

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 393.

National Water Supply and Sewerage.

GENERAL ANNOTATION.

ADMINISTRATION.

The administration of this Chapter was vested in the Minister for Works and Supply at the date of its preparation for inclusion.

The present administration may be ascertained by reference to the most recent Determination of Titles and Responsibilities of Ministers made under Section 148 (1) of the Constitution.

References in and in relation to this Chapter to—

“the Departmental Head”—should be read as references to the Secretary for Works and Supply;

“the Department”—should be read as references to the Department of Works and Supply.

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CHAPTER NO. 393.

National Water Supply and Sewerage Act.

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CHAPTER NO. 393.

National Water Supply and Sewerage Act.

Being an Act to establish a National Water Supply and Sewerage Board and to provide for the co-ordinated supply of water and sewerage facilities in the country and for related purposes.

PART I.—PRELIMINARY.

1. The purposes of this Act.

The purposes of this Act are to establish a National Water Supply and Sewerage Board and to charge it with the duty of co-ordinated planning, design, construction, management of, and charging for, water and sewerage facilities throughout the country.

2. Compliance with Constitutional requirements.

(1) This Act, to the extent that it regulates or restricts a right or freedom referred to in Subdivision III.3.C (*qualified rights*) of the Constitution namely—

(a) the freedom from arbitrary search and entry conferred by Section 44 of the Constitution; and

(b) the right to privacy conferred by Section 49 of the Constitution,

is a law that is made for that purpose.

(2) For the purposes of Section 29 of the *Organic Law on Provincial Government*, it is declared that this Act relates to a matter of national interest.

(3) For the purposes of Section 53 (*protection from unjust deprivation of property*) of the Constitution, the purposes expressed in Section 1 are public purposes.

3. Interpretation.

In this Act, unless the contrary intention appears—

“the Board” means the National Water Supply and Sewerage Board established under Section 4;

“consumer” in relation to the supply of water, means any person to whom water is supplied under this Act;

“occupier” means a person in actual occupation of any land or, if there is no person in actual occupation, the person entitled to possession of the land;

“owner” includes—

(a) in relation to land the subject of a State lease under or continued in force by the *Land Act*—the lessee under the lease; and

(b) where a person is in occupation of Government improved land under an agreement with the Government—that person;

“rates” means—

(a) in relation to the supply of water—water rates; and

(b) in relation to provision of sewerage facilities—sewerage rates;

“sewage” means any water contaminated by domestic wastes or trade effluent;

"sewerage district" means an area declared under Section 31 to be a sewerage district;

"sewerage rates" means the sewerage rates levied under Section 39;

"sewerage system" includes sewers, fittings, fixtures, appliances, plant, machinery and sewerage works constructed and maintained by, or under the authority of, the Board, or vested in the Board under this Act, for the purposes of treatment and conveyance of sewage;

"this Act" includes the regulations;

"water district" means an area declared under Section 17 to be a water district;

"water rates" means the water rates levied under Section 39;

"water works" means a reservoir, well, bore, tank, aqueduct, tunnel, building, pipe or other works constructed and maintained by, or under the authority of, the Board or vested in the Board under this Act, for the purposes of supplying water.

PART II.—ESTABLISHMENT, FUNCTIONS AND POWERS OF THE NATIONAL WATER SUPPLY AND SEWERAGE BOARD.

4. Establishment.

(1) The National Water Supply and Sewerage Board is hereby established.

(2) The Board—

- (a) is a corporation with perpetual succession; and
- (b) shall have a common seal; and
- (c) may acquire, hold and dispose of property; and
- (d) may sue and be sued in its corporate name.

(3) All courts, Judges and persons acting judicially shall take judicial notice of the common seal of the Board affixed to a document and shall presume that it was duly affixed.

5. Functions.

The functions of the Board are—

- (a) to comply with the *Water Resources Act*; and
- (b) to provide, construct and maintain such catchment areas, reservoirs and other works as may be required or are necessary for collection, production, supply and use of water for private and public purposes in accordance with this Act; and
- (c) to provide, design, construct and maintain sewerage facilities in the country in accordance with this Act; and
- (d) to secure and provide an adequate supply of water in accordance with this Act; and
- (e) to manage and work water and sewerage installations vested in the Board under this Act and such other installations as may be erected or constructed by the Board; and
- (f) to have the sole responsibility for approving the design, construction, maintenance and operation by other persons or bodies of water works and sewerage systems in the country; and

- (g) to abide by such water quality and sewerage discharge standards as are from time to time in force; and
- (b) to advise the Minister on all matters relating to the supply of water and provision of sewerage facilities in the country; and
- (i) generally to do such supplementary, incidental or consequential acts and things as are necessary or convenient for carrying out its functions.

6. Powers.

(1) The Board has powers to do all things necessary or convenient to be done for or in connexion with the performance of its functions and, in particular but without limiting the generality of the foregoing, has power—

- (a) to appoint agents in respect of the matters relating to the performance of its functions; and
- (b) to enter into, for the purposes of this Act, contracts and agreements for—
 - (i) the purchase of land or easements in or over land; or
 - (ii) the acquisition of any materials; or
 - (iii) the construction of any work; and
- (c) to enter on any land for the purposes of—
 - (i) taking levels, digging, breaking or trenching the soil of that land; and
 - (ii) removing or using the earth, stone, minerals, trees or other things obtained from or taken out of the land so entered; and
- (d) to enter any land and hold it permanently or otherwise for the purposes of—
 - (i) constructing, maintaining, repairing or improving any water works or sewerage systems; or
 - (ii) obtaining water, or enlarging the water works or sewerage systems; or
 - (iii) improving water quality or sewerage facilities; and
- (e) to sink wells or shafts and to make, maintain, alter or discontinue waterworks and sewerage systems; and
- (f) to maintain on any land, streams and water courses for the purposes of supplying water in accordance with this Act; and
- (g) to impound and take water from any stream or spring and for that purpose to alter or to divert the course of any stream or spring; and
- (h) to take water found in, under or on any land; and
- (i) to break up—
 - (i) the soil and pavement of any land, road, thoroughfare or street; or
 - (ii) any sewer, drain or tunnel within or under any land, road, thoroughfare or street,for the purposes of laying and placing pipes, sewers, conduits or other works necessary for the supply of water or sewerage facilities or for the repair, removal or maintenance of pipes, conduits, sewers or other works the property of the Board; and
- (j) to co-operate with provincial governments and local level government bodies and with persons and organizations concerned with the supply of water and the provision of sewerage facilities and services.

(2) Where the Board has under Subsection (1) (d) entered and held land permanently, that land shall, as far as practicable, be acquired in the manner provided for by the *Land Act*.

(3) The Board shall, in the exercise of its powers under this section, inflict as little damage as may be and where any damage is inflicted the Board shall pay compensation to the party sustaining the damage.

(4) The Board shall, as soon as practicable, reinstate any road, thoroughfare, street, pavement, drain or tunnel, broken up in pursuance of Subsection (1) (i).

7. Delegation.

The Board may, by instrument, delegate to any person all or any of its functions and powers (except this power of delegation).

PART III.—MEMBERSHIP AND MEETINGS OF BOARD.

8. Membership of the Board.

(1) The Board shall consist of—

- (a) The Departmental Head; and
- (b) one member appointed on the recommendation of the Minister responsible for financial matters; and
- (c) one member appointed on the recommendation of the Minister responsible for the National Planning Office; and
- (d) one member appointed on the recommendation of the Minister responsible for urban development matters; and
- (e) one member appointed on the recommendation of the Minister responsible for health matters; and
- (f) one member appointed on the recommendation of the Minister responsible for local level government matters.

(2) The members of the Board referred to in Subsection (1) (b), (c), (d), (e) and (f) shall be—

- (a) appointed by the Minister by notice in the National Gazette; and
- (b) appointed for a period of three years; and
- (c) eligible for re-appointment.

(3) The Departmental Head is ex officio Chairman of the Board.

(4) The Minister may, by notice in the National Gazette, appoint one of the members of the Board, other than the Departmental Head, to be the Deputy Chairman.

(5) Subject to this Act, the terms and conditions of appointment of members, are as determined by the Minister.

(6) The performance of functions or the exercise of the powers of the Board shall not be affected by reason only of there being a vacancy in the membership of the Board.

9. Leave of absence.

The Chairman may grant leave of absence to a member on such terms and conditions as he determines.

10. Resignation.

A member may resign his office by writing signed by him and delivered to the Minister.

11. Vacation of office.

If a member—

- (a) is absent, except on leave of absence granted by the Chairman, from three consecutive meetings of the Board; or
- (b) becomes permanently incapable of performing his duties; or
- (c) becomes bankrupt, applies to take the benefit of any law for relief of bankrupt or insolvent debtors, compounds with his creditors or makes an assignment of his remuneration for their benefit; or
- (d) resigns his office in accordance with Section 10; or
- (e) fails to comply with his obligations under Section 12,

the Minister may terminate his appointment.

12. Disclosure of interest.

(1) A member who has a direct or indirect interest in a matter being considered or about to be considered by the Board, otherwise than as a member of, and in common with the other members of, an incorporated company which consists of more than 25 persons and of which he is not a director, shall, as soon as the relevant facts have come to his knowledge, declare his interest at a meeting of the Board.

(2) A disclosure under Subsection (1) shall be recorded in the minutes of the Board, and the member—

- (a) shall not take part, after the disclosure, in any deliberation or decision of the Board in relation to that matter; and
- (b) shall be disregarded for the purposes of constituting a quorum of the Board in that deliberation or decision.

13. Meetings of the Board.

(1) The Board shall hold such meetings as are necessary for the purposes of its functions, but in any event shall meet not less than once in each year.

(2) The Chairman, or in his absence the Deputy Chairman, may, at any time, convene a meeting of the Board.

(3) Where the Minister requests the Chairman or the Deputy Chairman to do so, the Chairman or the Deputy Chairman, as the case may be, shall immediately convene a meeting of the Board.

(4) At a meeting of the Board,—

- (a) three members are a quorum; and
- (b) the Chairman or, in his absence, the Deputy Chairman shall preside, or if both are absent the members present shall elect one of their number to preside; and
- (c) matters arising shall be determined by a majority of votes of the members present and voting.

PART IV.—STAFF OF BOARD.

14. Staff.

(1) The Board may, with the approval of the Public Services Commission, engage such employees as are necessary for the performance of its functions under this Act.

(2) The terms and conditions of employment of persons engaged under Subsection (1) are as determined by the Board with the approval of the Public Services Commission.

15. Arrangements relating to staff.

The Board may make arrangements for the services of officers of the Public Service to be made available to the Board.

16. Consultants.

(1) In this section, "person" includes an unincorporated body or association and a partnership.

(2) The Board may engage persons having suitable qualifications or experience to furnish advice to, or perform services for, the Board otherwise than as members of the staff referred to in Section 14 or by virtue of an arrangement made under Section 15.

(3) The terms and conditions of engagement of persons under Subsection (2) are as determined by the Board with the approval of the Minister.

PART V.—SUPPLY OF WATER.

17. Declaration of water district by Minister, etc.

(1) The Minister may, on the recommendation of the Board, by notice in the National Gazette, declare an area to be a water district.

(2) The Board shall maintain and operate either through acquisition under this Act or by construction, water works in or for a water district.

18. Construction, etc., of water works by other persons.

(1) The Board may, on such conditions and in accordance with such standards as it considers appropriate, authorize a person or body to construct, maintain and operate water works in an area other than a water district.

(2) A person who constructs, maintains or operates water works—

(a) without the authority of the Board under Subsection (1); or

(b) otherwise than in accordance with the conditions and standards imposed under that subsection,

is guilty of an offence.

Penalty: A fine not exceeding K1 000.00.

(3) The Board may by written notice require the owner of any water works operated under an authority of the Board under Subsection (1) to make such alterations to the works as the Board considers necessary in the interests of public safety and convenience.

(4) A person who refuses or fails to comply with a requirement under Subsection (3) is guilty of an offence.

Penalty: A fine not exceeding K1 000.00.

19. General supply of water.

The Board shall, in each water district unless prevented by drought or other unavoidable cause or accident, distribute, to all persons entitled under this Act, a constant supply of water in accordance with this Act.

20. Contract for supply of water.

(1) Subject to this Act, the Board may, on such terms and conditions as it determines, supply water to any person who enters into a contract with the Board for that purpose.

(2) In determining the terms and conditions under Subsection (1), the Board shall fix charges commensurate with its financial objectives as set by the Minister.

(3) Notwithstanding a contract under Subsection (1), the Board may, in case of fire, excessive drought, repairs to mains, the construction of new works, alteration to existing works, or the installation, changing or removal of meters, stop or divert in part or wholly the water in any pipe or other water works under its control or management.

(4) The Board may, without incurring any liability for doing so other than the liability to make proportionate abatement (if any) in the sum agreed to be paid for the supply of water, discontinue, for such time as it considers fit, the supply of water, or reduce the quantity of water supplied, if, at any time, it is of the opinion that the supply of water available to it is insufficient for purposes of normal supply to the public.

21. Fire protection.

(1) The Board shall, at the request of the Minister responsible for fire service matters, fix fire plugs in the mains and other pipes belonging to it or erect and connect to those mains and other pipes pillar hydrants at such places as are most convenient or proper for the supply of water for extinguishing any fire that may break out in any area in a water district or adjacent to a water district.

(2) The Board shall keep or cause to be kept in good repair the fire plugs and hydrants referred to in Subsection (1).

(3) The Board shall—

(a) at all times, unless prevented by drought, unavoidable cause or necessary repairs, keep charged with water all pipes, the property of the Board, to which fire plugs and hydrants are fixed; and

(b) permit, without charge, the use of the water for the purposes of putting out, or stopping the spread of, a fire.

22. Meters.

(1) A contract under Section 20 (1) may stipulate that the water to be supplied under the contract shall be supplied through a meter to be fixed by the Board.

(2) A meter referred to in Subsection (1) remains the property of the Board and the Board may charge the consumer a fee for the hire of the meter.

(3) Unless authorized by the Board, a person who fixes, refixes, repairs, removes, alters, breaks or otherwise interferes with or tampers with, a meter supplied under this section is guilty of an offence.

Penalty: A fine not exceeding K500.00.

23. Laying of communication pipe.

(1) Subject to Subsection (2), the Board may, at the request of the owner or occupier of land in a water district, connect, by pipe, that land to a main-pipe the property of the Board.

(2) The Board shall not comply with a request under Subsection (1) unless the person making the request has undertaken—

- (a) to bear the cost of—
 - (i) the materials and the labour necessary in making the connexion; and
 - (ii) restoring the ground to the satisfaction of the Board; and
- (b) to comply with such other conditions as the Board may impose.

24. Notice to connect with water supply.

(1) The Board may, in relation to any land situated in a water district, require, by written notice, the owner or occupier of that land to connect, by pipe, that land to a main pipe the property of the Board.

(2) A person on whom a notice is served under Subsection (1) shall be responsible for—

- (a) the cost of—
 - (i) the materials and labour necessary in making the connexion; and
 - (ii) restoring the ground to the satisfaction of the Board; and
- (b) compliance with such other conditions as the Board may impose.

(3) A person who without reasonable excuse (proof of which is on him) refuses or fails to comply with a requirement under Subsection (1), is guilty of an offence.

Penalty: A fine not exceeding K500.00.

25. Execution of water works by Board.

(1) Where a person on whom a notice is served under Section 24 (1) refuses or fails to comply with a requirement of the notice within the time specified in the notice, the Board may—

- (a) cause the necessary works to be executed at the cost of that person; and
- (b) for the purposes of executing those works—cause such servants, agents and workmen as it deems necessary, to enter and remain on the land on which those works are to be executed.

(2) The costs and expenses incurred by the Board in and about the execution of the works under this section are recoverable by the Board from the owner or occupier of the land as a debt.

26. Fittings to be in good repair.

(1) A person who is supplied with water by the Board shall keep the communication pipe and other works and fittings that are within his own premises in good repair so as to prevent wastage of water.

(2) Where the Board is of the opinion that a person has failed or neglected to comply with Subsection (1), the Board may, in addition to any other remedy it may possess, stop the supply of water to those premises until the person complies with that subsection.

27. Interference with pipes.

The owner or occupier of any land or premises supplied with water by the Board or any consumer of water so supplied who, unless authorized by the Board—

- (a) fixes or causes to be fixed any pipe or apparatus; or

(b) makes alterations or additions,
to the communication or service pipe belonging to or used by that owner, occupier or consumer, is guilty of an offence.

Penalty: A fine not exceeding K500.00.

28. Use, etc., of water without authority.

A person who—

(a) uses, takes or diverts; or

(b) does any act that diminishes,

the water the property of the Board unless the use, taking, diversion or the doing of the act, as the case may be, is authorized by or under this Act is guilty of an offence.

Penalty: A fine not exceeding K500.00.

29. Wrongful use of water.

A consumer who uses water supplied by the Board for a purpose other than the purpose for which the supply is made is guilty of an offence.

Penalty: A fine not exceeding K500.00.

30. Non-payment of rates, etc.

The Board may stop or suspend the supply of water to any person by whom money is due to the Board in respect of rates or water supplied under this Act if the money remains unpaid for a period of 30 days after it became due and payable.

PART VI.—SEWERAGE FACILITIES.

31. Sewerage district.

The Minister may, on the recommendation of the Board, declare, by notice in the National Gazette, an area to be a sewerage district.

32. Public sewerage system.

The Board shall maintain and operate, either through acquisition under this Act or by construction, a public sewerage system in each sewerage district.

33. Private sewerage system.

(1) The Board may on such conditions and in accordance with such standards as it considers appropriate, authorize a person or body to construct and operate a sewerage system in an area other than a sewerage district.

(2) A person who constructs, maintains or operates a sewerage system—

(a) without the authority of the Board under Subsection (1); or

(b) otherwise than in accordance with the conditions and standards imposed under that subsection,

is guilty of an offence.

Penalty: A fine not exceeding K1 000.00.

(3) The Board may by written notice require the owner of a sewerage system operated under an authority of the Board under Subsection (1) to make such alterations to the system as the Board considers necessary in the interests of public health and convenience.

(4) A person who refuses or fails to comply with a requirement under Subsection (3) is guilty of an offence.

Penalty: A fine not exceeding K1 000.00.

34. Notice to connect with sewerage system.

(1) The Board may, in relation to any land situated in a sewerage district, require, by written notice, the owner or the occupier of that land to provide, within such time as is specified in the notice, water-closets, drains, fixtures and fittings, appliances and apparatus and connexions with such sewers as the Board may in the notice order.

(2) A person who without reasonable excuse (proof of which is on him), refuses or fails to comply with a requirement under Subsection (1) is guilty of an offence.

Penalty: A fine not exceeding K500.00.

35. Execution of sewerage works by Board.

(1) Where a person, on whom a notice is served under Section 34 (1), refuses or fails to comply with a requirement of the notice within the time specified in the notice, the Board may—

- (a) cause the necessary works to be executed at the cost of that person; and
- (b) for the purposes of executing those works—cause such servants, agents and workmen as it deems necessary, to enter and remain on the land on which those works are to be executed.

(2) The costs and expenses incurred by the Board in and about the execution of the works under this section are recoverable by the Board from the owner or occupier of the land as a debt.

36. Certain closets not to be used.

(1) A notice under Section 34 (1) shall specify the date on which a privy-closet, other than a water-closet approved by the Board, may not be used on the land to which the notice relates.

(2) If a privy-closet is used on any land contrary to Subsection (1), the owner or occupier on whom the notice was served is guilty of an offence.

Penalty: A fine not exceeding K500.00.

37. Applications for permission to connect with sewerage system.

(1) An application to connect with a sewerage system or to do plumbing work relating to the connexion, including alterations and extensions, shall be made to the Board by the owner of the land from which the sewage is to be carried or by his authorized agent.

(2) An application under Subsection (1) shall be in the prescribed form.

38. Conditions to be complied with before approval.

The Board shall not approve an application to connect with a sewerage system unless—

- (a) the plan has been submitted to, and approved by, the Board; and
- (b) in the case of a new building—
 - (i) the Board has fixed the position of the branch at which the connexion is to be made; and
 - (ii) a proper plan of the plumbing and draining of the building to be connected has been submitted to, and approved by, the Board; and

- (c) the Board is satisfied that provision has been made for the plumbing to be executed in accordance with such specifications and conditions as are prescribed.

PART VII.—ASSESSMENT AND RECOVERY OF WATER AND SEWERAGE RATES.

39. Levying of rates.

(1) The Board may, subject to the approval of the Minister, levy water rates or sewerage rates in respect of any rateable land that is—

- (a) in the case of water rates—at any point within 25m of a main pipe from which the Board is prepared to supply water to that land; and
- (b) in the case of sewerage rates—at any point within 25m of a sewer the property of the Board.

(2) Subsection (1) applies in relation to both vacant and occupied rateable land.

40. Rateable land.

All land including Government land in a water district or a sewerage district is rateable except—

- (a) commons, public parks and public reserves not held under lease or licence; and
- (b) cemeteries within the meaning of the *Cemeteries Act*; and
- (c) the sites of public hospitals, benevolent institutions and buildings used exclusively for charitable purposes; and
- (d) the sites of churches and other buildings used exclusively for public worship; and
- (e) Government land which is unoccupied and not leased; and
- (f) customary land or customary reserves.

41. Assessment of rates.

(1) The principles on which water rates or sewerage rates shall be assessed are as prescribed.

(2) The principles referred to in Subsection (1) may relate to the improved or unimproved value of the land or the superficial area of the land or of the floors of buildings on the land.

42. Notice of rates.

Immediately after a water rate or a sewerage rate has been struck, the Board shall publish a notice in the National Gazette notifying the particulars of the rate and in addition shall—

- (a) cause to be delivered or transmitted by post to the owner or occupier liable to pay the water rates or sewerage rates, as the case may be; or
- (b) where the land is unoccupied and the address of the owner is unknown—affix in some conspicuous place on the land and publish in a newspaper circulating in the area,

particulars of the rate made and to be collected in respect of the land, the time allowed for payment and the consequences of failing to do so in that time.

43. Appeals.

(1) Subject to Subsection (2), a person may, within one month of receipt of the particulars provided for under Section 42, appeal against the amount of the water rate or the sewerage rate, as the case may be, to the District Court nearest to the land affected.

(2) An appeal under Subsection (1) shall not be heard unless the person appealing has given seven days written notice to the Board.

(3) On the hearing of an appeal under Subsection (1), the District Court may vary the amount of the rate the subject of the appeal and its decision is final.

44. Payment of rates.

(1) A rate notified under Section 42 becomes due and payable 14 days after publication in the National Gazette of the notice under that section.

(2) A water or a sewerage rate due under Section 42 is recoverable by the Board as a debt.

(3) The Minister may, on the recommendation of the Board, reduce, or waive the payment of a water rate or a sewerage rate.

(4) The amount of the rate under Section 42 may be paid in lump sum or by such instalments and on such terms and conditions as the Board determines.

45. Liability for water and sewerage rates.

(1) The owner of rateable land is liable for the water or sewerage rates payable in respect of the land unless payment is otherwise provided by arrangement with the Board.

(2) Notwithstanding any other law, water rates and sewerage rates constitute a first charge on the land in relation to which they are levied.

(3) Where land is rateable for a portion only of a year, the amount of the water rates and sewerage rates payable in respect of the portion of that year is such amount as bears the same proportion to the amount of the rates payable for the whole year as the proportion of the year during which the land is rateable bears to a period of 12 months.

46. Penalty for non-payment of rates.

Where water rates or sewerage rates have become due and payable and remain unpaid, there shall be added to those rates a penalty computed at the rate of 5% per annum of the amount from the time it became due and payable until payment is received.

47. Recovery of rates.

(1) Where water rates or sewerage rates and the penalty due on those rates remain unpaid six months after the rates became due and payable, the Board may, in the National Gazette or in a newspaper circulating within the country, notify the amounts of the outstanding rates and the particulars of the land to which those rates relate and, if the rates including the penalty are not paid, or a satisfactory arrangement regarding payment is not entered into with the Board within 30 days of the notification under this subsection, the Board may—

- (a) institute legal proceedings in a court of competent jurisdiction against the person liable to pay the rates to recover the outstanding amounts; or

- (b) if the land is vacant—take possession of the land, hold it and—
 - (i) lease it for a term or terms not exceeding five years at any one time until the sums due to the Board have been recovered as provided in this section; or
 - (ii) if the owner cannot be found or contacted within the prescribed period—sell the land in accordance with an order of the National Court.

(2) Where the Board has proceeded in accordance with Subsection (1) (b), the Board shall apply the rents and other moneys received in respect of the land or the proceeds of the sale, as the case may be, in defraying—

- (a) the expenses incurred—
 - (i) in letting the land and collecting the rents and other moneys; or
 - (ii) in selling the land; and

(b) the rates and other sums due to the Board in respect of the land,

and hold the credit balance (if any) in trust for the person who, but for Subsection (1) (b), would have been entitled to the rents or, prior to the sale, was the owner of the land.

48. Duty and liability of owner on disposal of land.

Where rateable land is sold or otherwise disposed of, the owner of the land shall notify the Board of the fact and until that notification is given, he continues to be liable for the rates and the penalty on those rates as if he were still the owner.

49. Liability of joint owners.

Joint owners are jointly and severally liable for the whole amount of the rates and the penalty due in respect of the land but, as between themselves, each is liable for his share.

50. Refund of rates, etc.

The Minister may, on the recommendation of the Board—

- (a) refund any rates or penalties that are overpaid; and
- (b) remit any penalty imposed under Section 46, if, in his opinion, the imposition of the penalty would be inequitable.

PART VIII.—MISCELLANEOUS.

51. Inspection of premises.

A person authorized by the Board in writing may at all reasonable times enter on any premises or lands to, through, or into, which pipes or sewers have been laid, for the purposes of inspecting those pipes, sewers and any fittings, drains, fixtures, appliances or other works connected with those pipes or sewers and if, in his opinion, it is expedient to do so, may cause the ground to be opened up in any place he considers necessary, doing as little damage as may be.

52. Summary procedure.

All proceedings for offences against this Act shall, unless otherwise indicated, be taken summarily.

53. Meter register as evidence.

(1) The register of a meter provided by the Board or a copy of that register certified to be true by an agent of the Board is prima facie evidence of water consumed.

(2) A consumer may, on the payment of the prescribed fee, by writing addressed to the Board, query the accuracy of a meter.

(3) If, on testing, the meter is found to register more than 2% in excess of the water passing through it, the fee paid under Subsection (2) shall be refunded to the consumer and the meter repaired or replaced at the expense of the Board.

54. Persons liable for penalties.

A penalty imposed by or under this Act may be proceeded for and enforced against the person actually incurring the penalty or his principal or the person on whose behalf he acts.

55. Evidence as to ownership, etc.

In all proceedings for recovery of rates, the allegation by the Board that a person is the owner or occupier of any rateable land is prima facie evidence of that fact.

56. Existence of communication pipe as evidence.

The existence of a communication pipe between a main-pipe, the property of the Board, and any land or premises, is conclusive evidence, in any proceedings, that the owner and the occupier of the land or the premises have severally contracted with the Board for the supply of water to the land or premises, as the case may be, in accordance with this Act.

57. Regulations.

The Head of State, acting on advice, may make regulations not inconsistent with this Act, prescribing all matters that by this Act are required or permitted to be prescribed, or that are necessary or convenient to be prescribed, for carrying out or giving effect to this Act, and in particular for prescribing—

- (a) the form of contracts to be entered into with the Board for the purposes of this Act; and
- (b) the number, form, material, construction and arrangement of pipes, sewers, fittings and other works for the purposes of this Act; and
- (c) the times for execution of any works, the notices to be given for, and the superintendence of, those works; and
- (d) the licensing of competent plumbers, regulation of their charges, prevention of unlicensed plumbers or other persons from fixing, repairing or altering pipes, sewers, meters or other fittings connected with the pipes, sewers or works of the Board; and
- (e) the prevention of the use in connexion with the supply of water of pipes and other fittings unless tested and stamped in a manner approved by the Board; and
- (f) the fees to be charged for licences issued in pursuance of this Act and other fees in connexion with this Act; and
- (g) the conditions on which the Board may undertake to do plumbing for other persons; and
- (h) the defining of catchment areas by the Board and provision for their protection from pollution; and

- (i) conditions under which water may be supplied to ships; and
- (j) the imposition of penalties of fines not exceeding K500.00 for offences against the regulations.

58. Repeal.

The *Water Supply (Papua) Act* is repealed.

PART IX.—VESTING OF PROPERTY AND TRANSITIONAL PROVISIONS.

59. Declaration by Minister.

(1) Subject to Subsection (2), the Minister may, on the recommendation of the Board, by notice in the National Gazette, declare any water works or sewerage system, by whatever name called, in a water district or a sewerage district, to be water works or a sewerage system, as the case may be, to which this section applies.

(2) A declaration under Subsection (1) shall not be made in respect of any water works or sewerage system unless the water works or the sewerage system was in existence immediately before 2 September, 1982 being the date on which the *National Water Supply and Sewerage Act 1982* came into force.

(3) A water works or sewerage system to which this section applies shall, on the date of publication of the notice under Subsection (1), together with all the lands, goods, materials and things forming part of those water works or the sewerage system, vest in the Board and shall be the property of the Board.

60. Saving of contracts.

All contracts, agreements, conveyances, deeds, leases, licences and other instruments and undertakings entered into by, made with, or addressed to, any person or body in respect of any water works or sewerage system the property of the Board by virtue of Section 59, being a person who, or body which, immediately before publication of the notice under that section, was responsible for the management or operation of the water works or sewerage system, as the case may be, shall to the extent that they were previously binding on and enforceable against that person or body, be, on publication of the notice, binding and of full force and effect in every respect against or in favour of the Board as fully and effectually as if, instead of that person or body, the Board had been a party to them or bound by them or entitled to the benefit of them.

61. Actions, etc., not to abate.

Where, immediately before publication of a notice under Section 59, any action, arbitration or proceeding, or any cause of action, in relation to the water works or sewerage system, the subject of the notice, was pending or existing by, against or in favour of, the person or body referred to in Section 60, it does not, on the publication of the notice, abate or discontinue to be affected in any way by any provision of this Act, but may be prosecuted, continued and enforced by, against or in favour of the Board as and when it could have been enforced by, against or in favour of, that person or body.

62. Application of Acts, etc.

Where a notice under Section 59 has been published in respect of any water works or sewerage system—

- (a) any Act or subordinate legislation other than this Act; or

(b) any document or instrument whenever made or executed, in which a reference express or implied is made to the person or body responsible for the management or operation of those water works or the sewerage system, as the case may be, immediately before publication of the notice, shall after that publication and except where the contrary intention appears, be construed and has effect as a reference to the Board.

INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 393.

National Water Supply and Sewerage Regulation.

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 - “fitting”

- "fixture"
 - "flat"
 - "induct vent"
 - "inspector"
 - "Inspector of Health"
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INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER N.. 393.

National Water Supply and Sewerage Regulation.

MADE under the *National Water Supply and Sewerage Act.*

PART I.—PRELIMINARY.

1. Interpretation.

In this Regulation, unless the contrary intention appears—

“authorized person” means a person authorized by the Board for the purposes of this Regulation;

“domestic premises”—

(a) includes a dwelling house, flat and school and any premises occupied as a dwelling house, by a member of the clergy or of a religious order; but

(b) does not include domestic quarters in respect of which an account is rendered to the owner or occupier of some other domestic premises;

“public premises” includes a public recreation area, park, garden, memorial museum, library, hall, playing field and public swimming pool;

“vessel” includes any vessel used for any purpose on the sea or in navigation.

2. Application.

This Regulation applies to water districts and sewerage districts.

PART II.—WATER SUPPLY.

3. Charges for water supply.

For the purpose of Section 20 of the Act, charges for water supplied—

(a) to premises; and

(b) to vessels; and

(c) from hydrants,

are as determined by the Board and published in the National Gazette.

4. Reading of water meter.

Where water is supplied to premises through a meter, the meter shall be read at such regular intervals as the Board directs.

5. Rendering of accounts.

(1) An account may be issued in advance for payment for the amount of water that it is estimated will be consumed during the period to which the account relates.

(2) Where an account for metered premises is issued in advance under Subsection (1), the details of the meter reading and the charges for the actual amount of water consumed

shall be shown on the account for the next period, and where the amount of water actually consumed—

- (a) was less than the estimated amount—the value of the difference shall be deducted from the amount payable under the latter account; or
- (b) was more than the estimated amount—the value of the difference shall be added to the amount payable under that account.

(3) Accounts may be issued at quarterly, monthly or weekly intervals, or at such other periods as the Board approves.

(4) For the purposes of Subsection (3)—

- (a) a quarterly account shall be issued at intervals of as near to three months as practicable, but in any case not more than four times in any one year; and
- (b) a monthly account shall be issued at intervals as near to 31 days as practicable, but in any case not more than 12 times in any one year.

6. Delivery of accounts.

An account issued under Section 5 shall be deemed to have been delivered to the occupier or owner, as the case may be, of the premises to which it relates if it is—

- (a) delivered personally to him; or
- (b) left with the person in charge or apparently in charge of the premises; or
- (c) affixed securely to the front door or some other conspicuous place on the premises; or
- (d) served on him by post to his last known postal address.

7. Payment of accounts.

An account issued under Section 5 shall be paid—

- (a) in the case of a quarterly or monthly account—within 30 days; or
- (b) in the case of a weekly account—within seven days,

of the date of the delivery of the account.

8. Liability for payment.

(1) Subject to Subsection (2), the occupier of any premises to which water is supplied is liable for the payment of all charges levied on the premises under this Regulation.

(2) In the event of the absence of the occupier or the failure by him to pay any amount due, the owner of the premises to which the account relates is liable for payment of the charges.

(3) The master, owner and agent of a vessel are jointly and severally liable for the payment of all charges levied for the supply of water to the vessel.

9. Recovery of charges.

All charges payable under this Regulation are recoverable as a debt in any court of competent jurisdiction.

10. Discontinuance of supply.

When any charge levied under this Regulation in respect of any premises remains unpaid for more than 30 days after the date of delivery of an account, the Board may cause the supply of water to the premises to be discontinued.

11. Exemption of premises used for public worship.

A charge shall not be levied under this Regulation for water supplied to premises used exclusively for public worship.

12. Restrictions on the use of water.

(1) The Board may, by notice in the National Gazette, prohibit or restrict the use of—

- (a) hoses, whether fixed or otherwise; or
- (b) sprinklers; or
- (c) any other apparatus for watering an area,

to certain times or to certain areas, or to certain times in certain areas, subject to such conditions as are specified in the notice.

(2) A person who uses water, or causes or permits the consumption of water in contravention of a notice under Subsection (1) is guilty of an offence.

Penalty: A fine not exceeding K100.00.

Default penalty: A fine not exceeding K40.00.

13. Restrictions on use by occupiers of public premises.

An occupier of public premises shall not use or permit the use of water on the premises for the purpose of watering areas or filling pools between the hours of 6 a.m. and 7 p.m.

14. Wastage.

(1) A person who wilfully or negligently causes or permits a meter, pipe, valve, cock or other apparatus to be—

- (a) in a state of disrepair; or
- (b) used in such a way that water is or is likely to be wasted, misused or unduly consumed,

is guilty of an offence.

Penalty: A fine not exceeding K100.00.

Default penalty: A fine not exceeding K40.00.

(2) Where an authorized person has reason to believe that a meter, pipe, valve, cock or other apparatus—

- (a) is in a state of disrepair; or
- (b) is being used in such a manner that water is, or is likely to be, wasted, misused or unduly consumed,

he may—

- (c) enter on any land to ascertain if any water points are in a state of disrepair; and
- (d) repair any water point or leaking or faulty fitting.

(3) The charges for carrying out repairs under Subsection (2) (d) are as assessed by the Board or an authorized person.

(4) For the purposes of Section 8, charges under this section shall be deemed to be charges levied on the land.

15. Requirement of hand operated apparatus.

All urinals installed in premises other than public toilets and public premises shall have hand operated apparatus, and shall not be provided with an automatic flushing unit.

16. Conditions of supply generally.

(1) The owner or occupier of any premises who desires to have the premises connected to the Board's water supply may make application, in Form 1, to the Board or authorized person.

(2) Connexion to domestic premises shall be made in 15 mm pipe or as approved by the Board.

(3) A deposit may be levied by the Board for a water connexion.

(4) There may be supplied by and at the cost estimated by the Board, a connexion to all premises connected to the water supply—

(a) one stopcock; and

(b) one 15 mm meter; and

(c) one metre of 15 mm pipe inside, and up to a maximum of 25 meters of between 15 mm and 25 mm pipe outside, of the boundary of the property to be connected.

(5) Where an applicant requires a connexion to be made to his premises by means of a pipe having a larger diameter than that specified in Subsection (4), he is liable for the total cost of the connexion.

17. Conditions of re-connexion.

Where the supply of water to any premises has been disconnected for non-payment of any charges under this Regulation or for any other reason, the supply shall be re-connected only—

(a) after receipt by the Board, or a person authorized by the Board for the purpose, of an application for re-connexion in Form 2; and

(b) on payment in full of the charges; and

(c) on payment of a re-connexion fee of K5.00.

18. Supply from hydrants.

(1) Where a person desires to take water from a hydrant, he shall make written application to the Board or an authorized person.

(2) An application under Subsection (1) shall be accompanied by a fee determined by the Board.

(3) Water taken under a permit issued in respect of an application under Subsection (1) must be obtained from the hydrant or hydrants specified in that permit.

Penalty: A fine not exceeding K100.00.

Default penalty: A fine not exceeding K40.00.

(4) A permit shall be in a form approved by the Board.

PART III.—SEWERAGE.¹

Division 1.—Preliminary.

19. Interpretation of Part III.

In this Part, unless the contrary intention appears—

“anti-siphonage vent” means a 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 seals in the trap;

“approved” means approved by the Board or by the Sewerage Engineer;

“authorized agent” includes a plumber or drainer contracting to do sewerage work for an owner or occupier of any property;

“building” means a building used—

(a) as a work place, residence, place of business or amusement or place of human habitation; or

(b) for the storage of food intended for human consumption,

but does not include an outbuilding unless it is used for a purpose referred to in Paragraph (a) or (b);

“diameter”, in reference to a pipe, means the nominal internal diameter of the pipe;

“disconnecter trap” means a trap used—

(a) for isolating or disconnecting waste pipes from the house drain and soil pipes; and

(b) for providing inlet ventilation to the waste pipe or pipes discharging into it;

“drain” means a conduit, or any part of a conduit, laid through, under or on a street, way or land, whether public or private, for the carriage from any property of sewerage to a sewer;

“educt vent” means an opening or pipe for the exit of air from a soil pipe, waste pipe, or drain;

“external closet” means a closet other than an internal closet;

“fitting” means any apparatus, together with the necessary appurtenances, for use in connexion with a plumbing or drainage system, other than a fixture or straight piping;

“fixture” means any apparatus, together with the necessary appurtenances, that—

(a) is attached to a plumbing or drainage system; and

(b) is intended for the collection or retention of wastes or waters for ultimate discharge into a sewerage system, such as a closet pan, urinal, bath, sink, basin or trough;

“flat” means a suite of rooms that—

(a) is used, or intended or adapted for use, as a separate habitation; and

(b) is comprised in a building containing one or more similar suites;

¹See also, Public Health (Sewerage) Regulation.

"induct vent" means an opening or pipe for the admission of air to a soil pipe, waste pipe or drain;

"inspector" means an Inspector of Health, a Sewerage Inspector or a supervising officer;

"Inspector of Health" means an Inspector of Health appointed under Section 8 of the Public Health Act;

"internal closet" means a closet that is entered from, or has an opening into, a building;

"property" includes a house, building, tenement, land or premises;

"public building" means—

(a) a theatre, cinema, concert hall, music hall, assembly hall, skating rink, arena, amphitheatre, circus building, enclosure, gallery, platform, tent or structure in, around or on which numbers of people are usually or occasionally assembled; or

(b) a church, chapel or meeting house;

"sewer" means a pipe, conduit or underground channel other than a drain, used or intended to be used for the conveyance of sewage;

"Sewerage Engineer" means a Sewerage Engineer appointed under Section 22;

"the Sewerage Engineer", in relation to a sewerage district, means the Sewerage Engineer appointed for that district;

"Sewerage Inspector" means a Sewerage Inspector appointed under Section 23;

"sewered area" means an area declared to be a sewered area under Section 21;

"slop hopper" means a fixture, other than a closet pan or urinal, used for the discharge of soil or urine waters and provided with flushing apparatus;

"soil pipe" means a pipe conveying discharge from a water-closet, slop sink, urinal, mortuary or operating theatre to a drain;

"stack" means a vertical line of soil, waste, combined waste or vent piping, including its offsets (if any);

"supervising officer" means a supervising officer appointed under Section 24;

"trade wastes" means the liquid refuse from a business, trade or manufacturing property, other than domestic sewage, storm water or unpolluted water;

"trap" means a fitting designed to retain a quantity of water sufficient to arrest the passage of air or gases through the fitting;

"waste pipe" means a pipe conveying discharge (other than discharge from a water-closet, slop sink, urinal, mortuary or operating theatre) from a fixture to a disconnected pipe or trap;

"water seal" means the height of the column of water in a trap to the crown weir, less the diameter of the trap at the lowest point of the dip;

"yard gully" means a drainage trap that is—

(a) used externally; and

(b) fitted with a dished top and grating.

20. Relaxation, etc., of requirements.

(1) Where the Minister is satisfied that—

- (a) it is desirable that, in their application to any building or class of building, any of the provisions of this Part should be relaxed or modified in any way; and
- (b) the relaxation or modification will not result in any lowering of standards of hygiene, safety or effectiveness,

the Minister may, by order, provide for the relaxation or modification, subject to such conditions as he thinks proper.

(2) Section 76 of the Interpretation Act applies to and in relation to an order under Subsection (1) as if it were a regulation.

Division 2.—Administration.

21. Sewered areas.

The Board may, by notice in the National Gazette, declare an area in a sewerage district to be a sewered area for the purposes of this Regulation.

22. Sewerage Engineers.

The Board may appoint a person to be a Sewerage Engineer for a sewerage district.

23. Sewerage Inspectors.

The Board may, by notice in the National Gazette, appoint a person to be a Sewerage Inspector.

24. Supervising officers.

The Board may appoint a person to be a supervising officer for the purposes of this Regulation.

Division 3.—Official Sewerage Plans.

25. Plans of sewerage systems.

(1) The Sewerage Engineer shall prepare and maintain a plan showing the position in relation to building allotments of the sewers under his control.

(2) A plan referred to in Subsection (1) shall be available for public inspection.

26. Plans for connexions to sewerage systems.

Where, in the opinion of the Sewerage Engineer, it is practicable to connect any plumbing work, drains or sewers with the sewerage system, he may issue a plan for that purpose on payment of the fees set out in Schedule 2.

27. Plans of individual blocks of buildings.

(1) In order to facilitate the submission of plans, the Sewerage Engineer may supply, at the rate of K10.00 for each block, plans of individual blocks of buildings—

- (a) showing the position of the sewer and the position of the branch to which the building drain is to be connected, marked in red; and
- (b) having the depth of the branch indicated on the plan.

(2) A tracing of a group or block of buildings with the positions and depths of the branches marked on it, may be supplied, if required, by the Sewerage Engineer, on payment at such rates as are fixed by him, of the cost of the tracing.

Division 4.—Sewerage Generally.

28. Connexions to sewerage system.

(1) Connexions of plumbing work, drains or sewers with a sewerage system must be executed in accordance with this Regulation.

(2) A person who makes connexions referred to in Subsection (1) before a plan in respect of the connexions to be made has been issued under Section 26 is guilty of an offence.

Penalty: For the first offence, a fine not exceeding K500.00.

For a subsequent offence, a fine not exceeding K500.00.

In addition, a fine not exceeding K10.00 for each day during which the offence continues after the receipt of a written notification from the Board.

29. Drainage generally.

(1) For the purposes of this section, a block of flats in one building shall be considered as one house.

(2) The drainage of each house and building shall be separate from that of any other house or building that is not—

(a) on the same allotment; and

(b) owned by the same person, except where, in the opinion of the Sewerage Engineer, special reasons justify draining by a combined operation.

30. Use of drains.

Subject to any exception imposed or permitted by the Sewerage Engineer, the occupier of a sewerer property must discharge into the sewerage system—

(a) all faecal matter, urine, household slops and household liquid refuse from the property; and

(b) such other polluted water from stables, washing areas, manure bins, basements, cellars and roofed yards and such trade wastes, as the Sewerage Engineer authorizes or requires.

Penalty: For the first offence, a fine not exceeding K500.00.

For a subsequent offence, a fine not exceeding K500.00.

In addition, a fine not exceeding K10.00 for each day during which the offence continues after the receipt of a written notification from the Board.

31. Prohibited discharges into drains and sewers.

A person who throws, deposits or discharges, or causes or permits to flow or to be thrown, deposited or discharged, into a drain or sewer in a sewered area, or into any opening, pipe or receptacle connected with any such drain or sewer—

- (a) any garbage, offal, dead animal, vegetable, fruit, vegetable or fruit parings, ashes, cinders, rags, hair, oil, wool, silt, sand, gravel or refuse from a factory; or
- (b) petrol or other inflammable or explosive substances whether solid, liquid or gaseous; or
- (c) except by written permission of the Sewerage Engineer, roof, rain, surface or flood waters; or
- (d) except by written permission of the Sewerage Engineer, the contents of any night-soil cart, cesspool or privy; or
- (e) waste water, liquid, trade wastes or other substance that has not been completely neutralized as to its acidity; or
- (f) trade waste that is above the temperature of 40°C, or such lower temperature as is determined by the Sewerage Engineer having regard to the special circumstances of the discharge; or
- (g) a liquid that contains such proportion of common salt or of any other mineral salt, acid or gas as, in the opinion of the Sewerage Engineer, is liable to be injurious to, or to form compounds injurious to, any part of the sewerage system or to employees engaged in the operation or maintenance of the sewerage system; or
- (h) any other matter or thing that, in the opinion of the Sewerage Engineer, is liable to be injurious to any part of the sewerage system or to employees engaged in the operation or maintenance of the sewerage system,

is guilty of an offence.

Penalty: For the first offence, a fine not exceeding K500.00.

For a subsequent offence, a fine not exceeding K500.00.

In addition, a fine not exceeding K10.00 for each day which the offence continues after the receipt of a written notification from the Board.

32. Discharge of trade wastes.

(1) This section applies in relation to the discharge of trade wastes into a sewer.

(2) A written application for permission to discharge trade wastes from any property into a sewer shall be made to the Sewerage Engineer in the form determined by him, specifying—

- (a) the process of manufacture from which trade wastes are to be discharged into the sewer; and
- (b) the nature of the trade waste from every such process; and
- (c) the estimated maximum rate of discharge of trade waste from every such process; and
- (d) the hours of the day during which discharge of trade wastes from every such process will normally take place; and

- (e) the estimated maximum daily discharge of the trade wastes into sewers; and
 - (f) such other information as the Sewerage Engineer requires.
- (3) Trade waste must not be discharged into the sewer unless—
- (a) a written permit has been granted by the Sewerage Engineer; and
 - (b) an agreement has been executed by the applicant containing a covenant to comply with the conditions of the permit.
- (4) The Sewerage Engineer is the sole judge—
- (a) as to the quality, quantity and rate of discharge of trade waste; and
 - (b) as to whether they comply with the conditions of the permit and of this Regulation,
- and his decision is final.
- (5) The Sewerage Engineer shall determine—
- (a) the maximum aggregate daily quantity of trade waste that may pass from any property into a sewer; and
 - (b) the size and capacity of the drain for conveying the trade waste from the property to the sewer; and
 - (c) the hours during which the flow is permitted.
- (6) If ordered by the Sewerage Engineer, the volume of trade waste discharged must be determined by meter or by some other means of measurement approved by him.
- (7) Trade wastes must be passed through such settling, screening and neutralizing chambers and such other apparatus as is ordered or approved by the Sewerage Engineer in order to ensure that the resulting effluent complies with the requirements of the permit and of this Regulation.
- (8) All apparatus or machinery referred to in Subsection (7) shall be approved in type and general arrangement by the Sewerage Engineer, but the applicant—
- (a) shall determine the size and capacity; and
 - (b) must obtain an effluent in compliance with the requirements of the permit and of this Regulation.
- (9) The applicant must notify the Sewerage Engineer, in writing, of his desire to make any alterations to—
- (a) any apparatus or machinery referred to in Subsection (7); or
 - (b) the quality, quantity or rate of discharge of trade waste,
- and the alteration must—
- (c) conform in all respects to the requirements of the original application; and
 - (d) be approved by the Sewerage Engineer before being commenced.
- (10) A notification under Subsection (9) must set out the details of the alterations proposed and the reasons for them.
- (11) Where there is change of ownership or occupancy of any property in respect of which a permit has been issued under this section, the person to whom the permit was granted must, at least 14 days before the change, notify the Sewerage Engineer, in writing, of the change.
- (12) A permit issued under this section must not be assigned or transferred except with the written permission of the Sewerage Engineer.

(13) Where directed by the Sewerage Engineer, the owner or occupier of any property in respect of which a permit has been issued under this section must install to the design of the Engineer an approved chamber for the inspection, sampling and measurement of trade wastes or effluent.

(14) A chamber referred to in Subsection (13) must be readily accessible at all times to persons authorized by the Sewerage Engineer.

(15) The Sewerage Engineer, or a person authorized by him, may—

- (a) at any reasonable time enter on any property in respect of which a permit has been issued under this section; and
- (b) take samples of trade waste for analysis and otherwise; and
- (c) inspect the apparatus or machinery referred to in Subsection (7).

(16) A settling, screening or neutralizing chamber or other apparatus for the treatment of trade wastes in accordance with this section must be cleansed and maintained by the occupier of the property at his own expense and at such intervals as are thought necessary by the Sewerage Engineer to ensure the efficient operation of the chamber or apparatus.

(17) Notwithstanding any permission or approval by the Sewerage Engineer, the occupier of any property in respect of which a permit has been issued under this section is solely liable for and in respect of—

- (a) any accident, damage, loss or injury directly or indirectly arising out of or resulting from the discharge of trade waste from the property into a sewer; and
- (b) all damage, loss or injury occasioned or done to a sewer or any property belonging to the Board or any person or body by reason of any such discharge failing to comply with the terms, conditions and provisions of the permit or of this Regulation.

(18) The occupier shall agree to indemnify the Sewerage Engineer and the Board against all claims and demands for any damage, loss or injury referred to in Subsection 17(a) made or suffered by any person.

(19) In a case to which Subsection 17(b) applies, the occupier shall pay the cost of making good any damage, loss or injury referred to in that paragraph.

(20) Whenever the Sewerage Engineer thinks it necessary, he may exclude from any sewers all trade wastes from any property during the repairing, examination or maintenance of the sewers or the carrying out by him of any works in connexion with them.

(21) Compensation is not payable in respect of any exclusion of trade wastes from a sewer under Subsection (20).

(22) The discharge of trade wastes into a sewer is subject to any other conditions required by the Sewerage Engineer having regard to the special circumstances of the case.

(23) A person who discharges trade wastes into a sewer otherwise than in accordance with this section is guilty of an offence.

Penalty: For the first offence, a fine not exceeding K500.00.

For a subsequent offence, a fine not exceeding K500.00.

In addition, a fine not exceeding K10.00 for each day during which the offence continues after the receipt of a written notification from the Board.

33. Discharge of sub-soil water.

A person who discharges sub-soil water into a sewer otherwise than with the permission of, and under conditions approved by, the Sewerage Engineer is guilty of an offence.

Penalty: For the first offence, a fine not exceeding K500.00.

For a subsequent offence, a fine not exceeding K500.00.

In addition, a fine not exceeding K10.00 for each day during which the offence continues after the receipt of a written notification from the Board.

34. Plumbing and drainage in unsewered areas.

(1) The Sewerage Engineer may—

- (a) issue permits for sanitary plumbing or drainage work to be carried out before the construction of sewers in any area; and
- (b) arrange for the inspection of the work during construction.

(2) An inspection under Subsection (1) shall be paid for in advance by the owner of the property on which the work is carried out at such rates as the Sewerage Engineer determines.

(3) The Sewerage Engineer may issue a certificate of approval if he is satisfied that the work has been carried out in accordance with this Regulation.

Division 5.—Permits and Authorities Generally.

35. Application to connect, etc., with sewerage system.

(1) An application under Section 37 of the Act shall be in Form 3.

(2) The approval of an application under Section 37 of the Act does not authorize anything not stated in the application.

36. Form of submitted plans of plumbing.

A plan of a proposed sanitary plumbing installation submitted in accordance with Section 38 of the Act for approval shall—

- (a) be neatly and accurately drawn to a scale of 1:100, with details to a scale of 1:20 if required by the Sewerage Engineer; and
- (b) set out clearly—
 - (i) a plan of each floor, including the ground floor and basement (if any), on which fixtures are, or are proposed to be, installed, showing clearly—
 - (A) the nature and position of all fixtures; and
 - (B) the size and arrangement of all soil, waste, combined waste, and vent, pipes; and
 - (C) the position, size, gradient and approximate depth of all drains, fixtures being designated by the symbols set out in Schedule 2 and the various pipe lines being delineated in colours—
 - (D) soil pipes, combined waste pipes, waste pipes—blue; and
 - (E) vents—red; and

- (ii) the intended use of each room in which a fixture is, or is proposed to be, installed and of each room from which a water-closet or urinal is entered directly; and
- (iii) sectional line diagrams showing—
 - (A) each soil, waste, combined waste or vent, pipe or stack, together with their sizes; and
 - (B) the positions of all fixtures connected to them; and
 - (C) where required by the Sewerage Engineer—the gradient.

37. Variation from plans.

After a plumbing or drainage plan has been approved by the Sewerage Engineer, a variation from the approved plan shall not be made except with the prior approval of the Sewerage Engineer or an officer authorized by him for the purpose.

38. Alterations to buildings.

Before any alteration or addition is made to a building or outbuilding connected to a sewer, the owner of the property, or the authorized agent of the owner, must—

- (a) give notice to the Sewerage Engineer of his intention to do so; and
- (b) provide such information in connexion with any such alteration or addition as the Board requires.

Division 6.—Examining and Testing.

39. Notice of commencement and completion of work.

(1) An owner of any property, or the authorized agent of the owner, must—

- (a) give not less than 48 hours written notice to the Sewerage Engineer before commencing any work in relation to a connexion to a sewerage system; and
- (b) report when the work is ready for inspection.

(2) All work must be left uncovered and convenient for examination until inspected and approved by the Sewerage Engineer or an inspector.

(3) Within seven days after the completion of any work, the person authorized to carry out the work shall file, in the office of the Sewerage Engineer, a correct statement of the work done, in the form prescribed by the Sewerage Engineer and countersigned by an inspector.

40. Inspection.

Inspection of any work shall be made within 48 hours after the receipt of notification under Section 39 that the work is ready for inspection, unless the notification is received on Friday or Saturday in which case the inspection shall be made within 48 hours after the start of business in the following week.

41. Examination of materials, etc.

(1) Materials, pipes, bends, junctions, fittings, fixtures and apparatus—

- (a) shall, if directed by the Sewerage Engineer, be submitted for examination or test; and
- (b) shall not be placed in position until passed or stamped by the Sewerage Engineer.

(2) An examination or test conducted under Subsection (1)(a) shall—

- (a) be paid for by the person submitting the materials, or as the case may be; and
- (b) be done at such time and place as are ordered, and at such rates as are fixed, by the Sewerage Engineer.

42. Testing of drains.

(1) Every drain shall be thoroughly tested by an inspector before being approved, and if a drain is altered or repaired it shall be thoroughly tested by an inspector before the alterations or repairs are so approved.

(2) The inspector may apply the water, smoke or air-pressure test.

(3) The owner of the property on which the drain is situated, or the authorized agent of the owner, shall furnish such tools, labour and assistants as are necessary for any test under Subsection (2).

(4) The special testing apparatus for the water test and the smoke test shall be supplied by the plumber, or may be hired by the plumber from the Sewerage Engineer on behalf of the State.

(5) The water test—

- (a) may be applied to any drainage and plumbing systems and their fittings in their entirety or in sections; and
- (b) shall be applied by—
 - (i) hermetically sealing all openings below the top section to be tested; and
 - (ii) then filling the system with water to the highest point of the section or, if thought necessary, to such additional height as the inspector orders; and
 - (iii) carefully examining every joint for leaks,

and the loss of water shall not exceed the amounts permitted by the Sewerage Engineer.

(6) The smoke test shall be applied by—

- (a) forcing into the system thick smoke to a pressure of 25mm of water, by means of smoke test apparatus; and
- (b) closing all openings at which smoke appears; and
- (c) keeping up the pressure for five minutes after the last opening is closed.

(7) Before—

- (a) the fittings are connected with the plumbing of the house or building, or if so ordered after they are connected; and
- (b) the soil or waste pipe is connected to the sewer,

the outlet of the soil or waste pipe, and all openings into it below the top, shall be hermetically sealed and the pipe filled with water to such height as the inspector requires, and every joint carefully examined for leaks.

(8) Work already in place may be tested as and when required by the Sewerage Engineer.

43. Use of apparatus, etc., before testing.

(1) Pipes, drains or apparatus in connexion with sewerage or drainage must not be used until the work has been—

- (a) inspected, tested and passed by the Sewerage Engineer or an inspector; and
- (b) certified by him on the prescribed form.

(2) Underground or enclosed work must not be covered up or concealed until it has been inspected and passed.

(3) Every part of the work shall be made to conform with this Regulation, and is subject to the approval of the Sewerage Engineer.

Division 7.—Execution of Works.

44. Requirement of appropriate licence.

(1) Subject to Subsection (2), unless he holds the appropriate licence under the *Trade Licensing Act*, or is employed under the supervision of the holder of such a licence, a person must not—

- (a) execute or perform any work in the nature of sanitary plumbing intended to be connected to a sewer or in a sewered area; or
- (b) lay or repair a drain connected or intended to be connected to a sewer.

Penalty: For the first offence, a fine not exceeding K500.00.

For a subsequent offence, a fine not exceeding K500.00.

In addition, a fine not exceeding K10.00 for each day during which the offence continues after the receipt of a written notification from the Board.

(2) Notwithstanding Subsection (1)(a), a person who holds the appropriate licence under the *Trade Licensing Act* may execute any water supply plumbing necessary to sanitary work.

(3) A person who knowingly engages or employs, for the actual performance of plumbing or drainage work for purposes of this Regulation, a person who—

- (a) is not the holder of a licence authorizing him to perform that class of work; or
- (b) is not employed under the supervision of the holder of such a licence,

is guilty of an offence.

Penalty: For the first offence, a fine not exceeding K500.00.

For a subsequent offence, a fine not exceeding K500.00.

In addition, a fine not exceeding K10.00 for each day during which the offence continues after the receipt of a written notification from the Board.

(4) Where the licence under the *Trade Licensing Act* of a person has been suspended or cancelled, it is a defence to a prosecution for an offence against Subsection (3) if the defendant proves that at the time of the alleged offence he was not aware of the suspension or cancellation of the licence.

45. Supervision of work.

Connexions with the drains or sewers, including plumbing connexions, shall be made under the direction of the Sewerage Engineer, an inspector or a supervising officer.

46. Responsibility of tradesmen for work.

(1) The holder of a licence as a sanitary plumber or drainer under the *Trade Licensing Act* must ensure that all work carried out under an approval given or permit issued under this Regulation is done in accordance with this Regulation.

Penalty: For the first offence, a fine not exceeding K500.00.

For a subsequent offence, a fine not exceeding K500.00.

In addition, a fine not exceeding K10.00 for each day during which the offence continues after the receipt of a written notification from the Board.

(2) Where, in the opinion of the Sewerage Engineer, work has been carried out by a sanitary plumber or drainer in an unsatisfactory manner, the Board may charge the licensee a fee to cover the cost of additional inspections resulting from his default.

(3) A person holding a licence for the purpose under the *Trade Licensing Act* who executes any works in connexion with sewerage, drainage or sanitary plumbing shall, when directed by the Sewerage Engineer, make good at his own expense any defect found within 12 months of the date of completion of the work, that in the opinion of the Sewerage Engineer is due to faulty workmanship or defective material.

Division 8.—Construction Generally.

47. Matters not specifically dealt with.

Any work pertaining to the provision or maintenance of sanitary plumbing or house drainage not specified in this Regulation shall be done as directed by the Sewerage Engineer.

48. Materials, etc.

Materials, pipes, bends, junctions, fittings, fixtures and apparatus shall—

- (a) be of the best of their respective kinds, sound and free from defects; and
- (b) comply with such National Technical Standards as are accepted by the Board.

49. Workmanship.

All work shall be executed in a thorough and workmanlike manner and to the satisfaction of the Sewerage Engineer.

50. Safety precautions.

Adequate precautions shall be adopted by persons carrying out sanitary plumbing or drainage work to prevent injury to workmen, the public or property.

Division 9.—Standards, etc.

51. Concrete.

Unless otherwise ordered by the Sewerage Engineer, concrete shall—

- (a) consist of one part Portland cement, two parts clean, sharp sand and four parts hard stone, shingle or gravel not exceeding 18mm gauge; and
- (b) be thoroughly mixed with clean water to such consistency as is approved by the Sewerage Engineer.

52. Cement mortar.

Unless otherwise ordered by the Sewerage Engineer, cement mortar shall—

- (a) consist of one part Portland cement and two parts clean, sharp sand; and
- (b) be properly mixed with a proportion of clean water as is approved by the Sewerage Engineer.

53. Drainage materials.

Drain pipes, bends, junctions, and fittings, used shall be of glazed stoneware, concrete, cast-iron, or other material approved by the Sewerage Engineer, but the Sewerage Engineer may prohibit the use of any of those materials where he thinks that the circumstances or conditions are unfavourable.

54. Interceptor traps.

(1) An interceptor trap—

- (a) may be fixed if desired by the owner; and
- (b) shall be fixed if ordered by the Sewerage Engineer,

in the drain laid from any property to the sewer.

(2) An interceptor trap shall—

- (a) be fixed as near as practicable to the boundary of the subject property; and
- (b) where practicable, be within the boundaries of the property; and
- (c) be provided with an approved inspection cap on the sewer side of the trap; and
- (d) if so ordered by the Board or an inspector, be provided with an approved inspection chamber.

55. Inspection chambers.

(1) Where thought necessary by the Sewerage Engineer, drains shall join in an inspection chamber at least 900mm long by 600mm wide, fitted with a closed cover.

(2) The portions of the drains crossing the floor of the inspection chamber shall be connected in a straight line or by curved junctions in the floor of the chamber.

56. Inspection openings.

(1) Every line of drain shall be provided with an inspection opening—

- (a) at each junction not provided with an inspection chamber; and
- (b) at each change of direction; and
- (c) at each fitting; and
- (d) at intervals of not more than 20m,

and in paved areas, inspection openings shall, if thought necessary by the Sewerage Engineer, be brought to the surface and furnished with approved air-tight covers.

(2) The area of an inspection opening referred to in Subsection (1) shall not be less than the area of the cross-section of the drain at the place where the inspection opening is provided.

57. Gratings.

(1) An inlet to a drain, other than an inlet from a water-closet, shall be effectively protected by approved gratings of ample area.

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

(3) An opening for ventilation shall be kept completely free from obstruction by the occupier of the land on which the drain is situated.

58. Closure of openings.

(1) The ends of a drain not immediately connected with the plumbing fixtures, and all inspection openings, shall be securely closed with water-tight imperishable materials.

(2) In the case of a stoneware drain, the end shall be closed with a stoneware or cast-iron disk cemented in.

(3) In the case of a wrought-iron drain, the end shall be closed with a plug screwed on the end.

(4) In the case of a cast-iron drain, the end shall be closed with a cast-iron plug caulked in with lead.

59. Replacement or insertion of pipes.

(1) Where it is necessary to remove a pipe to clear a stoppage or to insert a pipe or branch in an existing stoneware or concrete drain, the pipe removed shall be replaced by an inspection pipe or an inspection junction of the same length, by one of the following methods:—

- (a) the top half of the socket of the new pipe and of the existing downstream pipe may be removed, but the bottom half, in each case, shall be left intact and the joints surrounded by concrete; or
- (b) an approved split pipe with double collar surrounded with concrete may be used; or
- (c) a length of not less than three pipes may be removed, the centre pipe replaced by an inspection pipe and the pipes dropped back into place without springing or cutting.

(2) Junctions shall not be made in existing metal pipes unless an approved downpipe is used in each case, and pipes shall not be sprung into position.

60. Use of concrete.

Concrete shall be used—

- (a) around and under yard gully basins, the exposed surfaces being rendered with cement mortar; and
- (b) around the tops of educt vent and induct vent pipe sockets where they are exposed; and
- (c) around interceptor trap covers and the tops of disconnector traps where the surface is not paved; and
- (d) under and around bends rising vertically off oblique branches and under bases of all drainage traps; and
- (e) around drains near tree roots and in such other places as the Sewerage Engineer directs.

61. Fixtures in cellars.

(1) A sink, trap, water-closet, urinal or other fixture or apparatus shall not be laid or fitted in a cellar or basement, or on a floor below ground level, unless—

- (a) the written consent of the Sewerage Engineer has been first obtained; and
- (b) the owner—
 - (i) submits such information as is required by the Sewerage Engineer; and
 - (ii) undertakes, in writing, in an approved form, to accept all liability for damage that may occur; and
 - (iii) gives to the Sewerage Engineer and the Board such indemnity in reference to that liability as the Sewerage Engineer requires; and
- (c) in areas liable to flooding—no external apertures to the cellar or basement is below the highest known flood level; and
- (d) no external aperture to the cellar or basement is in such a position that storm water, roof water or surface water can enter; and
- (e) the ventilation of the cellar or basement is in accordance with this Regulation; and
- (f) such other conditions as are required by the Sewerage Engineer, having regard to the special circumstances of the case, are complied with.

(2) If on an inspection it is found that—

- (a) the light or ventilation is not in accordance with this Regulation; or
- (b) in the opinion of the Sewerage Engineer, the fixtures and their surroundings are not kept in a sanitary condition; or
- (c) the purpose for which the cellar, basement or floor below ground level was used at the time when a consent was granted under Subsection (1) has changed; or
- (d) Subsection (1) has not been complied with,

the consent under Subsection (1) may be revoked by the Sewerage Engineer.

(3) If a consent is revoked under Subsection (2), the closet, urinal or other fixture shall be disconnected from the sewers within 14 days from the date of the revocation.

62. Drainage from cellars, etc.

(1) Where a cellar, basement or floor below ground level the subject of a consent under Section 61(1)(a) is at such a level as, in the opinion of the Sewerage Engineer, may involve risk of backflow in, or defective operation of, the drain, the owner must cause the sewage from all fixtures—

- (a) to be raised by a method approved by the Sewerage Engineer to such a height as is ordered by the Board or an inspector; and
- (b) to be discharged into the sewer as and where so ordered.

Penalty: for the first offence, a fine not exceeding K500.00.

For a subsequent offence, a fine not exceeding K500.00.

In addition, a fine not exceeding K10.00 for each day during which the offence continues after the receipt of a written notification from the Board.

(2) The water seal of the trap in the drain pipe leading from the cellar, basement or floor below ground level shall be constantly maintained.

63. Seepage drains.

(1) A person who discharges a seepage drain from a cellar, basement or floor below ground level into a sewer without the consent of the Sewerage Engineer is guilty of an offence.

Penalty: For the first offence, a fine not exceeding K500.00.

For a subsequent offence, a fine not exceeding K500.00.

In addition, a fine not exceeding K10.00 for each day during which the offence continues after the receipt of a written notification from the Board.

(2) Where discharge into a sewer is approved by the Sewerage Engineer under Subsection (1), the seepage shall be—

- (a) raised by ejector siphon or other approved apparatus to such height as is ordered by the Sewerage Engineer; and
- (b) discharged into the sewer as and where so ordered.

64. Drainage from polluted areas.

(1) A stable, cow stall, market-place, receptacle for sludge water from factories, area where milk cans are washed or area on which foul or polluted waters are discharged shall be graded, paved and drained to the satisfaction of the Sewerage Engineer, and the drain shall be provided with an approved silt trap connected with the drain.

(2) In the case of a motor car washing area, triple oil interceptor traps shall be provided.

(3) A silt trap referred to in Subsection (1) shall be provided with an approved removable grating, and the silt shall be removed from the trap as soon as the silt receptable is full.

(4) Where written notice is given by the Board to the owner of any property in a sewered area on which horses or cattle are kept, manure bins shall be provided for all stables, cow sheds and yards where the horses or cattle are kept.

(5) A manure bin provided under Subsection (4) shall be—

- (a) constructed of concrete or brickwork at least 225mm thick, laid in cement mortar; and
- (b) provided with a ledged, braced and hinged cover; and
- (c) rendered and made impervious throughout.

(6) Unless special permission is given by the Sewerage Engineer to the contrary, a place referred to in Subsection (1) or (2) that is to be connected to the drain shall be so roofed or raised above the adjoining ground as to prevent the entry of rain or surface water into the sewers.

(7) A person who permits rain-water conduits from adjoining roofs to discharge on to an area referred to in Subsection (1) or (2) is guilty of an offence.

Penalty: For the first offence, a fine not exceeding K500.00.

For a subsequent offence, a fine not exceeding K500.00.

In addition, a fine not exceeding K10.00 for each day during which the offence continues after the receipt of a written notification from the Board.

65. Drainage trenches.

(1) The trench for the drain from any property shall be dug so as to meet the end of the branch sewer, or of the junction provided or to be provided for the connexion, in accordance with the drainage plan approved by the Board.

(2) The face of the trench nearest the branch sewer shall be filled up with brick or rubble masonry or timbered up as and where ordered by the Board or an inspector.

(3) In refilling the trench, sand, gravel or other approved material shall first be deposited around the sides of the pipe and up to a depth of 300mm over the barrel of the pipe and carefully consolidated, after which the remainder of the trench shall be filled in, in layers not more than 300mm in thickness, each layer being rammed or flooded as ordered by the Board, or an inspector or approved by the Board, or the Sewerage Engineer.

(4) After the trench is filled in, the surface material shall be restored, as nearly as possible, to the same condition as that in which it was before operations were commenced, or otherwise in accordance with this Regulation and by arrangement with the owner of the property.

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

(6) A person who allows water, sand, earth or other prohibited discharge to enter the sewer during the progress of the work is guilty of an offence.

Penalty: For the first offence, a fine not exceeding K500.00.

For a subsequent offence, a fine not exceeding K500.00.

In addition, a fine not exceeding K10.00 for each day during which the offence continues after the receipt of a written notification from the Board.

66. Position and line of drains, etc.

(1) A drain, and a fitting or appliance connected to a drain, shall be laid and fixed where ordered by the Sewerage Engineer.

(2) Where a change of direction occurs in a drain, adequate provision shall be made for inspection and cleaning by means of—

- (a) a manhole or inspection chamber; or
- (b) an oblique junction or suitably curved pipe provided with an inspection eye; or
- (c) a suitably curved pipe with an inspection opening on each immediately adjoining pipe.

67. Oblique junctions.

Where a drain joins another drain or sewer, the junction shall be made obliquely at an angle not greater than 45° with the direction of flow of the other drain or sewer.

68. Connexion to sewer.

The disk stopper at the point of connexion to the sewer shall be carefully removed so as not to injure the socket or allow debris or other matter to get into the pipe.

69. Gradients.

(1) A drain shall be laid on an even grade and, except with the permission of the Sewerage Engineer, the gradient shall not be less than—

- (a) for a 100mm diameter drain—1 in 40, or 2.50 %; and
- (b) for a 125mm diameter drain—1 in 50, or 2.00 %; and
- (c) for a 150mm diameter drain—1 in 60, or 1.66 %; and
- (d) for a 225mm diameter drain—1 in 90, or 1.11 %.

(2) If permission is given for the use of flatter gradients than those prescribed by Subsection (1), the Sewerage Engineer may require special provision to be made to ensure regular and efficient flushing.

(3) Except with the permission of the Sewerage Engineer, a drain shall not be laid at a steeper grade than—

- (a) for a 100mm diameter drain—1 in 10, or 10 %; and
- (b) for a 150mm diameter drain—1 in 15, or 6.33 %; and
- (c) for a 225mm diameter drain—1 in 20, or 5 %; and
- (d) for a 300mm diameter drain—1 in 25, or 4 %.

(4) If approval is given for steeper grades than those prescribed by Subsection (3), concrete anchor blocks shall be placed at intervals of not more than 9m between blocks—

- (a) having a minimum width of 300mm along the pipe; and
- (b) being of such thickness that there is at least 75mm above and below the pipe; and
- (c) extending at least 200mm into the virgin ground at each side of the trench.

70. Depth of drains.

(1) Unless it is bedded on and encased in concrete of not less than 80mm thickness over any part of the drain, a drain of stoneware, concrete, or pitch fibre, pipe shall, subject to Subsection (3), be laid at a depth to the top of the socket of the pipe of not less than—

- (a) in a public thoroughfare or right of way, or in any other open space subject to vehicular traffic—600mm; or
- (b) in private property not subject to vehicular traffic—300mm.

(2) Unless such measures are taken to protect the drain as the Sewerage Engineer approves, a person who alters the surface over a drain so as to deprive it of the minimum depth of cover prescribed by Subsection (1) is guilty of an offence.

Penalty: For the first offence, a fine not exceeding K500.00.

For a subsequent offence, a fine not exceeding K500.00.

In addition, a fine not exceeding K10.00 for each day during which the offence continues after the receipt of a written notification from the Board.

(3) Where in the opinion of the Sewerage Engineer the nature of the soil or the traffic makes it necessary, the Sewerage Engineer may require the depth of cover or the thickness of concrete to be greater than that prescribed by Subsection (1).

71. Laying of drains.

(1) Pipes shall be laid to such lines and grades as shown on the plans submitted under Section 38 of the Act or as ordered by the Board, or an inspector.

(2) Except where otherwise ordered by the Board or an inspector—

(a) holes shall be cut in the bottom of the pipe trench to receive the sockets of the pipe; and

(b) the pipe shall be carefully bedded with the barrel on the solid ground.

(3) In the case of a rock-bottomed trench or where ordered by the Board or an inspector, the pipes shall be bedded up to the horizontal diameter on not less than 50mm thickness of approved sand or other approved material, measured from the barrel of the pipe.

(4) In water-charged ground, or where the foundation is bad, or where ordered by the Board or an inspector, the drain shall be formed of—

(a) cast-iron pipes; or

(b) stoneware, concrete, or pitch fibre, pipes—

(i) bedded on and encased in concrete in such a manner that there is—

(A) not less than 80mm of concrete underneath the barrel of the pipe; and

(B) not less than 80mm of concrete extending on each side beyond the largest diameter of the barrel of the pipe; and

(ii) haunched so that the top line of the concrete meets the pipe not less than 25mm above the top of the pipe; and

(iii) if ordered by the Board or an inspector—supported on approved foundations of timber or other approved material as so ordered.

(5) Drops or bends in vertically-inclined drains shall have 100mm of concrete placed under and around as ordered by the Board or an inspector.

(6) Where pitch fibre pipes are used for the purposes of this Regulation, they shall conform to British Standard Specification 2760—1973: A56.

72. Drains under buildings.

(1) A drain or sewer shall be constructed so as not to pass under a building except where no other mode of construction is practicable, and if a drain or sewer is constructed to pass directly under a building it shall—

(a) be laid in a direct line for the whole distance beneath the building; and

(b) have approved means of access for rodding—

(i) outside the walls of the building; and

(ii) if ordered by the Board or an inspector—beneath the building.

(2) Where the underside of the floor of the building is at least 1200mm above the ground surface, then either—

(a) earthenware or concrete pipes—

(i) laid on continuous concrete cradling at least 100mm thick under the barrel of the pipe with at least 300mm of cover over the pipe; or

(ii) completely surrounded in concrete of a minimum thickness of 100mm,

shall be used; or

(b) cast-iron pipes shall be used as ordered by the Board or an inspector.

(3) A drain pipe carried through a wall shall have a clear space of 80mm, filled with approved mastic left around it.

(4) A pipe brought up inside a building to connect a water-closet, slop hopper or similar installation—

(a) if it does not exceed 1200mm—may be of stoneware or concrete, surrounded in 100mm of concrete; or

(b) if it exceeds 1200mm—shall be of cast-iron, or, if approved by the Sewerage Engineer, of copper.

(5) A building or outbuilding shall not be erected over an existing house drain or sewer unless provision exists to comply with this section.

(6) Where an existing sewer main or sewer house connexion has to be altered or relocated by reason of an alteration or addition to a building, the owner of the building is liable for the whole cost of the alteration to or relocation of the main or connexion.

73. Salt glazed ware and cement and concrete pipes.

(1) Joints of salt glazed ware and of cement pipes shall be filled in solidly with—

(a) cement mortar neatly splayed off; or

(b) other approved material.

(2) After a joint is made, the interior of the joint shall be wiped clear of surplus mortar.

(3) The Sewerage Engineer may order or approve the use of rubber ring joints with concrete pipes.

(4) Special jointing in very wet ground or for special discharges shall be as ordered or approved by the Sewerage Engineer.

74. Cast-iron pipes.

(1) Joints in cast-iron pipes shall be—

(a) stemmed with approved gaskets; and

(b) so filled and caulked with lead or other approved material as to make them gas-tight and water-tight.

(2) Joints between cast-iron and stoneware or concrete pipes shall be made in the same way as joints between salt glazed ware or concrete pipes.

(3) Where cement jointing is used on cast-iron pipes, and in other cases where directed by an inspector, the protective coating shall first be removed from the portion of the cast-iron pipe that is in contact with the cement.

75. Trapping of inlets.

(1) An inlet to a drain, other than an inlet provided for ventilation in accordance with this Regulation, shall be provided with an approved trap.

(2) Except in the case of the combined pipe system, an inlet to a drain connecting directly with a sewer, other than an inlet that is necessary for the apparatus of a water-closet, urinal or slop sink, shall not be constructed within a building.

76. Classes of traps.

The following classes of traps shall be used as required—

- (a) drainage traps, for intercepting gases only, which shall be of round section and self-cleansing form, but not such as to empty by momentum or suction; and
- (b) silt traps, for intercepting both gases and solids, which shall—
 - (i) have slightly tapered sides, flat bottoms and rounded angles; and
 - (ii) be provided with approved means of catching and removing solids; and
- (c) grease traps, of such form as is approved for solidifying the collecting grease or other semi-fluid matter liable to foul the pipes; and
- (d) acid traps or neutralizers, for neutralizing acids and acidulated water before entering the house drains; and
- (e) oil traps, for collecting all kinds of oils and preventing it from entering the house drains.

77. Water seals.

A drainage trap shall have a water seal not less than 50mm in depth.

78. Provision of yard gullies.

Unless other approved provision is made for taking household liquid refuse, a yard gully—

- (a) shall be provided 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 600mm; and
- (b) shall not be situated within a building or outbuilding.

79. Details of yard gullies.

(1) A yard gully shall be fitted with a dished top and grating, the dished top being—

- (a) in one piece with the trap; or
- (b) jointed to the trap with a spigot and faucet; or
- (c) as otherwise approved.

(2) The depth of the dished top to the grating shall not be less than 150mm, and the grating shall be fixed so as to be removable with reasonable facility.

(3) The wastes shall discharge below the grating.

80. Kerbing to yard gullies and silt traps.

(1) A yard gully basin and the top of a silt trap—

- (a) shall be surrounded with an approved impervious kerbing of concrete or other approved material to prevent ingress of surface water to the drains; and

(b) if ordered by the Board or an inspector, the wall at the rear of the gully or silt trap—

(i) if of brick or stone, shall be cement-rendered to the height of the tap over the gully or silt trap; and

(ii) if of wood, shall be provided with an approved galvanized sheet iron apron.

(2) A rain-water pipe shall not discharge into a gully or fixture connected with the sewerage system.

(3) A gully or pit for the disposal of road drainage, or for the disposal of storm water from a roof, yard or vacant land, shall not be connected to a sewer.

81. Sealed disconnecter traps.

(1) Where approved by the Sewerage Engineer, sealed disconnecter traps may be affixed inside or outside a building or outbuilding, but breather pipes or fresh air inlets equal in area to the waste pipe or pipes discharging into the trap shall—

(a) be taken to such height as is ordered by the Board or an inspector; and

(b) in the case of traps inside—be led to the outside of the building or outbuilding.

(2) The material for breather pipes shall be the same as for vent pipes.

(3) Inspection openings to traps referred to in Subsection (1) shall be sealed to the approval of the Sewerage Engineer.

82. 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:—

(a) any 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 drains; and

(b) a sink in a food-packing house, butcher's shop, lard-rendering establishment, hotel, restaurant or boarding house; and

(c) such other fixtures, areas or apparatus as the Sewerage Engineer directs.

83. Construction of grease traps.

(1) Grease traps shall be fixed outside buildings or outbuildings wherever practicable.

(2) An external grease trap shall be constructed of glazed stoneware, brick in cement, concrete or other approved material to the standard approved by the Sewerage Engineer.

(3) An internal grease trap shall—

(a) be constructed of copper or other approved material; and

(b) if ordered by the Board or an inspector—be fixed on a tray, and its design shall be approved by the Sewerage Engineer before work commences.

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

84. Size of grease traps.

(1) The dimensions of a grease trap shall be such as to ensure the retention of all grease entering the trap.

(2) The minimum size and dimensions for a grease trap serving a kitchen sink or mechanical dishwasher shall be as follows:—

- (a) the capacity below the level of the invert of the outlet shall be not less than the total capacity of the sink or dishwasher served; and
- (b) the height from the top of the outlet of the grease trap to the vent take-off shall be not less than 100mm; and
- (c) the difference in level between the inverts of the inlet and outlet shall be not less than 25mm.

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

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

85. Construction of petrol and oil traps.

A petrol trap or an oil trap shall be—

- (a) constructed in accordance with the Sewerage Engineer's type drawing and to the approval of the Sewerage Engineer; and
- (b) connected to a disconnector trap; and
- (c) provided with independent ventilation, the outlet of which is made flame-proof by soldering approved fine bronze mesh gauze over the opening.

86. Vents on main house drains.

(1) The main drain of a house shall be ventilated at its upper end by a pipe ventilator erected vertically, and the ventilator may be a soil vent pipe.

(2) If the drain is provided with an interceptor trap—

- (a) there shall also be a ventilator connected to the interceptor trap shaft; and
- (b) where practicable, there shall be a difference in height of not less than 2m between the tops of the vents at the upper and lower ends of the drain, respectively.

87. Vents on branch drains.

A branch drain need not be vented if the drainage traps are within 6m of 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 of the outlet side of the water seal of the drainage trap.

88. Size of drainage vents.

(1) Unless otherwise ordered by the Board or an inspector, a drainage vent pipe shall be not less than—

- (a) 100mm in diameter in the case of an educt vent; and
- (b) 80mm in diameter in the case of an induct vent.

(2) Where more than one educt vent is provided, the vent on the longest line of drain shall be not less than 100mm in diameter and all others not less than 80mm in diameter.

(3) A drainage vent shall not be smaller in diameter than is necessary to comply with Section 94.

(4) Unless otherwise ordered by the Board or an inspector or approved, a drainage vent pipe shall be provided with an approved basket end, educt or induct cowl.

89. Materials for drainage vents.

(1) A drainage vent pipe situated wholly outside buildings and outbuildings shall be of—

- (a) cast-iron, galvanized wrought-iron, galvanized sheet iron or other approved material above the surface of the ground; and
- (b) salt-glazed ware or concrete beneath the surface of the ground.

(2) A galvanized sheet iron vent pipe shall be grooved and welded, soldered or riveted, and shall be not less than—

- (a) 1mm thick for a 80mm or 100mm diameter pipe; and
- (b) 1.20mm thick for a 150mm diameter pipe, and the first 2m above ground shall be of cast-iron or other approved material.

(3) The circumferential joints of a galvanized sheet iron bent pipe shall be riveted and soldered.

(4) Unless otherwise approved, a drainage vent pipe inside a building or outbuilding shall be of—

- (a) cast-iron, of soil pipe strength; or
- (b) galvanized wrought-iron.

90. Materials for vents of soil or waste pipes.

(1) Subject to Subsection (2), a vent pipe shall be of cast-iron, wrought-iron, lead, copper or brass.

(2) If it is entirely outside a building or an outbuilding and is higher than 600mm above the level of the highest fixture served by the pipe, a vent pipe may be of grooved and welded or riveted galvanized sheet iron.

(3) A lead vent pipe—

- (a) for use with a water-closet, urinal or slop sink—shall not be less than 2.8mm thick; and
- (b) for use with other fixtures—shall not be less than 2.4mm thick.

(4) External vent pipes of galvanized sheet iron shall not be less in thickness than the following—

- (a) 40, 50 or 65mm diameter—0.8mm; or
- (b) 80 or 100mm diameter—1mm; or
- (c) 150mm diameter—1.6mm.

(5) A galvanized sheet iron vent shall be—

- (a) coated on the inside with an approved bituminous coating; and
- (b) painted on the outside to the colour required by the owner of the land on which the vent is situated.

91. Soil vent pipes.

The upward extension from a soil pipe for ventilation shall pass in as direct a manner as possible above, and if necessary through, the roof.

92. Length of unvented waste.

(1) A waste pipe need not be ventilated unless it exceeds 3m in length on a horizontal plane or an aggregate of 6m in length on all planes, if—

- (a) the water seal of the trap is not reduced by siphonage or other cause and there is only one fixture (not being a sink connected to a grease trap) attached to the waste pipe; or
- (b) two waste fixtures are connected to one 100mm diameter back-inlet waste pipe.

(2) Anti-siphon traps shall not be used unless approved by the Sewerage Engineer and installed in a manner specified in the approval.

93. Anti-siphonage vents.

(1) Loss of the water seal in a trap shall be prevented by proper ventilation in accordance with Section 107 and, unless the Sewerage Engineer approves otherwise, such anti-siphonage vents from fixtures shall be carried up in accordance with Section 94 or joined to the branch or main vent above the level of the fixture.

(2) The vent pipe shall connect to the waste or soil pipe, on the opposite side of the water seal from the fixture, at a point not less than 80mm or more than 600mm from the crown of the trap, except in the case of a closet pan when the vent pipe shall not be more than 1200mm from the crown of the trap.

(3) No other fixture shall be connected to the soil pipe or waste pipe at a point between the anti-siphonage vent and the trap that it serves.

94. Height of vent pipes.

(1) Unless otherwise ordered by the Board or an inspector—

- (a) a vent pipe extending upwards from a soil or drain pipe shall be carried not less than 2m higher than any door, window or other opening into a building within a distance of 10m from the vent pipe; and
- (b) an educt vent shall be carried at least 4m above ground level and 1m above the level of the eaves or coping.

(2) A vent pipe extending upwards from a waste pipe or disconnector trap shall be carried—

- (a) not less than 1200mm higher than any door, window or other opening into a building within 5m from the vent pipe; and
- (b) at least 600mm above the level of the eaves or coping.

(3) A vent pipe under the roof or eaves of a building shall be carried at least 600mm above the point of intersection with the roof.

(4) Where necessary, a vent shall be carried to such additional height as is required to effectively prevent the escape of foul air into any building in the vicinity.

(5) Where necessary, a vent pipe shall be provided with sufficient clips or stays to support it effectively.

(6) Where a flat roof is used for any purpose other than as a covering to the building—

- (a) a vent pipe from a soil pipe or house drain shall be carried at least 3m above roof level; and
- (b) a vent from a waste pipe shall be carried at least 2500mm above roof level.

95. Ground vents.

An approved ground vent may be used on a boundary trap when situated not less than 10m from any window, door or other opening into a building.

96. Use of chimneys as ventilators.

A chimney shall not be used as a ventilator to a drain, soil, or waste, pipe.

97. Vents near chimneys, etc.

(1) A vent shall be kept as far away as possible from a chimney or ventilating air shaft.

(2) Section 94 applies where a ventilator pipe terminates 2m or more from a chimney opening or ventilating air shaft, but where the distance is less than 2m and the vent pipe is at least 4m long it shall terminate not less than 600mm below the top of the chimney or air shaft.

98. Vent pipe grades.

(1) A vertical line of vent pipe shall—

(a) connect, full size, at its base with a soil, waste or drain pipe; and

(b) either—

(i) extend in undiminished size above the roof; or

(ii) be connected to the soil, waste or vent stack, as prescribed by Section 99(1) on a grade not less than 1 in 40.

(2) An offset shall be at a grade not less than 45° to the horizontal.

(3) A vent pipe shall not be used as a waste or soil pipe.

99. Combining of vents, etc.

(1) A vent pipe may be combined or branched into a soil or waste pipe above the level of the highest fixture, but in the case of a separate pipe system a soil vent shall be branched into a soil pipe or vent, and a waste vent into a waste pipe or vent, only.

(2) Where an additional branch is required to an existing galvanized sheet iron vent pipe, a brass saddle piece, bolted and soldered to the vent, shall be used.

100. Pipe clips, etc.

(1) There shall be at least one pipe hook or clip to each 2m length of vent pipe.

(2) Approved coated wrought-iron clips shall be provided for cast-iron pipes without lugs, and for wrought-iron pipes.

(3) Galvanized band iron clips (40mm by 2mm thick) or approved pipe hooks shall be provided for galvanized sheet iron pipes.

(4) For cast-iron pipes with lugs, two 65mm by 12mm coach screws or dog nails shall be provided for each pair of lugs.

(5) Where it is necessary to fix a pipe clear of the wall, approved extension clips shall be used which, in the case of a cast-iron pipe, shall be placed tight up against the head or underside of the collar.

101. Attachment to walls.

(1) Unless otherwise ordered by the Board or an inspector, where a galvanized sheet iron pipe, with or without offset, is carried above the brick wall of a building or outbuilding

a galvanized wrought-iron clip shall be used, leaded into the wall near the top wherever possible, and bolted against the vent pipe.

(2) A band iron clip of a vent pipe to a brick wall shall be fastened—

(a) with nuts and bolts, leaded in; or

(b) by means of T-headed bolts passed through the brick joints and turned at right angles to the joints.

102. Supporting of vents.

A vent pipe—

(a) the top of which is more than 3 000mm above the highest fastening to a structure; or

(b) that has an offset above the top holdfast,

shall be stayed by at least two approved stays set at right angles to each other.

103. Vents adjoining high buildings.

(1) Where—

(a) a building is erected next to an existing building of less elevation; and

(b) a window of the new building is located within 10m of an existing vent stack on the lower building,

the owner of the new building shall defray the cost of the alterations to the vents of the previously existing building that are necessary to comply with Section 94.

(2) The owner of the lower or existing building shall—

(a) on receipt from the owner of the new or higher building of money or security sufficient for the purpose—make the necessary alterations; or

(b) at the election of the owner of the new or higher building—permit the making of the alterations by the owner of the new or higher building.

104. Grease trap ventilation.

(1) Unless otherwise approved, an internal grease trap or external grease trap that—

(a) is within 10m of any door, window or other opening into a building; and

(b) is not fitted with an approved air-tight cover,

shall have independent provision made for inlet and outlet ventilation.

(2) A vent referred to in Subsection (1) shall be carried—

(a) not less than 2m above any window, door or other opening into a building within a distance of 10m from the vent; and

(b) at least 600mm above the eaves or coping,

or to such additional height as is necessary to effectively prevent the escape of foul air into any building in the vicinity.

(3) There shall be a difference in height of at least 2m between the tops of the inlet and outlet vents.

(4) The size of the vents shall be in accordance with the requirements for main vents in Section 107(2)—

(a) the diameter of the waste pipe being taken as that of the outlet from the grease trap; and

- (b) the number of fixture units being taken as equivalent to the number represented by the sinks served by the grease trap.

105. Fixture units.

(1) In this section and in Schedule 4, one fixture unit denotes a rate of discharge equal to 30 litres per minute.

(2) For the purpose of determining the size of a drain, waste, soil or vent pipe, unless otherwise ordered by the Board or an inspector, the equivalent fixture units set out in Schedule 4 shall be adopted.

(3) For fixtures other than fixtures referred to in Schedule 4, the equivalent fixture units to be adopted shall be determined by the Sewerage Engineer.

(4) Cleaners' sinks and floor wastes that are not regularly in use during the period of maximum use of other fixtures need not be included in determining the number of fixture units to be provided for.

106. Sizes of soil, waste and drain pipes.

(1) Subject to Subsection (2), the sizes of soil, waste, and combined waste, pipes shall not be less than the sizes determined, on the basis of the total number of fixture units drained or likely to be drained, in accordance with Schedule 5.

(2) Notwithstanding Subsection (1)—

- (a) waste, combined waste and soil, pipes shall not be diminished in the direction of flow; and
- (b) the diameter of a trap, waste, combined waste, or soil, pipe receiving the discharge from a fixture shall not be less than the nominal outlet diameter of the fixture, and a soil pipe shall not be less than 80mm in diameter; and
- (c) more than two closet pans shall not discharge into any 80mm graded soil pipe; and
- (d) where 45° fittings are used throughout for connexions to a vertical stack, the permissible maximum number of fixture units for the stacks may be increased by 50%; and
- (e) more than 50% of the total permissible number of fixture units for a vertical stack shall not be connected to the stack in any 2.4m length of the stack; and
- (f) soil, combined waste, and waste, pipes shall be as direct and free from bends as practicable, but where bends are unavoidable approved provision shall be made, if necessary, to safeguard fixtures connected immediately above or below the bends.

(3) For the purposes of this section and of Schedule 5, an offset in a vertical stack may be deemed to be vertical, if the length of the offset does not exceed 1.5m measured horizontally.

107. Sizes of vents.

(1) For the purposes of this section, the length of a vent shall be measured as follows:—

- (a) the length of a main vent shall be taken as the height of the building, in storeys, above the floor on which the lowest fixtures served by the vent are situated; and
- (b) the length of a branch vent shall be taken as the height of the building, in storeys, above the floor on which the lowest fixtures served by the vent are

situated, plus an additional storey for each 3600mm, or part of 3600mm, in the length of the branch vent, measured horizontally from the main vent to the fixture in question.

(2) Subject to Subsection (3), the diameters of main and branch vents shall be not less than the sizes determined, in accordance with Schedule 6, from—

- (a) the diameter of the soil, waste, or combined waste, pipe or stack to be vented; and
- (b) the total number of fixture units served by the main vent or by the part of the branch vent under consideration; and
- (c) the length of the vent.

(3) Notwithstanding Subsection (2)—

- (a) a vent shall not be less than 32mm in diameter; and
- (b) a main or branch vent shall not have a diameter less than 50% of that of the soil, combined waste, or waste, pipe that it serves; and
- (c) for a 50mm and 65mm waste pipe the main or branch vent shall have a diameter of not less than 40mm; and
- (d) a branch vent need not be larger in diameter than the soil, combined waste, or waste, pipe that it serves.

(4) The diameter of an individual anti-siphonage vent shall not be less than the diameter 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.
mm	mm	mm	mm
32	32	65	50
40	32	80	50
50	40	100	50

108. Provision of waste pipes.

Separate waste pipes shall be provided for—

- (a) dirty water from baths, sinks, lavatory basins and wash troughs, and other water containing a small proportion of soap and dirt; and
- (b) greasy water—
 - (i) from kitchen and scullery sinks or other fixtures; and
 - (ii) where grease traps are required by this Regulation or ordered by the Board or an inspector.

109. Provision of soil pipes.

A soil pipe shall be provided for—

- (a) soil water from a closet; and
- (b) other water containing faecal matter; and
- (c) urinal water from a slop sink or urinal; and

- (d) where ordered by the Board or an inspector—for discharges from an operating theatre or morgue,

and such water shall not be discharged into a waste pipe.

110. Combined pipe systems.

The Sewerage Engineer may, if he thinks fit, approve the adoption of the combined pipe system for plumbing installations, subject—

- (a) to an interceptor trap or a boundary trap being provided in the house drain complete with induct vent on the drain side of the trap in all buildings with ground-floor fittings; and
 (b) to such other conditions as he thinks necessary in a particular case.

111. Connexions to drains.

(1) A waste pipe shall discharge under the grating of a yard gully or into a disconnector trap.

(2) A soil pipe, including a soil pipe connected to a urinal or a slop sink, shall be connected direct to a drain.

(3) A metallic waste pipe shall not be laid in the ground, whether inside or outside a building, without the approval of the Sewerage Engineer.

112. Flashings, etc.

(1) Unless otherwise ordered by the Board or an inspector—

- (a) a trough, sink or other fixture that is placed less than 80mm; and
 (b) a bath that is placed less than 150mm,

from a wall (other than a wall provided with wall skirtings as part of the fixture) shall be flashed with—

- (c) 1.6mm thick lead; or
 (d) 0.6mm thick copper, bronze, brass, nickel-silver or monel metal; or
 (e) other approved material,

except that galvanized sheet iron may be used for a fixture other than a sink.

(2) Flashing referred to in Subsection (1) shall be—

- (a) turned up the wall at least 100mm; or
 (b) tucked 25mm into a joint and cemented water-tight,

except where the wall is tiled when the flashing shall be carried up at least 6mm behind the tiles.

(3) A bath or other fixture having a turned-up flange, for use against a tiled wall instead of sheet metal flashing, shall be properly supported to prevent settlement, and the flange shall lap at least 6mm behind the tiles.

(4) In a case to which Subsection (3) applies—

- (a) the tiles shall be brought hard down on to the surface of the fixture; and
 (b) wall surfaces adjacent to all fittings shall be impervious to water.

(5) A flashing shall—

- (a) be properly secured and made water-tight; and

- (b) be bedded in red or white lead for a width of not less than 25mm along the edge nearer the fixture.

113. Fixtures, etc., against walls.

(1) Unless otherwise ordered or approved by the Sewerage Engineer—

- (a) a sink, tub or similar fixture situated in premises, other than a private house, where food for human consumption is prepared, manufactured or stored for sale; and
- (b) a draining board, slab or plate used in connexion with any such fixture,

shall not abut against a wall.

(2) A sink, tub or other fixture, and a draining board, slab or plate, referred to in Subsection (1) shall have or leave a clear space of not less than 75mm between the fixture and a wall surface or obstruction.

114. Internal cocks.

A cock delivering water shall not be fixed internally unless—

- (a) a sink, lavatory, basin or other approved fixture; or
- (b) a properly drained impervious floor,

is provided underneath.

115. Pipes passing through roofs.

Where a vent, waste or soil pipe passes through a roof, a suitable lead collar or flashing out of 1.6mm thick lead shall be soldered or otherwise fixed to the pipe and the roof in such a manner that the roof is perfectly water-tight.

116. Location of soil and waste pipes.

A line of soil or waste pipe shall be as direct as possible.

117. Materials for soil and waste pipes.

- (1) Material other than cast-iron, lead, copper or brass shall not be used for a soil pipe.
- (2) Material other than wrought-iron, cast-iron, lead, brass, copper, stoneware or other ceramic ware, or in the case of acid wastes other materials approved by the Sewerage Engineer, shall not be used for a waste pipe.

118. Lead soil and waste pipes.

The minimum permissible thickness of lead for soil pipes is 2.8mm, and for waste pipes 2.4mm.

119. Galvanized steel pipes.

Notwithstanding anything in this Regulation, galvanized steel pipe conforming with Australian Standard Specification AS 1074—1976 “steel tubes and tubulars threaded or suitable for threading with pipe threads of Whitworth form”, may be used instead of wrought-iron pipe.

120. Cast-iron pipes.

(1) A cast-iron pipe shall be sound, free from holes and cracks, and coated with approved bituminous composition or lined with glass enamel or other material to the approval of the Sewerage Engineer.

(2) Where laid in the ground, a cast-iron pipe and its fittings shall conform to British Standard Specification 1211/1958 Class B.

(3) A cast-iron pipe for use in situations other than those referred to in Subsections (1) and (2) shall have a minimum thickness of 5mm, measured without the enamel or other lining, and its fittings shall correspond with it in weight and quality.

(4) A junction in a pipe referred to in Subsection (3) shall be curved, and a right-angled junction shall not be made.

121. Copper and brass pipes.

(1) A copper or brass waste pipe or inside vent pipe shall be a seamless solid drawn tube and—

(a) if made of brass—shall be not less than 1.6mm thick; or

(b) if made of copper—shall conform to Australian Standard Specification AS 1589—1973,

and shall, where ordered, by the Board or an inspector, be protected from external injury.

(2) A sheet copper vent pipe for use on outside work only shall be not less than 0.6mm thick, made with grooved seams.

122. Use of lead pipes.

A lead pipe shall not be used where it is liable to damage.

123. Supporting of lead pipes.

(1) A lead pipe shall be supported by—

(a) cast lead tacks wiped on to the pipe; or

(b) other approved fastenings.

(2) The fastenings shall be arranged as nearly as possible as follows:—

Type of pipe.	Centres.
100mm vertical lead pipe	750mm
100mm inclined lead pipe.	600mm
Less than 100mm vertical pipe	900mm
Less than 100m inclined pipe	675mm.

(3) The dimensions of the tacks shall be as follows:—

Diameter of pipe.	Tacks.
100mm	200mm x 6mm
80mm	150mm x 5mm
50mm	100mm x 3mm
40mm	75mm x 3mm

124. Minimum permissible gradients for soil and waste pipes.

Except where the Sewerage Engineer approves the use of flatter gradients, the minimum gradient to be adopted for soil and waste pipes is—

Diameter of pipe.	Minimum gradient.
32mm	1 in 12.5, or 8.00%
40mm	1 in 15, or 6.76%
50mm	1 in 20, or 5.00%
80mm	1 in 30, or 3.33%
100mm	1 in 40, or 2.50%
150mm	1 in 60, or 1.66%

125. Junctions.

Where a waste or soil stack is branched into a graded waste, soil or drain pipe—

- (a) the branch fitting shall have an angle of not less than 45° to the graded pipe; and
- (b) the length of the branch of the fitting shall be such that the vertical projection of the attached stack is wholly outside the area of the junction with the graded pipe.

126. Sealing of pipes.

(1) When a fixture is demolished, the soil, waste, vent and water supply pipes to the fixture shall be removed, or if they are allowed by the Sewerage Engineer to remain the ends of the pipes shall be sealed with water-tight imperishable materials.

(2) Wrought-iron pipe may be sealed with a screwed plug, cast-iron pipe may have a cast-iron plug caulked in with lead, lead pipe may have the end securely closed with a wiped joint, and stoneware pipe may have a stoneware disk cemented in.

127. Sheet metal bends and offsets.

- (1) A sheet metal end or offset for a flush or vent pipe shall be bent or pressed.
- (2) Mitred elbows shall not be used.

128. Concealment of pipes, etc.

(1) Except where passing through a wall, partition or floor, a soil, waste or main vent pipe or trap shall be reasonably accessible at all times for convenience of inspection and repair.

(2) In a hospital or a similar institution, a soil, waste or main vent pipe shall, where practicable—

- (a) be fixed on the outside of an external wall or in a pipe duct having a minimum width of 600mm and a minimum area of 1m² (measured clear of all pipes or other obstructions); and
- (b) be so arranged as to facilitate inspection and maintenance at all times,

and the pipe duct shall be provided with access doors so placed as to permit ready inspection of every straight line of pipe.

(3) If a soil, waste or main vent pipe in a building other than a hospital or a similar institution is concealed within a pipe duct or a recess in a wall, the pipe duct or recess shall—

- (a) be provided with approved means of access and have a minimum width of not less than 600mm and a minimum area of 1m² (measured clear of all pipes or other obstructions); or
- (b) have at least one of its sides—
 - (i) constructed of woodwork, brickwork in lime mortar, terra-cotta or gypsum blocks, plaster on expanded metal lathing 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
 - (ii) provided with inspection openings placed so as to allow ready inspection and maintenance of every straight line of pipe.

- (4) A branch or anti-siphonage vent pipe may be—
- (a) concealed in a hollow wall; or
 - (b) built in lime mortar in a wall-chase,
- if it is made of—
- (c) cast-iron, wrought-iron or steel; or
 - (d) brass, being not less than 2.5mm thick when screwed fittings are used; or
 - (e) brass, being not less than 1.6mm thick when—
 - (i) compression fittings are used, with fittings to correspond; or
 - (ii) joints are brazed; or
 - (f) copper conforming to Australian Standard Specification AS 1589—1973.
- (5) Unless approved by the Sewerage Engineer, a junction shall not be built into a wall.
- (6) An inspection or access opening to a concealed pipe shall—
- (a) be finished throughout with smooth surfaces; and
 - (b) be of such size and shape as to permit the entrance of cleaning tools, as required, to the pipe.
- (7) For the purposes of this section, a straight line of soil, waste or main vent pipe shall be taken to include any offset or deviation from the straight line of—
- (a) not more than 45°; and
 - (b) not more than 900mm in length.

129. Concealed standing wastes.

A person must not have concealed standing waste on any property.

Penalty: For the first offence, a fine not exceeding K500.00.

For a subsequent offence, a fine not exceeding K500.00.

In addition, a fine not exceeding K10.00 for each day during which the offence continues after the receipt of a written notification from the Board.

130. Painting.

Painting of any portion of the plumbing work shall not be carried out until the work has been inspected and approved.

131. Stoneware, cement, concrete and cast-iron pipe.

Joints of stoneware, cement, concrete or cast-iron pipes shall conform with Section 73.

132. Lead pipe.

Joints of lead pipes, and between lead pipes and brass unions, ferrules and other corrosion-resistant metallic fittings, shall be—

- (a) plumber's wiped joints; or
- (b) made by fittings approved for the purpose.

133. Wrought-iron pipe.

(1) The screwed ends and sockets of each size of wrought-iron or wrought-steel pipe shall be so formed, and the threads so cut, that the ends of the pipe butt against each other when screwed home in the sockets.

(2) Bends, junctions and similar fittings shall be similarly formed and screwed, so that when the pipe ends are screwed home the bore is continuously uniform and without breaks or pockets.

(3) The burr shall be neatly filed off on the inner edge of all pipe ends.

(4) Screwed joints shall be made with approved jointing material.

(5) British Standard pipe threads shall be used.

134. Wrought-iron pipe to lead pipe.

Joints between wrought-iron and lead pipes shall be made by brass unions screwed to iron and wiped to lead.

135. Brass or copper pipe.

Joints of brass or copper pipes shall be made—

(a) by brazing to the satisfaction of the Sewerage Engineer; or

(b) in accordance with the Australian Standard Specification AS 1645—1977 "Copper and Copper Alloy compression fittings for use in water supply and hot water services"; or

(c) by other approved means.

136. Lead pipe to cast-iron pipe, etc.

The connexion of lead pipe or a lead trap to cast-iron pipe shall be made by brass ferrules lined with and connected to—

(a) the lead pipe or trap, by means of a wiped joint; and

(b) the cast-iron pipe, by inserting the ferrule in the socket of the cast-iron pipe and making the joint in the same way as in cast-iron pipe.

137. Sheet iron pipe to cast-iron pipe.

Connexions of galvanized sheet iron pipe to cast-iron pipe shall be made with molten lead, lightly but tightly caulked into the cast-iron socket.

138. Sheet iron pipe to wrought-iron pipe, etc.

Galvanized sheet iron pipe or sheet steel pipe shall be connected to wrought-iron or steel pipe by means of—

(a) brass unions or sleeves soldered to the sheet iron pipe and screwed to the wrought-iron pipe; or

(b) wrought-iron sockets screwed to the wrought-iron pipe, into which the sheet iron pipe is lightly but tightly caulked with molten lead.

139. Sheet iron pipe to lead pipe.

Connexions of sheet iron pipe to lead pipe shall be made by—

(a) brass sleeves wiped to the lead pipe and soldered to the sheet iron pipe; or

(b) cast lead collars wiped to the lead pipe, into which the sheet iron pipe is caulked as ordered by the Board or an inspector, or soldered and jacketed.

140. Lead pipe to salt glazed ware pipe.

Connexions of lead pipe to salt glazed ware pipe shall be made by means of a mortar joint as prescribed by Section 73 for joining salt glazed ware pipes, but the portion of the

lead pipe that is covered by the joint compound shall first be coated with an approved bituminous compound.

141. Concrete or stoneware traps to lead pipe.

The connexion of a concrete or stoneware trap to a lead pipe shall be by means of a cast lead or brass socket—

- (a) the joint being made with bitumen or other approved material; and
- (b) the lead pipe being connected to the tail end of the brass or lead socket by a plumber's wiped joint.

142. Connexions of closet pan traps to soil or drain pipes.

(1) Connexions of a closet pan trap to a soil or drain pipe shall be made—

- (a) 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 the socket of the soil or drain pipe and neatly splayed off; or
- (b) by some other approved method.

(2) In the case of a lead soil pipe, a cast lead or brass socket shall be used, connected to the lead pipe by means of a wiped joint.

143. Connexions of cistern flush pipes to closet pans.

(1) The flush pipe from a cistern shall be connected to the water-closet pan—

- (a) by means of a lead cap piece of lead not less than 1.6mm thick, packed with red lead or other approved material; or
- (b) by some other approved method.

(2) The cap piece shall be jointed—

- (a) to galvanized sheet iron, copper, brass or drawn steel pipe by means of a soldered joint; and
- (b) to lead flush pipe by means of a wiped or soldered joint.

(3) The connexion of the flush pipe to the cistern shall be—

- (a) by means of a brass union, wiped to lead pipe or soldered to sheet iron pipe; or
- (b) by some other approved method.

(4) Copper or brass pipe shall be connected to the cistern—

- (a) by means of a brass ring, with nut, brazed to the pipe; or
- (b) by some other approved method.

144. Connexion of vent pipes to closet pans.

(1) A vent pipe shall be connected to the vent horn of the water-closet trap—

- (a) by a lead cap piece with red lead packing; or
- (b) by some other approved method.

(2) The cap piece shall be jointed—

- (a) to copper or brass pipe by means of a soldered joint; and
- (b) to lead pipe by means of a soldered or wiped joint.

145. Connexion of outlet fittings to fixtures.

(1) Connexions between outlet fittings and baths, sinks, basins and other fixtures—

- (a) shall be made with locknuts when the fixtures are constructed of cast-iron, plate iron, ceramic ware or concrete; and
- (b) may be soldered when the fixtures are made of sheet metal lighter than 0.9mm thick.

(2) The outlet fitting shall be connected to the waste pipe by means of a union.

146. Connexion of waste pipes to troughs.

(1) Connexions of waste pipes to wash troughs shall be made in accordance with this section.

(2) Cement troughs, unless otherwise approved, shall have cast-in outlets.

(3) Sheet metal troughs shall be connected to the waste pipes as prescribed by Section 145.

(4) For wooden troughs, lead, copper or brass waste pipes shall—

- (a) be connected as prescribed by Section 145; or
- (b) have flanges connected to the waste pipes and fastened to the undersides of the troughs with copper tacks,

after which the waste pipe shall be turned over inside the trough and the plug casting—

- (c) bedded over it with red lead putty; and
- (d) screwed to the trough with brass wood-screws.

(5) Where wrought-iron or other screwed pipes are used, the plug shall be connected to the trough by means of a locknut instead of a flange.

147. Trapping of fixtures.

(1) A fixture shall be effectively trapped, unless otherwise permitted in writing by the Sewerage Engineer.

(2) Separate traps shall be provided for each fixture, except that lavatory basins or sinks may be connected in pairs if—

- (a) they are situated in detached outbuildings, open verandahs or sanitary blocks well ventilated to the satisfaction of the Sewerage Engineer; and
- (b) the length of the waste pipe between the two fixtures does not exceed 900mm.

148. Position of traps.

A trap provided for a fixture shall—

- (a) be placed as near the fixture as possible; and
- (b) not be more than 600mm from its fixture, except—
 - (i) as provided by Section 147; or
 - (ii) with the special permission of the Sewerage Engineer.

149. Materials for traps.

(1) A trap for a fixture other than a water-closet, slop sink or urinal shall be of copper, brass or drawn lead.

(2) Traps receiving chemical wastes shall be of ceramic ware or stoneware.

150. Depth of water seal.

A trap provided for a fixture shall have a water seal of not less than 50mm.

151. Form of trap.

(1) The P form of trap shall be used in preference to the S form where in the opinion of the Sewerage Engineer it is equally suitable for the situation.

(2) Re-sealing traps may be installed—

- (a) with the approval of the Sewerage Engineer; and
- (b) in a manner specified in the approval.

152. Lead traps.

A lead trap shall be of the applicable weight specified in Section 118 for a lead pipe of the same class.

153. Gratings.

In corrodible outlets, gratings of approved design and material in accordance with Australian Standard Specification AS 1589—1973 "Copper and Copper Bound Alloy fittings for use in sanitary plumbing installations", shall be provided for all urinals, slop sinks and fixtures discharging into waste pipes, but if there is no Australian Standard Specification for a fixture the grating shall be as approved by the Sewerage Engineer.

154. Provision for inspection and cleaning.

(1) Inspection and cleaning eyes shall be provided in such positions on a soil and waste pipe as to provide access for proper inspection and cleaning of the entire length of pipe.

(2) A trap for a sanitary fixture (other than a water-closet or slop sink) shall be provided, for cleaning purposes, with an approved screwed brass plug fixed under the water-line of the trap.

155. Inspection openings on soil pipes.

Where the vertical stack of a soil pipe provides for a closet 1200mm or more above ground level, measured from the floor level of the water-closet to ground level at the foot of the stack, an inspection opening, 225mm by 100mm, having a cover fixed to a flange with non-corrodible bolts or studs, shall be provided near the foot of the stack in such position as is ordered by the Board or an inspector.

156. Washers for inspection and cleaning openings.

Inspection or cleaning eyes on metal, soil, or waste, pipes shall be jointed with insertions of leather washers, or in such other approved manner as to seal the joints effectively against the egress of gas or water.

157. Water-closets, urinals and hand basins.

(1) In this section—

"licensed" means licensed under a liquor licensing law of the State or a province;

"resident" includes an employee of a resident employed on the property, whether or not living on the property.

(2) The owner of any property shall provide on the property water-closets, urinals and hand basins in accordance with the following scale:—

- (a) subject to Paragraph (b), for each house, flat or other form of tenement—one closet; and
- (b) subject to Subsection (3), for a residential building used, or intended for use, as an apartment-house, boarding-house, boarding-school, hostel, lodging-house, motel, residential club or hotel or licensed hotel—
 - (i) where the number of resident male persons—
 - (A) does not exceed 100—one closet for every 20; or
 - (B) exceeds 100—five closets and one additional closet for every additional 20 above 100; and
 - (ii) where the number of resident female persons—
 - (A) does not exceed 100—one closet for every 20; or
 - (B) exceeds 100—five closets and one additional closet for every additional 20 above 100; and
- (c) in addition to the requirements of Paragraph (b) and Subsection (3), such number of separate water-closets, urinals and hand basins for the public frequenting the bars of a licensed club, hotel or motel, or other licensed premises, as is thought necessary by the Board, in the interests of public health and convenience, generally or in a particular case; and
- (d) subject to Subsection (4), for an office building (including a bank, broadcasting studio or doctor's or dentist's surgery), a shop (including a cafe, restaurant, retail store, espresso bar or service station), a warehouse (including a fire station, hangar, car park, show-room or display room), a factory or a day school—
 - (i) where the number of male persons—
 - (A) does not exceed 100—one closet for every 25; or
 - (B) exceeds 100—four closets and one additional closet for every additional 25 above 100; and
 - (ii) where the number of female persons—
 - (A) does not exceed 100—one closet for every 25; or
 - (B) exceeds 100—four closets and one additional closet for every additional 25 above 100; and
- (e) for a church—one closet for male persons and one closet for female persons; and
- (f) for any other public building used or intended to be used, for a recreational or other social purpose not specified in this subsection—in accordance with Schedule 7, and in addition such number of separate water-closets, urinals and hand basins for employees and performers as is thought necessary by the Board, in the interests of public health and convenience, in any particular case; and
- (g) for a building not otherwise specified in this subsection—such number of water-closets, urinals and hand basins as is thought necessary by the Board, in the interests of public health or convenience, generally or in a particular case; and

- (b) where the Board thinks it necessary in the interests of public health or convenience—such additional number of water-closets, urinals and hand basins as is ordered by the Board, generally or in a particular case; and
- (i) for male persons employed in the erection of buildings—such number of temporary water-closets, urinals and hand basins as is ordered by the Board, generally or in a particular case.

(3) Where Subsection (2)(b) applies—

- (a) there shall be at least two water-closets; and
- (b) if the number of male persons exceeds 20, there shall be a urinal in the place of every second closet.

(4) Where Subsection (2)(d) applies—

- (a) if the number of male persons exceeds 25, there shall be a urinal in place of every second closet; and
- (b) if the number of persons does not exceed 10, there need be only one closet if—
 - (i) the door is fitted, for the purpose of privacy, with a latch of an approved type; and
 - (ii) the toilet-seat is of the “lift-up” type.

(5) A water-closet, urinal or hand basin that is required by this section to be provided on any property shall comply with the requirements of the *Building Act*, and the regulations made under that Act, with respect to lighting, ventilation, airlocks and standards of construction.

158. Fixing of closet pans.

- (1) A closet pan on a concrete floor or floor of tiles set in concrete shall be—
 - (a) securely bedded in concrete or cement mortar; and
 - (b) fixed with brass screws to approved lead dowels set in the floor, or by some other approved method.
- (2) Where a closet pan is fixed on a wooden floor—
 - (a) the floor shall be covered with lead or approved composition; and
 - (b) the base of the pan shall be secured with brass screws to a raised block covered with lead or composition finishing 32mm above floor level; and
 - (c) the block shall not extend beyond the base of the pan.

159. Closet pans.

- (1) A water-closet shall be furnished with a pan of non-absorbent material of such shape, capacity and construction as is approved by the Sewerage Engineer.
- (2) A water-closet pan and its fittings shall be entirely open to inspection and without any enclosure.
- (3) A vent horn shall be provided on a pan even if an anti-siphonage vent is not required, but if it is not used for a vent the vent horn shall be sealed with a lead disk, bituminous filler and a lead cap piece, or by some other approved method.

160. “Asiatic” toilets.

Notwithstanding this Regulation, the Sewerage Engineer may approve the installation of the “Asiatic” type of closet pan in a water-closet.

161. Closet pan seats.

- (1) Where a seat is provided in a water-closet, it shall be—
 - (a) of approved size, shape, construction and material; and
 - (b) fitted with hinges and screws of non-corrosive metal.
- (2) A one-piece seat constructed of wood shall be reinforced with two or more wood or brass slips let in flush on the underside.
- (3) A multi-piece seat shall be glued and dowelled or bolted.

162. Flushing apparatus.

- (1) Approved apparatus shall be provided for—
 - (a) the effective application of water to the pan of the water-closet; and
 - (b) the efficient flushing and cleansing of the pan; and
 - (c) the effective removal of any solid or liquid matter deposited in the pan.
- (2) Subject to Section 163, the flushing apparatus shall have a flushing capacity of 9 litres, plus or minus not more than 10%.

163. Flushing cisterns.

- (1) A flushing cistern shall be fixed at such height as will effectively flush the pan, but, unless otherwise approved by the Sewerage Engineer, a cistern shall not be fixed at a height, measured from the top of the seat to the underside of the cistern, less than—
 - (a) 1500mm, where a 32mm flush pipe is used; or
 - (b) 1200mm, where a 40mm flush pipe is used, and there shall be a space of at least 225mm between the top of the cistern and the ceiling of the closet.
- (2) A low-level flushing cistern may be installed if—
 - (a) the flush does not exceed 14 litres; and
 - (b) the suite has been passed by the Sewerage Engineer after testing it as a complete unit.
- (3) A cistern shall be fixed—
 - (a) on 40mm angle-iron bearers or approved iron brackets properly supported; or
 - (b) if approved by the Sewerage Engineer, to a cistern board not less than 300mm deep and 32mm thick, fixed to the wall in an approved manner.
- (4) The iron-work of a cistern shall be painted or galvanized as approved, and brackets shall be secured to the wall with 6mm bolts of the required length.
- (5) A low-level cistern fitted with a flush pipe less than 65mm in internal diameter shall be placed so that the bottom of the cistern is not less than 200mm above the top of the pan.
- (6) The water supply pipe to a cistern shall be adequate to fill the cistern at the rate of not less than 2 litres per minute when one other tap on the service is turned full on.
- (7) A cistern shall have a separate stop tap, and an overflow of 20mm internal diameter.

164. Flush pipes.

- (1) A flush pipe to a closet pan shall—
 - (a) be of brass, copper, lead, 2.4mm thick, seamless galvanized steel tube not less than 1.2mm thick or other approved material; and
 - (b) have a minimum diameter of 32mm.

(2) Where the closet pan is provided with a hinged seat, the flush pipe shall be fitted with an approved buffer and buffer block.

165. Flushing apparatus other than cisterns.

(1) A flushing valve used in connexion with a flushing apparatus other than a cistern shall be—

- (a) of a type tested and approved by the Sewerage Engineer; and
- (b) provided with a fullway stop-cock fixed in such a position as to be readily accessible.

(2) A flushing apparatus other than a cistern shall be fed only from a storage tank that is supplied from the main through a ball-cock.

166. Storage tanks.

(1) Where ordered by the Sewerage Engineer, internal water-closets shall be provided with storage tanks capable of holding the equivalent of two flushes of water for each occupant of the building, with a minimum of 20 flushes per closet for all buildings except private residences, which shall have a minimum capacity of 10 flushes.

(2) Unless otherwise approved by the Sewerage Engineer, the storage tanks shall be placed—

- (a) in the water-closet apartment; or
- (b) on the roof, over a flat or gutter; or
- (c) subject to Subsection (3), in an accessible place between the ceiling and the roof.

(3) In a case referred to in Subsection (2)(c), a safe of galvanized iron, lead or other approved impervious material, with at least 40mm overflow, shall be fixed under the storage tank.

(4) A storage tank shall be provided with an approved cover.

(5) The head of water measured vertically from the top water level of the storage tank to the level of the point of discharge into a cistern shall be not less than 2m, but in the case of discharge into a flush valve the head shall be such that the flush valve operates to the tests required by the Sewerage Engineer.

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

1—2 cisterns	20mm diameter
3—6 cisterns	25mm diameter
7—25 cisterns	40mm diameter
26—50 cisterns	50mm diameter

(7) Where the head of water from the storage tank to the flushing cistern is less than 6m, a low pressure ball valve shall be installed.

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

- (a) the available head of water 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 the portion of the supply pipe under consideration,

in accordance with Schedule 8.

- (9) Where the capacity of a tank exceeds 250 litre, it shall be fitted with a fullway valve on the main outlet.

- (10) Where ordered by the Sewerage Engineer, storage tanks in accordance with this section shall be provided for all external water-closets at hospitals, asylums and similar institutions.

167. Venting of closet pans, slop hoppers and urinals.

- (1) Subject to Subsection (2), unless otherwise ordered or approved by the Sewerage Engineer a closet pan, slop hopper or urinal on an upstairs floor shall discharge into a soil vent pipe.

- (2) Where there are no other fixtures connected to the soil stack, a pan may be ventilated by an anti-siphonage vent only, as prescribed by Sections 93 and 107, and discharge into a soil pipe without extension as vent pipe.

- (3) Subject to Subsection (4), an external closet pan in which siphonage occurs, and an internal closet pan shall be ventilated by an anti-siphonage vent, as prescribed by Section 107, sufficiently close to prevent siphonage and not more than 450mm from the trap.

- (4) Where there is only one closet pan on the branch and the pan is not more than 1200mm from a soil vent pipe (measured horizontally between the centre of the soil vent pipe and the centre of the pan) the anti-siphonage vent may be omitted.

168. Grouped external closets.

Where there are more than three external wall closet pans grouped on the ground floor or in the yard of any premises—

- (a) the drain or soil pipe shall be separately ventilated for every group or part of a group of three pans; and
- (b) the size of the vent shall be as prescribed by Section 107.

169. Construction of urinals.

- (1) Unless otherwise approved by the Sewerage Engineer, round-backed stall-type urinals of approved impervious material and approved construction shall be used for internal urinals.

- (2) Soil pipes shall be—

- (a) of glazed earthenware, glass enamelled or coated cast-iron, lead, or other approved material; and
- (b) kept as short and free from bends as possible; and
- (c) provided with inspection openings as ordered by the Board or an inspector.

- (3) Urinals shall be provided—

- (a) with approved flushing apparatus; and
- (b) with a hose tap in a suitable position for hosing down.

- (4) The floor in front of a urinal shall be—

- (a) covered with approved impervious material for a width of not less than—
 - (i) 600mm; or

- (ii) if it is raised above floor level of the urinal apartment—450mm; and
 - (b) graded to drain to the urinal.
- (5) For the purposes of this section, the following materials are impervious:—
- (a) for urinals—glazed fire-clay or stainless steel; and
 - (b) for floors in front of urinals—
 - (i) glazed tiles set in cement mortar, composed of equal parts of cement and sand; or
 - (ii) concrete 150mm thick rendered with 12mm thick cement mortar, slate or marble.

170. External urinals.

(1) With the approval of the Sewerage Engineer, external urinals shall be constructed in an approved position of approved slabs of slate or other impervious material and channels.

(2) All fastenings shall be brass, and channels where let into the floor shall be of glazed earthenware 125mm wide of semi-circular section and graded with an even fall to the outlet of 1:20.

(3) An outlet shall be provided for each 3m or part of 3m of channel.

(4) The floor in front of the urinal shall be raised and constructed as prescribed in Section 169, and subject to this section the urinal shall comply with that section.

171. Flushing apparatus for urinals.

Unless an automatic flushing cistern is approved in writing by the Sewerage Engineer, a hand-operated cistern or other approved hand-operated apparatus shall be installed for a urinal.

172. Flushing cisterns.

(1) The discharge from a cistern installed for a urinal shall, unless otherwise approved by the Sewerage Engineer, be equal to 4 litres for—

- (a) each urinal stall; or
- (b) every 600mm width of slab-back urinal, but a cistern of a capacity of more than 14 litres shall not be used.

(2) Unless otherwise approved by the Sewerage Engineer, the height of a cistern shall be at least 2m from the floor to the bottom of the cistern with a clear space of at least 225mm above the top of the cistern, for access to the ball-cock.

(3) A urinal-flushing cistern shall be provided with a suitable cover and a separate stop tap.

173. Flush pipes.

(1) Flush pipes for urinals shall have a minimum diameter of 32mm, except that flush pipes for automatic flushing cisterns generally shall not exceed—

- (a) for a 4 litre cistern—20mm internal diameter; and
- (b) for a 9 litre cistern—25mm internal diameter; and
- (c) for a 14 litre cistern—32mm internal diameter.

(2) For a 20mm flush pipe one spreader only may be used, for a 25mm flush pipe two spreaders and for a 32mm flush pipe three spreaders may be used.

(3) Saddle or bridle pieces shall be of approved diameter where they are necessary, and pipe clips, bolts and screws used in fixing shall be of brass or copper.

(4) Where slab urinals are permitted, the distance between spreaders shall not exceed 600mm.

(5) Sparge pipes shall be perforated by drilling, and the perforations shall be—

- (a) 3mm in diameter and spaced at 40mm centre; or
- (b) as approved by the Sewerage Engineer.

174. Flush valves for urinals.

Where flush valves are approved by the Sewerage Engineer, every urinal flush valve shall be supplied from a storage tank, as prescribed by Section 166.

175. Slop hoppers.

(1) A slop hopper shall be—

- (a) made in one piece of approved impervious material; and
- (b) provided with approved flushing apparatus of 9 litres capacity as prescribed for water-closets.

(2) A slop hopper shall be placed and ventilated as prescribed for water-closets by Section 167.

(3) A bibcock shall be fixed directly over, and at least 450mm above, each slop hopper.

176. Wash troughs.

(1) A wash trough shall be—

- (a) of approved pattern and material; and
- (b) securely fixed and graded to the outlet pipe; and
- (c) fitted with a brass strainer sunk to the level of the bottom of the trough.

(2) Unless otherwise approved by the Sewerage Engineer, a water tap shall be constructed over each trough.

(3) Unless otherwise approved in writing by the Sewerage Engineer, a wash trough—

- (a) shall be properly mounted on approved concrete or brick-in-cement pedestals; and
- (b) if mounted within 150mm of a wall, shall be bolted with galvanized hook bolts at least 10mm diameter to the wall.

177. Troughs abutting against brick wash-coppers.

Where 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.

178. Standing overflow wastes.

Standing overflow wastes shall not be used in connexion with a sink, bath, lavatory basin or shower compartment.

179. Fixing of sinks, etc.

(1) A sink or approved combined sink and draining board shall be effectively supported, and the traps and waste pipes shall be left readily accessible for inspection and cleaning.

(2) A draining board may be of wood, stainless steel or other approved metal or composition.

(3) A wooden draining board attached to a sink—

- (a) shall be constructed of suitable timber not less than 32mm thick after being properly fluted and graded into the sink; and
- (b) shall be bedded on top of the sink with white lead putty; and
- (c) shall not be stopped after fixing.

180. Galvanized sheet iron baths.

The bottom of a galvanized sheet iron bath shall be effectively supported on legs, and the bath shall not be enclosed.

181. Bath traps.

Unless otherwise approved by the Sewerage Engineer, a bath trap fixed on the outside of a wall shall not be more than 900mm from the outlet of the bath.

182. Baths without flashing.

Where a pedestal bath is fixed and it is not desired to flash it, it shall be fixed at least 150mm clear of walls.

183. Shower compartments.

(1) The floor of a shower compartment shall be—

- (a) graded to an approved 50mm diameter trapped outlet; and
- (b) constructed of—
 - (i) not less than 100mm of concrete, trowelled smooth or covered with tiles set in cement mortar; or
 - (ii) timber covered with—
 - (A) enamelled cast-iron; or
 - (B) approved impervious non-corrosive sheet metal; or
 - (C) other approved material,turned up at the edges and flashed as prescribed by Section 112; or
 - (iii) other approved impervious materials.

(2) The level of the grating on the outlet shall be—

- (a) at least 50mm below the level of the floor outside and adjoining the shower compartment; or
- (b) where a kerb is provided, 50mm below the level of the kerb.

(3) The walls of a shower compartment shall be—

- (a) finished with cement mortar rendered to a smooth surface; or
- (b) covered with tiles set in cement mortar; or
- (c) lined with approved non-corrosive material.

184. Showers over baths.

A shower shall not be fixed over a bath unless—

- (a) the walls within a radius of 900mm of the shower are of an impervious nature and the floor is constructed of approved impervious material graded to a floor waste; or
- (b) the bath is provided with an approved shower shield attachment.

185. Venting of lavatory basins.

Where ordered by the Sewerage Engineer, a lavatory basin waste shall be provided with an anti-siphonage vent.

186. Venting of sinks discharging into grease traps.

A kitchen sink discharging into a grease trap shall be vented irrespective of the length of the waste.

187. Lavatory basins and sinks.

- (1) A basin or sink shall be of an approved type, inspected and passed by the Sewerage Engineer.
- (2) If a basin or sink is provided with an overflow, it shall be of the weir type.
- (3) A basin bracket shall be bolted to the wall in an approved manner.

188. Tip-up basins.

Tip-up lavatory basins shall not be used.

189. Ground floor showers.

Where a shower only is provided in a bathroom on a ground floor, a 100mm stoneware or concrete trap fitted with a brass grating shall be used for the drainage of the floor.

190. Safes.

(1) Unless the floor is constructed—

- (a) of concrete not less than 100mm thick; or
- (b) of other approved impervious material,

graded as ordered by the Board or an inspector, safes of lead or other approved impervious material shall be fitted under—

- (c) a slop hopper or water-closet; and
- (d) a bath or wash trough where, in the opinion of the Sewerage Engineer, there is a danger of damage or nuisance by its overflowing.

(2) A lead safe shall be laid with sheet lead not less than 2mm thick, and where the whole floor is not covered with lead the safe shall extend—

- (a) for a pan or slop sink—300mm beyond the side and 375mm beyond the front of the fixture; and
- (b) for a bath or wash trough—300mm beyond the end and 600mm beyond the front of the fixture.

(3) A safe shall extend back to the wall and 75mm up it, and the roll of the safe shall be 50mm wide and 18mm high and constructed as approved.

(4) Unless otherwise approved by the Sewerage Engineer, a safe—

- (a) shall be drained by a separate 50mm 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
- (b) shall not connect with a waste pipe, soil pipe, drain or sewer.

191. Cistern overflows.

(1) A cistern supplied with water shall have an overflow pipe of adequate size, discharging in a position where it does not cause damage but acts as a warning pipe.

(2) On a ground floor where a cistern is fixed over an impervious floor graded to drain outside the room, the overflow may discharge on to the floor if damage is not likely to arise from the discharge.

(3) Overflows may discharge into the open air above ground level only where the discharge will not cause any inconvenience or nuisance, and in all other cases the pipes shall be brought to the ground surface or be arranged to discharge where they will not prove a source of annoyance or inconvenience.

Division 10—Existing works and defective works generally.

192. Regrading of existing floors under fixtures.

Where, in the opinion of the Sewerage Engineer, it is necessary, an existing floor under a fixture shall be regraded, and a proper waste pipe and, if ordered by the Board or an inspector a flap valve, fixed.

193. Existing fixtures, fittings, etc.

(1) An existing fixture, fitting or appliance not in accordance with this Regulation that—

- (a) the owner desires to retain unaltered and undisturbed; and
- (b) in the opinion of the Sewerage Engineer, will be inoffensive,

may, on the written request of the owner, remain until the Sewerage Engineer orders otherwise.

(2) Existing fixtures, fittings and appliances that, in the opinion of the Sewerage Engineer, are offensive shall be removed at once.

194. Defective works, etc., generally.

(1) Materials, pipes, bends, junctions, fittings, fixtures and apparatus found on inspection under this Regulation to be defective shall be removed and replaced by sound ones, and all defective joints shall be made tight.

(2) A drain, soil, waste or vent fitting or fixture that—

- (a) is laid, used or constructed otherwise than as prescribed by this Regulation; or
- (b) in the opinion of the Sewerage Engineer is, or has become defective,

must, on written notice from the Board or the Sewerage Engineer to—

- (c) the owner or occupier of the property; or

- (d) in the case of joint drainage—the owners or occupiers of the several properties,
be removed, altered or repaired by the owner or occupier—
- (e) as required by the Board or the Sewerage Engineer, as the case may be; and
- (f) within the time fixed in the notice; and
- (g) to the satisfaction and approval of the Sewerage Engineer.

195. Responsibility of owner or occupier for defective work, etc.

(1) An owner or occupier who fails to comply with a notice given to him under Section 194(2) is guilty of an offence.

Penalty: For the first offence, a fine not exceeding K500.00.

For a subsequent offence, a fine not exceeding K500.00.

In addition, a fine not exceeding K10.00 for each day during which the offence continues after the receipt of a written notification from the Board.

(2) In a case to which Subsection (1) applies, the Board or the Sewerage Engineer, may, if it or he thinks fit—

- (a) remove, alter or repair the defective fitting, fixture or apparatus; and
- (b) charge the owner or occupier of the property with the cost incurred and proceed for recovery in the manner provided for by the Act.

PART IV.—RATING¹.

(Replaced by No. 3 of 1984.)

196. Interpretation of Part IV.

In this Part, "unimproved value" has the same meaning as in the *Valuation Act*.

197. Principles for assessing water rates.

(1) A water rate may be assessed as—

- (a) a flat charge to be paid in respect of each allotment of rateable land in a water district; or
- (b) a special charge to be paid in respect of a property or a class of property in a water district; or
- (c) a percentage of the unimproved value of each allotment of rateable land in a water district.

198. Principles for assessing sewerage rates.

A sewerage rate may be assessed as—

- (a) a flat charge to be paid in respect of each allotment of rateable land in a sewerage district; or
- (b) a special charge to be paid in respect of a property or a class of property in a sewerage district; or
- (c) a percentage of the unimproved value of each allotment of rateable land in a sewerage district.

¹See Public Health (Sewerage) Regulation.

199. Period in respect of which rates shall be levied.

(1) For the purpose of this section "fiscal year" means the period of 12 months commencing on each 1 January.

(2) For the purpose of Section 39 of the Act, a rate under that section shall be levied in respect of a fiscal year.

SCHEDULE 1.

PAPUA NEW GUINEA.

National Water Supply and Sewerage Act.

Reg., Sec. 16.

Form 1.

APPLICATION FOR SUPPLY OF WATER.

Name of applicant:

Postal address:

Section:

Allotment:

Number and street:

Suburb or area:

Type of premises:

if rented—

Name and address of owner:

Name and address of agent:

Commencement date:

Indicate if meter is installed:

Name and address of former occupant (if any):

Notice.

I understand that if an account issued for payment for these services is not paid within 30 days of the date of delivery of the account, services may be discontinued and a reconnection fee of K5.00 imposed.

(Signature of Applicant.)

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PAPUA NEW GUINEA.

National Water Supply and Sewerage Act.

Reg., Sec.17.

Form 2.

APPLICATION FOR RECONNECTION OF WATER SUPPLY.

Name of applicant:

Postal address:

Section:

Allotment:

Number and street:

Suburb or area:

I apply to have the above premises reconnected to the Board's water supply. The water was disconnected on _____, 19____.

Dated _____, 19____.

(Signature of Applicant)

PAPUA NEW GUINEA.

National Water Supply and Sewerage Act.

Act, Sec.37.

Form 3.

Reg., Sec.19.

APPLICATION TO CONNECT, ETC., WITH SEWERAGE SYSTEM.

Name of applicant:

Postal address:

Section:

Allotment:

Suburb or area:

Description of property:

Name and address of owner:

Name and address of person employed to do the work:

Detail of the work to be done:

Dated _____, 19____.

(Signature of Applicant)

SCHEDULE 2.

Reg., Sec. 26.

FEES FOR PLANS FOR CONNEXIONS TO SEWERAGE SYSTEMS.

1. Plan of drainage for building where not more than one water-closet or urinal is provided	K20.00
2. Plan of any amendment of original plan referred to in Item 1.	K10.00
3. Plan of sewerage connexion.	K10.00
4. Survey of levels where required for the purposes of a plan referred to in Item 1, 2 or 3.	K20.00

SCHEDULE 3.

Reg., Sec. 36(b)(i).

SYMBOLS TO BE USED IN PLANS OF PLUMBING.

B.T.	—	Boundary trap
C.I.P.	—	Cast-iron pipe
D.T.	—	Disconnecter trap
E.V.	—	Educt vent
G.D.T.	—	Gully disconnecter trap
G.E.W.P.	—	Glazed earthenware pipe
G.I.T.	—	Gully interceptor trap
G.T.	—	Gully trap
G.W.I.P.	—	Galvanized wrought-iron pipe
I.C.	—	Inspection chamber
I.O.	—	Inspection opening
M.H.	—	Manhole
S.D.P.	—	Stoneware drain pipe
S.I.V.P.	—	Soil induct vent pipe
S.T.	—	Silt trap
S.V.P.	—	Soil vent pipe
T.I.T.	—	Triple interceptor trap.

Internal fittings, such as showers, baths, closets, basins, sinks, troughs, urinals, etc., should be indicated by numerals or drawings and an explanatory key provided.

SCHEDULE 4.

Reg., Sec. 105.

TABLE OF EQUIVALENT FIXTURE UNITS.

Fixture.	Nominal outlet diameter.	Fixture units.
	mm	
One lavatory basin	32	1
For each lavatory basin over 20 served by the pipe		0.5 for each basin
One kitchen sink (up to 150mm depth to overflow)	50	3
One bath (with or without overhead shower)	40	4
One wash trough set with common trap	50	5
One urinal or group of urinals drained to a common trap	50	3
One slop sink	80	4
One shower compartment	50	3
One water-closet	100	6
Group 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

SCHEDULE 5.

Reg., Sec. 106.

SIZES OF SOIL, WASTE AND DRAIN PIPES.

Grade not less than—					
Diameter of pipe.	Minimum permissible grade.	1 in 40 (corresponding to 88.5° fittings.)	1 in 12 (corresponding to 85° fittings.)	1 in 4 (corresponding to 75° fittings.)	Vertical stacks.
mm					
32	1		1	1	1
40	6		6	8	9
50	9		12	17	24
65	14		20	28	36
80	20		30	40	50
100	100	100	150	210	260
150	420	490	820	1150	1400.

SCHEDULE 6.

Reg., Sec. 107.

DIAMETERS OF VENTS.

Diameter of soil, combined waste or waste pipe.	Total no. of fixture units calculated in accordance Section 105.	Total length of vent in storeys—												
		1	2	3	4	5	6	7	8	9	10 and over.			
		(Diameter of vent in mm).												
40	Not more than 8	32	32	32	40	40								
	Exceeding 8 but not exceeding 14	32	32	40										
50	Not more than 12	40	40	40	40	50	50	50						
	Exceeding 12 but not exceeding 18	40	40	40	50	50	50	50						
	Exceeding 18 but not exceeding 36	40	40	40	50	50	50	50						
65	Not more than 6	40	40	40	40	40	50	50	65	65	65			
	Exceeding 6 but not exceeding 12	40	40	40	40	50	50	50	65	65	65			
	Exceeding 12 but not exceeding 24	40	40	40	40	50	50	65	65	65	65			
	Exceeding 24 but not exceeding 36	40	40	40	50	50	50	65	65	65	65			
	Exceeding 36 but not exceeding 54	40	40	40	50	50	65	65	65	65	65			
80	Not more than 12	40	40	50	50	50	50	50	50	50	50			
	Exceeding 12 but not exceeding 18	40	50	50	50	50	65	65	65	65	65			
	Exceeding 18 but not exceeding 24	50	50	50	65	65	65	65	65	65	65			
	Exceeding 24 but not exceeding 30	50	50	50	65	65	65	65	65	65	80			
	Exceeding 30 but not exceeding 42	50	50	65	65	65	65	65	80	80	80			
	Exceeding 42 but not exceeding 60	50	50	65	65	65	65	80	80	80	80			
	Exceeding 60 but not exceeding 75	50	65	65	65	65	80	80	80	80	80			
100	Not more than 12	50	50	50	65	65	65	65	65	65	65			
	Exceeding 12 but not exceeding 24	50	65	65	65	65	65	65	65	65	80			
	Exceeding 24 but not exceeding 36	50	65	65	65	65	65	65	80	80	80			
	Exceeding 36 but not exceeding 48	65	65	65	65	65	80	80	80	80	80			
	Exceeding 48 but not exceeding 72	65	65	65	65	80	80	80	80	80	80			
	Exceeding 72 but not exceeding 120	65	65	65	80	80	80	80	80	80	80			
	Exceeding 120 but not exceeding 180	65	65	80	80	80	80	80	80	80	80			
	Exceeding 180 but not exceeding 300	65	80	80	80	80	80	80	100	100	100			
	Exceeding 300 but not exceeding 390	80	80	80	80	80	100	100	100	100	100			
150	Not more than 600	100	100	100	100	125	125	125	125	125	125			
	Exceeding 600 but not exceeding 1300	100	125	125	125	125	125	125	125	125	150			
	Exceeding 1300 but not exceeding 2100	100	125	125	125	125	150	150	150	150	150			

Prepared for inclusion as at 1/1/1985.

SCHEDULE 7.

Reg., Sec. 157(2)(f)

WATER-CLOSET, URINALS AND HAND BASINS IN PUBLIC BUILDINGS.

1.—Water-closets and Urinals.

No. of seats in building.	No. of water-closets—		No. of urinals.
	for males.	for females.	
Not exceeding 200	1	2	1
Exceeding 200 but not exceeding 400	1	3	2
Exceeding 400 but not exceeding 600	2	4	2
Exceeding 600 but not exceeding 1 000	2	5	3
For every 1 000 (or part of 1 000) in excess of 1 000	1	2	1

2.—Hand Basins.

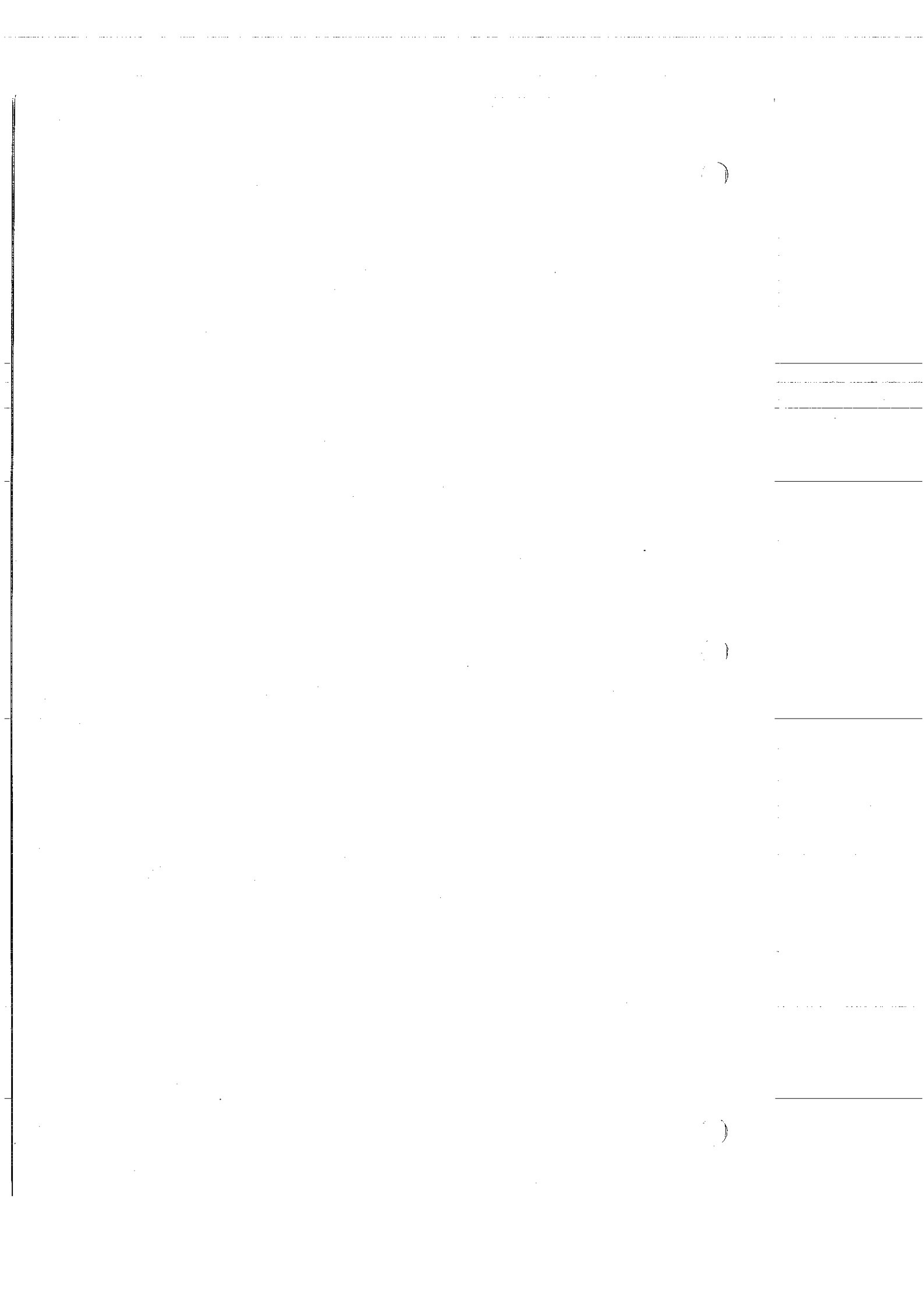
No. of seats in building.	Hand basins for males.	Hand basins for females.
For every 500 (or part of 500)	1	1

SCHEDULE 8.

Reg., Sec 166(8).

SIZES OF WATER SUPPLY PIPES.

Available head in storeys.	Diameter of portion of supply pipe under consideration.	Maximum permissible number of flush valves served by portion of supply pipe under consideration.	
		Galvanized wrought-iron pipe.	Copper or brass pipe.
1	mm		
	40	1	2
	50	10	15
	65	30	50
2 or 3	80	100	150
	40	2	3
	50	15	30
	65	50	150
	80	100	150



INDEPENDENT STATE OF PAPUA NEW GUINEA.

CHAPTER NO. 393.

National Water Supply and Sewerage.

APPENDIX 1.

SOURCE OF THE NATIONAL WATER SUPPLY AND SEWERAGE ACT.

Part A.—Previous Legislation.

National Water Supply and Sewerage Act 1982. (No.4 of 1982).

Part B.—Cross References.

Section, etc., in Revised Edition.	Previous Reference ¹ .	Section, etc., in Revised Edition.	Previous Reference ¹ .
1	1	32	32
2	2	33	33
3	3	34	34
4	4	35	35
5	5	36	36
6	6	37	37
7	7	38	38
8	8	39	39
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¹Unless otherwise indicated, references are to the Act as set out in Part A.

APPENDIX 2.

SOURCE OF THE NATIONAL WATER SUPPLY AND SEWERAGE REGULATION.

Part A.—Previous Legislation.

National Water Supply and Sewerage Regulation 1982. (Statutory Instrument No.7 of 1982.)

as amended by—

National Water Supply and Sewerage (Amendment) Regulation 1984 (Statutory Instrument No. 3 of 1984.

Part B.—Cross References.

Section, etc., in Revised Edition.	Previous Reference ¹ .	Section, etc., in Revised Edition.	Previous Reference ¹ .
1	1	41	42
2	2	42	43
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4	5	44	45
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34	35	73	74
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39	40	78	79
40	41	79	80

¹Unless otherwise indicated, references are to the regulation as set out in Part A.

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Part B.—Cross References—continued.

Section, etc., in Revised Edition.	Previous Reference.	Section, etc., in Revised Edition.	Previous Reference.
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132	133	188	189
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134	135	190	191
135	136	191	192

Part B.—Cross References—*continued.*

Section, etc., in Revised Edition.	Previous Reference.	Section, etc., in Revised Edition.	Previous Reference.
192	193	Schedule 1	Schedule
193	194	Schedule 2	Schedule 2
194	195	Schedule 3	Schedule 3
195	196	Schedule 4	Schedule 4
196	197	Schedule 5	Schedule 5
197	198	Schedule 6	Schedule 6
198	199	Schedule 7	Schedule 7
199	200	Schedule 8	Schedule 8