shall comply, as nearly as practicable, with the requirements for water closets as set out in by-laws 167 to 171 inclusive.

**196.** Bib-cock over Slop Hopper — A bib-cock shall be fixed directly over a slop hopper and at least 18 inches above such hopper.

[197. Repealed in Gazette 22 December 1989 p.4633.]

**198.** Troughs Abutting Against Brick Wash-coppers — Wherever the end of a wash trough abuts against the brickwork of a wash-copper, the space between the end of the trough and the brickwork shall be bridged with approved waterproof material and made watertight.

**199.** Troughs in Buildings with Wood Floors — (1) Where the distance to ground level from troughs installed in buildings with wooden floors is less than one foot, the stand or concrete pedestals shall be fixed on a concrete or brick base built up from below ground to floor level.

(2) Wooden stands shall be constructed out of not less than 4 inches by 4 inches jarrah for legs and 4 inches by 2 inches rails, bolted together in approved manner.

(3) A water tap shall be fixed over each trough unless otherwise ordered by the responsible officer.

Sinks, Baths, Lavatory Basins and Shower Compartments

**200.** Fixing Sinks — (1) All sinks and combined sinks and draining boards shall be effectively supported and traps and waste pipes shall be left readily accessible for inspection and cleaning.

(2) Wooden draining boards attached to sinks shall be constructed of suitable timber not less than 1<sup>1</sup>/<sub>4</sub> inches thick properly fluted and graded into the sink. (3) The board shall be bedded on top of the sink with white lead putty and shall not be stopped after fixing or shall be made of approved composition constructed on similar lines to that of wood and fixed in a similar manner.

[By-law 200 amended in Gazette 22 December 1989 p.4633.]

**201.** Galvanised Sheet Iron Baths — Galvanised sheet iron baths shall not be enclosed and the bottom of each bath shall be effectively supported on legs.

**202.** Shower Compartments — (1) The floors of shower compartments shall be graded to an approved 2 inch diameter trapped outlet, and shall be constructed of not less than 4 inches of concrete, trowelled smooth or covered with tiles set in cement mortar, or of other approved impervious materials, or, if constructed of timber, shall be covered with enamelled cast-iron, approved non-corrosive sheet metal, or other approved material, turned up at the edges and flashed in accordance with the requirements of by-law 123.

(2) The level of the grating on the outlet shall be at least 2 inches below the level of the floor outside and adjoining the shower compartment, or where a kerb is provided, 2 inches below the level of the kerb.

(3) The walls of shower compartments shall be finished with cement mortar rendered to a smooth surface, or covered with tiles set in cement mortar, or shall be lined with approved non-corrosive sheet metal, or other approved impervious material.

**203.** Showers over Baths — Showers shall not be fixed over baths unless bath or bathrooms comply with the following conditions: —

- (a) Walls within a radius of 3 feet from shower to be of an impervious nature.
- (b) Approved impervious floor graded to an outlet provided with approved flap valve.

(d) Where bath is provided with an approved shower shield attachment, paragraphs (a), (b) and (c) hereof shall not apply.

**204.** Venting of Lavatory Basins — All lavatory basin wastes shall be provided with anti-siphonage vents.

**205.** Venting of Kitchen Sinks discharging into Grease Traps — All kitchen sinks discharging into grease traps shall be vented irrespective of the length of waste.

206. Lavatory Basins and Sinks —

[(1) repealed]

(2) Tip-up lavatory basins shall not be permitted unless by special permission of the Corporation.

(3) Basin brackets shall be bolted to wall in approved manner.

(4) Unless otherwise requested in writing to the Corporation pillar taps shall be provided attached to basins.

(5) Traps, other than lead traps connected direct to a porcelain basin without an expansion joint shall be fixed at owner's risk.

[By-law 206 amended in Gazette 22 December 1989 p.4633; 29 December 1995 pp.6314-15.]

Bed Pans, Bottle Slop Sinks, Bidets, Dental Units, Glass Washers, Teapot Washers and Foot Baths

[207. Repealed in Gazette 22 December 1989 p.4633.]

**208.** Bed Pan and Bottle Slop Sinks — (1) Shall be provided with authorized flushing apparatus and shall be connected and vented to a soil pipe or drain in a similar manner as for connection of a water closet.

(2) The lighting, ventilation and approaches of such sinks shall also conform to the requirements specified for internal water closets, as provided in by-laws 167 to 171, inclusive.

(3) The water supply to jets shall not be connected direct from the Corporation's supply, but from a storage tank fixed at approved height.

(4) The service pipe to the jets shall be provided with a spring valve. Where a steam jet is used in such fixtures for sterilising purposes an approved vent pipe shall be taken off the fixture.

[By-law 208 amended in Gazette 22 December 1989 p.4633; 29 December 1995 p.6315.]

**209.** Bidets — (1) Bidets shall be provided with not less than  $1\frac{1}{4}$  inch waste pipe, trapped and vented in a similar manner to lavatory basins.

(2) The waste supply shall conform to the requirements as specified for bed pan and slop hoppers.

**210.** Dental Units — (1) Dental units shall be provided with  $1\frac{1}{2}$  inch waste pipe, trapped and vented.

(2) The trap may be placed at floor level provided that the waste pipe between the trap and the fixture is one inch diameter copper or brass and free from bends.

(3) The water supply to the fixture shall be provided with a stop-cock and check valve which shall be fixed as near to the the fixture as possible.

(4) The water supply pipe serving the dental unit shall not pass through the waste recesses of the unit. **211.** Glass and Tea Pot Washers — (1) The waste water from glass and tea pot washers shall discharge into an approved 24-gauge copper or brass funnel which shall be trapped and vented in a similar manner as for baths and troughs.

(2) The waste pipe attached to the fixture shall terminate one inch above the top of the funnel.

(3) An independent stop-cock shall be provided for each fixture.

**212.** Foot Baths — Approved foot baths shall be provided with not less than  $1\frac{1}{2}$  inch waste pipe trapped and vented, similarly to wash troughs and baths and the dimensions of such baths shall be approved by the Corporation.

[By-law 212 amended in Gazette 29 December 1995 pp.6314-15.]

### Safes and Overflows

**213.** Safes — where required — Unless the floor is constructed of concrete of not less than 4 inches thickness or of other approved impervious material, graded as directed, safes of lead or other approved impervious material shall be fitted under slop hoppers and water closets, and under baths and wash troughs, where in the opinion of the Corporation, there is a likelihood of damage being caused by the bath or troughs overflowing.

[By-law 213 amended in Gazette 29 December 1995 pp.6314-15.]

**214.** Lead Safes under Fixtures — (1) All lead safes shall be laid with sheet lead weighing not less than 51b. per square foot and where the whole floor is not covered with lead the safe shall extend in the case of pans and slop sinks, 12 inches beyond the sides and 15 inches beyond the front of the fixture, but in the case of baths and wash troughs the safe shall extend 12 inches beyond the end and 2 feet beyond the front of the fixture.

(2) The lead safe shall in all cases extend back to and 3 inches up the wall, and the roll of safes shall be  $2\frac{1}{2}$  inches wide and one inch high, and constructed as directed.

(3) The safe shall discharge in some conspicuous place.

(4) This by-law shall not apply to any water closet situated on the ground floor of any house or building, and where in the opinion of the Inspector there is no likelihood of damage being caused by leakage or blockage.

215. Safe Overflows — Unless otherwise permitted, every safe shall be drained by a separate 2 inch diameter pipe provided at the inlet with a brass grating and at the outlet into the open air with a flap valve of brass or other approved metal and shall not connect with any waste pipe, soil pipe, drain or sewer.

**216.** Cistern Overflows — (1) Every cistern supplied with water shall have an overflow pipe of adequate size discharging in such a position that it will not cause damage and will act as a warning pipe.

(2) On ground floors where cisterns are fixed over impervious floors graded to drain outside the room, the overflow may discharge on to such floors provided no damage is likely to arise therefrom.

**217.** Discharge from Safe Overflows — (1) Overflows may discharge into the open air above ground level only when the discharge, in the opinion of the Inspector, will not cause any inconvenience or nuisance.

(2) In all other cases the pipes shall be brought nearly to the ground surface, or be arranged to discharge where they will not prove a source of annoyance or inconvenience.

**218.** Existing Floors Under Fixtures — Where necessary, in the opinion of the Corporation, every existing floor under a fixture shall be regraded, and a proper discharge pipe with flap valve fixed.

[By-law 218 amended in Gazette 29 December 1995 pp.6314-15.]

### Installation of overflow-relief gullies and disconnector gullies

**218A.** The installation of overflow-relief gullies and disconnector gullies shall be carried out in accordance with the requirements set out in by-laws 18.13.6 and 18.13.7 of the *Metropolitan Water Supply*, Sewerage and Drainage By-laws 1981.

[By-law 218A inserted in Gazette 31 December 1992 p.6416.]

**219.** Existing Fixtures and Fittings, etc. — All existing fixtures, fittings and apparatus not in accordance with these by-laws which in the opinion of the Corporation are unsatisfactory shall be removed or replaced by approved fittings.

# [By-law 219 amended in Gazette 29 December 1995 pp.6314-15.]

**220.** Supply of Water Fixtures — (1) All water closets and other plumbing fixtures shall be provided by the owner with a sufficient supply of water from the Corporation's service unless otherwise directed by the responsible officer, for flushing purposes to keep them at all times in a proper and cleanly condition.

(2) Every owner of property who desires, or who has been ordered, to provide sanitary appliances for his property and to connect his property with the Corporation's sewers, shall provide and have made the necessary connections for the conveyance of water, in accordance with these by-laws and any subsequent amendment thereof.

(3) The piping shall be of capacity sufficient to supply all sanitary fixtures on the property freely and continuously, and convey to the flushing cistern, flushing tank or other flushing apparatus of each water closet upon the property enough water to fill the same at an average rate of not less than one gallon per minute.

(4) The owner shall keep the piping of sufficient capacity to fill the flushing cistern, storage tank or other flushing apparatus, at an average rate of not less than one gallon per minute.

[By-law 220 amended in Gazette 29 December 1995 p.6315.]

**221.** Fixtures not Connected with Sewer — No water service pipe shall be laid to supply any plumbing fixture in any property connected to the Corporation's sewer unless such fixture is connected with the said sewers; or unless special permission, in writing, has been previously given to lay such service pipe.

[By-law 221 amended in Gazette 29 December 1995 p.6315.]

**222.** Storage Tanks — (1) Water supply pipes to storage tanks for internal closets shall be of not less than  $\frac{3}{4}$  inch diameter, and shall be provided with high pressure ball valves, except where the available pressure from the water supply system is not sufficient to allow of high pressure ball valves being used, and in such case the permission of the Corporation to fix low pressure ball valves shall be obtained.

(2) A stop-cock shall be fixed on the supply pipe to the storage tank.

[By-law 222 amended in Gazette 29 December 1995 pp.6314-15.]

223. Maintenance and Defective work — (a) Any soil, waste, combined waste, vent or drain pipe, trap, water closet, urinal, sink or other fixture or fitting which is laid, used, or constructed otherwise than in accordance with these by-laws or which, in the opinion of the Corporation, is or has become, bad or of defective quality, shall, upon notice in writing from the Corporation to the owner or occupier of the property or in the case of joint drainage to the owners or occupiers of the several properties be removed, altered, or repaired by the owner or occupier, as required by the Corporation, and within the time fixed by it, and to the satisfaction and approval of the inspector, and in case such owner or occupier fails to comply with the requirements of such notice, it shall be liable to prosecution and a penalty for a breach of this by-law, or for an offence against the Act, as the case may be and/or the Corporation may, if it thinks fit, remove, alter, or repair the defective fitting, fixture or apparatus and charge the owner or occupier of the property with the cost so incurred, and proceed for recovery of the same in the manner provided by the Act.

(b) The occupier shall be responsible for cleansing and keeping clean the drain connected to the Corporation's sewer and wherever such drain is used as a common drain by more than one occupier, the cost of cleansing and keeping clean shall be equally borne by each of the occupiers of such several properties.

[By-law 223 amended in Gazette 29 December 1995 pp.6313, 6314-15 and 6315.]

### PART V — CERTAIN FEES

[Heading inserted in Gazette 14 July 1987 p.2651.]

#### Statements

**224.** The fee prescribed —

- (a) for furnishing a copy of any portion of the records kept under section 69A of the Water Agencies (Powers) Act 1984, is as set out in Part IV of Schedule C;
- (b) for providing answers to orders and requisitions in relation to land, is as set out in Part IV of Schedule C,

except that, where a like fee is payable under by-law 104C of the *Country Areas Water Supply By-laws 1957*, no further fee applies under this by-law.

[By-law 224 inserted in Gazette 14 July 1987 p.2651; amended in Gazette 29 June 1988 p.2130; 29 December 1995 p.6313.]

### **Records**, plans and diagrams

**225.** The fees set out in Part III of Schedule C are prescribed for the purposes specified in that Part.

[By-law 225 inserted in Gazette 14 July 1987 p.2651; amended in Gazette 29 June 1988 p.2131.]

### **Amounts rounded**

**225A.** Where a fee calculated in accordance with these by-laws is an amount which is not a whole number multiple of 5 cents the amount shall be rounded up or down, as the case may be, to the nearest whole number multiple of 5 cents.

[By-law 225A inserted in Gazette 26 June 1992 p.2836.]

### PART VI

### General

### [Division (1) Repealed in Gazette 14 July 1987 p.2658.]

### Division (2) — Offences and Penalties

Gratuities Prohibited

**229.** Officers, workmen, or agents of the Corporation shall not solicit or receive any fee or gratuity whatever.

[By-law 229 amended in Gazette 29 December 1995 pp.6314-15.]

Junction or interference with Pipes, Sewers, or Fittings

**230.** (1) No person shall make any connection or interfere with any pipe, sewer, or fitting of the Corporation or with any sewer, or drain communicating therewith, at any other place than shall be approved of by the Corporation, and the main shall only be tapped by the Corporation upon receipt of the appropriate minimum fee prescribed in Schedule C, Part IX.

[By-law 230 amended in Gazette 1 July 1993 p.3241; 29 December 1995 pp.6313 and 6314-15.]

Obstruction of Pipes, Sewers, Drains, or Fittings

**231.** (1) Any person who, without the written consent of the Corporation places or keeps any material or thing or causes any material or thing to be placed or kept over any pipe, sewer, drain or fitting whether the property of the Corporation or otherwise and thereby —

(a) trespasses on or causes injuries to such pipe, sewer, drain or fitting; or

(b) prevents or in any way impedes or obstructs the inspection, maintenance, cleansing, repair, management or use, of such pipe, sewer, drain or fitting,

shall be guilty of an offence and be punishable on summary conviction by a penalty not exceeding \$40, and in the case of a continuing breach of this by-law the offender shall be liable to a further penalty not exceeding \$10 for each day the offence continues after notice thereof has been given by or on behalf of the Corporation to the offender.

(2) The Corporation may cause any material or thing placed or kept over any pipe, sewer, drain or fitting contrary to sub-bylaw (1) to be removed or otherwise dealt with as it thinks fit.

(3) Any person committing any breach of this by-law shall, in addition to any penalty imposed on him, pay any expense incurred by the Corporation in consequence of such breach.

(4) This by-law applies irrespective of whether the material or thing concerned was placed over a pipe, sewer, drain, or fitting before or after this by-law came into force.

[By-law 231 amended in Gazette 14 July 1987 p.2652; 29 December 1995 p.6315.]

### Penalties

**232.** Any person committing a breach of any of the provisions of these by-laws, to which no specific penalty is attached, shall be liable on summary conviction to a penalty not exceeding \$40 and in addition may be ordered to pay any expense incurred by the Corporation in consequence of such breach.

In the case of a continuing breach the offender shall be liable in addition to the fine and payment of expenses to a daily penalty not exceeding \$10 for each day the breach continues after notice thereof has been given by or on behalf of the Corporation to the offender.

[By-law 232 amended in Gazette 29 December 1995 pp.6314-15.]

### Division (3) — Miscellaneous

### [233. Repealed in Gazette 14 July 1987 p.2658.]

#### Authority to Enter Premises

**234.** Any officer acting under the Corporation's authority may at all reasonable times enter any house or premises connected, or intended to be connected with sewers, in order to examine whether the water pipes, drains, and other fittings in such house or premises are in proper order. Any person refusing such admission or in any way hindering such officer in the execution of his duty shall be guilty of an offence and liable to a penalty as prescribed in by-law 232.

[By-law 234 amended in Gazette 29 December 1995 p.6315.]

Standard Drawings for Fixtures and Fittings

**235.** (1) Approved standard drawings of fixtures and fittings will be exhibited at the offices of the Corporation.

(2) Due consideration shall be given by the Corporation to the claims of any other fittings which may be presented for approval, and, if considered satisfactory, the same may be placed among and become one of the approved standard fittings.

(3) The Corporation may, from time to time, amend, alter, or cancel any or all of the standard fittings or type drawings, and replace them by such other approved fittings or drawings.

[By-law 235 amended in Gazette 29 December 1995 pp.6313 and 6314-5.]

### SCHEDULE A

#### Method of Computing the Sizes of Soil, Waste, Combined Waste and Vent Pipes, in Accordance with the Requirements of By-laws 116, 117 and 118

#### Fixtures

1. In accordance with by-law 116, classify the various fixtures and determine the maximum number of fixture units to be provided for in each portion of the system under consideration. Cleaners' sinks and floor wastes which are not regularly in use during the period of maximum use of other fixures need not be included in determining the number of fixture units to be provided for.

#### Sizes of Graded Soil, Waste, and Combined Waste Pipes

2. (a) By reference to by-law 117, determine from the maximum number of fixture units served at the point under consideration the required sizes and grades of the soil, waste, and combined waste pipes in each portion of the system.

(b) Compare the sizes so obtained with the minimum permissible sizes for the particular case and adopt the larger.

#### Sizes of Vertical Soil, Waste, and Combined Waste Stacks

3. (a) By reference to by-law 117, determine from the maximum number of fixture units served at the point under consideration, the required sizes of vertical soil, waste, and combined waste stacks.

(b) Ascertain whether the number of fixture units connected to the stack within an 8ft. length is within the permissible limits of provision (f) of by-law 117 - if not adopt such larger size stack as will comply with this requirement.

(c) Compare sizes so obtained with the minimum permissible sizes for the particular case and adopt the larger sizes, subject to provision (a) of by-law 117.

#### Size of Main Vents

4. (a) Determine the approximate vertical length of the main vent in storeys from its connection at its lower end with a soil or waste pipe or drain to the ceiling level of the top floor. (b) From the table of permissible sizes in by-law 118, determine for the maximum number of fixture units served by the vent, the required size for a vent of such a length.

(c) Compare the sizes so determined with minimum permissible sizes and adopt the larger

### Sizes of Branch Vents

5. (a) Determine the approximate vertical length in storeys of the main vent from the point of connection of the branch vent under consideration to the ceiling level of the top floor.

(b) Determine the horizontal length of the branch vent from its connection with the main vent to the furthermost end of the portion under consideration.

(c) Allowing one storey for each 12 feet, or part of 12 feet, in horizontal length of branch vent, as determined by rule 5 (b) above, and this length in storeys to the length in storeys by rule 5 (a) above.

(d) Determine the number of fixture units served by the portion of branch vent under consideration.

(e) From the table of permissible sizes in by-law 118, determine the minimum size of vent required for the above number of fixture units and for the total length of vent in storeys as determined by rule 5 (c) above.

(f) Compare the sizes so determined with the minimum permissible sizes and adopt the larger, subject to the provision that no vent need be larger than the soil or waste pipe which it serves.

# Country Towns Sewerage By-laws 1952

# Schedule B

Form of notification of building construction or alteration

# WATER CORPORATION

Notice of Construction or Alteration of Building

PROPERTY DESCRIPTION:	
(House/Office etc.)	
LOT No.:	UNIT No.:
STREET(S)	
(IF CORNER LOT ENT	TER BOTH STREET NAMES)
SUBURB OR TOWN	
OWNER or OCCUPIER	
ADDRESS	
POSTCODE TELEPHONE .	
LOCAL AUTHORITY	ESTIMATED VALUE
LIC No	\$
Signature of Owner, Occupier or Agent	
Date	

[Schedule B inserted in Gazette 14 July 1987 p.2652; amended in Gazette 29 December 1995 p.6314.]

Sch. B

# SCHEDULE C

# FEES

# PART I

# **Plumbing Fees**

			\$
1.	For	works to be connected to the sewer —	
	(a)	Single residential building —	
		(i) one major fixture	64.00
		(ii) each additional major fixture	16.00
		(iii) re-inspection	32.00
	(b)	Other than single residential building — single storey —	
		(i) one major fixture	99.00
		(ii) each additional major fixture	33.00
		(iii) re-inspection	49.50
	(c)	Other than single residential building — more than one storey — fee per floor —	
		(i) one major fixture on floor	163.50
		(ii) each additional major fixture on floor	54.50
		(iii) re-inspection	81.75
2.	For	works to be connected to a septic tank —	
	(a)	one major fixture	38.50
	(b)	each additional major fixture	19.25
3.	For i	inspection of work under by-law 18F —	
	(a)	single residential building	32.00

Sch. C

		\$
(b)	other than single residential building — single storey	49.50
(c)	other than single residential building — more than one storey — fee per floor	81.75

# PART II

# Fees under section 41A

In respect of land on which it is proposed to —

		\$
(a)	construct a new single residential building	49.50
(b)	alter an existing single residential building at a cost, as assessed by the Corporation, of over \$22 500	99 cents per \$1 000 of the cost so assessed, up to a maximum of \$49.50
(c)	construct or alter a building other than a single residential building, the cost of which construction or alteration the Corporation assesses to be over \$22 500, an amount for each \$1 000 of the cost assessed —	
	up to \$1 000 000	1.20

over \$1 000 000 but not over \$10 000 000	0.80
over \$10 000 000 but not over	0.00
\$50 000 000	0.40
over \$50 000 000	0.20

### PART III

### Fees for copies of records, plans and diagrams

1. Supply of copy of, or extract from, records or plans (other than those stored in digital format) under section 102 (3) of Water Agencies (Powers) Act 1984 —

size	film	paper
A1 A2 A3 A4	\$11.00	\$9.00 \$7.00 \$6.00 \$6.00

2.	Property sewer diagram (per A4 copy)	6.00
3.	Additional fee (A4 only) for facsimile transmission	

3.50

### PART IV

### **Statements and information**

1.	Furnishing a copy of any portion of the records kept under s.69A of the <i>Water Agencies (Powers)</i> <i>Act 1984</i>	7.00
2.	Providing answers to orders and requisitions in relation to land	5.00
3.	Providing information that involves research or investigation of 15 minutes or more (per hour or part thereof)	25.00
	PART V	
	Plumber's examinations and licences	

1.	Water supply and sanitary plumber's examination —	
	first subject	37.50
	for each additional subject	24.00
	remark (per subject)	25.00
	report, including remark (per subject)	50.00

# Sch. C

1.

Application fee ---

2.	(a)	Application for a water supply and sanitary plumber's licence	30.00	
	(b)	Issue of water supply and sanitary plumber's licence —		
		per quarter (or part thereof)	25.00	
3.	(a)	Duplicate instruments (licences and certificates)	20.00	
	(b)	Renewal of water supply and sanitary plumber's licence	100.00	

### PART VI

## Fees for books of forms

1.	Book of forms of notice and certificate of completion and compliance	15.00
2.	Book of forms for multi-entry plumbing certificate	5.75

## PART VII

# Fees for authorization of materials, fittings and fixtures

	(a)	for first item of product type	312.00
	(b)	for each additional item of product	43.50
2,	Examination, testing, inspection or evaluation (per hour or part thereof)		73.00

# PART VIII

#### Fees for the provision of plan sheets for preparation of diagrams of property sewer installations

1.	A4 size (per pad of 25 sheets)	3.50
2.	A3 size (per pad of 25 sheets)	6.50
3.	Al size (per sheet)	1.20

### PART IX

## Minimum fees for installation of sewer junction (By-law 230)

1.	100mm sewer junction	 182.00
2.	150mm sewer junction	 281.50

[Schedule C inserted in Gazette 1 July 1993 pp.3241-3; amended in Gazette 29 June 1994 pp.3162-5; 30 June 1995 pp.2770-1; 29 December 1995 p.6314.]

### Schedule D

[By-law 49 (1) and (2)]

### Part 1 — Fixtures

Baths Basins Sinks

Laundry troughs Shower recess bases

### Part 2 - Prohibited materials, fittings and fixtures

Food waste disposal units Rubber or plastic olives in metallic water service fittings Non-demand operated urinal flushing devices

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[Schedule D inserted in Gazette 22 December 1989 p.4633.] 

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### NOTES

<sup>1.</sup> This reprint is a compilation as at 17 September 1996 of the *Country Towns Sewerage By-laws 1952* and includes amendments in the reprint published in the *Gazette* on 9 April 1968 and amendments effected by the regulations referred to in the following Table<sup>1a</sup>.

### Table of By-laws

By-law	Gazettal	Commencement	Miscellaneous
Country Towns Sewerage Act By-laws	22 February 1952 pp.478-510	22 February 1952	Short title subsequently amended (see note under by-law 1)
Amending by-laws	8 November 1967 p.3061	8 November 1967	
Amending by-laws	24 July 1968 p.2111	24 July 1968	
Amending by-laws	26 September 1968 p.2858	26 September 1968	
Amending by-laws	9 March 1970 p.756	9 March 1970	
Amending by-laws	21 July 1978 pp.2653-4	21 July 1978	
Amending by-laws	17 November 1978 p.4310	17 November 1978	
Amending by-laws	27 June 1980 pp.1964-5	27 June 1980	
Country Towns Sewerage Act Amendment By-laws 1981	27 February 1981 p.825	27 February 1981	
Country Towns Sewerage Act Amendment By-laws (No. 2) 1981	26 June 1981 p.2321	26 June 1981	
Country Towns Sewerage Act Amendment By-laws 1982	25 June 1982 pp.2129-30	25 June 1982	
Country Towns Sewerage Amendment By-laws 1983	24 June 1983 p.2002	24 June 1983	
Country Towns Sewerage Amendment By-laws 1984	29 June 1984 p.1790	29 June 1984	

Gazettal	Commencement	Miscellaneous
28 June 1985 pp.2334-5	1 July 1985 (see by-law 3)	
27 June 1986 p.2135	27 June 1986	By-law 6: savings⁵
21 November 1986 p.4275	21 November 1986	
14 July 1987 pp.2651-3	14 July 1987	
29 June 1988 p.2128-32	1 July 1988 (see by-law 3)	By-law 2: application <sup>6</sup>
14 October 1988 p.4173	14 October 1988	
29 June 1989 pp.1884-5	1 July 1989 (see by-law 3)	
22 December 1989 p.4623	1 January 1990 (see by-law 3)	
22 December 1989 pp.4623-7	1 February 1990 (see by-law 2 and <i>Gazette</i> 5 January 1990 p.38)	By-law 12: savings and transitional <sup>7</sup>
22 December 1989 pp.4632-3	1 February 1990 (see by-law 2 and <i>Gazette</i> 5 January 1990 p.38)	
29 June 1990 pp.3242-4	1 July 1990 (see by-law 3)	
21 September 1990 pp.4953-4	21 September 1990	
28 June 1991 pp.3283-5	1 July 1991 (see by-law 3)	
	28 June 1985 pp.2334-5 27 June 1986 p.2135 21 November 1986 p.4275 14 July 1987 pp.2651-3 29 June 1988 p.2128-32 14 October 1988 p.4173 29 June 1989 pp.1884-5 22 December 1989 pp.4623 22 December 1989 pp.4623-7 22 December 1989 pp.4623-7 22 December 1989 pp.4632-3 29 June 1990 pp.3242-4 21 September 1990 pp.4953-4 28 June 1991	28 June 1985 1 July 1985   pp.2334-5 (see by-law 3)   27 June 1986 27 June 1986   p.2135 21 November   1986 p.4275 21 November   1986 p.4275 14 July 1987   pp.2651-3 14 July 1987   29 June 1988 1 July 1988   p.2128-32 (see by-law 3)   14 October 1988 14 October 1988   p.4173 14 October 1988   29 June 1989 1 July 1989   pp.1884-5 (see by-law 3)   22 December 1989 1 January 1990   p.4623 (see by-law 2)   and Gazette 5 January 1990   p.4623-7 2 and Gazette   5 January 1990 p.38)   22 December 1989 1 February 1990   p.4632-3 1 September   29 June 1990 1 July 1990   p.38) 22 December 1989   1 February 1990 p.38)   21 September 1 July 1990   p.3242-4 (see by-law 3)   21 September 21 September   1990 p.4953-4 1990   28 June 1991

Regulation	Gazettal	Commencement	Miscellaneous
Country Towns Sewerage Amendment By-laws 1991	3 January 1992 pp.31-2	3 January 1992	
Water Authority Amendment By-laws 1992, Part 3	26 June 1992 pp.2836-9	1 July 1992 (see by-law 3)	
Water Authority Amendment By-laws (No. 2) 1992, Part 3	31 December 1992 p.6416	1 January 1993 (see by-law 2)	
Water Authority Amendment By-laws 1993, Part 3	1 July 1993 pp.3240-3	1 July 1993	By-law 2: application <sup>8</sup>
Water Authority Amendment By-laws 1994, Part 3	29 June 1994 pp.3162-5	1 July 1994 (see by-law 2)	By-law 3: application <sup>9</sup>
Water Authority Amendment By-laws 1995, Part 3	30 June 1995 pp.2769-71	1 July 1995 (see by-law 2)	By-law 3: application <sup>10</sup>
Water Agencies (Amendment and Repeal) By-laws 1995, Part 4	29 December 1995 pp.6310-16	1 January 1996 (see by-law 2 and <i>Gazette</i> 29 December 1995 p.6291)	

- <sup>1a</sup> The power to make these by-laws is now contained in section 34 of the *Water Agencies (Powers) Act 1984.*
- <sup>2</sup> Note no longer relevant.
- <sup>3</sup> Now Factories and Shops Act 1963.
- <sup>4</sup> Note no longer relevant.
- <sup>5</sup> By-law 6 of the Country Towns Sewerage Amendment By-laws 1986 reads as follows —
  - " Savings

6. Nothing in these by-laws affects the application of the principal by-laws, as in force before the coming into operation of these by-laws, in relation to --

 the payment of rates in respect of the whole or part of a rating year commencing before 1 July 1986;

- (b) the payment of a prescribed charge for sewerage discharged by measure where an account for that charge was given before 1 July 1986;
- (c) the amount of a fee to which by-law 15 or Schedule C of the principal by-laws relates, or a minimum rate to which by-law 224F relates, in so far as that fee or rate was incurred in or in respect of a rating year commencing before 1 July 1986.
- <sup>6</sup> By-law 2 of the Country Towns Sewerage Amendment By-laws 1988 reads as follows —

#### Application

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2. Nothing in these by-laws affects the application after 1 July 1988 of a by-law in force before that day in so far as that by-law relates to a fee for a period commencing before that day or to a fee for any matter or thing done before that day.

By-law 12 of the Country Towns Sewerage Amendment By-laws (No. 2) 1989 reads as follows —

### " Savings and transitional

12. (1) Notwithstanding these by-laws, during the period from the commencement until 1 March 1990, a licensed plumber may commence, carry out or complete work as if these by-laws had not come into operation.

(2) Nothing in these by-laws shall be taken to prevent a licenced plumber from commencing, carrying out or completing work, on or after 1 March 1990, for which a permit was issued and in force immediately before that date, and the principal by-laws as in force immediately before the commencement apply in respect of such work.

(3) In this by-law —

"commencement" means the commencement of these by-laws.

By-law 2 of the Water Authority Amendment By-laws 1993 reads as follows —

#### ' Application

2. Nothing in these by-laws affects the application after 1 July 1993 of a by-law in force before that day in so far as that by-law relates to a fee or charge for a period commencing before that day or to a fee or charge for any matter or thing done before that day.

".

"

"

".

<sup>9</sup> By-law 3 of the Water Authority Amendment By-laws 1994 reads as follows —

#### Application

"

3. Nothing in these by-laws affects the application after 1 July 1994 of a by-law in force before that day in so far as that by-law relates to a fee or charge for a period commencing before that day or to a fee or charge for any matter or thing done before that day.

<sup>10</sup> By-law 3 of the Water Authority Amendment By-laws 1995 reads as follows —

### " Application

3. Nothing in these by-laws affects the application after 1 July 1995 of a by-law in force before that day in so far as that by-law relates to a fee or charge for a period commencing before that day or to a fee or charge for any matter or thing done before that day.

"

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