THE TERRITORY FOR THE SEAT OF GOVERNMENT.

Regulations under the Building and Services Ordinance 1924-1928.

PURSUANT to the powers conferred upon me by the *Building and Services Ordinance* 1924-1928, I, John Arthur Perkins, the Minister of State for the Interior, hereby make the following Regulations to come into operation forthwith.

Dated this twenty-fourth day of October, 1933.

J. A. PERKINS
Minister of State for the Interior.

CANBERRA SEWERAGE AND WATER SUPPLY REGULATIONS.

PART I.—PRELIMINARY.

1. These Regulations may be cited as the Canberra Sewerage and Water Supply Regulations. Short title.

Repeal.

2. The Canberra Sewerage and Water Supply Regulations made on the 16th day of October, 1924, and the Regulations amending those Regulations made on the 20th day of September, 1926, the 28th day of April, 1931, and the 11th day of July, 1933, are repealed.

Parts.

3. These Regulations are divided into Parts, as follows:—

Part I.—Preliminary.
Part II.—Licensing of plumbers and drainers.
Part III.—Sewerage and drainage.
Part IV.—Water supply.
Part V.—Miscellaneous.
Part VI.—Charges and penalties.

Definitions.

4.—(1.) In these Regulations, unless the contrary intention appears—

"Approved" means approved by the Proper Authority or the Engineer;

"Authorized" means—

(*a*) when used with respect to fittings and drainage apparatus—authorized by these Regulations or by the Proper Authority or the Engineer;

(*b*) when used with respect to officers—authorized by the Proper Authority either generally or for any particular purpose; and

(*c*) when used with respect to an agent—authorized by written authority from the lessee;

"Cement concrete" means concrete consisting of one part approved Portland cement, three parts of clean sand, and five parts of approved stone or gravel broken to 1½-in. gauge by volume;

"Cement mortar," used in reference to jointing, means mortar consisting of one part of approved Portland cement to one part of clean sand by volume;

"Commonwealth pipe" means any pipe forming part of any water-supply system provided by or under the authority, or under the control, of the Minister;

"Disconnector trap" means a trap in which provision is made for inlet ventilation to the pipe or pipes discharging therein;

"Drain" means any drain used for the drainage of one building only or of premises within the same curtilage and leading therefrom into a cesspool or other receptacle for drainage or into a sewer, and also any drain for draining any group or block or houses or buildings by a combined operation in pursuance of these Regulations, and includes any drain connected directly or indirectly with the sewerage system;

"External closet" means any closet which is entered directly and solely from the open air and not from any building;

"Internal closet" means any closet other than an external closet;

"Ordered" means ordered by the Proper Authority, the Engineer, or the Inspector;

"Public building" includes—

(*a*) Any concert, music or assembly hall or skating rink or any arena, amphitheatre, circus building, enclosure, gallery, platform, tent or structure whatsoever in around or upon which numbers of people are usually or occasionally assembled; and

(*b*) Any church, chapel, or meeting house;

"Sewage" means house wastes delivered from any sanitary receptacle and water so soiled or polluted as to be unfit to run or flow into a stormwater channel, creek or river;

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

"Supervising Officer" means any person appointed or employed by the Minister as a Supervising Officer, and includes any person temporarily authorized by the Proper Authority to act as a Supervising Officer;

"the City Area" means the city area as defined in the *City Area Leases Ordinance* 1924-1929;

"the Engineer" means any person appointed or employed by the Minister as Sewerage Engineer or Engineer for Water Supply, as the case may be, and includes any person from time to time acting for that person;

"the Inspector" means any person appointed or employed by the Minister to inspect, pass or approve of any work to which these Regulations apply, and includes any person temporarily authorized by the Proper Authority to act as an Inspector;

"the lessee" means the lessee, under the *City Area Leases Ordinance* 1924-1929, of land on which any sewerage or water service has been, or is to be, installed;

"the Proper Authority" means any person appointed by the Minister to be the Proper Authority for the purposes of these Regulations;

"the sewerage system" means the sewerage system provided by or under the authority, or under the control, of the Minister;

"urinal" means an enclosure fitted with urinal stalls;

"urinal stall" means a crock, bowl, or stall capable of accommodating one individual user at a time; and where in the absence of a sewerage system conveniences in the form of troughs are permitted, includes every complete 18 inches of available clear length thereof.

(2.) Any reference to a form shall be read as a reference to a form in the Schedule to these Regulations.

Strict compliance with forms not essential.

5. Strict compliance with the forms in the Schedule to these Regulations shall not be required but substantial compliance shall be sufficient for the purposes of these Regulations.

Part II.—Licensing of Plumbers and Draineers.

Plumber's licences.

6.—(1.) The Proper Authority may issue to any person a sanitary plumber's licence or a water-supply plumber's licence, or a journeyman plumber's licence, or a drainer's licence, in accordance with Form C, E, G, or I, as the case requires, upon compliance with the conditions prescribed in these Regulations.

(2.) An application for the issue of a licence under these Regulations shall be in accordance with Form A, D, F or H, as the case requires, and shall be accompanied by a certificate in accordance with Form B and by the prescribed fee for the issue of the licence:

Provided that the Proper Authority may in any case, if he thinks fit, dispense with the production of the certificate in accordance with Form B.

(3.) Every licence issued under this regulation—

(*a*) shall expire on the thirty-first day of December in the year in which it is issued, but may be renewed from time to time upon application in writing accompanied by the prescribed fee for the renewal; and

(*b*) shall be subject to cancellation or suspension at the discretion of the Proper Authority.

Conditions of issue of licences.

7. A licence shall not be issued under the provisions of these Regulations unless the applicant satisfies the proper authority—

(*a*) in the case of an applicant for a sanitary plumber's licence —that he has passed a satisfactory course of plumbing handicraft at a Technical School in Canberra, Sydney, or Melbourne, or holds a current licence of an equal standard from any sewerage or water supply authority;

(*b*) in the case of an applicant for a water supply plumber's licence—that he is a competent plumber, and has passed such examination (if any) as the Proper Authority requires;

(*c*) in the case of an applicant for a journeyman plumber's licence—that he has passed such examination (if any) in practical plumbing as the Proper Authority requires;

(*d*) in the case of an applicant for a drainer's licence—that he is a competent drainer, and has passed such examination or practical test (if any) as the Proper Authority requires;

(*e*) that he is not under the age of 21 years; and

(*f*) that he has a sufficient knowledge of these Regulations.

Evidence of qualifications, &c.

8. Before issuing any licence under these Regulations, the Proper Authority may require the applicant to produce such evidence as the Proper Authority considers necessary as to his qualifications and character.

Fees.

9. The fees to be paid in connexion with licences issued under these Regulations shall be as follows:—

	s.	*d.*
For issue of each licence	10	6
For annual renewal	2	6

Return of licence fee where licence refused.

10. Where an application for the issue or renewal of a licence under these Regulations is refused the fee paid for the issue or renewal, as the case may be, of the licence shall be repaid to the applicant.

Sanitary plumbers to be licensed.

11.—(1.) A person shall not execute or perform any work in the nature of sanitary plumbing unless he holds a sanitary plumber's licence issued in pursuance of these Regulations.

Penalty: Ten pounds.

(2.) Notwithstanding anything contained in this regulation—

(*a*) a person who holds a water supply plumber's licence may execute any water supply plumbing necessary to sanitary work; and

(*b*) a person who holds a journeyman plumber's licence may execute sanitary plumbing work provided he is employed under the general supervision of a holder of a sanitary plumber's licence issued in pursuance of these Regulations.

House drainage work.

12. A person shall not lay or repair any drain unless he holds a drainer's licence issued in pursuance of these Regulations, and executes the work under the general supervision of the Engineer.

Water supply plumbers to be licensed.

13. A person shall not affix any service pipe to a Commonwealth pipe, or alter, repair, or in any way interfere with, any Commonwealth pipe or any service pipe, cock, or fitting connected therewith, or lay any pipe so as directly or indirectly to communicate with a Commonwealth pipe unless he holds a water supply plumber's licence issued by the Proper Authority.

Employment of unlicensed plumbers.

14.—(1.) A person shall not engage or employ for the actual performance of any plumbing work any plumber or workman who is not the holder of a licence authorizing him to perform that class of work.

Penalty: Ten pounds.

(2.) Where the licence of any plumber or workman has been suspended or cancelled, it shall be a good defence in any prosecution for any offence against this regulation if the defendant proves that he was not aware of the fact of the suspension or cancellation of the licence.

Part III.—Sewerage and Drainage.

Interference with drains.

15. A person, whether or not he is the holder of a sanitary plumber's licence, water supply plumber's licence, or journeyman plumber's licence, or drainer's licence, shall not alter, remove, or in any way interfere with any drain, fitting, pipe, bend, trap, or other thing connected with the sewerage system, without the consent in writing of the Engineer, in accordance with Form J.

Penalty: Ten pounds.

16. All connexions of plumbing work, drains or sewers with the sewerage system shall be executed in accordance with these Regulations, and no such connexion shall be made unless and until a plan has been issued in pursuance of regulation 20 of these Regulations in respect of the connexions to be made. Connexions to be made in accordance with Regulations.

17.—(1.) Application for approval to connect with the sewerage system, or to do plumbing work connected therewith (including all extensions, alterations or amendments), shall be made in writing to the Proper Authority, Department of the Interior, Canberra, by the lessee of the property to be drained or by his authorized agent. Applications for permission to connect with sewerage system.

(2.) The application shall set forth—

(*a*) the description of the site of the property;

(*b*) the name of the lessee; and

(*c*) the name of the person employed to do the work;

and shall be in the form required by the Proper Authority.

(3.) An approval shall not be deemed to authorize anything not stated in the application to which approval has been given.

18. Approval to connect with the sewerage system shall not be given unless— Conditions to be complied with before approval.

(*a*) provision is made for all plumbing to be executed in accordance with these Regulations;

(*b*) the plan has been approved by the Engineer; and

(*c*) in the case of new buildings, the Engineer has fixed the position of the branch at which the connexion is to be made, and a proper plan of the plumbing and of the drainage of the building to be connected has been submitted to, and approved in writing by, the Engineer.

19. All connexions with the drains or sewers, and all plumbing connexions therewith, shall be made under the direction of the Engineer, an Inspector, or a Supervising Officer. Work to be done under direction of supervising officer.

20. Where, in the opinion of the Proper Authority, it is practicable to connect any plumbing work, drains or sewers with the sewerage system, the Engineer may issue a plan in connexion therewith upon payment of the following fees:— Fees for plans.

	s.	*d.*
Plan of drainage (including survey) for any house or building where not more than one water-closet is provided	5	0
For every additional water-closet	5	0
Plan of any amendment of original plan	2	6
Plan of completed drainage	2	6

21. In order to facilitate the submission of plans, the Proper Authority will supply, at the rate of Two shillings and sixpence for each block, plans of individual blocks of buildings showing the position of the sewer and the position of the branch to which the building drain must be connected, marked in red, and having the depth of the branch indicated thereon. Plans of individual tenements.

22. If tracing of groups or blocks of buildings are required, together with the positions and depths of the branches marked thereon, they will be supplied on payment of the cost of the tracing at such rates as are fixed by the Minister. Tracings.

23.—(1.) The lessee or his authorized agent shall give not less than forty-eight hours' notice, in writing, to the Proper Authority, Department of the Interior, Canberra, before commencing any work to which this Part applies, and shall report when any work is ready for inspection. Notice to be given by lessee.

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

(3.) Inspection shall be made within forty-eight hours after the receipt of the notification that the work is ready for inspection, unless the notification is received on a Saturday, in which case the inspection shall be made within seventy-two hours after the receipt of the notification.

Testing.

24.—(1.) Every drain shall be thoroughly tested by the Inspector before being passed, and in the event of any drain being at any time altered or repaired, it shall be thoroughly tested by the Inspector before those alterations or repairs are passed.

(2.) The Inspector may apply the water, smoke or air-pressure test, and the lessee, or his authorized agent, shall furnish such tools, labour and assistants as are necessary for each of those tests.

(3.) The special testing apparatus for each of these tests shall be supplied by the Proper Authority.

(4.) The lessee or his authorized agent shall make good any defect when and as directed by the Engineer, and if he neglects or fails to do so, he shall be guilty of an offence.

(5.) Before the fittings are connected with the plumbing of any house or building, or, if so ordered, after the fittings are so connected, and before 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. The pipe shall then be filled with water to such height as the Inspector requires, and every joint carefully examined for leaks.

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

(7.) Defective pipes shall be removed and replaced by sound ones and all defective joints made tight, and every part of the work shall conform to these Regulations and be subject to the approval of the Engineer or an Inspector.

Drains, &c., not constructed in accordance with Regulations to be removed or repaired.

25.—(1.) Any drain, soil pipe, waste pipe, trap, water-closet, urinal, sink, bath or other sanitary convenience or drainage apparatus which is laid or constructed otherwise than in accordance with these Regulations, or which, in the opinion of the Engineer, is of bad or defective quality, shall upon receipt of a notification to that effect from the Engineer, be removed or repaired by the lessee in the manner determined, and within the time fixed, by the Engineer.

(2.) If the lessee neglects or fails to comply with the requirements of the notification within the time fixed, he shall be guilty of an offence, and the Proper Authority may, if he thinks fit, cause the sanitary convenience or drainage apparatus to be removed or repaired, and may recover the cost thereof from the lessee.

Notice to be given by plumbers.

26. Before a licensed plumber commences to effect any repair or renewal of any drains, drainage apparatus or sanitary convenience, or the cleansing thereof, he shall give twenty-four hours' notice, in writing, to the Proper Authority, Department of the Interior, Canberra, in order that an Inspector may attend:

Provided that in cases of emergency he shall give the Proper Authority such notice as the circumstances in each case permit, and forthwith, after commencing the work, shall give notice thereof, in writing, to the Proper Authority.

Statements to be filed after completion of work.

27.—(1.) The person authorized to carry out any work shall, within seven days after the completion thereof, file in the office of the Proper Authority, Department of the Interior, Canberra, on forms furnished by the Proper Authority for the purpose, a correct statement of the work done under the approval given.

(2.) The statement shall be countersigned by the Inspector.

Drainage of houses to be separate.

28. The drainage of each house and building shall be arranged for separately, except in cases of properties belonging to the same owner, or where, in the opinion of the Proper Authority, special reasons exist for draining by a combined operation.

Quality of pipes, &c.

29. All pipes, bends, junctions and traps used shall be of good, sound quality of glazed stoneware or concrete or cast iron, or other suitable material tested and approved by the Engineer.

Size of drains.

30. Every drain shall be of such size as, in the opinion of the Engineer, is adequate for the drainage of the property on which it is to be laid, and shall have an internal diameter of not less than 4 inches.

Position of drains.

31. Every drain and branch drain, and every trap or other drainage apparatus connected therewith, shall be laid and fixed where and as directed by the Engineer.

32. Every drain shall be laid in a straight line as far as is practicable, and where changes of direction are necessary, every such change shall be made in a manhole and inspection chamber or proper bend, and junction pipes shall be used in such manner as the Engineer directs. Bends.

33. Combined drains shall be provided with an inspection chamber at each junction. Combined drains.

34.—(1.) Except in cases where no other mode of construction is practicable, a drain shall not be constructed to pass under any building. Drains under buildings, &c.

(2.) Where it is necessary to construct a drain under any building the drain shall be constructed in a direct line for the whole distance under the building and, if formed of stoneware, shall be completely embedded in and covered with solid cement concrete at least 6 inches in thickness all round the barrel of the pipe:

Provided that, if the lowest floor of that part of the building under which the drain is laid is not less than 4 feet clear above ground, the drain need not be so embedded in and covered with concrete.

(3.) If the drain is formed of cast-iron, the metal shall be not less than $\frac{3}{8}$-inch in thickness, and shall be supported in such manner as the Engineer directs.

(4.) All drain pipes carried through walls shall have a space of 3 inches clear left above the pipes.

35.—(1.) All drains shall be laid with suitable regular gradients, and in no case, unless special permission is obtained from the Proper Authority, in which case the Engineer may require special provision to be made to ensure regular and efficient flushing, shall the inclination of a 4-in. drain be less than 1 foot in 40 feet; of a 6-in. drain, less than 1 foot in 60 feet; of a 9-in. drain, less than 1 foot in 300 feet; or that of a 12-inch drain, less than 1 foot in 400 feet. Gradient, &c., of drains.

(2.) In no case, except by special permission of the Engineer, shall the grade for 4, 6, 9, or 12-in. drains be steeper than 1 in 10, 1 in 15, 1 in 20, or 1 in 25, respectively.

(3.) Holes shall be cut in the bottom of the pipe trench to receive the sockets of the drain pipes, and all pipes shall be carefully bedded with the barrel on the solid ground or, when ordered, the pipes shall be bedded on sand, gravel, or other approved material.

36.—(1.) The joints of stoneware and concrete pipes shall be filled in solidly all round with cement mortar, and neatly splayed off, or, if so ordered, hemp gasket, soaked in cement, or other material shall first be driven into the joint all round, and the remainder of the joint filled in with cement mortar and neatly splayed off. Joints of pipes.

(2.) The joints between stoneware and cast-iron pipes shall be made in the same way as those between stoneware pipes.

(3.) The joints of cast-iron pipes shall be made with gasket and lead and well caulked.

37. Where in the opinion of the Engineer the ground is water-charged, or the foundation is bad, or the cover is insufficient to protect stoneware or concrete pipes, or near cellars or basements, and in other places, if the Engineer so directs, the drain shall be formed of cast-iron pipes $\frac{3}{8}$ inch in thickness, or of stoneware or concrete pipes bedded in concrete foundations and encased with concrete. Special pipes in certain places.

38. Drains of stoneware pipe, unless bedded on and encased in concrete, shall be so laid that there is a depth of not less than 2 feet between the surface of the ground and the centre line of the pipe. Depths of pipes.

39.—(1.) When any drain joins another drain, the junction shall be obliquely in the direction of the flow of the secondly mentioned drain. Junctions.

(2.) Right-angled junctions shall not be made.

40.—(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. Trenches.

(2.) The face of the trench nearest the branch sewer shall, where ordered, be filled up with brick or rubble masonry, or timbered up as directed.

(3.) In refilling the trench, sand, gravel, or other approved material shall be first deposited round the sides of the pipe, and to a height of 1 foot over the barrel of the pipe, and carefuly wetted with water; after which the remainder of the trench shall be filled in, in layers of 1 foot in thickness, each well wetted with water, and rammed. The surface material shall then be restored, as nearly as possible, to the same condition in which it was before operations were commenced.

(4.) Except by special permission of the Engineer, the filling in shall not be commenced till a period of not less than twenty-four hours has elapsed after the completion of the jointing, and, if so ordered, the drain shall be kept full of water till the filling in has been completed.

Inlets to be trapped.

41. Every inlet to any drain not being an inlet provided as an opening for the ventilation of a drain or for inspection purposes, shall be properly trapped, and all such drainage traps shall be fixed outside buildings.

Interceptor traps to be fixed in certain cases.

42. An interceptor trap shall be fixed in the drain laid from any property to a sewer, if the Proper Authority so directs.

Top of trap to be above surface level.

43. The top of every gully, basin, and disconnector trap, shall be above the level of the surface of the yard, ground, area, or place in which it is fixed, and arranged so as to prevent the inflow of rain and surface water.

Cement concrete to be used for certain work.

44. Cement concrete shall be used in each of the following cases:—

(*a*) around and under gully basins;

(*b*) around the top of ventilator pipe sockets and disconnector trap tops (in each case finished off in cement mortar); and

(*c*) under and around bends and shafts rising off drains and near tree roots.

Method of closing ends of private drains, &c.

45. The ends of all drains not immediately connected with the plumbing fixtures, and all inspection openings, shall be securely closed with watertight imperishable materials. In the case of stoneware drains, a stoneware or cast-iron disc shall be cemented in; in the case of wrought-iron drains, a plug shall be screwed on the end; and, in the case of cast-iron drains, a cast-iron plug shall be caulked in with lead.

Cover to interceptor traps and manholes.

46. Interceptor traps and manholes shall be carried to the ground surface and there furnished with approved cast-iron airtight covers.

Interference with interceptor traps.

47. Any person who, unless thereto authorized by the Proper Authority or the Engineer (proof whereof shall be upon him), in any way tampers with, or alters or causes to be tampered with or altered any interceptor trap or manhole or cover thereto, or who wilfully or carelessly breaks, injures, opens, renders not easily accessible or obscures from view any interceptor trap or manhole or cover thereto, shall be guilty of an offence.

Penalty: Ten pounds.

Inspection openings.

48. Every line of main or branch drain shall be provided with an inspection opening at each junction not provided with an inspection chamber, and in no case at greater than 30 feet intervals; and in paved areas the inspection opening shall be brought to the surface and furnished with an approved airtight cover.

Drainage from cellars, &c.

49.—(1.) Where any building has its lowest floor at a lower level than the sewer into which the premises would otherwise drain, the owner shall cause the drainage from that floor to be raised by a method approved by the Engineer so that it shall discharge into a drain communicating with the sewer.

(2.) The water seal of the trap in the drain pipe leading from the cellar shall be constantly maintained.

Waste and soil pipes in cellars, &c.

50.—(1.) The waste or soil pipe from any sanitary convenience shall not, except by permission of the Engineer, be placed in a cellar or basement.

(2.) Where the waste or soil pipe is placed in a cellar or basement, the drainage system of the building shall be designed to carry away the drainage from that pipe.

Sanitary conveniences in cellars and basements.

51. Sanitary conveniences drained by syphon or other automatic method shall not be placed in a cellar or basement.

Connexions from cellars, &c., permitted in certain cases.

52.—(1.) Where, in the opinion of the Engineer, a cellar or basement is so situated that it can be drained by gravitation to the sewers, the Proper Authority may permit connexion with the sewers provided a sluice valve is fixed between the cellar or basement connexion and the boundary of the property and is kept closed in the manner provided in the next succeeding regulation.

(2.) Applications for permits under this regulation shall be in writing, signed by the lessee, and shall be accompanied by a written acknowledgment that the connexion is made at the risk of the lessee, and an undertaking to indemnify the Proper Authority against all damage arising out of any accident to the connexion.

(3.) The soffit of the pipe draining the cellar or basement shall at its highest point be at least 2 feet below the cellar or basement at its lowest point.

Valves to be closed.

53.—(1.) Sluice valves shall be kept closed, and opened only when it is necessary to allow an accumulation of water to drain to the sewers.

(2.) Spindles of sluice valves shall be fitted with permanently attached extension rods of sufficient length and diameter to enable the valves to be opened or closed from above the level of the ground floor of the building.

Drainage traps.

54.—(1.) Traps for intercepting gases only shall be of round section, and self-cleansing form, and so constructed as not to empty by momentum or syphonage.

(2.) In the case of traps fitted with a dished top and grating, and commonly known as "gully traps," the dish shall be of one piece with the trap, or jointed thereto in an approved manner; the depth of the dish from the top to the grating shall be not less than 6 inches, and the grating shall be removable. Gratings to gully traps shall be not less than 6¾ inches in diameter overall, and shall have openings of sufficient outlet capacity.

(3.) Silt traps for intercepting both gases and solids shall have slightly tapered sides, flat bottom, round section, and trays fitted with handles for catching and removing solids.

(4.) Grease traps for solidifying and collecting grease or any semi-fluid matter liable to foul the pipes shall be used where deemed necessary by the Engineer and shall be of such size and form as are from time to time approved by the Engineer.

(5.) All gratings shall be of galvanized cast iron and of approved pattern and shall be fixed down with bitumen or wedges of lead; but, for fixing down gratings in gully-trap basins, bitumen only shall be used.

(6.) All traps shall have a water seal of 2½ inches.

Gully traps.

55. Unless a slop sink be fixed inside a building, a gully trap shall be provided in the yard of the building, placed as near as possible to the back of the kitchen door, or, where directed, with a tap placed over it at a height of about 2 feet.

Ventilation of main drains.

56.—(1.) The main drain shall be ventilated at its proper end by a pipe or shaft erected vertically, and the pipe or shaft may be the soil pipe of a water-closet.

(2.) The height of any ventilator shall be such that the mouth of the pipe or shaft shall be a least 6 feet higher than any window, door, or air shaft ventilating living rooms situated within a distance of 30 feet therefrom.

(3.) Every ventilating pipe or shaft shall be of undiminished size, without return bend, and fitted with basket end.

Ventilation of branch drains.

57.—(1.) Branch drains shall be ventilated if the drain trap or closet trap is more than 15 feet from the main drain.

(2.) If the drain is provided with an interceptor trap, there shall be, in addition, a ventilator connected to the interceptor trap shaft at the lower end of the drain.

Size, &c., of ventilators.

58.—(1.) All ventilators on drains shall be of the same diameter as the drains, unless special permission is given to vary their dimensions.

(2.) Ventilator pipes inside a building shall be of cast-iron, wrought-iron, wrought steel, or lead, but if situated wholly outside a building, the vent pipe may be galvanized sheet iron of not less than No. 20 standard wire gauge, and shall, where ordered, be protected, as directed by the Engineer, against damage from traffic.

(3.) Every ventilator pipe shall be coated inside with an approved composition and outside with two coats of best quality white lead and linseed-oil paint.

Stays for ventilators.

59.—(1.) Whenever ventilator pipes are 12 feet or more above the eaves, they shall be stayed with ½-in. galvanized wrought-iron pipe.

(2.) When a galvanized-iron ventilator pipe, with or without an offset, is carried up above the masonry wall of a building, a galvanized wrought-iron bolted pipe-clip shall be used at the top, firmly secured to the wall, and bolted against the ventilator pipe.

(3.) A length of 15 feet above the highest fixing or clip of straight ventilator pipe without offset may be fixed without stays; if more than 15 feet, the ventilator pipe shall be stayed.

(4.) There shall be at least one pipe-hook or clip to each 6 feet length of ventilator pipe between the highest fixing and the ground.

Ventilators near chimneys.

60.—(1.) Ventilators shall, wherever practicable, be kept away from chimneys.

(2.) When ventilator pipes terminate more than 6 feet from chimney openings at the same level, the ordinary rule as to height shall apply, but when the distance is 3 feet and under, the ventilator pipe shall terminate 2 feet below the chimney opening.

Rain and surface waters not to be discharged into sewers, &c.

61.—(1.) A person shall not discharge or allow to be discharged into any sewer, or into any drain communicating with any such sewer, or into any sanitary convenience or drainage apparatus used in connexion with any such drain, any rain water, surface water or storm water.

(2.) Inlets to all drains shall be constructed and maintained in such manner and at such levels as will prevent the flow of rain water, surface water, or storm water, into the drains.

Injury to sewers.

62.—(1.) Except as provided in regulation 63 of these Regulations, a person shall not discharge or cause to be discharged into any drain or any part of the sewerage system any solid or liquid other than ordinary domestic sewage.

(2.) Without limiting the effect of the last preceding sub-regulation—

(*a*) a person shall not throw or deposit, or cause or permit to be thrown or deposited, in any drain or sewer under the control of the Minister, or in any opening or receptacle connected with a drain or sewer under the control of the Minister, any garbage, offal, dead animal, vegetable parings, ashes, cinders, rags, hair, wool, sand, refuse from factories, or any other matter or thing liable to cause a stoppage in the drains or sewers or to injure the drains or sewers, plant, machinery or any undertaking of, or under the control of, the Minister, or any part thereof; and

(*b*) a person shall not cause or permit to flow or pass or be carried into any drain or sewer under the control of the Minister any liquid, other than ordinary domestic sewage, which—

(i) is of a temperature above one hundred and ten degrees Fahrenheit;

(ii) has not been completely neutralized as to its acidity; or

(iii) contains more than one-tenth of 1 per centum of common salt, or contains any other mineral, salt, acid, or gas, which mineral, salt, acid, or gas is, in the opinion of the Engineer, injurious to, or liable to form, compounds injurious to, the drains, sewers, plant, machinery, or any undertaking of, or under the control of, the Minister, or to any part thereof.

Drainage from stables, &c.

63.—(1.) All stables, cow stalls, market places, receptacles for sludge water from factories, areas where milk cans are washed, and all areas on which foul or polluted waters are discharged, shall be graded, paved and drained to the satisfaction of the Engineer, and the drain therefrom shall be provided with an approved silt-trap connected with the drain of the property. In the case of motor car washing areas, triple interceptor traps shall be provided.

(2.) Every such silt-trap shall be provided with an approved removable grating, and the silt shall be removed from the trap as soon as the silt receptacle is full.

(3.) Where notice in writing is given by the Proper Authority to the owner of horses and cattle kept in the city area, manure bins shall be provided for all stables, cow sheds and yards where such horses and cattle are kept.

(4.) Such manure bins shall be constructed of concrete or brickwork, at least 9 inches in thickness, laid in cement mortar, and shall be provided with a ledged, braced and hinged cover, and shall be rendered and made impervious throughout:

Provided that, in the case of manure bins constructed prior to the commencement of these Regulations, the owner or lessee shall render his bins impervious with cement mortar on the inside surface.

Water supply.

64.—(1.) The water piping shall be of sufficient capacity to convey to the flushing cistern of each water-closet, slop-sink, and urinal upon the premises enough water to fill each such cistern within five minutes, and shall be connected with each cistern prior to the completion of the work.

(2.) The supply of water to each water-closet, urinal and slop-sink shall be controlled by a separate stop-cock.

(3.) Water supply pipes to storage cisterns for water-closets shall be provided with high-pressure ball-cocks, and the outlet pipe from the storage cisterns shall be of sufficient size to fill each flushing cistern within five minutes.

(4.) Wherever the height of the storage cistern is not sufficient to allow of high-pressure ball-cocks being used for flushing cisterns, low-pressure ball-cocks shall be used.

(5.) In all storage and flushing cisterns a piece of copper or wrought iron pipe shall be used between the cistern and supply pipe.

(6.) The overflow from storage tanks shall be galvanized wrought-iron, and not less than 1½ inches in diameter, and a stop-cock, placed in an accessible position, shall be fixed on the supply pipe to every storage cistern.

(7.) Every sanitary convenience, gully-trap, and silt-trap shall have water discharging into it.

(8.) No appliance will be permitted whereby there may be a reflux from any sink, cistern, pan or other receptacle back into any water pipe during such time as the pipe may be emptying.

Discharge pipes, &c.

65.—(1.) A separate discharge pipe shall be provided for conveying polluted water from each of the following classes of sanitary conveniences:—

(*a*) Baths, lavatories, wash troughs, pantry sinks and the like;

(*b*) Kitchen sinks and scullery sinks, where grease traps are required; and

(*c*) Closets, urinals and slop-sinks.

(2.) The waste pipe for the sanitary conveniences specified in paragraphs (*a*) and (*b*) of the last preceding sub-regulation shall be of wrought iron or cast iron or wrought steel or drawn lead, and shall be taken by the shortest possible route, and shall discharge into a gully-trap or a disconnector-trap.

(3.) The soil pipes for the sanitary conveniences specified in paragraph (*c*) of sub-regulation (1) of this regulation shall be of cast iron or drawn lead with wiped joints, and shall discharge direct into the drains.

(4.) In all cases the upward extension from the soil pipe for ventilation shall pass in as direct a manner as possible.

Size and quality of pipes.

66.—(1.) The minimum size of soil, waste, and ventilator pipes, the minimum weights of lead waste and ventilator pipes, and the minimum thickness of cast-iron soil and waste pipes, which shall be used, shall be as follows:—

Sanitary Conveniences.	Internal Diameter of Pipe.	Weight of Lead Pipe (Super feet).	Thickness of Cast-iron Pipe.
	Inches.	lb.	Inch.
Lavatories and wash basins—			
Single connexion	1¼	6	..
Where more than one connexion	1½	6	..
Bath, wash trough or wash tub, kitchen and pantry sink	2	6	..
Slop sink	2½	7	¼
Urinal	1½	7	¼
Closet	4	7	¼

(2.) All cast-iron pipes used shall be thoroughly coated inside and outside, according to the method approved by the Engineer.

(3.) All lead pipes shall be solid-drawn lead pipes.

(4.) Where, in the opinion of the Engineer, lead waste or ventilator pipes heavier than 6-lb. lead may be required, such heavier lead as the Engineer directs shall be used.

(5.) For soil or waste pipes, glass-enamelled pipes may be used, and they shall be of a minimum thickness of three-sixteenths of an inch irrespective of the enamel.

Sockets, bends, &c.

67.—(1.) All sockets, nipples, bends, junction pipes or branches, and other apparatus used in connexion with pipes of the kinds referred to in the last preceding regulation shall correspond with them in weight and quality.

(2.) All junctions shall be curved; right-angled junctions shall not be used.

(3.) The sockets of cast-iron pipes shall be not less than 2 inches in depth.

Provision for inspection of pipes.

68.—(1.) Sufficient inspection and cleaning eyes shall be provided as directed by the Engineer or an Inspector in such positions on soil and waste pipes as to be easy of access.

(2.) The soil and waste pipes and traps shall, where practicable be exposed to view at all times, ready for inspection and for convenience of repairing.

(3.) Every soil-pipe shall be provided with one inspection opening at least—the cover to be clamped to a flange on the pipe with bolts and nuts of non-corrosible metal.

(4.) Where unavoidably placed within partitions or recesses of walls, soil or waste pipes and traps shall be covered with woodwork, so fastened with screws as to be readily removed.

(5.) In no case, except by special permission of the Proper Authority or Engineer, shall junctions or joints be built into walls.

Gradients.

69. The following are the flattest gradients which may be adopted:—

Size of Pipe.	Gradient.
4 inch	1 in 40
3 inch	1 in 30
2½ inch	1 in 25
2 inch	1 in 20
1½ inch	1 in 15
1¼ inch	1 in 12

Area of gratings.

70. The area of openings in the grating to any waste-pipe shall not be less than will fully charge the waste-pipe.

Ventilator pipes.

71.—(1.) All internal ventilator pipes shall be of cast or wrought iron, wrought steel or lead.

(2.) Waste-pipe ventilators of galzanized iron shall not be less than No. 22 standard gauge, and shall have lapped folded seams.

(3.) Drain ventilator pipes of galvanized iron shall have lapped and riveted seams.

(4.) All seams and rivets shall be soldered over.

(5.) Galvanized sheet-iron bends and offsets shall be similarly made and bent, or pressed to the proper curvature.

(6.) The various ventilator pipes may be branched into a soil or waste-pipe of the same class of sanitary convenience above the level of the highest of the sanitary conveniences.

(7.) Ventilator pipes may be combined by branching together those which serve several traps on the waste-pipes of the same class of sanitary convenience.

(8.) Ventilator pipes shall always have a continuous slope, and the joints shall be set so as to avoid collecting water by condensation.

(9.) A ventilator pipe shall not be used as a waste or soil-pipe.

(10.) Pipe ventilators shall be carried above the eaves of the building, and finished with basket ends, and shall be taken off the pipes as near as possible to the traps from such a position that their entrance will not be fouled by the discharge of the trap.

(11.) A person shall not attach or fix to or place on or around any ventilator pipe or any pipe-hook, pipe-clip or stay used in connexion with any ventilator pipe, any wire or thing whatsoever.

Use of lead pipes.

72. Lead pipes shall not be used under any ground floor or in the soil.

When ventilation not required.

73.—(1.) Waste pipes from disconnected sanitary conveniences (except urinals and slop-sinks) need not be ventilated unless they exceed 12 feet inclined, or 18 feet vertical in length (or their equivalent).

(2.) Branch waste pipes to those sanitary conveniences, if connected to a ventilated main waste pipe, provided there be no other sanitary conveniences attached to the line of waste, may be 12 feet in length without being ventilated:

Provided that every waste pipe where syphonage occurs in the trap shall be ventilated.

Spacing of lead tacks.

74. Spacing of lead tacks shall be arranged as nearly as possible at 2 ft. 6 in. centres.

Flashing.

75. Where water might percolate to the floor, sinks, baths, draining boards, troughs, tubs, basins, slop-sinks, and the like, fittings shall be flashed with lead of approved weight, or some other approved material, but in special cases, when required, some other approved provision for preventing percolation shall be made.

Internal taps.

76. Internal taps shall not be allowed unless a sink, lavatory, or other approved fitting is provided underneath.

77. The following provisions shall apply in regard to joints and connexions:— Joints.

(*a*) Cast-iron Pipe.—The joints shall be made with lead wool tightly driven into the bottom, or with gasket and molten lead run in full, and well caulked all round, and set up with proper caulking tools;

(*b*) Lead Pipes and Joints.—All joints of lead pipes shall be plumbers' wiped joints;

(*c*) Wrought-iron or Steel or Lead.—All joints between wrought-iron or steel waste pipes and lead pipes shall be made by means of brass unions screwed to iron or steel, and wiped to lead.

(*d*) Lead to Cast-iron.—The connexion of lead pipes or traps to cast-iron pipes shall be made by means of a brass ferrule, which shall be lined with and connected to the lead pipe or trap by means of a wiped joint, and connected to the cast-iron by inserting it in the socket thereof and making the joint in the same way as in cast-iron pipe;

(*e*) Stoneware Trap to Lead Pipe.—In every case the connexion of a stoneware trap to a lead pipe shall be by means of a cast-lead or brass socket, and the joint made with bitumen or other approved material; the lead pipe shall be connected to the tail-end of the brass or lead socket by means of a plumber's wiped joint;

(*f*) Stoneware Pipe to Lead Pipe.—The joint shall be made by means of a brass ferrule connected to the lead pipe by means of a wiped joint, and connected to the stoneware pipe by inserting it in the socket thereof, and making a cement mortar joint;

(*g*) Stoneware W.C. Trap to Iron or Stoneware Pipes.—The joint shall be made with bitumen or other approved material;

(*h*) Sheet-Iron and Cast-Iron Pipe.—All connexions of galvanized sheet-iron pipes to cast-iron pipes shall be made with molten lead tightly caulked into the cast-iron socket.

(*i*) Sheet-iron to Wrought-iron and Wrought-steel and Lead Pipes.—Brass unions or sleeves shall be used in connecting galvanized sheet-iron pipes to wrought-iron or wrought-steel pipes, and brass sleeves shall be used in connecting galvanized sheet-iron pipes to lead pipes. The iron or steel pipe shall be screwed to the brass; the lead shall be wiped to the brass; and the sheet-iron shall be soldered to the brass;

(*j*) Wrought-iron and Wrought-steel Pipes.—The screwed ends and the sockets of each particular size shall be so formed and the threads so cut that the ends of the pipes will butt against each other when screwed home in the sockets; bends, junctions and similar apparatus shall be similarly formed and screwed so that when the pipe ends are screwed home the bore will be continuously uniform and without breaks or pockets; the burr shall be neatly filed off the inner edge of all pipe ends; and all screwed joints shall be made with approved jointing material.

(*k*) The flushing-pipe from cistern to water-closet shall be connected by a lead cap-piece. The flushing-pipe may be of lead weighing not less than 6 lb. per superficial foot, or of brass, copper, galvanized malleable iron, or other material of approved weight and quality. The connexion of flushing-pipe to cistern shall be made by means of a brass union, wiped to lead or soldered to sheet-iron. When a closet is fitted with a hinged or pedestal seat the flush-pipe shall be fitted with an approved buffer-block and buffer; and

(*l*) The standard position for vent branch in regard to traps shall be not nearer than 3 inches, and not further than 18 inches from the crown of the trap; when this is not practicable, the point of juncture shall approach this as closely as possible, but a vent-pipe shall not be placed on the crown of a trap, and the vent-socket shall be 3 inches in diameter in the clear.

Trapping fittings.

78.—(1.) Every water-closet, urinal, lavatory, slop-sink, kitchen-sink, pantry-sink, bath, tub, or set of tubs, or other sanitary convenience shall be separately and effectively trapped, unless otherwise specially allowed.

(2.) Traps for sanitary conveniences, other than water-closets, shall be provided with approved brass plugs for cleaning purposes fixed under the water-line of the trap.

(3.) Traps shall be placed as near the sanitary convenience as possible, and in no case shall a trap be more than 2 feet from a sanitary convenience, unless allowed, in writing, by the Engineer.

(4.) All lead traps shall be of drawn lead.

(5.) All traps shall have a water seal of at least half the diameter of the outlet pipe, but in no case less than 2½ inches.

(6.) The form of trap to be used, whether "P" or "S", shall be governed by the position and local conditions in each case.

(7.) A person shall not use in connection with low pressure, any galvanized iron or lead pipe, or any trap, junction, elbow, ball tap, stop-cock or any other fitting which is not of the best quality, tested and approved by the Engineer.

Grease traps.

79.—(1.) Every grease-trap shall be fixed outside the premises, wherever practicable, and if not portable, shall be attached to a gully or disconnector trap.

(2.) Whenever a galvanized iron or copper grease-tray is used inside a building, it shall be fitted so as to be easily removable.

(3.) Every large grease trap which is built in brick or other impervious material shall have provision made for inlet and outlet ventilation.

(4.) Every sink in any food-packing house, butcher's shop, lard rendering establishment, hotel, restaurant, boarding-house, laundry or public or private hospital or in any place in respect of which the Engineer so orders, shall be provided with an approved grease-trap.

Water closets, and urinals.

80.—(1.) At least one water closet approved by the Engineer shall be provided for each house, building or parcel of land required by the Proper Authority to be connected with the sewerage system.

(2.) At least one water closet shall be provided in respect of each shop, factory, office or flat and in respect of each tenement in any building containing more than one tenement, and that water closet shall be so placed either within or outside the shop, factory, office, flat, or building as to ensure the due observance of decency and to be easily accessible to the occupiers of the shop, factory, office, flat or tenement in respect of which it is provided.

(3.) In every building used for a warehouse, factory, shop, office or other business, where the number of persons to be provided for exceeds ten, separate closet accommodation shall be provided for males and females, at the rate of one water-closet for each ten or portion of ten persons of either sex for whom water-closet accommodation is required, and, in addition, when the number of males to be provided for exceeds ten, a urinal stall shall be provided for every fifteen males or portion of fifteen males.

(4.) In every hotel, separate water-closet accommodation shall be provided for males and females at the rate of one water-closet pan for each ten or portion of ten persons of either sex for whom water-closet accommodation is required, and, in addition, a urinal stall shall be provided for every fifteen males or portion of fifteen males.

(5.) In every building used for a boarding house or lodging house where the number of persons to be provided for exceeds eight, separate water-closet accommodation shall be provided for males and females at the rate of one water-closet pan for each eight or portion of eight persons of either sex for whom water-closet accommodation is required.

(6.) In every restaurant or eating-house, separate water-closet accommodation shall be provided for males and females when and as directed by the Proper Authority.

(7.) In every school, seminary, or educational establishment, one water-closet shall be provided for each twenty-five persons:

Provided that there shall be separate closets for both males and females, and in the case of males, there shall be, in addition, a urinal stall for each 25 males to be provided for on the premises.

(8.) In every public building the number of water-closets and urinals to be provided shall be in accordance with the following scale:—

Total Number of Persons of both Sexes combined.	For Males.		Females.
	Closets.	Urinal Stalls.	
Not exceeding 100	1	1	1
Exceeding 100 but not exceeding 200	1	2	1
Exceeding 200 but not exceeding 400	1	4	2
Exceeding 400 but not exceeding 600	2	6	3

For a greater number of persons than 600 the requisite number of conveniences shall be reckoned to the nearest whole number *pro rata* with those set out above 600 persons. Unless otherwise determined by the Proper Authority, it shall be assumed in computing the number of persons to be served by the conveniences that the sexes are equal in number.

(9.) Subject to these Regulations the number of closets to be provided on any premises shall be as directed by the Proper Authority.

(10.) Every internal closet compartment shall be constructed in such a position that at least one of the sides shall be on an external wall which abuts immediately upon a street, yard, garden or open space of not less than 100 square feet of superficial area measured horizontally at a point below the floor of the apartment.

(11.) An internal closet apartment shall not be constructed so that it is entered directly from any room used for the purpose of human habitation or for the manufacture, preparation or storing of food for human consumption, or used as a factory, workshop or workplace.

(12.) Every such closet apartment shall be so constructed that on any side on which it would abut on a room intended for human habitation or used for the manufacture, preparation or storage of food for man, or used as a factory, workshop or workplace, it shall be enclosed by an air-tight partition of brick or other approved material extending the entire height from floor to ceiling.

(13.) The entrance to every internal water closet shall be from a well lighted and well ventilated hall, passage, lobby or staircase, or, if the closet is fixed in or adjoining a room, used for the purpose of human habitation, or as a factory, workshop, or workplace, it shall be cut off from that room, factory, workshop or workplace by a separate enclosure adjoining the closet apartment, which enclosure shall have a floor area of at least 14 square feet for each closet entered therefrom, and shall be entirely enclosed by air-tight partitions extending from the floor to the ceiling or ceiled over with an air-tight ceiling at an approved height from the floor.

(14.) Every such hall, passage, lobby, staircase or enclosure shall be provided with a window having an area of at least two square feet opening directly into the external air.

(15.) If compliance with the last preceding sub-regulation is impracticable, such other means of admitting daylight as the Engineer approves shall be provided.

(16.) Every such water closet apartment and every such hall, passage, lobby, staircase or enclosure shall be provided with independent adequate means of constant inlet and outlet ventilation, by means of air bricks built in the external wall of the apartment, hall, passage, lobby, staircase or enclosure, or by combination of an air brick and an air shaft, louvred openings, or by some other effectual method or appliance of ventilation. The ventilation in external walls shall be equal to two 9″ x 6″ air bricks in each wall, and the air shaft shall be at least 6″ in diameter fitted in the ceiling, carried through the roof and fitted with a cowl.

(17.) The effective area provided for outlet ventilation of each water closet apartment, hall, passage, lobby, staircase, or enclosure shall not be less than 27 square inches and where the level of the floor of the water closet apartment is lower than the outside surface of the ground, exhaust ventilation shall be provided by means of a tube of at least six inches diameter carried up through the roof and furnished with a cowl.

(18.) All doors of internal water closet and air locks shall be provided with self-closing springs.

(19.) Without the special permission of the Proper Authority, no closet apartment shall be of less than the following dimensions, namely, the walls shall be at least 6 ft. 6 in. high in the lowest part, and the

closet apartment shall not be less than 2 ft. 9 in. wide and shall have a minimum floor area of 14 superficial feet, inside measurements; it shall have a door, opening to the inside, and capable of being fastened inside, and in the case of an external closet apartment, so hung that its within edge is not less than 2 inches nor more than 6 inches above the floor.

(20.) Closet apartments shall be provided with floors of concrete or other impervious and approved material, finished and graded as directed, with a fall of not less than ½ inch to the foot.

(21.) Pedestal pans, with basin and trap in one piece, shall be used in all closets; the closet basin and trap, and apparatus thereto shall be entirely open to inspection, and with no enclosures; all pedestal pans shall have a water seal 2½ inches in depth; the outlet pipe of pedestal pans shall be of the same diameter as the soil pipe.

(22.) On floors other than wooden floors, the pan shall be laid flush with the floor, and shall be secured by brass screws to lead plugs laid into the floor.

(23.) Where the floor is wooden, the pedestal pan shall be laid on a redgum or jarrah block bevelled the size and shape of the base of the pedestal pan and fixed on the floor, and a lead floor of not less than 6 lb. sheet lead, dressed over the block, turned up not less than 3 inches and projecting not less than 15 inches from the front lip of the pan, shall be provided.

(24.) Closet seat openings shall not be greater than 10¼ inches by 9 inches.

(25.) A room, closet, privy, building or office shall not be converted for use as a water-closet apartment, unless it has previously been approved for that use by the Proper Authority, or has been altered or repaired in such manner as the Proper Authority requires.

(26.) Where more than three external closet pans are grouped on the ground floor or in the yard of any premises, provision shall be made to prevent syphonage.

(27.) Every closet-pan shall be furnished with a separate flushing cistern of three gallons capacity, and shall give an effective flush of three gallons and not more than three gallons, and for test purposes shall flush with two gallons.

(28.) Except in cases of approved combination closets with low-down cisterns the flushing cistern shall be fixed at such a height as will effectually flush the pan, but in no case shall a cistern be fixed at a less height than 5 ft. 9 in. from the floor to the top of the cistern, and there shall be a distance of at least 9 inches between the top of the cistern and the roof of the closet. All cisterns shall be fitted with a 5-in. ball float of approved material.

(29.) Every flushing cistern shall be supported by—

(*a*) wrought-iron brackets securely fixed to a board of approved material not less than 12 inches deep by 18 inches wide and 1¼ inches thick which is secured to a wall with at least two ⅜-in. by 6-in. bolts; or

(*b*) cast-iron cantilever brackets built into a wall.

(30.) Where so ordered by the Proper Authority, every internal water closet, urinal, slop-sink and bed pan sink shall be provided with a storage tank capable of holding not less than 50 gallons of water for each cistern. If galvanized sheet-iron is used for the construction of any such tank, it shall be not less than 16 gauge. A storage tank provided in accordance with the provision of this regulation shall not be used for supplying water to any other installation or fitting.

(31.) Storage tanks shall be placed in an accessible position, and, if between the ceiling and the roof, a galvanized sheet-iron or lead tray shall be provided. Any such tray shall be of 22 gauge iron or 5 lb. sheet lead, turned up not less than 3 inches and provided with 1½ inch galvanized wrought-iron overflow pipe carried down to within 12 inches of the ground level outside. Storage tanks shall be provided with a 1½-in. galvanized wrought-iron overflow carried down to discharge over grating of tray.

(32.) Notwithstanding anything contained in these Regulations, closet-pans in any building may be flushed by means of a central storage cistern, with levers or other apparatus to each pan, if the apparatus—

(*a*) automatically controls the amount of water used in such a manner that each flush uses not less than two nor more than three gallons of water; and

(*b*) is approved by the Proper Authority.

(33.) Every internal closet apartment shall be provided with a window on an external wall not less than 2 square feet in area, measured inside the frame, made to open, and shall be provided with air-brick on an external wall, or with some other approved effectual method or appliance for ensuring constant ventilation.

(34.) In no case shall water-closet accommodation be provided in a cellar or basement, except by permission, in writing, of the Proper Authority, and then only when the water-closet cannot be otherwise placed, and where the soil-pipe can be connected into an existing sewer, and in all such cases, before installation, the lessee shall notify the Proper Authority, in writing, that he will take all risk of damage that may arise from closets so placed.

(35.) Every closet-pan on an upstairs floor shall discharge into a soil-ventilator pipe carried up in cast-iron or lead, 3 feet above fitting; above that level the soil ventilator pipe may be continued in galvanized sheet-iron of not less than No. 20 standard steel-wire gauge, and shall be provided with an approved galvanized wire-basket, or ventilating cowl. The height of soil ventilator pipe shall be as prescribed for drain ventilator pipes. Cast-iron ventilator pipes, 2 inches to 4 inches in diameter, shall be of minimum thickness of three-sixteenths of an inch.

(36.) Every such closet-pan and every internal closet-pan shall be ventilated by a 2-inch ventilator taken off at least within 18 inches of the trap, and in any case sufficiently close thereto to prevent syphonage.

(37.) If there is more than one closet-pan discharging into the same soil-pipe, the ventilation shall be so arranged as to have a current of air continually passing through the pipe.

Urinals.

81.—(1.) Every urinal on premises licensed for the sale of fermented or spirituous liquors, and on premises used as a factory, workshop, workplace, manufactory, shop, office, school, or public building, where persons of the male sex are employed, or are in attendance, shall be of such size as the Proper Authority requires, but not less than 3 feet by 4 feet of clear space:

Provided that when the number of persons of the male sex does not exceed ten, a urinal need not be fixed if the closet has a pedestal pan with a hinged tip-up weighted seat.

(2.) Internal urinals may be fixed in such rooms only as are well lighted and well ventilated and have at least one external wall, and are separated from other portions of the building by a well lighted and well ventilated passage or air chamber.

(3.) The provisions of these Regulations as to the approaches, arrangement of lighting and ventilation of internal water-closets shall apply to internal urinals.

(4.) The walls of all urinals to a height of at least 4 ft. 6 in. above the floor, and the divisions between stalls and the floor of all urinals, shall be made of impervious materials.

(5.) For the purpose of this regulation, the term "impervious materials" means the following materials:—

(*a*) For Urinal Walls.—Tiles set in cement mortar; brickwork 9 inches thick, set in cement mortar, and rendered with one-half inch cement mortar; slate, marble, white or brown glazed fireclay, salt-glazed stoneware, and enamelled cast-iron;

(*b*) For Urinal Floors.—Tiles set in cement mortar; cement concrete, 6 inches in thickness, rendered with one-half inch cement mortar; slate, marble, asphaltum, and sheet lead.

(6.) Out-side urinals may discharge into open channels without further trapping except that provided for open channels.

(7.) Wherever inside urinals are fitted with waste pipes and traps, and drippings may become a nuisance, provision shall be made to prevent the nuisance by—

(*a*) a urinal floor-trap, with the floor graded to the trap when the floor is other than of lead; or

(*b*) a suitable sunken tray trapped and connected with the waste when the floor is covered with lead.

(8.) The waste pipes for internal urinals shall be ventilated.

(9.) Provision in each case shall be made for flushing the trap in the floor by tapping the cistern flushing pipes with $\frac{3}{8}$-in. pipe, and carrying the latter to the floor.

(10.) The height of flushing cistern shall be at least 6 ft. 6 in. from the floor to the bottom of the cistern.

(11.) Pull and chain cisterns shall be used in connexion with all urinals:

Provided that in special cases, and subject to the approval, in writing, of the Proper Authority, approved automatic cisterns may be fixed.

(12.) Flush pipes for automatic flushing cisterns shall not exceed—

(*a*) for 1-gallon cisterns—$\frac{3}{4}$ inch diameter;

(*b*) for 2-gallon cisterns—1 inch diameter; and

(*c*) for 3-gallon cisterns—$1\frac{1}{4}$ inch diameter.

(13.) The number and dimensions of branches from flush pipes shall be as directed by the Engineer.

(14.) The flushing pipes shall be of copper, lead or brass.

(15.) All iron cisterns used for flushing urinals, and all working parts of such cisterns, shall be coated with an effective rust preventative.

(16.) The discharge of flushing water shall be equal to 1 gallon for each 2 feet in width of urinal.

(17.) The floors of all urinals shall be graded as directed with a fall of not less than $\frac{1}{2}$ inch to 1 foot.

(18.) Every external urinal shall be screened in an approved manner.

(19.) The space between the urinal and the screen shall have a floor similar to that of the urinal, and shall be graded to the urinal as ordered by the Engineer.

Slop-sinks.

82.—(1.) A slop-sink shall be provided where required by the Proper Authority.

(2.) The trap for a slop-sink shall be well opened out to receive the sink basin, and the waste-pipe shall be ventilated.

(3.) The sink shall be of approved material.

(4.) Slop-sinks shall be provided with approved flushing arrangements.

(5.) A draw-off tap, if fixed directly above any slop-sink, shall not be less than 18 inches above the sink.

Mackintosh sinks.

83. Approved bed-pan and mackintosh sinks shall be provided in all buildings used as hospitals.

Flashing of sinks, &c.

84.—(1.) All kitchen, scullery and slop-sinks, wash troughs, lavatories and baths abutting against a wall or partition shall have a suitable flashing of not less than 5 lb. lead.

(2.) Where a draining board to a sink abuts against a wall or partition of a living room, it shall, except where otherwise approved, have a suitable flashing, of not less than 5 lb. lead, carried up the wall or partition not less than 4 inches, and securely fastened and made water-tight.

(3.) All new sinks shall be fixed with vertical uprights or approved wrought or cast iron brackets, and the space between the floor and the under portion of the sink shall be entirely open without any enclosure.

(4.) Where the end of a wash trough abuts against the brickwork of a washing copper, the space between the end of the trough and the brickwork shall be made thoroughly water-tight.

(5.) Wooden fittings, other than laundry wash troughs, shall be lined inside with sheet lead not less than 6 lb. per square foot, or with sheet copper not less than $1\frac{1}{2}$ lb. per square foot, before their connexion to the sewerage system will be permitted.

Wash troughs.

85.—(1.) Wash troughs or tubs shall be of approved pattern and material, and shall be securely fixed and graded to the outlet pipe.

(2.) The brass strainer shall be sunk to the level of the trough.

(3.) When the distance between the outlets on troughs exceeds 21 inches, and lead pipe is used, the pipe shall be supported either by a lead tack wiped on the top of the pipe, or by a wooden block screwed to the bottom of the trough and clamped to the pipe. The pipe passing through shall have a lead flange wiped on.

Lavatories.

86.—(1.) In every internal range of lavatories—that is, one or two or more—separate trap ventilation shall be provided.

(2.) In every range of lavatories in an external building, or rooms isolated from the main building, the waste-pipe shall be ventilated by at least a single pipe at its upper end, provided that ranges of not more than four lavatories need not have more than one trap.

(3.) Unless they are already in use and are allowed by the Proper Authority to be retained as existing fittings, tip-up basins shall not be allowed to be connected with the drains.

(4.) All brackets for lavatory basins shall be secured to walls with at least 5-16th inch by 6 inch bolts.

Baths.

87.—(1.) The bottoms of galvanized sheet-iron baths shall be efficiently supported. Longitudinal joints shall not be used in the bottoms of baths.

(2.) Where a pedestal bath is fixed and it is not desired to flash the bath, it shall be fixed with a space of at least 6 inches clear of walls.

(3.) Where a bath is fixed against a wall, the bath shall be of the flanged type.

(4.) Where a flanged bath is built in, provision shall be made for one ventilator opening to the outer air to ventilate the enclosed space, and a trap door shall be provided in the front riser giving access to the enclosure. The floor under the bath shall be of impervious material and shall be graded and provided with requisite outlets and with a flashing of lead as required by the Engineer.

Safes.

88.—(1.) Except where otherwise allowed by the Engineer, every lead-safe under a sanitary convenience other than a urinal shall be drained by a special pipe not directly connected with any waste-pipe, soil-pipe, drain, or sewer, which shall be provided at the outlet into the open air with a flap valve of brass or other approved metal. The diameter of the special pipe and of the flap valve shall be 2 inches.

(2.) Suitable safes of approved impervious material shall be fixed under every water-closet and slop-sink.

(3.) Pipes draining safes shall discharge so as not to cause inconvenience or nuisance.

(4.) In all cases not otherwise provided for, the pipes shall be brought to the ground surface, or arranged to discharge where directed.

(5.) A brass grating shall be fixed to the entrance of each safe pipe, and a pipe shall be 2 inches at least in diameter, and a brass flap-valve shall be fixed to the outlet therefrom.

Gratings.

89. The entrance to all exit pipes to all sanitary conveniences, except water-closets, shall be furnished with permanently attached gratings.

Fittings to be tested.

90. A person shall not fix any pan and trap, slop-sink, bath, bed-pan sink, kitchen sink, lavatory basin or any sanitary fitting which is not tested and approved by the Engineer.

Part IV.—Water Supply.

Restriction of Water Supply.

91. The Minister may, in the public interest, restrict the supply of water from the Cotter River Catchment Area in such manner as he thinks fit.

Meters to be fixed in certain premises.

92.—(1.) Where water is required or used for the purposes of private water troughs, steam boilers, engines, or for building purposes, brickwork, concrete, masonry, syphons, hydraulic power blasts, watering of horses, cattle, or other stock, glass-washing machines, cooling windows, washing or cleaning motor or other vehicles, watering gardens, yards, pathways, or drives, or for any trade, industry, boarding-house, or business, it shall be supplied through a meter:

Provided that except where, in the opinion of the Proper Authority, water is being excessively used, nothing in this sub-regulation shall apply in respect of water required or used on land leased for residential purposes only and on which a residence is erected.

(2.) The Proper Authority may, by notice in writing, direct that any person, being a consumer supplied with water or desiring to be supplied with water, whether for domestic purposes solely or not, shall be supplied through a meter.

(3.) Every person in respect of whom a direction is given under the last preceding sub-regulation shall fix a meter, in accordance with the provisions of the next succeeding regulation, to register the quantity of water supplied.

(4.) The Proper Authority may supply a meter or meters to any person in respect of whom a direction is given under sub-regulation (2.) of this regulation and, where a meter is so installed, the consumer supplied with water or desiring to be supplied shall pay the cost of installation and hire of the meter.

Provisions relating to meters.

93.—(1.) Every meter shall be fixed in a position approved by the Engineer, an Inspector or Supervising Officer.

(2.) A meter shall not be fixed until it has been examined, tested, and approved by the Engineer, an Inspector or Supervising Officer.

(3.) Each meter shall be capable of registering at least 1,000,000 gallons.

(4.) Each ½-in., ¾-in., or 1-in. meter shall be capable of registering any flow not less than 10, 15, or 30 gallons per hour respectively.

(5.) Every meter shall be fixed truly level, with connexions above ground, in a manner approved by the Engineer, an Inspector or Supervising Officer, and in an easily accessible position; it shall be properly protected, and shall be on a proper foundation of timber, stone, brick, or concrete, which shall wherever practicable, be level with the surface of the ground and within 3 feet of the building line of the property.

(6.) Where it is impracticable to place the meter above the surface of the ground, it may be fixed in a pit constructed and drained in a manner approved by the Engineer, an Inspector or Supervising Officer.

(7.) Wrought-iron quarter bends shall be fixed on each side of the meter. The use of elbows will not be permitted.

(8.) Every meter shall be fixed to register the whole of the water supplied to any tenement or premises except where otherwise allowed by the Proper Authority.

(9.) If any repairs to a meter are required, the lessee shall immediately give notice to the Proper Authority.

(10.) Every person desiring to repair, remove or alter the position of a meter shall make written application for the consent of the Proper Authority, and no such repair, removal or alteration shall be effected until permission in writing has been given by the Proper Authority.

(11.) A person, other than a licensed water-supply plumber, shall not do any work in connexion with the fixing, removal, alteration of position or alteration or repair of a meter.

(12.) A person shall not construct, place, stack, or store any building, erection, material, or goods over or upon any meter through which water is supplied from a Commonwealth pipe, or do or permit anything which prevents or interferes with the inspection at any time of any meter.

(13.) Every meter shall be kept in repair by and at the cost of the lessee.

(14.) If any person refuses or delays to have the meter provided by or for him properly repaired and put in correct working order after having been directed to do so by the Engineer, an Inspector or Supervising Officer, the Proper Authority may shut off the supply of water from the premises of that person, either by closing or cutting the service pipe or otherwise, until the meter has been properly repaired and certified by the Engineer or an Inspector as being in proper working order.

(15.) If any meter in use ceases to register or is reported as out of repair or registering inaccurately, the Proper Authority shall, in cases where the consumer pays for water upon the quantity disclosed by the meter, estimate and charge for the water consumed during the period for which the meter is not in working order, and until it is repaired and re-affixed—

(*a*) by taking an average of the quantity used during the previous quarter or during the corresponding period of the previous year; or

(*b*) on the basis of subsequent consumption after repairing.

(16.) Every meter removed for repairs shall be repaired, adjusted, and submitted for test and re-fixed with the least possible delay by a licensed water-supply plumber employed for the purpose.

(17.) Wherever a 2-in. meter or meter of larger size is fixed or re-fixed provision shall be made for testing the working of the meter in position by the affixing of a stop tap or valve on the outlet side of the meter, with a stop tap ferrule between the stop tap and meter.

(18.) Branches shall not be taken off between the stop tap or valve and the meter.

(19.) The sizes of stop tap ferrules shall be as follow:—

For 2-in. and 3-in. meters	¾ inch.
For 4-in. meters	1 inch.
For meters larger than 4-in.	1½ inch.

Accuracy of meters.

94.—(1.) The register of any meter fixed in accordance with the provisions of Regulations 92 and 93 shall be *prima facie* evidence of the quantity of water consumed.

(2.) If the accuracy of the meter is questioned by the consumer, and notice in writing is given to the Proper Authority, accompanied by a fee of One pound, the meter shall be tested by the Engineer or an Inspector.

(3.) If the meter is found by the Engineer or an Inspector to register correctly, or less than the amount of water passing through the meter, the fee of One pound shall be paid into Consolidated Revenue Fund.

(4.) If the meter is found by the Engineer or an Inspector to register more than two per cent. of the amount of water passing through it, the meter shall be repaired and replaced or renewed without charge to the consumer and the fee of One pound shall be returned to the consumer.

Rebate of charges in certain cases.

95. Any consumer of water who is supplied with water through a meter and pays for that supply by measure an amount exceeding the sum which would be payable if he paid rates based upon the valuation

of the land shall, out of the excess, be allowed, so far as the excess will admit thereof, a deduction equal to Ten shillings per annum on account of each closet pan on the premises, the water for which passes through and is recorded by the meter:

Provided that the deduction allowed to any consumer shall not exceed One pound per annum in respect of any premises.

Conditions to be observed in regard to tappings and services.

96. The following provisions shall apply to all work, connexions, fittings, apparatus, and material in connexion with the supply of water from Commonwealth pipes:

(*a*) Ordinary connexions with sub-mains shall be made with stop-cock ferrules, and with wrought-iron quarter bends;

(*b*) The use of elbows shall not be allowed;

(*c*) One service pipe only for domestic supply to each tenement will be permitted;

(*d*) The bore of the service pipe shall not exceed ¾ inch unless permission for a larger service has been obtained in writing from the Proper Authority, in which case the supply shall be taken through a meter, and no such larger service shall exceed 1 inch in diameter unless the average number of persons residing in the tenement is more than 25, nor shall it exceed 1¼ inch in diameter unless the average number of persons residing in the tenement is more than 100;

(*e*) The maximum tapping that will be allowed without clip for each size of cast-iron main shall be as follows:—

For 3-in. and 4-in. pipes	¾ inch tapping;
For 5-in., 6-in., and 7-in. pipes ..	1 inch tapping;
For 8-in. pipes	1¼ inch tapping;
For 9-in. pipes	1½ inch tapping;
Over 9-in. pipes	2 inch tapping;

(*f*) A branch shall be inserted for all connexions of 2-in. diameter or over to a main of 5-in. diameter or less, and for all connexions of 3-in. diameter or over to mains of 6-in. diameter or over;

(*g*) All such branches shall be of pattern and material approved by the Engineer, and shall be fixed in accordance with the directions of the Supervising Officer;

(*h*) Tapping of pipes must be made under pressure by an officer authorized by the Proper Authority in every case unless otherwise ordered or permitted, in writing, by the Proper Authority in cases where tapping under pressure is not practicable;

(*i*) Any person giving notice of his desire to lay a pipe to connect with and tap a Commonwealth pipe shall provide for, and bear the cost of, all labour and material necessary for the connexion and for the restoration of the ground to the satisfaction of the Engineer, and shall be liable for the consequence of failure in so doing, and shall pay in advance to the Commonwealth the expense of the tapping at such rates as are from time to time determined by the Proper Authority.

(*j*) If it becomes necessary to shut off a main of 9 inches diameter or over to repair, remove, or replace any tapping, such special fees as are from time to time fixed by the Proper Authority shall be paid to cover the expense of shutting off the main;

(*k*) All connexions with lead and iron pipes shall be made with brass union couplings;

(*l*) A high-pressure screw-down stop tap properly secured and covered with an approved cast-iron box shall be fixed on each water service between the main and the building line;

(*m*) Where mains are under wood blocks, concrete or other special pavements, an approved iron box shall be fixed over the stop-tap ferrule in the main;

(*n*) Except where otherwise permitted by the Engineer every stop-tap and stop-tap ferrule shall be opposite the tenement supplied and in one line at right angles to the main on which the stop-tap ferrule is fixed;

(*o*) All joints connecting lead pipes shall be wiped joints, and in no case will bolt or copper bit or blown joints be allowed on water-service pipes;

(*p*) Except with the permission, in writing, of the Proper Authority, not more than one tenement shall be supplied from a single water service;

(*q*) The Proper Authority may, if he thinks fit, give permission to arrange in special cases that the water supply to more than one tenement may pass from the water main into a single pipe (in this regulation referred to as "trunk service") which shall be laid in a street, and have branch piping to each tenement; on each such branch there shall be a stop tap fixed in a public thoroughfare, but in no case shall branches be fixed in excess of the number set out in the following table, viz.:—

Diameter of Trunk Service.	Number of 1-in. Branches only.	Number of ¾-in. Branches only.	Number of ½-in. Branches only.
¾ inch	..	..	2
1 inch	..	2 or	5
1¼ inches	2 or	4 or	10
1½ inches	3 or	6 or	15
2 inches	6 or	12 or	30;

(*r*) Every service pipe shall be laid at a depth of at least 15 inches below the surface, and no service pipe shall be laid longitudinally under a footpath or channel; and

(*s*) An extension of a private service shall not be allowed except by consent of the Proper Authority.

Plan to be forwarded with application in certain cases.

97. In connexion with every application to lay a water service of 2 inches and upwards in diameter or to alter the position of any such water service, the plumber's notice shall be accompanied by a properly dimensioned plan, showing the locality of the premises at which the work is to be effected and the position in which it is intended to lay the pipes and fix meters, plugs, stop taps, and other fittings thereto.

Repairs, &c., to service pipes.

98. The service pipe from the main being the property of the owner or occupier of the tenement supplied by the service pipe, the occupier (if any) or (if none) the lessee shall, upon receiving notice that his service pipe requires repairing, immediately proceed to repair it, and he shall be responsible for any loss of water or other damage which is caused by reason of the service pipe being leaky or otherwise out of repair or broken, and the Proper Authority may stop the water from flowing into the tenement until the necessary repairs have been effected.

Unauthorized interference with Commonwealth property

99. Any person who wilfully or carelessly breaks, injures, opens, renders not easily accessible, or obscures from view, any lock, tap, valve, pipe, work or engine under the control of the Minister or the Proper Authority, or any person who causes any such lock, tap, valve, pipe, work or engine to be broken, injured, opened, rendered not easily accessible, or obscured from view, shall be guilty of an offence.

Notice to be given *before* interfering with pipes, &c., communicating *with* Commonwealth pipes.

100.—(1.) Any person who—

(*a*) opens any ground so as to uncover any Commonwealth pipe or pipes, or lays any pipe to communicate with a Commonwealth pipe, or alters, repairs, or replaces pipes or fittings in communication with a Commonwealth pipe without first giving two days' notice in writing, of the day and hour when the work is to be carried out, and further obtaining a permit in accordance with Form J so to do before proceeding with the work;

(*b*) in the event of directions as to the manner in which any such communication, alteration, repair, or replacement being given by the Engineer, an Inspector or Supervising Officer, fails to make any communication, alteration, repair, or replacement of any pipe in communication with a Commonwealth pipe in accordance with those directions and these Regulations; or

(*c*) lays any leaden or other pipe to communicate with a Commonwealth pipe of a strength and material not in accordance with these Regulations, or any person who causes any such pipe so to be laid,

shall be guilty of an offence.

Penalty: Five pounds, and, in addition, a penalty not exceeding Two pounds per day for any continuance of the offence after the receipt of a notification from the Proper Authority or the Engineer.

(2.) Every notice under this regulation shall be signed by the licensed plumber actually engaged in carrying out the works referred to in the notice or by a licensed plumber employing another plumber to carry out the work under his supervision.

(3.) Any licensed plumber who signs a notice for work which is not actually done either by himself or by a plumber under his supervision, or carries out work under a notice not signed by himself, shall be guilty of an offence.

(4.) This regulation shall apply to a service communication with a Commonwealth pipe made through the intervening medium of a storage tank, as well as to communication by direct service.

(5.) Notwithstanding anything contained in this regulation, the Proper Authority may dispense with the giving of two days' notice and obtaining of a permit under this regulation, in the event of urgent repairs being required to stop the waste or escape of water, but in that case the notice shall be sent to the Proper Authority by the licensed plumber concurrently with, or immediately after, the execution of the repairs.

Quality of fittings, &c.

101.—(1.) A person shall not use, in connexion with a supply of water from Commonwealth pipes, any tap, stop tap, bib tap, ball tap, valve, closet cistern, service box, bath tap or valve, or other fitting which is not of the best quality, tested, stamped and approved by the Engineer.

(2.) A person shall not use any stop or bib taps which are not screw-down high-pressure taps, made of hard brass or gunmetal, and in every respect of best quality and workmanship, tested, stamped and approved by the Engineer.

(3.) Lead piping shall be of the following weights:—

Diameter of Pipe.	Weight of Pipe per Yard.	Diameter of Pipe.	Weight of Pipe per Yard.
⅜ inch	5 lb.	1 inch	14½ lb.
½ inch	6 lb.	1¼ inches	22 lb.
⅝ inch	7½ lb.	1½ inches	30 lb.
¾ inch	9 lb.	2 inches	45 lb.

(4.) Except with the written consent of the Proper Authority, piping other than galvanized wrought-iron piping, of approved quality, tested and stamped by the Engineer, or copper tube of approved gauge, shall not be used for external and internal services.

(5.) A person shall not use any cistern or tank that is not provided with an equilibrium ball valve and with the overflow pipe laid and fixed in a suitable manner, open to inspection, and in a position approved by the Engineer.

(6.) All internal pipes shall be fixed in such positions as the Engineer approves, but in no case shall they be fixed in the cavities of walls.

Size of baths.

102. Except with the special permission of the Proper Authority a bath shall not be installed or used which has a holding capacity when full of more than 100 gallons.

Pumping appliances.

103. A person shall not fix any water ejector, hand syphon, automatic syphon, or other water-power pumping appliance without the permission, in writing, of the Proper Authority, and the Proper Authority may grant permission subject to such conditions as he thinks fit.

Connecting pipe with steam boilers.

104. Any person, whether licensed or not, who connects any service pipe or branch service pipe with any steam boiler for the purpose of feeding the boiler with water without first affixing a self-acting valve to prevent the pressure of the steam reversing or affecting the dial of the meter, shall be guilty of an offence.

Penalty: Five pounds, and, in addition, a penalty not exceeding Two pounds per day for any continuance of the offence after the receipt of a notification in writing from the Proper Authority or the Engineer.

Stand pipes.

105. Each stand-pipe connected to a service pipe shall be fixed to a wall or fence or shall be supported to the satisfaction of the Engineer by a hardwood stake at least 3 inches wide by 2 inches thick.

Unlawful taking of water.

106.—(1.) Any person who has not agreed to be supplied with water, and who takes or carries away water, or causes water to be taken or carried away, from the premises of any other person so supplied or from any drinking tap, trough or private or public service tap, shall be guilty of an offence.

Penalty: Five pounds.

(2.) Any person who is supplied with water through a meter and who, without the authority of the Proper Authority, takes or carries away water, or causes water to be taken or carried away, from the premises of a person supplied with water not through a meter, shall be guilty of an offence.

Penalty: Five pounds.

Taking or supplying water without authority.

107. Any person who is supplied with water and who, without the authority of the Proper Authority, takes or carries away, or allows any person to take or carry away water from his premises, or sells water to any person, shall be guilty of an offence.

Penalty: Five pounds.

Waste of water.

108. Any person supplied with water who wilfully or negligently allows water to run to waste shall be guilty of an offence.

Penalty: Five pounds, and, in the case of a continuing offence a further penalty not exceeding Two pounds for each day during which the offence continues after the Proper Authority has given the person charged notice in writing of the offence.

Hot water supply services.

109.—(1.) Subject to this regulation, these Regulations shall, so far as applicable, apply to all domestic hot water supply services to all service pipes connected therewith.

(2.) All water heaters installed between a ceiling and a roof shall be provided with an approved safe of 22 gauge galvanized sheet iron of sufficient size to collect the overflow from any portion of the heater, and shall be provided with a galvanized wrought iron waste of 1½ inches diameter.

(3.) A hot water supply service (other than an electric continuous water heating installation) shall be provided with a storage tank of the following capacity:—

For each bath connected with the installation ..	30 gallons
For each laundry trough connected with the installation	10 gallons
For each sink connected with the installation ..	5 gallons
For each lavatory basin connected with the installation	3 gallons

or as directed by the Proper Authority.

(4.) A storage tank provided in accordance with the provisions of this regulation shall not be used for supplying water to any other installation or fitting.

(5.) The provisions of sub-regulation (26.) of regulation 80 of these Regulations shall apply to storage tanks provided in accordance with the provisions of this regulation.

(6.) The expansion pipe from any hot water supply service (including any installation where an expansion tank is used) may be discharged direct onto a roof or other convenient place where the discharge will not cause inconvenience or nuisance:

Provided that the expansion pipe shall not be discharged into the storage tank provided in connexion with the installation.

(7.) If galvanized sheet iron is used for the construction of any expansion tank used in connexion with any hot water supply services it shall be not less than 16 gauge.

(8.) The provisions of sub-regulation (5.) of this regulation shall apply to expansion tanks as if they were storage tanks.

(9.) All pipes used in connexion with hot water supply services shall be so installed that there is provision for expansion and contraction, and in no case shall screwed unions or similar joints be built into floors or walls or placed in inaccessible positions. If a joint is unavoidably placed in a wall or floor it shall be brazed and gunmetal fittings and copper pipe shall be used.

(10.) A person shall not use in connexion with any hot water supply service any boiler, cylinder, pipe or fitting, unless it is approved by the Engineer. An approved thermometer shall be fitted in the flow pipe near the boiler, or, in the case of a closed system, in an approved position on or close to the hot water cylinder.

(11.) The Engineer or an Inspector may test any hot water supply service and a water heating installation shall not be used until so tested and passed by the Engineer or an Inspector.

Applications for consent of proper authority.

110.—(1.) In every case in which it is necessary to obtain the consent of the Proper Authority or the Engineer before doing any act or commencing any work, application for consent shall be made, in writing, addressed to the Proper Authority and delivered at his office at least two days prior to the time proposed for the doing of the act or the commencement of the work.

(2.) The application shall clearly specify the act proposed to be done or the work to be commenced, and the act shall not be done or the work commenced before the receipt of consent, in writing, from the Proper Authority or the Engineer as the case may be, and then only subject to, and in accordance with, such directions or conditions as are therein specified.

111. Every person who commits any of the following offences with respect to any stream or water-course, reservoir, aqueduct, or other waterworks, under the control of the Minister or under the management of the Proper Authority for the purposes of the Canberra water supply system, shall be guilty of an offence, namely:— Bathing or washing, or throwing dirt and filth into waterworks.

(*a*) Bathes therein;

(*b*) Washes, throws or causes to enter therein, any dog or other animal;

(*c*) Throws, conveys or causes or permits to be thrown or conveyed therein, any refuse, rubbish, dirt, filth or noisome thing whatsoever; and

(*d*) Washes or cleanses therein, the skin of any animal, or any clothes, cloth, wool, leather or other thing whatsoever.

Penalty: Five pounds.

112.—(1.) Any person who wrongfully takes or uses water from any reservoir, aqueduct or pipe, under the control of the Minister, or under the management of the Proper Authority, or from any pipe leading to or from any such reservoir, aqueduct or pipe, or from any cistern or other like place under the control of the Minister, or under the management of the Proper Authority, or supplied by it with water for the use of any consumer, shall be guilty of an offence. Penalty for unlawfully taking water.

Penalty: Five pounds.

(2.) Any person who illegally diverts or takes water supplying or flowing into any waterworks, watercourse or reservoir under the control of the Minister, or under the management of the Proper Authority, or who does any unlawful act whereby the water from any such waterworks, water-course, or reservoir may be drawn off or diminished in quantity, shall be guilty of an offence. Penalty for illegally taking or diverting water.

Penalty: Five pounds for every day during the whole or any part of which the supply of water is diverted or diminished by reason of any act done by or by the direction of that person.

113. Whenever it is shown that any water is or has been so wrongfully taken or used or illegally diverted or taken to or into land owned or occupied by any person, the taking or using or diversion of the water shall be deemed to have been effected by, or by the direction of, that person, unless that person satisfies the court that the taking or using or diversion of the water on to or into the land was effected without his direction or connivance. When water diverted to any land onus of proof of non-complicity lies on owner or occupier of land.

Part V.—Miscellaneous.

114.—(1.) The Proper Authority, the Engineer, an Inspector or Supervising Officer, may inspect any drain, sink, trap, pipe, meter, appliance, connection, or other works connected therewith, and may for that purpose at all reasonable times in the day-time enter upon any premises or lands to, through or into which, water is supplied, and cause the ground to be opened in any place he thinks fit, doing as little damage as may be, and may also remove any meter, pipe or fittings the property of the Commonwealth or under the control of the Minister. Inspection of private premises.

(2.) Any person who hinders or obstructs the Proper Authority, the Engineer, an Inspector or Supervising Officer, in the execution of his duties under this Ordinance, shall be guilty of an offence.

Penalty: Five pounds.

(3.) In case any such drain or works is found on inspection not to have been made according to the provisions of these Regulations, or to be in bad order and condition, or to require cleansing, alteration or amendment, or to be filled up, the Proper Authority shall cause notice in writing to be given to the owner of the premises upon or in respect of which the inspection was made requiring him forthwith, or within such time as is specified in the notice, to do the necessary works.

(4.) If the notice is not complied with by the person to whom it is given, the Proper Authority may, if he thinks fit, execute such works and the expenses incurred by the Commonwealth in so doing shall be paid to it by the owner of the premises and may be recovered in any court of competent jurisdiction.

(5.) If any such drain, sink, trap, pipe or other connected works and apparatus are found on any such inspection to be made to the satisfaction of the Engineer, and in proper order and condition, he shall cause the same to be reinstated and made good as soon as may be, and the expenses of examination reinstating and making good thereof shall be defrayed by the Commonwealth.

Charges for sewerage service and water.

115.—(1.) Subject to this regulation, the charges to be made with regard to each year for sewerage and water services in the City Area shall be as follows:—

(*a*) the charge for sewerage service with regard to each parcel of land shall be at the rate of twopence halfpenny for each pound of the unimproved capital value of the land; and

(*b*) the charge for water with regard to each parcel of land shall be at the rate of threepence halfpenny for each pound of the unimproved capital value of the land.

(2.) Where water is supplied to any parcel of land through a meter, the charge for the water supplied may, in lieu of the charge prescribed by the last preceding sub-regulation, be at the rate of One shilling per thousand gallons shown by the meter to have been consumed, unless the amount payable as charges for water, based upon the unimproved capital value of the land, is greater.

(3.) The minimum amount payable in respect of water supplied to any parcel of land through a meter shall be One pound per annum, and the minimum amount payable in respect of water supplied to any parcel of land based upon the unimproved capital value of the land shall be Ten shillings per annum.

(4.) The minimum amount payable in respect of sewerage charges based upon the unimproved capital value of the land shall be Ten shillings per annum.

(5.) The lessee of the parcel of land shall be liable to pay the prescribed charges in respect of that land, and, where any person other than the lessee is or has been the tenant, occupier or holder of the land for the whole or portion of the year, that person shall be liable to pay the charges for the year or that portion of the year during which he was the tenant, occupier or holder of the land, and the charges may be recovered accordingly in any court of competent jurisdiction.

Provided that the charges in respect of any one period shall not be recoverable both from the lessee and from any other person.

(6.) Where land is leased from the Commonwealth, the amount of the charges payable in respect of that land for any year shall be such an amount as bears the same proportion to the amount of the charges payable for the whole year as the portion of the year during which the lease subsists bears to a period of twelve months, and, if the amount of the charges paid with regard to that year based upon the unimproved value of the land exceeds the amount so payable, the Proper Authority may refund the excess to the lessee.

(7.) For the purposes of this regulation the unimproved capital value of the land shall be the unimproved capital value of the land as assessed in pursuance of the provisions of the *Rates Ordinance* 1926-1931, and existing at the time of making such charges.

116. Notwithstanding anything contained in the last preceding regulation where water is supplied through a meter to any parcel of land leased under the provisions of the *Leases Ordinances* 1918-1933, the charge shall be at the rate of One shilling per thousand gallons shown by the meter to have been consumed:

Provided that the charge for any quantity of water consumed during each of the two periods of six months commencing on the 1st July and the 1st January, respectively in each year, in excess of 91,000 gallons, shall be at the rate of One shilling and sixpence per thousand gallons shown by the meter to have been consumed.

Special services.

117.—(1.) Notwithstanding anything contained in these Regulations, special supplies of water at such charges as the Minister in each case determines may be provided for the following purposes, namely:—General building purposes, plumbers' blasts, steam boilers, gas engines, watering stock, washing vehicles, supply to places outside the City area, and any other purposes which, in the opinion of the Minister, are of such a kind as to justify special treatment.

(2.) The Proper Authority may require any person to whom this regulation applies to make a preliminary payment of such amount as the Proper Authority determines before water is supplied to him.

118. The provisions of the *Rates Ordinance* 1926-1931 with regard to the valuation of land, the assessment of rates, and the recovery of rates and charges shall apply *mutatis mutandis* to the determination of the unimproved capital value of land, and the assessment and recovery of charges in respect of sewerage and water services based upon the unimproved capital value of the land to which those services are supplied. Application of provisions of Rates Ordinance.

119.—(1.) If any person who is supplied with water by the Minister refuses or neglects— Power to cut off water for non-payment or failure to fix meter.

(*a*) to fix a meter in accordance with the provisions of these Regulations, or

(*b*) to pay on demand any charge or sum due to the Commonwealth under these Regulations or any regulation hereby repealed,

the Proper Authority may close or cut off any of the pipes or means by or through which water is supplied by the Commonwealth to such person or for his use and may cease to supply him with water so long as the charge or sum remains unpaid; and neither the closing or cutting off of pipes or means nor the cessation of water supply shall relieve any person of his liability to pay water charges during the period of cessation.

(2.) The powers conferred by the last preceding sub-regulation are ancillary to and shall not lessen any powers for the recovery of charges or sums under any other provisions of these Regulations.

120. The provisions of these Regulations shall apply to the City Area only: Services outside the city area.

Provided that where the Minister provides water and sewerage services outside the City Area these Regulations shall apply in that locality or place.

121. Any person who contravenes or fails to comply with any provision of these Regulations shall be guilty of an offence, and where no other penalty is provided, shall be liable on conviction to a penalty not exceeding Five pounds for the first offence, and Ten pounds for any subsequent offence, and, in addition, to a daily penalty not exceeding Ten shillings for any continuance of the offence after the receipt of a notification in writing from the Proper Authority. Penalties.

122. Proceedings for offences against these Regulations and for the recovery of charges and fees may be instituted by the Proper Authority in any court of competent jurisdiction. Proceedings for offences.

THE SCHEDULE.

Regulation 6. FORM A.

The Territory for the Seat of Government.

Building and Services Ordinance 1924-1928.

CANBERRA SEWERAGE AND WATER SUPPLY REGULATIONS.

APPLICATION FOR SANITARY PLUMBER'S LICENCE.

To—
The Proper Authority,
Department of the Interior,
Canberra.

I(*) (*a*) Insert full name and address of applicant.

hereby apply for a Sanitary Plumber's Licence under the provisions of the Canberra Sewerage and Water Supply Regulations.

*My qualifications for the issue of the licence to me are as follows:—

I am not under the age of twenty-one (21) years.

I enclose certificate in accordance with Form B in the Schedule to the above-mentioned Regulations.

I enclose the sum of Ten shillings and sixpence (10s. 6d.) being the prescribed fee for the issue of a Sanitary Plumber's Licence. Amount due, £0 10s. 6d.

I undertake that, in the event of a licence being issued to me, I will faithfully comply with the conditions of the licence and observe the provisions of the Canberra Sewerage and Water Supply Regulations and any regulations amending or in substitution for those regulations and all other laws from time to time in force governing the design, erection or execution of buildings and works in the Territory for the Seat of Government.

Dated this day of 19 .

(Signature)

Witness

*NOTE.—An applicant for a Sanitary Plumber's Licence must satisfy the Proper Authority that he had passed a satisfactory course of plumbing handicraft at a Technical School in Canberra, Sydney or Melbourne, or holds a current licence of an equal standard from any sewerage or water supply authority.

Regulation 6. FORM B.

The Territory for the Seat of Government.

Building and Services Ordinance 1924-1928.

CANBERRA SEWERAGE AND WATER SUPPLY REGULATIONS.

CERTIFICATE OF THREE HOUSEHOLDERS TO ACCOMPANY FORM A, D, F OR H.

To—

The Proper Authority,
Department of the Interior,
Canberra.

(a). Insert "Sanitary Plumber's," "Water Supply Plumber's," "Journeyman Plumber's," or "Drainer's", as the case requires.

We, the undersigned householders, resident in hereby certify that we have known , who now resides at for years.

We believe him to be a person of good fame and character, and to be a fit person to have (a) Licence under the abovementioned Regulations.

Dated this day of 19 .

(Signature)

Regulation 6. FORM C.

The Territory for the Seat of Government.

Building and Services Ordinance 1924-1928.

CANBERRA SEWERAGE AND WATER SUPPLY REGULATIONS.

SANITARY PLUMBER'S LICENCE.

Pursuant to the provisions of the Canberra Sewerage and Water Supply Regulations made under the *Building and Services Ordinance* 1924-1928, of is hereby licensed as a Sanitary Plumber. This Licence shall be and continue in force from the date hereof until the thirty-first day of December next following.

Dated this day of 19 .

Proper Authority.

NOTE.—1. This Licence may be renewed from time to time upon payment of the prescribed renewal fee of 2s. 6d.

2. This Licence is subject to cancellation or suspension at the discretion of the Proper Authority.

Regulation 6. FORM D.

The Territory for the Seat of Government.

Building and Services Ordinance 1924-1928.

CANBERRA SEWERAGE AND WATER SUPPLY REGULATIONS.

APPLICATION FOR WATER SUPPLY PLUMBER'S LICENCE.

To—

The Proper Authority,
Department of the Interior,
Canberra.

(a) Insert full name and address of applicant.

I (a) hereby apply for a Water Supply Plumber's Licence under the provisions of the Canberra Sewerage and Water Supply Regulations.

*My qualifications for the issue of the licence to me are as follows:—

I am not under the age of twenty-one (21) years.

I enclose certificate in accordance with Form B in the Schedule to the abovementioned Regulations.

Amount due, £0 10s. 6d.

I enclose the sum of Ten shillings and sixpence (10s. 6d.) being the prescribed fee for the issue of a Water Supply Plumber's Licence.

I undertake that, in the event of a licence being issued to me, I will faithfully comply with the conditions of the licence and observe the provisions of the Canberra Sewerage and Water Supply Regulations and any regulations amending or in substitution for those regulations and all other laws from time to time in force governing the design, erection or execution of buildings and works in the Territory for the Seat of Government.

Dated this day of 19 .

(Signature)

Witness

*NOTE.—An applicant for a Water Supply Plumber's Licence must satisfy the Proper Authority that he is a competent plumber, and has passed such examination (if any) as the Proper Authority requires.

Regulation 6. FORM E.

The Territory for the Seat of Government.

Building and Services Ordinance 1924-1928.

CANBERRA SEWERAGE AND WATER SUPPLY REGULATIONS.

WATER SUPPLY PLUMBER'S LICENCE.

Pursuant to the provisions of the Canberra Sewerage and Water Supply Regulations made under the *Building and Services Ordinance* 1924-1928, of is hereby licensed as a Water Supply Plumber. This Licence shall be and continue in force from the date hereof until the thirty-first day of December next following.

Dated this day of 19 .

Proper Authority.

NOTE.—1. This Licence may be renewed from time to time upon payment of the prescribed renewal fee of 2s. 6d.

2. This Licence is subject to cancellation or suspension at the discretion of the Proper Authority.

Regulation 6. FORM F.

The Territory for the Seat of Government.

Building and Services Ordinance 1924-1928.

CANBERRA SEWERAGE AND WATER SUPPLY REGULATIONS.

APPLICATION FOR JOURNEYMAN PLUMBER'S LICENCE.

To—

The Proper Authority,
Department of the Interior,
Canberra.

I(a)
hereby apply for a Journeyman Plumber's Licence under the provisions of the Canberra Sewerage and Water Supply Regulations.

(a) Insert full name and address of applicant.

*My qualifications for the issue of the licence to me are as follows:—

I am not under the age of twenty-one (21) years.

I enclose certificate in accordance with Form B in the Schedule to the above-mentioned Regulations.

I enclose the sum of Ten shillings and sixpence (10s. 6d.) being the prescribed fee for the issue of a Journeyman Plumber's Licence.

Amount due, £0 10s. 6d.

I undertake that, in the event of a licence being issued to me, I will faithfully comply with the conditions of the licence and observe the provisions of the Canberra Sewerage and Water Supply Regulations and any regulations amending or in substitution for those regulations and all other laws from time to time in force governing the design, erection or execution of buildings and works in the Territory for the Seat of Government.

Dated this day of 19 .

(Signature)

Witness

*NOTE.—An applicant for a Journeyman Plumber's Licence must satisfy the Proper Authority that he has passed such examination (if any) in practical plumbing as the Proper Authority requires.

Regulation 6. FORM G.

The Territory for the Seat of Government.

Building and Services Ordinance 1924-1928.

CANBERRA SEWERAGE AND WATER SUPPLY REGULATIONS.

JOURNEYMAN PLUMBER'S LICENCE.

Pursuant to the provisions of the Canberra Sewerage and Water Supply Regulations made under the *Building and Services Ordinance* 1924-1928, of is hereby licensed as a Journeyman Plumber. This Licence shall be and continue in force from the date hereof until the thirty-first day of December next following.

Dated this day of 19 .

Proper Authority.

NOTE.—This Licence may be renewed from time to time upon payment of the prescribed renewal fee of 2s. 6d.

2. This Licence is subject to cancellation or suspension at the discretion of the Proper Authority.

Regulation 6. FORM H.

The Territory for the Seat of Government.

Building and Services Ordinance 1924-1928.

CANBERRA SEWERAGE AND WATER SUPPLY REGULATIONS.

APPLICATION FOR DRAINER'S LICENCE.

To—

The Proper Authority,
Department of the Interior,
Canberra.

I(a)
hereby apply for a Drainer's Licence under the provisions of the Canberra Sewerage and Water Supply Regulations.

(a) Insert full name and address of applicant.

*My qualifications for the issue of the licence to me are as follows:—

I am not under the age of twenty-one (21) years.

I enclose certificate in accordance with Form B in the Schedule to the above-mentioned Regulations.

I enclose the sum of Ten shillings and sixpence (10s. 6d.) being the prescribed fee for the issue of a Drainer's Licence.

Amount due, £0 10s. 6d.

I undertake that, in the event of a licence being issued to me, I will faithfully comply with the conditions of the licence and observe the provisions of the Canberra Sewerage and Water Supply Regulations and any regulations amending or in substitution for those regulations and all other laws from time to time in force governing the design, erection or execution of buildings and works in the Territory for the Seat of Government.

Dated this day of 19 .

(Signature)

Witness

*NOTE.—An applicant for a Drainer's Licence must satisfy the Proper Authority that he is a competent drainer, and has passed such examination or practical test (if any) as the Proper Authority requires.

Regulation 6. FORM I.

The Territory for the Seat of Government.

Building and Services Ordinance 1924-1928.

CANBERRA SEWERAGE AND WATER SUPPLY REGULATIONS.

DRAINER'S LICENCE.

Pursuant to the provisions of the Canberra Sewerage and Water Supply Regulations made under the *Building and Services Ordinances* 1924-1928, of is hereby licensed as a Drainer. This Licence shall be and continue in force from the date hereof until the thirty-first day of December next following.

Dated this day of 19 .

Proper Authority.

NOTE.—1. This Licence may be renewed from time to time upon payment of the prescribed renewal fee of 2s. 6d.

2. This Licence is subject to cancellation or suspension at the discretion of the Proper Authority.

Regulations 15, 100. FORM J.

The Territory for the Seat of Government.

Building and Services Ordinance 1924-1928.

CANBERRA SEWERAGE AND WATER SUPPLY REGULATIONS.

PLUMBING PERMIT.

Canberra.....193 .

Licensed Plumber Mr.....

is hereby authorized to.....

.....

.....

On Block.....Section.....Division.....District.....

Commencing.....

Drainage Plan No.....

Builder.....

Lessee.....

.....

Sewerage Engineer or Engineer for Water Supply.