

THE PUBLIC HEALTH ACT.

Statutory Instrument 281—4.

The Public Health (Drainage and Sanitation) Rules.

Arrangement of Rules.

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THE PUBLIC HEALTH ACT.

Statutory Instrument 281—4.

The Public Health (Drainage and Sanitation) Rules.

(Under sections 70, 92 and 138 of the Act.)

PART I—APPLICATION AND INTERPRETATION.

1. Citation.

These Rules may be cited as the Public Health (Drainage and Sanitation) Rules.

2. Application.

Subject to such exceptions and exemptions as are prescribed in these Rules or as may be prescribed by the Minister by statutory instrument, these Rules shall apply to all municipalities, towns, gazetted planning areas, trading centres and factories wherever situated and also to all plots in non-African occupation, other than holdings used solely for agricultural purposes or for purely residential purposes and not for gain, and the Minister may apply all or any of these Rules to such other areas as he or she may from time to time declare by statutory instrument.

3. Interpretation.

In these Rules, unless the context otherwise requires—

- (a) “authority” means a local authority as defined in section 1 of the Act;
- (b) “British Standard Specification” means, notwithstanding anything to the contrary in these Rules, the relevant and current specification of the British Standard Institution of the article or material to which reference is made;
- (c) “cement” means cement complying in all respects with the British Standard Specification for Portland cement;
- (d) “cement concrete” means concrete composed of cement, clean washed sand or grit and clean gravel, stone or other suitable material in the proportions by measure stated in these Rules and thoroughly mixed with clean water;

- (e) “cement mortar” means mortar composed of cement and clean washed sand, grit or other suitable material in the proportions by measure stated in these Rules and thoroughly mixed with clean water;
- (f) “concrete” means cement concrete;
- (g) “drainage work” means the construction, installation, laying, connecting, fixing, repair or removal of any pipe, drain, lateral drain, private sewer, gully, cesspool, septic tank, private sewage filter installation, or other works for the conveyance, discharge, reception, or disposal of sewage in connection with any premises, or of any wastepipe, soil pipe, trap, urinal, water closet, slop hopper, sink, bath, lavatory basin, ventilation pipe, anti-siphonage pipe or any drain fitting or water-flushing cistern, or any works connected with the discharge of liquid or solid matter into any drain, private sewer, cesspool, septic tank, private sewage filter installation or other like receptacle for drainage, or otherwise connected with the drainage of any premises;
- (h) “foul sewer” means a sewer used or intended for the carriage of foul water;
- (i) “foul water” means soil or waste water;
- (j) “fresh air inlet” means an inlet to a drainage system provided for the introduction of air for ventilating the drain;
- (k) “grease trap” means a type of gully trap constructed for the retention and removal of grease, petroleum spirit or similar matter from waste water;
- (l) “grit” means suitable stone crushed and graded from three-sixteenths inch or finer;
- (m) “gully trap” means an appliance for receiving waste water or surface water and passing it to the drain through a trap;
- (n) “inspection chamber” means a chamber constructed on a drain to permit of its inspection and cleansing;
- (o) “intercepting trap or interceptor” means an appliance for intercepting the flow of air or gas along a drain or sewer;
- (p) “lime mortar” means mortar composed of good lime of suitable quality and clean washed sand or grit or other clean and suitable material and clean water thoroughly mixed in the proportions by cubic measure of at least 1:3;
- (q) “pavement drain” means any pipe or channel, laid in a footpath or pavement and in connection with the disposal of rain, storm or surface water;
- (r) “sewer connection” means any pipe junction, saddle junction or

- other contrivance constructed in or on any public sewer for the purpose of joining a lateral drain to that sewer;
- (s) “soil pipe” means any pipe fixed on or in any building for the purposes of conveying soil water;
 - (t) “soil-water fitting” means any water closet, slop hopper or urinal and any water fitting adapted or designed for the reception of matters of excremental character in connection with any system of drainage;
 - (u) “subsoil drain” means any drain designed or used for the removal of subsoil or ground water;
 - (v) “wastepipe” means any pipe for conveying waste water;
 - (w) “waste-water fitting” means any bath, lavatory basin, sink, bidet, or similar fitting.

PART II—GENERAL MATTERS AFFECTING SEWERS AND DRAINS.

Protection of public sewers.

4. Damage to public sewers.

(1) Any person who excavates, opens up or removes or causes to be excavated, opened up or removed, the ground around, under or near to any public sewer without the written consent of the authority first obtained, or who injures or destroys or causes to be injured or destroyed any public sewer or any works in connection therewith vested in an authority, commits an offence.

(2) No person shall construct or cause to be constructed any building over a public sewer; except that, with the prior written consent of the authority, a building may be so constructed if the sewer affected is of cast iron or of stoneware encased in concrete.

(3) In the case of the foundation of a building crossing the line of a sewer where the ground has been opened up, a reinforced concrete beam or arch shall be constructed over the line of sewer so that the points of bearing of that beam or arch shall be at least three feet distant outside the limits of the piece of ground which has been opened up.

5. Access to premises over sewer and ditches.

Where the owner or occupier of any premises requires access to the premises

over any sewer, roadside ditch or drain vested in an authority, the owner or occupier shall apply to the authority for that purpose and the authority shall, without unreasonable delay, undertake the necessary works or authorise the owner or occupier in writing to carry out the necessary works in accordance with drawings previously submitted to and approved by the authority.

Connection with public sewers.

6. Form of notice to connect to public sewers.

(1) The notice required to be given under section 83 of the Act for communication with a public sewer shall be in Form D5 in the Schedule to these Rules, and shall be sent to the authority at least twenty-eight days before the communication is required to be made.

(2) Separate notices shall be given in regard to communications with foul water and storm water sewers.

7. Analyses may be required.

(1) Upon receipt of a notice for communication with a public sewer, the authority may require fair and just samples of any gaseous, liquid or solid waste, sewage or effluent conveyed or to be conveyed to the sewer to be taken and analysed by any responsible and qualified person designated by it, who shall deliver to the authority true analyses of those samples.

(2) The costs and expenses connected with the taking and analysing of the samples shall be defrayed by the person or persons applying for permission to connect a drain or drainage works to the sewer.

(3) If, as the result of the analyses, the authority is satisfied that the gaseous, liquid or solid waste, sewage or effluent conveyed or to be conveyed by the drain or drainage works is of such a character as would be likely to cause a nuisance or be dangerous or be injurious, it may require to be installed upon the premises from which the gaseous, liquid or solid waste, sewage or effluent originates and at the expense of the person or persons applying for permission to connect the drain or drainage works to a sewer, a suitable screening and treatment plant and the gaseous, liquid or solid waste, sewage or effluent to be caused to pass through that plant.

8. Power to require special inspection chamber for taking samples.

An authority may require the owner or occupier of any premises from which any gaseous, liquid or solid waste, sewage or effluent is conveyed or will be conveyed to any sewer to construct on his or her premises, in connection with any pipe or channel conveying the gaseous, liquid or solid waste, sewage or effluent, an inspection chamber of such size (not being less in horizontal internal dimensions than 3' x 2' x 6") as it may think fit, and any duly authorised officer of the authority shall at all times have access to that chamber and may examine the character of the discharge from those premises.

9. Admission of storm water to a foul sewer.

An authority shall not approve of the admission of storm water into a foul sewer under section 80(2)(b)(ii) of the Act, unless the storm water or any drain for the conveyance of the storm water shall discharge directly into the open air over or into a trapped gully and above the level of the water in the gully, and unless any drain for the conveyance of storm water from the gully shall be constructed as though it were a drain for the conveyance of foul water, and shall comply with the rules prescribed for the construction and maintenance of foul water drains.

10. Only one lateral drain from a building to a sewer.

(1) Except where there are in the opinion of the authority special circumstances, there shall be only one lateral drain to any kind of sewer from a building or several buildings situated within the same curtilage.

(2) Where two or more buildings are or are to be drained in combination by a private sewer, except where there are, in the opinion of the authority, special circumstances, the whole of the respective drainage systems of each building shall be required to drain into the private sewer, and there shall be only one lateral drain connecting the private sewer with the public sewer.

(3) Subrules (1) and (2) of this rule shall not apply to such storm water downpipes as the authority may permit to discharge into the curb or open channel of any street.

(4) In every case where permission for more than one lateral drain is

granted by an authority under this rule, a report setting out the special circumstances for the grant of permission shall be made to the Advisory Board of Health.

Drainage works in public places and through private land.

11. Drainage works in streets and other public places.

(1) No person shall carry out any drainage works connected with any private premises in any street, sidewalk, access lane or other public place vested in or under the control of any authority, nor, in carrying out those works, disturb the surface of any street, sidewalk, access lane or other public place as aforesaid, without the consent in writing of the authority.

(2) The grant of a written consent by an authority for carrying out any drainage works as stated in subrule (1) of this rule shall automatically impose upon any person carrying out the drainage works the obligation to erect such barriers, hoardings and shorings and to take such precautions as may be necessary to ensure the safety of public and private services underground, on the surface or overhead and of the public at all times. The drainage works shall be carried out in a workmanlike manner and as expeditiously as possible to the satisfaction of the authority and under such conditions as it may impose.

(3) Nothing in this rule shall be held to impose any liability on the authority for any damage sustained by any person arising out of the carrying out of the drainage works referred to in this rule.

12. Drainage works through private land.

(1) Where, under section 82 of the Act, the owner of any premises intends to construct or repair a drain or private sewer in, on or over any land not owned or occupied by him or her and not forming part of a street, he or she shall give notice of his or her intention in Form D4 in the Schedule to these Rules to every owner or occupier of that land, and also to the authority, and shall inform the authority of the date on which the notice on the owner or, if more than one notice is required to be served, the date on which the last of such notices was served.

(2) The authority shall not proceed to consider the notice for the purpose of giving its consent under section 82 of the Act until the expiration

of twenty-one days from the date of the service of the notice on the owner or, if more than one notice was served, from the date on which the last of such notices was served.

(3) Upon the consideration of the notice the authority shall have regard to any objections to the proposed construction or repair of the drain or private sewer which may be sent to it in writing by any owner or occupier of the land affected or any land adjacent to it, and shall not give its consent to any such works unless it is satisfied that the works are, in the circumstances of the case, reasonable and necessary.

(4) The authority may make its consent dependent upon the modification of the works proposed in such manner as the authority may specify or may impose any other conditions which in the circumstances appear to it reasonable or necessary; but nothing in this rule shall be held to impose any liability on the authority for any damage sustained by any person arising out of the carrying out of such drainage works as aforesaid.

Miscellaneous provisions.

13. Forms.

The forms contained in the Schedule to these Rules shall, subject to any alterations or modifications which an authority may see fit to make, be used for the purpose to which they relate.

14. Drainage of new buildings and their sites and of extended, altered or repaired buildings.

(1) No person shall erect a building unless the whole of that building and its site can be effectually drained by the construction of foul water, storm and surface water and subsoil water systems of drainage capable of being connected with any available public sewer, cesspool, outfall or any other place into which the individual kinds of those systems of drainage may lawfully empty.

(2) No person shall extend or alter any building or carry out any repairs to a building where the extension, alteration or repair concerns any matters mentioned in these Rules unless the extension, alteration or repair shall conform in every manner with these Rules.

(3) Subrules (1) and (2) of this rule shall not apply to so much of the lowest storey of a building as comprises a cellar or basement intended for the purposes of storage only and constructed in a dry soil or so as to be impervious to water if the cellar or basement is not constructed at variance with any enactment for the time being in force relating to the construction of cellars or basements.

15. Cesspools and septic tanks not to discharge into sewers.

No person shall cause or permit any discharge or overflow from any cesspool or septic tank or any like receptacle of sewage or drainage to communicate in any way with any public sewer.

16. Maintenance of drainage works, etc.

(1) The owner or occupier of any premises shall, at his or her own expense, maintain all drains, drainage works, fittings and appurtenances in connection with the collection and disposal of foul and storm water constructed upon or in connection with the premises in an efficient and clean condition and in a proper state of repair and free from obstruction to the satisfaction of the authority.

(2) In all cases where two or more buildings owned or occupied by more than one owner or occupier are drained in combination by a private sewer, the owners or occupiers shall jointly and severally be responsible for the duty of, and for any costs and expenses incidental to, maintaining and repairing that private sewer.

17. Stoppage, etc. in drains.

(1) Upon receipt of information as to a stoppage, or to the existence of any injurious matters as set out in section 79(1) of the Act, in any closed drain constructed upon or in connection with any premises, the authority shall cause a written notice to be served upon the owner or occupier of the premises requiring him or her immediately to cause the stoppage or injurious matters to be removed.

(2) If the owner or occupier fails to comply immediately with the requirements of the notice under subrule (1) of this rule, or if the owner or occupier cannot immediately be found, the authority may itself cause the stoppage or injurious matters to be removed and may recover in a summary

manner as a civil debt the expenses incurred in so doing.

(3) Where two or more buildings owned by more than one owner or occupied by more than one occupier are drained by a combined system of drainage, the costs and expenses incidental to the removal of any such stoppage or injurious matters specified in this rule shall be apportioned between the owners or occupiers of those buildings in such manner as the authority shall determine, provided that where the stoppage takes place or the injurious matter exists in a section of any such drain used by one owner or occupier only the costs and expenses incurred in its removal shall be borne only by the owner or occupier of the building served by that section.

18. Trafficways over drains.

No person shall without the written permission of the authority alter or construct any drive, yard or car park where any part of the drive, yard or car park passes or is intended to pass over any drain.

19. Specifications for private sewers.

Private foul sewers not exceeding six inches in diameter shall in all respects conform to the requirements of these Rules relating to foul water drains, but foul sewers exceeding six inches in diameter shall be constructed in accordance with specifications approved by the Advisory Board of Health and tested in such manner as the authority may require.

Plans, execution and testing of drainage works.

20. Plans and particulars to be submitted to the authority.

(1) Every person who notifies an authority of his or her intention to erect or make any alterations or additions to a building under rule 6 of the Public Health (Building) Rules, and every person who intends to connect the drainage system of any existing building with any public sewer or to carry out any drainage work shall furnish the authority with plans and particulars set out in Form D1 in the Schedule to these Rules; except that the owner or occupier of any building who intends, or is required by the authority under the Act, to make any alterations or additions to any existing drainage works in connection with the building shall furnish the authority with such plans and particulars as the authority may require.

(2) An authority may disapprove of any plans submitted under these Rules on the ground that they show a contravention of or do not comply with any provision of these Rules.

21. Approval of plans, etc.

The authority shall have the same powers of approving or withholding approval of drainage plans and notices of alterations or additions to drainage works as it has in regard to building plans under any building or other rules for the time being in force.

22. Requirements and fees for plans.

(1) All drawings, plans and descriptions shall be furnished in quadruplicate of which one copy shall be on linen.

(2) Three copies (including the linen copy) shall become the property of and be retained by the authority and the fourth, on approval, shall be signed and returned to the applicant.

(3) All drawings and plans submitted in accordance with these Rules shall be of a quality approved by the authority, and the authority may refuse to approve any drawings and plans which are not of a reasonable standard of draughtsmanship.

(4) The Minister may by statutory instrument prescribe a fee or fees to be paid to an authority when any drawings or plans are submitted or resubmitted in amended form under these Rules.

23. In urgent cases work may be carried out before submission of plans.

Notwithstanding anything in these Rules, where, in consequence of an existing nuisance or a case of infectious disease on any premises, the carrying out of any drainage work on those premises is a matter of urgency, a medical officer of health may issue a certificate of urgency to the owner or occupier of those premises, and thereupon the owner or occupier may proceed immediately to carry out the work before submitting to the authority the plans and particulars required by these Rules, but in that case he or she shall without delay notify the authority that the work is being so carried out; and—

- (a) the plans and particulars shall be submitted to the authority within fourteen days of the commencement of the work; and
- (b) nothing in this rule shall be deemed to relieve the person carrying out the work from the necessity of complying, in the carrying out of the work, with these Rules and any other law for the time being in force.

24. Notice to be given of commencement of work.

(1) Every person who intends to carry out any drainage work shall, unless he or she has been issued with a certificate of urgency under rule 23 of these Rules, give to the authority in writing at least forty-eight hours' notice, excluding Sundays and public holidays, of the date on which the work is to be commenced.

(2) The submission of plans or particulars as provided in rule 20 of these Rules shall not be deemed to be a notice under this rule.

(3) If for any reason the execution of any drainage work has been suspended for more than seven days, notice as provided in subrule (1) of this rule shall be given to the authority of the date on which the work is to be resumed.

25. Inspection and testing of work.

- (1) Every person who carries out any drainage work shall—
 - (a) notify the authority in writing in Form D2 in the Schedule to these Rules, as soon as the whole of the work is ready for inspection and testing by the authority, and before covering up the work; and
 - (b) afford to any duly authorised officer of the authority every facility for inspection and testing of the work as the officer may deem necessary.
- (2) No person shall—
 - (a) cover up any drainage work until it has been passed as satisfactory by the duly authorised officer of the authority, unless the authority has failed to cause the work to be inspected or tested within fourteen days of the receipt by it of the notice referred to in subrule (1)(a) of this rule; or
 - (b) use or permit to be used any drainage work until the work has,

after final inspection and testing, been passed as satisfactory by the duly authorised officer of the authority, unless the authority has failed to cause the final inspection or testing to be carried out within fourteen days of the receipt by it of the notice referred to in subrule (1)(a) of this rule.

(3) When any drainage work has been passed as satisfactory after inspection and testing as provided in this rule a certificate in Form D10 in the Schedule to these Rules shall be issued by the duly authorised officer of the authority to the person who carried out the work.

26. Testing and condition of new drainage works.

(1) The tests to be applied to new drainage works shall be as follows—

(a) every pipe drain intended to be used for the carriage of foul water shall be subject to and shall be required to pass a test by either of the following methods at the discretion of the person applying the tests—

(i) the drain to be tested shall be filled with water so that it is under a head of water not less than two feet nor greater than ten feet; if it is necessary, a square junction shall be inserted on steep gradients so that the maximum head shall not be exceeded on any portion of the drain and the drain tested in sections. On completion of the required tests, the square junction shall be sealed as specified in rule 34(3) of these Rules. Where the fittings to any drain, other than a cast iron or steel drain passing under or through a building, are such that it is not possible to obtain a maximum head of 2 feet of water, the maximum head possible shall be applied. The maximum permissible loss of water in any nonmetal drain under test shall be 1 cubic inch in five minutes for every 10 linear feet of 4-inch diameter drain under test and 1½ cubic inches in five minutes for every 10 linear feet of 5- and 6-inch diameter drain under test. Cast iron and steel drains shall be required to be absolutely watertight and may be subjected to a water pressure test of 10 pounds per square inch;

(ii) the test shall consist of air under pressure in the pipes holding up a column of water of ¾ inch diameter and 5 inches high. The drain shall be deemed to pass the test if

the column of water shall not fall more than ½ inch in one leg in five minutes;

- (b) inspection chambers shall be tested by filling them with water to a depth not exceeding 10 feet and shall be required to prove absolutely watertight;
- (c) soil and vent pipes shall be tested by subjecting them to an air pressure test equivalent to 5 inches of water. The pipes shall be passed if they withstand the test for five minutes and are absolutely airtight.

(2) Any defects which may be found as the result of the tests as set out in subrule (1)(a), (b) and (c) of this rule or otherwise shall immediately be made good in such a manner as to conform to these Rules.

27. Power to examine and test drains, etc. believed to be defective.

(1) Where it appears to an authority that there are reasonable grounds for believing that any latrine accommodation, drain, sewer, cesspool, soil pipe or wastepipe is defective or in such a condition as to be prejudicial to health or a nuisance, the authority may examine its condition, and for that purpose may apply any of the tests specified in subrule (2) of this rule, and, if necessary, open the ground.

(2) In the case of drainage works originally tested in the manner provided by rule 26 of these Rules, the test to be applied under the powers conferred by subrule (1) of this rule shall be any of the tests enumerated in rule 26, but in any other case the test shall be a smoke, chemical, coloured water or other similar test; except that in the case of any existing drain, soil-water fitting or soil pipe which is in, or which passes under or through, any building, the drain, fitting or pipe may be tested by any of the tests enumerated in rule 26 of these Rules.

(3) If on examination the sanitary convenience, drain, sewer, cesspool, soil pipe or wastepipe is found to be in proper condition, the authority shall, as soon as possible, reinstate any ground which has been opened by it and make good any damage done by it.

PART III—SPECIFICATIONS AND DETAILED REQUIREMENTS FOR THE
CONSTRUCTION OF FOUL WATER DRAINS AND THE ERECTION OF FITTINGS,
ETC.

28. Drain connected to sewer to comply with rules for new drains.

Any drain, drain fitting, soil-water fitting, waste-water fitting or pipe or appurtenance connected therewith, which forms part of a system of drainage connected or to be connected to any public sewer, shall comply in all respects with the specifications contained in these Rules; except that, with the written consent of the authority, any of those articles which existed before the 14th December, 1950, and which contravene any of these Rules may be used in connection with any drainage system connected or to be connected with a public sewer if the article is in a clean, sound, serviceable and sanitary condition to the satisfaction of the authority.

29. Laying of drains.

Every person who constructs any closed drain in connection with a building other than a drain constructed for the drainage of the subsoil of the site of the building or a drain constructed for the drainage of surface, storm or rain water only, except as herein otherwise provided, shall, in the construction of the drain, comply with the following requirements—

- (a) the quality and description of all materials and appliances, including pipes, cement, traps, shafts, etc. used in construction and repair of any such drain of any building shall be approved by the authorised officer of the authority, but shall not, in any case, be less in quality and specification than is provided by these Rules;
- (b) the drain—
 - (i) shall be of adequate size and shall not be larger than 4 inches in diameter, except where the authority considers larger pipes necessary. Branch drains from urinals shall be not less than 2 inches in diameter;
 - (ii) shall be laid with a proper fall, the fall being whenever practicable—

Drain conveying both waste water and soil water.

Diameter of pipe	2"	2½"	3"	4"	5"	6"
Maximum fall						1-20
Minimum fall	1-12	1-16	1-22	1-40	1-50	1-60

but, except in special circumstances, no drain conveying soil water only shall be laid with a fall exceeding—

Length of drain	Four inch diameter and over
Up to 15 feet	Unlimited fall
15 to 50 feet	1-8 fall
Over 50 feet	1-25 fall

- (iii) unless of cast iron or steel or constructed as described in this paragraph, shall not have less than 2 feet 6 inches of cover in a carriage drive or yard used by light traffic, 3 feet 6 inches of cover in a street and 1 foot 6 inches of cover in places other than as aforementioned. Where a drain of any material whatsoever is especially liable to injury from any cause, and in every case of pipes of material other than cast iron or steel which shall have less than the prescribed minimum cover, the authority shall require the drain to be entirely encased in 1:3:6 concrete at least 6 inches in thickness all round the drain;
- (c) the drain shall be laid with the barrel of the pipe on a good solid and even bed, free of irregularities and, if so required by the authority, the drain shall be laid on an adequate and efficient bed of concrete or supported upon a sufficient number of piers constructed of concrete. Pipes shall not at any time be laid—
 - (i) so that the sockets support them, but a hole shall be cut in the earth or concrete so that the socket hangs entirely free; the socket holes shall be filled solid with earth or concrete after the pipes have been tested;
 - (ii) on temporary supports and a concrete bedding or filling subsequently put under the pipe, but a concrete bedding where required shall be placed before the pipe is laid and where the pipe is laid on or in fresh concrete, the concrete shall be firm and without excess water and such that the bedded or laid pipe shall not subsequently move out of grade or alignment before the concrete has set, except that—
 - (iii) where any such drain as aforesaid is of any material other than cast iron or steel and is to be laid on made or unstable ground, the drain shall be laid on a bed of 1:3:6 concrete not less than 6 inches in thickness and projecting on each

side of the drain to an extent not less than 6 inches from the exterior of the barrel of the pipes, and the pipes shall be haunched with 1:3:6 concrete for the full width of the bed to the top of the barrel; and

- (iv) where any such drain as aforesaid is of cast iron or steel and is to be laid on made or unstable ground or above ground, the drain shall be supported on 12 inch square piers of concrete not less in strength than 1:3:6 mix and on an adequate foundation of similar grade concrete not less than 20 inches and 6 inches thick and the whole support if so required shall be adequately reinforced; one such pier shall be at the back of each socket of the pipes, and the distance between the centres of any two piers shall not exceed 9 feet; the pipes shall be supported on the piers on a cast iron or other suitable plate firmly fixed to the top of the piers, and lightly held in position by an iron or other suitable type strap coated against corrosion in the form of an inverted U with the ends firmly embedded in the pier and, if so required by the authority, rollers and an expansion joint shall be used;
- (d) if the drain is of pipes of cast iron or other metal approved by the authority jointed with ordinary socket joints, the joints shall be made with plain spun yarn and molten lead or lead wool properly caulked home and finished off 1/16 inch inside the socket; if the drain is jointed with flanged joints, the joints shall be securely bolted together after some suitable insertion for jointing has been placed between the flanges;
- (e) if the drain is of stoneware pipes or of pipes of material other than metal (other than pipes with patent joints acceptable to the authority), the joints shall be made with strands of tarred spun yarn, three or more in number as may be necessary only to hold the pipes concentrically, tightly driven into the socket, and the remainder of the socket shall be filled up with 1:3 cement mortar and bevelled off at an angle of 60° from the outside of the pipe to the outer edge of the socket all around. All sand used for jointing pipes, and fittings shall pass a 20 x 20 mesh sieve;
- (f) all lengths of pipe shall be laid true in a straight line and to one grade and so that there shall be a truly cylindrical bore throughout the whole length within the limits of deviation of a straight pipe prescribed in the following table which are those laid down in British Standard Specification No. 540 (1937)—

Length of pipe	Permissible deviation from straightness
2 feet	3/16 of an inch
2 feet 6 inches	1/4 of an inch
3 feet	5/16 of an inch

all joints of pipes and drain fittings shall be free of intrusions of any kind whatsoever;

- (g) if the drain is of cast iron, it shall conform to British Standard Specification No. 437 (1933) for cast iron drain pipes. The weight of the pipe in proportion to the diameter shall not be less than that laid down in the following extract from the above specification—

Internal diameter (inches)	Thickness of metal not less than (inch)	Minimum weight (including socket and spigot)
2	—	42 lbs. per 6 feet
3	5/16	98 lbs. per 9 feet
4	3/8	157 lbs. per 9 feet
5	3/8	186 lbs. per 9 feet
6	3/8	225 lbs. per 9 feet

All specials and fittings shall conform to the relevant British Standard Specification where it exists; but where the drain is a lateral drain of cast iron under the foregoing specification the lateral drain shall have a minimum cover of 2 feet and shall otherwise be in accordance with paragraph (b)(iii) of this rule;

- (h) if the drain is of stoneware, the thickness of the pipes, the depth of the sockets and the annular space for the cement in proportion to the diameter shall not be less in any case than is prescribed in the following extract from British Standard Specifications No. 65 (1937) and No. 540 (1937)—

Internal diameter (inches)	Thickness of pipe (inch)	Depth of socket (inches)	Annular space for the cement (inch)
3	7/16	2	5/16
4	1/2	2	3/8
5	9/16	2 1/4	7/16
6	5/8	2 1/4	7/16

- (i) if the drain is of steel, the pipes and specials shall conform to the British Standard Specification No. 534 (1934) for steel socket and spigot pipes. Coverings or linings shall not show any tendency to flow or creep at a temperature of 170• Fahrenheit.

The thickness of the pipes and specials shall not be less in any case than is prescribed in the following extract from the above specification—

Nominal bore of pipe (inches)	External diameter (inches)	Thickness S.W.G.	Inches
3	3.76	11	0.116
4	4.80	10	0.128
5	5.90	9	0.144
6	6.98	8	0.160

- (j) if the drain is of asbestos cement or other material not hereinbefore specifically mentioned but approved by the authority, the pipes, specials and fittings shall conform in all respects to the relevant British Standard Specification where it exists;
- (k) if the drain has bends, junctions, gullies, traps or other drain fittings of either salt-glazed ware or salt-glazed glass enamelled fireclay, the drain fittings shall comply in all respects with British Standard Specification No. 539 (1937);
- (l) no joint of the drain shall be built into any wall or foundation except where any other mode of construction is impracticable;
- (m) the annular space in any joint shall not be less than one-quarter inch at any point;
- (n) except as hereafter provided, and then only where other means of drainage are impracticable, a person shall not construct a drain or

a building so that the drain passes under or through the building; but where a drain is constructed under or through a building—

- (i) the drain shall be of cast iron or steel or, if of other material, shall be completely surrounded with 1:3:6 concrete at least 6 inches in thickness all round the pipes; or the drain if of cast iron or steel may be carried above ground and supported by a sufficient number of iron, steel or other suitable brackets or upon a sufficient number of suitable piers constructed of iron or cement concrete as specified in paragraph (c)(iv) of this rule;
- (ii) any drain laid under or through a building shall be laid in a direct line and to one grade from chamber to chamber, situated outside the building; where this is impracticable an intermediate chamber or access box constructed in accordance with rule 37(8) of these Rules shall be provided at any change in direction or grade;
- (iii) in every case where any such drain is laid beneath or through a wall, the drain shall be protected by means of an arch, lintel or suitable metal support of sufficient size and strength to prevent any disturbance or other injury to the drain, and there shall be at least 2 inches clearance all round the drain;
- (iv) subparagraphs (i), (ii) and (iii) of this paragraph shall not apply to the nonmetal pipes and fittings, not exceeding 8 feet in horizontal length, which may be necessary for the direct connection of a soil water fitting with a drain if the nonmetal pipes and fittings are securely embedded in 1:3:6 concrete at least 6 inches in thickness all round the pipes.

30. Drop leads or back drops.

(1) Where such action may be necessary to maintain the correct fall of any drain, a drop lead or back drop shall be constructed either outside or inside an inspection chamber at the junction of the drains.

(2) Where the drop is on a branch drain and is greater than 2 feet in height and the branch drain is likely to carry an almost continuous flow, the invert of the branch drain below the drop lead shall be constructed as the lowest invert in the inspection chamber; and all other drains emptying into that inspection chamber shall do so at half channel height above that lowest invert.

(3) Drop leads may be made in accordance with one of the following methods—

- (a) an external drop lead may be constructed immediately outside the walls of inspection chambers, with vertical pipes on gradients not exceeding 1 in 20 or with pipes at 45° for gradients steeper than 1 in 20. In either case a properly curved double spigot drop lead junction shall be used in conjunction with a 90° or 45° bend at the bottom, the bend being not less than 18 inches in length. The straight arm of the junction shall be extended, bedded firmly on the concrete filling mentioned below and haunched with 1:3:6 concrete to the inside wall of the inspection chamber to provide access for rodding. The drop lead may be constructed in any approved type of drain pipes, but in any case all pipes shall be surrounded with 1:3:6 concrete at least 6 inches in thickness outside the pipes; and the whole of any excavation below the normal line of drain in connection with the construction of the drop lead shall be filled with 1:3:6 concrete after the pipes are laid;
- (b) an internal pipe drop lead may be constructed inside inspection chambers if the pipes are of cast iron or steel in accordance with rule 29(h) and (j) of these Rules. The bend at the top of the drop lead shall be of 90° with a rodding eye which shall be so placed as to be readily accessible, and the bend at the bottom shall be of 90° firmly embedded in the benching of the inspection chamber; and where the vertical pipe between the two bends exceeds 4 feet in length, the vertical pipe shall be firmly secured to the wall of the inspection chamber. In every case the horizontal dimensions of the inspection chamber shall be increased in one direction by an amount not less than the greatest horizontal projection of the drop lead into the inspection chamber and in the other direction by the external diameter of the pipe; or
- (c) notwithstanding the requirements of subrules (1) and (2) of this rule, a ramp may be formed in the floor of any inspection chamber where the difference in level between two drains does not exceed 2 feet. The invert of every ramp shall be made as a double and reverse vertical bend and shall be so constructed as to permit the easy and satisfactory insertion of testing appliances into the drain, and no branch drain shall enter the inspection chamber in the area occupied by the ramp; nor shall any branch drain enter the inspection chamber unless the inspection chamber

is increased in size by an amount equal to the area occupied by the ramp.

(4) Notwithstanding the requirements of rule 37(1)(e) of these Rules, where a drop lead is constructed in cast iron or steel and the length of the horizontal pipe does not exceed 8 feet and a wide socketed special pipe is used, the drop lead may be continued upstream as a nonmetal drain; but 1 foot of the metal drain and 4 feet of the adjacent nonmetal drain shall be surrounded with 1:3:6 concrete at least 6 inches all round.

31. Inlets to drains to be trapped.

(1) Every person who constructs any such drain as is described in rule 29 of these Rules shall cause every inlet to the drain, not being an inlet from a soil-water fitting, or provided as an opening for the ventilation of the drain, to be properly trapped by an efficient trap so constructed as to be capable of maintaining a sufficient water seal.

(2) No person shall construct or fix in or in connection with any such drain any trap which has not been approved by the authority.

32. Junctions and joints.

(1) Every branch drain or tributary drain shall, at the point of junction, join another drain obliquely in the direction of the flow of the drain and at half channel height above the main channel.

(2) All bends and turnings shall be truly curved and any alteration in the size of the drain shall be properly tapered and of good shape.

(3) If any bend, junction, pipe or any drain fitting is cropped, trimmed or shortened in order to make it fit, the end face of the bend, junction, pipe or fitting, after it has been cropped, trimmed or shortened, shall be fair and in one plane and not more than 5° from the square section of the bend, junction, pipe or fitting at the point of the cropping, trimming or shortening.

(4) When any bend, junction, pipe or drain fitting, whether whole or part only, is fitted and joined to any other bend, junction, pipe or drain fitting, the centre lines or tangents at the point of junction of the two articles when fitted and joined shall not be at a greater angle than 5° from the straight.

(5) Knuckle bends shall not be used except at the foot of a ventilating pipe unless no other type of bend is serviceable and then only with the consent of the authority.

33. Connections with public sewers.

A connection with a foul public sewer shall be made by means of a 45° junction or branch pipe provided for the purpose or, if this does not exist, by means of a saddle junction or by cutting out a pipe on the sewer and inserting a suitable junction pipe.

34. Lateral drain for foul water.

(1) A lateral drain shall where practicable be laid in one direct line from the intercepting chamber to a foul sewer, and the fall for a 6-inch diameter pipe may be greater than 1 in 20.

(2) A square junction shall be inserted in the lateral drain as near to the sewer connection as possible, in order that a stopper may be inserted in the drain for testing purposes.

(3) On the completion of the required test, the square junction shall be sealed and surrounded with 1:3:6 concrete at least six inches in thickness all round.

(4) It shall not be permissible for more than one bend to be inserted between the interceptor and the sewer connection or for two or more interceptors to discharge into the same lateral drain, except that—

- (a) where the sewer is over 10 feet to invert, a ramped pipe not less than 7 feet long shall be allowed in conjunction with a maximum change of vertical direction of 45° from the horizontal;
- (b) where on a deep sewer a vertical pipe constructed at the same time as that sewer exists and finishes either with or without a bend to the horizontal and either with or without a junction, a connection may be made to the vertical pipe, bend or junction;
- (c) where, although the sewer is less than 10 feet in depth to the invert, the proximity of the interceptor to the sewer is such that a bend jointed to the interceptor is necessary in order to make a fair joint and give the required rake to the lateral drain, the bend may be used; and

- (d) where a direct line from the sewer junction to the interceptor is crossed by a water main, storm water drain or other public service, an extra bend may be used.
- (5) Any bend in connection with a lateral drain shall be securely bedded on 1:3:6 concrete at least four inches thick.
- (6) If so required by the authority in order to prevent possible movement, the bend near the connection to the sewer shall be backed with 1:3:6 concrete between it and the sewer.
- (7) Where the cover to the pipes in a highway or carriage drive is less than 3 feet 6 inches, the mode of construction shall be—
 - (a) stoneware or pipes other than of cast iron or steel surrounded with at least 6 inches of 1:3:6 concrete; or
 - (b) cast iron pipes or steel pipes.

35. Inserting saddle junctions, etc.

- (1) A saddle for a pipe other than a pipe of cast iron or steel shall be of the oblique type only and of correct size and shape to fit the pipe to which it is to be joined, and when fitted shall not project through the internal circumference of the pipe.
- (2) The hole over which the saddle is to sit shall be carefully cut out to the required shape, and the remaining pipe must not be cracked or damaged in any way.
- (3) The saddle shall be firmly jointed to the pipe with 1:3 cement mortar and set on a bed of 1:3:6 concrete.
- (4) Unless the joint is made with cement mortar and concrete containing a quick setting substance, the joint must be allowed to set for twenty-four hours before the next pipe is laid to the saddle.
- (5) In any case the saddle shall be inspected by the authority before the next pipe is laid.
- (6) When an ordinary junction is to be inserted in a pipe line, the pipe to be removed shall be carefully cut away so as not to damage any of the pipes which are to remain—

- (a) in order to facilitate the operation in a socketed pipe line other than of cast iron or steel, the top half of the socket of the pipe immediately down stream of the one to be taken out and the top half of the socket of the junction to be inserted shall be cut off; the junction shall be put in upside down and turned over into position. The sockets shall be made good and surrounded with 1:3:6 concrete when the new junction is in position; and
- (b) in the case of cast iron or steel pipes, a junction shall be inserted and a loose collar used to make the joints at the two spigot ends.

(7) Where a pipe drain is of patent joints other than of the socketed (plain or patent) type, the authority may permit the removal of a section of the drain and the replacement of the section by a junction pipe either of a socketed type or double spigot type and jointed into the drain in such manner as the authority may determine.

36. Drains to be trapped from public sewers.

(1) All drains communicating with any public sewer shall be provided with an approved intercepting trap and an efficient water seal having a vertical drop of 2 inches from the invert of the inlet channel to the maximum level of the water seal and an inspection or rodding arm not less than 4 inches in diameter with an airtight stopper.

(2) The interceptor shall be placed at a point as near as may be practicable to the public sewer and within the curtilage of the building which the drains serve. The interceptor shall be set on, and that portion outside the walls of the inspection chamber shall be surrounded by 1:3:6 concrete, 4 inches thick, and shall be constructed in conjunction with an inspection chamber built in accordance with rule 37 of these Rules.

- (3) Notwithstanding subrules (1) and (2) of this rule—
 - (a) with the written permission of the authority and when any other position is impracticable, the inspection chamber and interceptor may be constructed in a street or other suitable place; and
 - (b) where a private sewer or system of private sewers is connected to a public sewer and the private sewer is ventilated in accordance with the general arrangements for public sewers and each separate connection to the private sewer is trapped by means of an intercepting trap as provided for by subrules (1) and (2) of this rule, the authority may dispense with the provisions of subrules

(1) and (2) of this rule.

(4) No person shall remove or cause to be removed in any circumstances the stopper sealing the inspection or rodding arm in the interceptor except for the purpose of inspecting or cleaning the lateral drain or outfall pipe and then only in the presence of a responsible officer of the authority.

(5) When the stopper has been removed it shall be replaced in an airtight condition immediately upon the completion of the inspection or cleaning.

(6) The stopper shall not in any circumstance whatsoever be left out from or loosely placed in the inspection or rodding arm so as to allow of the passage of any liquid, solid or gaseous matter, in either direction, through the arm.

(7) The occupier, or if there is no occupier, the owner of a building which is served by the intercepting trap shall be responsible if the stopper is inefficient or is misplaced.

(8) Where the authority so requires, every such stopper shall be held in position by a metal bar, or other efficient locking contrivance, fitted with a chain attached to a metal hook not less than three-sixteenths inch in thickness fixed to the wall not more than 3 inches from the underside of the inspection chamber cover or slab.

37. Provision of inspection chambers in connection with drains.

(1) Every person who constructs any closed drain in connection with a building shall cause adequate and efficient inspection chambers to be provided in the following positions—

- (a) at every point in the drain where two or more drains shall converge; except that notwithstanding rule 32 of these Rules and subrule (11) of this rule, the authority may grant permission for the use of curved oblique junctions, together with, if so required, a long bend not greater than 45°; for the connection of a branch drain from a rodding eye gully trap to a main drain. The junction shall be made in the direction of flow, and at an angle with the main drain of not more than 45°. Opposite junctions shall not be permitted;

- (b) at every point in the drain where there shall occur any angle, bend, deviation from a direct alignment, change in gradient, difference in level or alteration in size; except that pipe bends shall be allowed without an inspection chamber, for the necessary connection of soil pipes, gullies, soil-water fittings and the like to a drain, if the bends are surrounded on all sides by at least 4 inches of 1:3:6 concrete;
- (c) at such points that no part of the drain shall be more than 50 feet distant in the length of the drain from the centre of an inspection chamber; except that—
 - (i) no connection shall exceed 20 feet in length, measured from a gully trap without an approved rodding eye, soil pipe or soil fitting to the centre of an inspection chamber; and
 - (ii) in private sewers exceeding 6 inches in diameter it shall be permissible to provide inspection chambers or manholes at such points that no part of the sewer shall be more than 250 feet distant in the length of the sewer from the centre of an inspection chamber or manhole;
- (d) where the drain communicates with a sewer or any private sewer communicates with a public sewer, within or without the curtilage of a plot, at a point as near as practicable to the point of entry of the drain into the sewer or of the private sewer into the public sewer. The inspection chamber shall contain the interceptor and shall be termed the intercepting chamber; except that where an authority has agreed to dispense with an interceptor in accordance with rule 36(3)(b) of these Rules the inspection chamber or manhole shall be built at the junction of a private sewer with the public sewer and in a manner to be determined by the authority; and
- (e) where in the drain there is a change in the type of pipe from metal to nonmetal or vice versa.

(2) Every inspection chamber shall be of such internal dimensions as the authority shall require, except that the finished internal horizontal dimensions of inspection chambers shall be governed by the number of inlets and that in any event the minimum internal dimensions of these chambers shall be—

Depth to invert	Size
(a) up to 1' 6"	1' 6" x 1' 6"
(b) up to 3' 0" if exceeding 1' 6"	2' 0" x 1' 6"
(c) up to 5' 0" if exceeding 3' 0"	3' 6" x 2' 0"
(d) if greater than 5' 0"	3' 6" x 2' 6"

(3) The dimensions shall not, except with the permission of the authority and subject to such conditions as the authority may prescribe, be reduced throughout the entire height of the chamber from the benching to the underside of the cover or slab.

(4) The foundations of inspection chambers shall be constructed of 1:3:6 concrete and shall extend over the whole area covered by the inspection chambers.

(5) The minimum thickness of the foundations below the underside of the lowest channel shall be—

- (a) 5 inches, where the depth to invert does not exceed 5 feet;
- (b) 8 inches, where the depth to invert is more than 5 feet,

except that where in the opinion of the authority the ground is unstable, pile, reinforced concrete or concrete foundations of a depth and superficial area required by the authority shall be provided.

(6) Every inspection chamber shall be constructed of brickwork built in 1:3 lime mortar or 1:4 cement mortar or of 1:3:6 concrete, not less than 5 inches in thickness (including the cement rendering) where the walls are not more than 3 feet in height, and not less than 9½ inches in thickness (including the cement rendering) in any other case, and shall be watertight up to the level of the adjoining ground surface, and shall be rendered with 1:3 cement mortar at least ½ inch in thickness and finished with a smooth surface; except that, if the concrete is finished to a smooth surface and free of honeycombs, it shall not be necessary to render the walls.

(7) The cover slabs of inspection chambers (when the slabs are permitted) shall be of 1:2:4 concrete and—

- (a) not less than 4 inches thick, where the shortest span does not exceed 3 feet, and with adequate mild steel reinforcement suitably placed; or
- (b) not less than 6 inches thick, where the shortest span does not

exceed 4 feet 6 inches and with adequate mild steel reinforcement suitably placed,
but in situations where inspection chamber covers specified in subrule (9)(c) of this rule are permissible and where the shortest span does not exceed 4 feet 6 inches, cover slabs may be not less than 4 inches thick with adequate mild steel reinforcement suitably placed.

(8) In the case of drains which pass under or through buildings and which do not pass in a straight line or in one grade from chamber to chamber situated outside the building, an intermediate chamber or chambers shall be built with walls not less than 9 inches thick, rendered in 1:3 cement mortar not less than $\frac{3}{4}$ inch thick inside. The cover shall be of the double cover screw-down type on rubber or other watertight and airtight seating and shall be made and maintained watertight and airtight; except that, where the drain is of cast iron or steel and it is impracticable to build an intermediate chamber as provided in this subrule, a suitable watertight and airtight cast iron or steel access box junction or bend shall be used.

(9) Every inspection chamber shall be fitted with a strong, movable airtight cast iron manhole cover and frame of fine quality metal and of adequate size and approved design and construction, fixed not lower than the surface of the adjoining ground or floor and so that surface or rain water cannot course over it. The frame shall be securely bedded on 1:3 cement mortar with an adequate fillet all round outside so that it shall not move. The minimum sizes of clear opening for covers for inspection chambers referred to in subrule (2)(a) of this rule shall be 18" x 18" and for those referred to in subrule 2(b), (c) and (d) of this rule shall be 24" x 18". The weights and types of manhole covers shall in all cases be such that they shall be sufficiently strong to bear any traffic which it is considered by the authority likely to pass over them but the combined minimum weight of covers and frames, excluding inside sealing covers or plates, shall not be less than—

- (a) in private carriage ways subject to use by light vehicles only and in public footpaths—
 - Size 18" x 18" weight $\frac{3}{4}$ hundredweight
 - Size 24" x 18" weight 1 hundredweight
 - Size 24" x 24" weight $1\frac{1}{2}$ hundredweight;
- (b) in all places subject to the passage of any vehicles other than those mentioned in paragraph (a) of this subrule—
 - Size 18" x 18" weight $2\frac{1}{4}$ hundredweight
 - Size 24" x 18" weight 3 hundredweight
 - Size 24" x 24" weight $3\frac{3}{4}$ hundredweight;

- (c) in positions within a curtilage where it is impracticable for vehicular traffic to pass over the inspection chamber—
 - Size 18" x 18" weight 42 pounds
 - Size 24" x 18" weight 56 pounds
 - Size 24" x 24" weight 112 pounds.

The weights of covers of sizes which are not specified in paragraphs (a), (b) and (c) of this subrule shall be in the same proportions to sizes as those specified in those paragraphs respectively, except that covers of special types and manufacture may be used if approved by the authority and if of at least equivalent strength to those specified in this subrule.

(10) Where the depth of an inspection chamber is less than 3 feet from ground level to invert, it shall have a movable cast iron cover or covers of the entire internal horizontal dimensions of the chamber; and where a chamber is greater than 1 foot 6 inches and less than 3 feet in depth, no one cover shall have a clear opening less than 432 square inches in area or 18 inches in width, the whole of the opening being situated within the internal horizontal limits of the chamber.

(11) Branch drains shall discharge into the main channel by means of splay channel bends. A pipe, whether of a branch drain or of the main drain, shall not project inside the walls of an inspection chamber by more than 2 inches. Channels shall be of salt-glazed or glazed fireclay ware of half round or three-quarter section as may be required to prevent riding or splashing, or at the discretion of the authority and where the authority is satisfied that the standard of workmanship is satisfactory, of 1:3 cement mortar, well formed and rendered smooth. Where the continuous pipe system is used, level invert junctions and bends with access boxes may be used in conjunction with an inspection chamber.

(12) The sides of the channels in every inspection chamber shall be brought up vertically to a height not less than the diameter of the drains and in any event sufficiently high to prevent riding or splashing from branch drains, and shall be in 1:3:6 concrete; the benching shall be sloped up from the tops of the channels at an angle not less than 20° nor more than 30° from the horizontal and rendered with 1:3 cement mortar of at least ½ inch thickness, finished with a smooth surface; except that a benching shall not be so high above the invert as to prevent easy access to the drain.

(13) No person shall cover up or allow to be covered up the cover or

covers of any inspection chamber or access box so that it is not readily located and easy of access.

(14) If an inspection chamber is so placed that the cover is liable to be submerged or partially submerged, by reason of floods or from any other cause, the inspection chamber shall be provided with a cover of the double cover screw-down type in accordance with subrule (8) of this rule.

38. Ventilation of drains.

(1) Every person who constructs any closed drain in connection with a building shall, for the purpose of securing efficient ventilation of the drain, comply with the following requirements—

- (a) at least one untrapped opening shall be provided to the drain, which opening shall be situated as far distant as may be practicable from the point at which the drain communicates with a sewer, septic tank or cesspool, and an additional untrapped opening shall be provided at the upper extremity of every branch drain not less than 4 inches diameter which exceeds 20 feet in length or which if less than 4 inches diameter exceeds 12 feet in length and which receives any soil water or waste water. The untrapped opening shall be obtained by carrying up vertically a pipe or shaft, of an internal diameter of not less than 4 inches in the case of the main drain or in the case of a branch drain not less than the diameter of the drain with which it is immediately connected, to such a height and in such a position as to afford by means of the open end of the pipe or shaft a safe outlet for foul air and so as effectually to prevent any escape of foul air from the pipe or shaft into any building in its vicinity, and in no case to a less height than 3 feet above the eaves of any adjoining roof or to a less height than 5 feet above the top of any window, door, ventilator, chimney not carried up as a stack with an enclosed flue or other opening into a building which shall be within an unobstructed distance of 20 feet horizontally from the open end of the pipe or shaft, whichever shall give the higher vent, or to a less height than 10 feet above the adjoining ground level. The pipe or shaft, if unsupported for a length of more than 4 feet, shall be properly stayed with not less than two mild steel rods at least $\frac{3}{8}$ -inch in diameter or 0.11 square inches in cross sectional area, protected against corrosion; except that the soil pipe of any water closet, in every case where the situation, sectional area, height

and mode of construction of the soil pipe is in accordance with requirements applicable to the pipe or shaft to be carried up from the drain, may be deemed to provide the necessary opening for ventilation which would otherwise be obtained by means of the last-mentioned pipe or shaft;

- (b) except where unavoidable, no bend or angle shall be made in any pipe or shaft used in connection with any of the arrangements hereinbefore specified;
- (c) every pipe or shaft used in connection with any of the arrangements specified in subrule (1)(a) shall be adequately protected at the top by copper or brass mosquito gauze, which shall be securely fixed in such manner as to prevent the passage of mosquitoes and shall be constructed in the same manner and of the same material and weight as if the pipe or shaft were a soil pipe; except that an approved grating, wire cage or basket may be substituted for mosquito gauze with the approval of the authority.

(2) In every case where any such drain communicates with a sewer, septic tank or cesspool, there shall be provided a second ventilating opening to be known as a fresh air inlet, not less in area than the pipe to which it is attached, and being not less than 12 inches and not more than 6 feet above the level of the surface of the ground adjoining the fresh air inlet.

(3) The fresh air inlet shall in every case be connected to the drain by means of a pipe or shaft communicating with the intercepting chamber of an internal diameter throughout its entire length not less than that of the largest drain emptying into the intercepting chamber; but—

- (a) where a branch drain emptying directly into the intercepting chamber is of an internal diameter not less than that of any drain emptying into the interceptor and does not exceed 50 feet in length, the second opening may be placed at the head of the branch drain in place of any other means of ventilation, if the authority so approves; and
- (b) where in accordance with rule 36(3)(b) of these Rules the authority dispenses with the provision of an intercepting trap in connection with any private sewer communicating with any public sewer, it shall not be necessary to provide a fresh air inlet to the private sewer.

(4) Every pipe or shaft which is constructed so as to provide any such second opening as provided in subrules (2) and (3) of this rule shall be

constructed in the same manner and be of the same material and weight as if the pipe or shaft were a drain pipe or a soil pipe either below or above ground, as the case may be, and shall be provided with an adequate and efficient inlet valve protected by a louvre or hood securely jointed to it at the point at which it opens to the external air. The face or frame of the valve shall not be of stamped brass.

(5) Every pipe or shaft referred to in subrule (4) shall be adequately protected by a copper or brass mosquito gauze which shall be securely fixed in an accessible position for inspection and in such a manner as to prevent the passage of mosquitoes.

(6) The vertical portion of the pipes of the fresh air inlet to the drain shall be of cast iron and shall be bedded at the foot in a block of 1:3:6 concrete, 15"x15"x15" and the upright pipe shall be securely fixed to a wall or other suitable stay if the top of the pipe is more than 2 feet above the level of the block of concrete.

39. No inlet to a drain inside a building.

No inlet to a drain, except such inlet as may be a necessary part of the connection of any water closet, urinal or slop hopper, shall be made within a building; except that—

- (a) where other means are impracticable, a trapped gully fixed inside a building and fitted with a suitable grating may be permitted to receive the discharge from a waste-water fitting, and the connecting drain to the gully shall be vented at a point as near as possible to the trap, and the venting shall conform in construction with rule 44(q) of these Rules for antisiphon pipes; and
- (b) this rule shall not be construed as prohibiting the fixing of, or requiring the ventilation of, the connecting drain to a trapped gully on a ground floor verandah or any portion of the verandah, so constructed as to be permanently open, but no verandah or portion of the verandah shall at any time be enclosed with wire gauze or other material without the written permission of the authority and then only subject to the wastepipe being ventilated and the gully trap fitted with a sealed cover; a gully trap fitted in either an open or closed verandah as permitted by this provision shall be so arranged as to prevent the ingress of storm or surface water to the satisfaction of the authority.

40. Soil and vent pipes.

Every person who provides a soil pipe or a soil vent pipe in connection with a building shall, in the providing and fixing of the soil pipe or vent pipe, comply with the following requirements—

- (a) every soil pipe or vent pipe shall be permanently and easily accessible for inspection or repairs;
- (b) soil or vent pipes may with the permission of the authority be fixed within a building or in an external chase, and shall be subject to the following further conditions—
 - (i) if any soil or vent pipe is fixed in a chase or duct, movable access covers shall be provided in the chase or duct at all inspection points in the soil or vent pipe;
 - (ii) any soil or vent pipe inside a building shall be of cast iron or other approved metal and shall have airtight socket joints;
 - (iii) no soil or vent pipe shall pass through any habitable room unless enclosed in a duct constructed in such manner and of such material as shall be approved by the authority;
 - (iv) in no case shall any soil or vent pipe be encased within the masonry of the walls;
- (c) the soil pipe or vent pipe shall—
 - (i) be constructed of cast iron, asbestos cement or other equally suitable material approved by the authority. If the soil pipe or vent pipe is constructed of cast iron, it shall comply with British Standard Specification No. 416 (1935) and shall be at least of “medium” grade, and if constructed of asbestos cement shall comply with British Standard Specification No. 582 (1934). If the soil pipe or vent pipe is of other approved material, it shall comply with the relevant British Standard Specification where one exists;
 - (ii) be jointed in accordance with rule 29(d) and (e) of these Rules. In every case joints shall be finished off outside the socket with a splay so as to prevent the lodging or ingress of water; but the soil pipe or vent pipe may be jointed in any manner or with any material not referred to in this paragraph if the manner or material is approved by the authority;
- (d) the soil pipe or vent pipe shall not be connected with any rain water pipe or with any wastepipe or waste-water fitting;
- (e) there shall not be any trap in the soil pipe or vent pipe or between

the soil pipe or vent pipe and any drain with which it is connected;

- (f) the bend at the foot of the soil pipe or vent pipe shall be surrounded on all sides by at least four inches of 1:3:6 concrete, and there shall be provided in the soil pipe or vent pipe adequate means of access, above the adjoining ground level and at a height not exceeding 2 feet above that level, unless, in the drain to which the soil pipe or vent pipe is connected, there is an inspection chamber within 6 feet of the soil pipe;
- (g) the soil pipe shall be circular of an internal diameter of not less than 4 inches and shall be continued up without diminution of its diameter and, except where unavoidable, without any bend or angle being formed in the soil pipe to such a height and in such a position as is required under rule 38 of these Rules; except that—
 - (i) a soil pipe fitted in connection with a basin type urinal or other type of urinal may be not less than 1½ inches or 2 inches in diameter respectively;
 - (ii) where any soil pipe is not more than 8 feet in length it shall not be necessary to continue the soil pipe as a vent pipe, subject to rule 38(1)(a) of these Rules, but no such soil pipe which is less than 4 inches diameter shall be fixed at a greater angle than 70° from horizontal; and
 - (iii) where any soil pipe which is less than 4 inches diameter connects with any drain less than 4 inches diameter and the total lengths of the soil pipe and drain together exceed 12 feet, the soil pipe shall be continued up as a vent pipe in accordance with this paragraph;
- (h) no right-angled junctions shall be made in the soil pipe and every branch soil pipe shall join another soil pipe obliquely in the direction of the flow of the soil pipe and all bends and turnings shall be truly curved and shall not reduce the internal diameter of the pipe;
- (i) suitable provision for the purpose of access and inspection shall be provided to the soil pipe, by means of an adequate opening with screw doors and fastenings or with a screwed metallic cap or plug at every junction or change of direction or gradient in the soil pipe; except that where adequate means for through rodding have been provided in any straight section of the soil pipe by means of adequate openings at the opposite ends of that section, those provisions for access and inspection may be omitted in the

- (j) case of any junction in the straight section as aforesaid; and all soil pipes and soil fittings and joints in connection therewith shall be made and maintained in a sound and watertight condition.

41. Antisiphonage to soil pipes.

Where the authority considers it necessary for the prevention of siphonic action and in all cases where a soil pipe receives the discharge from more than one soil-water fitting, the following provisions shall be made—

- (a) the trap of the soil-water fitting shall be ventilated by an anti-siphon pipe which shall—
 - (i) have an internal diameter not less than 2 inches;
 - (ii) be connected with the arm of the soil pipe at an approved point within 30 inches from the highest part of the trap, on that side of the water seal which is nearer to the soil pipe;
 - (iii) either have an open end as high as the top of the soil pipe or be carried into a soil pipe at a point above the highest connection to the soil pipe;except that it shall not be necessary to provide an anti-siphon pipe in connection with a soil-water fitting which is connected to—
 - (iv) a vertical soil pipe by an oblique soil pipe which is the highest connection to the vertical soil pipe, if not more than one soil-water fitting is connected to the oblique soil pipe;
 - (v) the uppermost junction of an oblique soil pipe continued as a vent pipe;
- (b) antisiphon pipes shall comply with rule 40(c) of these Rules; but an antisiphon pipe may be constructed of iron, lead or copper in accordance with rule 44(e), (f), (g), (h) and (i) of these Rules; and
- (c) no main antisiphon pipe shall be of less than two 2 internal diameter; but in cases where in the opinion of the authority pipes of larger dimensions are necessary to prevent siphonage or aspiration, the authority shall specify the size of pipes to be used.

42. Connections to soil pipes.

- (1) Every person who connects a soil pipe to a soil-water fitting or to a drain shall make the connections in a suitable and efficient manner.
- (2) Where any wastepipe, ventilating pipe or trap of lead is connected

with an iron or copper wastepipe or trap or with an iron soil pipe or the stoneware (or fireclay) ventilated branch pipe from any soil-water fitting, the connection shall be made with a suitable socket, ferrule or similar appliance of brass or other suitable metal.

- (3) The types of joints required shall be as follows—
 - (a) the joint between the socket, ferrule or similar appliance and the lead pipe or trap shall be by means of an efficient wiped joint;
 - (b) the joint between the socket, ferrule or similar appliance and any pipe or trap of iron shall be made with lead, properly caulked, or in some equally efficient manner; and
 - (c) the joint between the socket, ferrule or similar appliance and any pipe or trap of stoneware or the outlet of any closet pan shall be made with cement mortar or in some equally efficient manner.

43. Channels or open drains.

(1) A channel or open drain for the conveyance of foul open water, either within or without a building, shall be semicircular and of salt-glazed or vitreous enamelled ware or of 1:3 cement mortar ½-half inch thick.

(2) The channels shall be laid to a fall of not less than 1:60 and shall not be covered without the approval of the authority.

(3) The foundation of the channels shall be of 1:3:6 concrete not less in width than 6 inches greater than the finished width of the channels and not less than 4 inches in thickness.

(4) Where the channel is greater in depth than the radius, the sides and top shall be of glazed tiles or rendered with 1:3 cement mortar not less than ½-half inch thick.

(5) Rain and storm water shall be excluded from all channels and the channels shall, where required by the authority, be protected by an adequate curb rendered in 1:3 cement mortar ½-inch thick.

(6) All renderings of cement mortar shall be finished true to shape and to a perfectly smooth face and to the satisfaction of the authority.

- (7) The permitted length of channels shall be as follows—
 - (a) an external channel for the conveyance of waste water only to an

- external gully trap shall not exceed 6 feet;
- (b) a channel or open drain for the conveyance of foul water to an external gully trap, from an internal system of drainage in connection with any building used or intended to be used as a slaughterhouse, stable, cowshed or other place of like nature approved by the authority, shall not exceed 6 feet in length; and
- (c) internal channels shall be permitted only in the following premises and may be of unlimited length—
 - (i) premises mentioned in paragraph (b) of this subrule;
 - (ii) laundries or rooms used for ablutionary purposes if not within a dwelling;
 - (iii) ice factories or aerated water factories;
 - (iv) laboratories if the channels do not communicate with two or more rooms and do not receive the discharge from any waste-water fitting other than from a sink used or intended to be used solely for laboratory work; and
 - (v) institutional kitchens or other premises approved by the authority for the reception and disposal of floor washings.

44. Wastepipes and waste-water fittings.

Every person who shall provide or fix a wastepipe to a waste-water fitting, or overflow pipe to a waste-water fitting in connection with a building shall comply with the following requirements—

- (a) the wastepipe or overflow pipe shall be constructed of lead, cast iron, wrought iron, copper, asbestos cement or other equally suitable material approved by the authority and if more than 4 feet in length shall not be fixed at a greater angle than 70° from horizontal unless anti-siphonic measures are provided;
- (b) the wastepipe or overflow pipe shall be properly trapped by means of an efficient siphon trap, at a point as near as may be practicable to the point at which the wastepipe or overflow pipe is attached to any waste-water fitting; but the authority may in special circumstances permit an untrapped wastepipe not exceeding 6 feet in length, where the wastepipe discharges externally as under paragraph (l) of this rule, except that the wastepipe shall always be made to discharge over an open channel not less than 2 feet in length;
- (c) every trap fixed in connection with the wastepipe shall be constructed of material not inferior in quality to that specified for wastepipes and shall be provided on the side or underside with a

screwed movable plug of adequate dimensions or some other suitable means of easy access to the interior. Every such trap shall be fixed in such manner that the whole of the trap shall be easily accessible and provided with a water seal at least 1½ inches in depth; except that floor traps of approved design may be sunk into floors;

- (d) every trap fixed in connection with the wastepipe shall have an internal diameter not greater than that of the wastepipe to which it is connected and not less than 1¼ inches in the case of a lavatory basin or 1½ inches in other cases;
- (e) if the wastepipe or fittings are of iron, the wastepipe shall be constructed either of cast iron not less than 3/16 inch in thickness, or of wrought iron not less than 1/8 inch in thickness, and the wastepipe or fittings shall conform to the relevant British Standard Specification;
- (f) if the wastepipe is of lead, it shall be fixed by means of proper lead tacks at not more than the following distances apart—
 - (i) vertically—at 3 feet centres;
 - (ii) horizontally—at 1 foot 6 inches centres,
 and every such wastepipe, in proportion to its internal diameter, shall be of the following minimum weight—

Internal diameter	Per linear yard
1¼ inches	7½ lbs.
1½ inches	9 lbs.
2 inches	12 lbs.

- (g) if the wastepipe is of copper, it shall be fixed by means of proper pipe clips or holderbats at not more than the following distances apart—
 - (i) vertically—at 6 feet centres;
 - (ii) horizontally—at 3 feet centres,
 and every such wastepipe, in proportion to its internal diameter, shall be of the following minimum weight—

Internal diameter	Per linear yard
1¼ inches	2¼ lbs.
1½ inches	2.7 lbs.
2 inches	4.17 lbs.

- (h) if the wastepipe or fitting is of asbestos cement, then the wastepipe or fitting shall comply with the British Standard Specification No. 582 (1934) for asbestos cement wastepipes and fittings;
- (i) if the wastepipe or fitting is not of any of the materials hereinbefore specifically mentioned but is of other material approved by the authority, the wastepipe or fitting shall conform in all respects to the relevant British Standard Specification where one exists;
- (j) no wastepipe shall have an internal diameter of less than 1½ inches, except that a lavatory basin wastepipe may be ¼ inch internal diameter. No wastepipe which receives the discharge of more than one waste-water fitting shall have an internal diameter of less than 2 inches, except that a wastepipe receiving the discharge from not more than two lavatory basins may be of an internal diameter of 1½ inches;
- (k) the wastepipe, wherever practicable, shall be fixed above floors, and in any case where the wastepipe shall be fixed below any floor it shall be provided with adequate and satisfactory means of access for the purpose of inspection and cleansing;
- (l) except as provided in rule 39 of these Rules, and then only subject to the provisions of this rule, where applicable, the wastepipe shall be taken through an external wall of the building at the nearest practicable point and so constructed and fixed as to discharge over an open channel communicating with a properly trapped gully or into that gully above the level of the water in the trap thereof and so as not to communicate with any sewer or other means of drainage for the reception of subsoil or storm water only. The wastepipe shall discharge at a height not more than 3 inches above the level of invert of the channel or top of the gully, and so that any liquid or solid matter shall be wholly conveyed into the channel or gully without splashing, but—
 - (i) in special circumstances, a ventilated wastepipe may discharge into an accessible gully trap with a sealed cover;

and

- (ii) where the authority so approves, a wastepipe may discharge into a grease trap of an approved type;
- (m) where a sink, bath or lavatory basin is on a floor above the ground storey, every such wastepipe shall discharge into a ventilated wastepipe of a suitable diameter, and, if more than 12 feet in length from the trap to the ventilated wastepipe, shall, in addition, be vented in the manner provided for in this rule;
- (n) ventilated wastepipes shall be arranged in the manner described in paragraph (l)(l) of this rule and shall be continued up without diminution of diameter and to such heights and in such positions as are required under rule 38 of these Rules; except that it shall be only necessary to continue the ventilated wastepipes to the height of not less than 12 inches above the eaves of the building or 24 inches above any door, window or other opening, whichever is the higher;
- (o) notwithstanding any other provision of this rule, ventilated wastepipes may, with the permission of the authority, be fixed within a building or in an external chase and shall be subject to the special requirements under rule 40(j) of these Rules;
- (p) the wastepipe, if more than 12 feet in length, shall be vented from a point as near as possible to the trap and the venting shall conform in construction to the provisions of paragraph (q) of this rule for antisiphon pipes;
- (q) where the wastepipes receive the discharge of more than one waste-water fitting there shall be made such provision for the prevention of siphonic action as the authority may require. An antisiphon pipe shall conform to the following requirements—
 - (i) it shall not in any case be less in quality and specification than the wastepipe to which it is fitted;
 - (ii) it shall be connected with the trap or the branch wastepipe in the direction of the flow and at an approved point within 30 inches of the highest part of the trap, on that side of the water seal which is nearest to the wastepipe;
 - (iii) the branch and main anti-siphon pipes respectively shall have in all parts an internal diameter of not less than two-thirds of the respective internal diameters of the branch and main wastepipes; except that where the internal diameter of the wastepipe exceeds 3 inches, the internal diameter of the antisiphon pipe need not be greater than 2 inches, but if an approved form of anti-vacuum trap is fitted to the waste-

- water fittings and the anti-vacuum trap conforms in all respects with the requirements of paragraphs (c) and (d) of this rule, it shall not be necessary to fit antisiphonage pipes in addition;
- (r) joints of every such wastepipe and the joints of every ventilating pipe or antisiphon pipe provided in connection with any trap fixed to any such wastepipe shall be made as follows—
 - (i) if the wastepipe, ventilation pipe or antisiphon pipe is constructed of cast iron or asbestos cement, the joints shall be made in the same manner as if the wastepipe, ventilation pipe or antisiphon pipe were a soil pipe;
 - (ii) if the wastepipe, ventilation pipe or antisiphon pipe is constructed of galvanised wrought iron, the joints shall be made by the pipes being butted closely together and secured by means of screwed joints and couplings in red lead or other approved compound, the depth of the couplings being equal at the least to half the diameter of the wastepipe, ventilation pipe or antisiphon pipe;
 - (iii) if the wastepipe or antisiphon pipe is constructed of lead, the joints shall be made by means of screwed plumber's union or wiped joint;
 - (iv) if the wastepipe, ventilating pipe or antisiphon pipe is constructed of copper, the joints shall be made by means of a screwed plumber's union or compression joints;
 - (v) the wastepipe, ventilating or antisiphon pipe may be jointed in any manner or with any material not herein referred to if the manner or material is approved by the authority;
 - (s) no right-angled branch joint shall be made in the wastepipe but every branch wastepipe shall join another wastepipe obliquely in the direction of the flow of the wastepipe and all bends and turnings shall be truly curved. Where the authority so requires, adequate and satisfactory means of access shall be provided at any junction or bend in the wastepipe;
 - (t) the wastepipe and any ventilation pipe or anti-siphon pipe fitted in connection with it shall be kept separate and distinct from any soil pipe or any ventilation pipe, or anti-siphon pipe fitted in connection with the soil pipe; and
 - (u) all wastepipes and waste-water fittings and joints in connection with them shall be made and maintained watertight.

45. Rain water pipes not to be used for soil or waste water.

No person shall cause any pipe used for the purpose of carrying off rain water from the roof of any building to be used for the purpose of carrying of soil water or waste water or to be used as a ventilating pipe or anti-siphon pipe to any drain, soil pipe or wastepipe.

46. Overflow pipes to discharge into the open air.

(1) No person shall cause any overflow pipe from any water cistern, flushing cistern or water-waste preventer to be connected with any drain, soil pipe, wastepipe, ventilating pipe or soil-water fitting.

(2) The overflow pipe from any cistern shall discharge into the external air and, where possible, shall be in a conspicuous position, and be adequately protected against the ingress of mosquitoes.

47. Requirements of gully traps.

Any person who provides and fixes a gully trap in connection with the drainage of any building shall cause the gully trap—

- (a) to be of good glazed stoneware, or other approved material;
- (b) to be provided with a water seal of not less than 2½ inches in depth and an outlet not less than 4 inches in diameter;
- (c) except where otherwise required by the authority, to be of the washout type with the bottom of the gully well rounded;
- (d) to be well and securely fixed in a surround of not less than 4 inches of 1:3:6 concrete and fitted with an approved movable grating or cover, and protected against the ingress of surface or storm water by a solid curb, smooth on the inside, at least 4 inches in height above the adjoining ground level.

48. Provision of grease traps, etc.

(1) The authority may, by written notice addressed to the owner of any premises from which liquid waste of a fatty or soapy character is or is to be discharged into any drain or sewer, require the owner within a reasonable time, to be specified in the notice, to provide and fix in connection with the drainage of those premises, a proper and efficient grease trap of an approved pattern, with a galvanised iron or zinc tray or basket through which all liquid shall pass, constructed of approved materials, for the reception of all waste water or sewage of a fatty or soapy character from those premises before the waste water or the sewage is discharged into that drain or sewer. The tray or

basket shall be emptied as necessary by the occupier; except that, in the case of a dwelling, grease traps shall only be required where the drainage system is not connected to a public sewer.

(2) Wash water and waste water from any commercial garage shall be passed through an adequate double grease trap of a type approved by the authority, so that oil, grease or petrol shall not be allowed to enter any drain which communicates with any public sewer. Any such refuse so trapped shall be removed at least once a day by the occupier.

(3) Any drain which is constructed to carry any waste from any slaughterhouse shall have at the summit a trap of adequate size containing a galvanised iron or zinc tray or basket, into which the waste shall directly empty, so constructed as to prevent the entry into the drain of any entrails or other such matter. The tray or basket shall be emptied at least once a day by the occupier.

(4) Discharges of blood or other refuse from slaughterhouses into any public sewer shall not be allowed unless the discharges are regulated in such a manner that the total discharges of blood or other refuse shall enter the sewer in even quantities over the daily period from 6 a.m. to 6 p.m. or in such quantities and at such times, except between 6 p.m. of one day and 6 a.m. of the next day, as the authority may direct. Clotted blood or solid matter shall not be allowed to enter the public sewer.

49. Disposal of foul water where no sewer exists.

In all cases where no available sewer exists, all drains, drain fittings, soil-water or waste-water fittings, pipes or appurtenances shall be in accordance with such of these Rules as may be applicable, and the disposal of soil water and waste water arranged within the plot boundaries or some other suitable place, in a sanitary and efficient manner to the satisfaction of the authority, unless suitable drains for the carriage and disposal of the soil water or waste water have been provided to the satisfaction of the authority. Connections to the drains shall in each case not be made until the approval of the authority has been obtained.

PART IV—SPECIAL PROVISIONS RELATING TO LATRINE ACCOMMODATION.

50. Water closets.

Every person who constructs a water closet in connection with a building shall, in the construction of the water closet, comply with the following requirements—

- (a) all water closet pans shall be in accordance with a type approved by the authority;
- (b) the water closet shall be furnished with a pan made of nonabsorbent material, and of such shape, capacity and mode of construction as to receive and contain a sufficient quantity of water, and to allow all filth to fall free of its sides, and directly into the water received and contained in the pan;
- (c) there shall not be constructed or fixed under the pan any “container” or other similar fitting, or, in connection with the water-closet apparatus, any trap of the kind known as a D-trap;
- (d) every such water closet shall be of the washdown type, self-cleansing, and provided with a trap having a water seal not less than 2 inches in depth, and, except in the case of an approved siphonic closet, the outlet of the trap shall not be less than 3½ inches or more than 4 inches internal diameter. The pan and trap of the water closet shall be of porcelain ware, or well-glazed stoneware; and
- (e) the authority may at its discretion permit the installation of trough closets of a type approved by the Advisory Board of Health.

51. Urinals.

Every person who constructs a urinal shall, in the construction of the urinal, comply with the following requirements—

- (a) the urinal shall be constructed of glazed bricks, slabs or stalls not less than 3 feet 6 inches high and fitted immediately above the edge of a glazed half channel pipe not less than 4 inches internal diameter and laid to a fall of not less than 1 in 40. The channel shall discharge into a salt-glazed ware or vitreous enamelled trap with a water seal not less than 2 inches in depth; the trap shall have an internal diameter of not less than 2 inches for a single stall or basin and not less than 3 inches for a range of stalls or basins. Where the urinal is of glazed bricks or slabs, return walls not less than 1 foot long shall be constructed of the same materials. The floor of the urinal shall be constructed of 1:4:8 concrete at least 3 inches in thickness with ¾-inch of 1:3 cement mortar or of other approved impervious materials, finished with

- a smooth surface;
- (b) in the case of a urinal of the basin type, the soil pipe connected to the basin of the urinal shall discharge directly over a trap or into a glazed impervious channel leading to the trap, either of which shall be constructed in the manner prescribed in paragraph (a) of this rule;
 - (c) only one trap shall be provided to each range of urinals and communication between each urinal and trap shall be provided by means of glazed impervious channel. The floor of any urinal shall be laid with a fall towards the channel or trap for a distance of at least 18 inches from the channel or trap; and
 - (d) every trap provided in connection with the urinal shall be provided with a movable or hinged strong brass or gunmetal barred gate of the dome pattern and shall have an internal diameter not greater than that of the soil pipe or drain to which it is connected.

52. Slop hoppers, etc.

Every person who fixes a slop hopper or similar soil-water fitting in connection with a building shall fix a fitting of an approved type in such manner as the authority may require.

53. Soil-water fittings.

Every person who constructs any soil-water fitting in connection with a building shall, in the construction of the soil-water fitting, comply with the following requirements—

- (a) each soil-water fitting shall be furnished with an approved water-flushing valve or water-flushing cistern of adequate capacity, which shall be so constructed, fitted and placed as to admit a proper, adequate and constant supply of water by mechanical means for use in the soil-water fitting without any direct connection between any service pipe upon the building and any part of the apparatus of the soil-water fitting, other than that water-flushing valve or water supply cistern. There shall also be furnished to the soil-water fitting a suitable and approved apparatus for the effectual application of water to any pan, basin, urinal or other receptacle with which the apparatus may be connected and used, and for the prompt and effectual flushing and cleansing of the pan, basin, urinal or other receptacle, and for

- the prompt and effectual removal from it of any solid or liquid filth which may from time to time be deposited in it;
- (b) the cistern provided in connection with a soil-water fitting other than a urinal shall have an effective flushing capacity of—
 - (i) not less than 2 gallons or more than 3 gallons where the height from the underside of the cistern to the point of discharge into the soil-water fitting is greater than 5 feet; or
 - (ii) not less than 2½ gallons or more than 3 gallons where the height is not less than 4 feet; or
 - (iii) not less than 3 gallons where the height is less than 4 feet;
 - (c) the cistern provided in connection with a squatting type water closet shall not in any case be fixed at a less height than 5 feet above the squatting slab;
 - (d) the flush pipe from any such cistern provided in connection with a soil-water fitting other than a urinal shall be not less than 1¼ inches internal diameter in any part and shall be constructed with not more than four easy bends. For the purposes of this paragraph a swan-neck shall be considered equivalent to two bends;
 - (e) where flushing valves are used, they shall be of a waste-preventing type and shall be supplied by a pipe of adequate size from a tank giving a sufficient head and volume of water to allow the flushing valves to operate satisfactorily and to discharge at each separate operation a volume of water equivalent to that laid down in this rule for flushing cisterns;
 - (f) when so required by the authority a urinal shall be provided with an approved automatic water-flushing cistern;
 - (g) the underside of a cistern for flushing a urinal shall be at a height of not less than 7 feet above the level of the floor with a down pipe the first 3 feet of which shall be of a diameter not less two is specified in the following table—

No. of basins or stalls	Diameter of downpipe
One	½"
Not exceeding 2	1"
Not exceeding 4	1¼"
Exceeding 4	1½"

In the case of other types of urinals 2 feet length of channels shall be calculated as being equivalent to one basin or stall;

- (h) the capacity of a cistern for flushing a urinal shall be not less than 1 gallon for each basin, stall or 2 feet 6 inches length of sparge pipe served by it and in any case not less than 2 gallons;
- (i) every urinal shall be efficiently flushed and, subject to paragraph (g) of this rule, if flushed individually shall have a flushpipe connecting with either a suitable spreader or a sparge pipe not less than $\frac{1}{2}$ inch diameter and in any case not less in diameter than the sparge pipe served by it;
- (j) where a sparge pipe serves more than one urinal stall or exceeds 2 feet 6 inches in length it shall be not less than $\frac{3}{4}$ inch diameter. Every urinal sparge pipe shall have sufficient holes of correct size and be fixed to give efficient flushing throughout without splashing. The sparge pipe shall be the full length of the urinal or urinal stall and shall be returned for a length of 6 inches along any end return wall or slab;
- (k) all cisterns fitted in connection with soil-water fittings shall be adequately protected against the ingress of mosquitoes.

54. Automatic water-flushing cisterns not to be provided to water closets.

No person shall construct in connection with a water closet any automatic water-flushing cistern; but an automatic cistern may be used in connection with a trough closet if the use of the cistern is approved by the authority.

55. Water closets to be kept provided with a sufficient supply of water.

(1) The occupier of any premises on or for which any water closet is for the time being provided shall, insofar as he or she is able, cause the water closet at all times to be properly supplied with a sufficient quantity of water for its proper and efficient flushing; and shall ensure that the water-flushing cistern shall be capable of refilling within an interval of two minutes after the previous discharge.

(2) Where necessary a separate supply of water shall be provided for ablution purposes, and the supply shall be obtained from a storage cistern. In no case shall a water tap, situated within a latrine, be connected direct to a water mains supply pipe.

(3) In the case of any factory, workshop, workplace or public building, an adequate supply of toilet paper shall be provided free of charge

to all users of every water closet provided in connection with those premises.

56. Apartments for soil-water fittings.

(1) Every person who fixes a soil-water fitting in connection with a building shall enclose the fitting in a suitable apartment constructed in such a manner as to ensure privacy and of such material as shall meet with the approval of the authority.

(2) The internal measurements of the apartment shall not in any case be less than 2 feet 6 inches in width, 4 feet 6 inches in length, or a mean height of 7 feet, with a minimum height of 6 feet 6 inches at the lowest part of the roof measured from the plate of a squatting closet, when it is fitted, or the floor of the apartment, whichever is the higher; but every urinal apartment shall be constructed in such a manner as will ensure compliance with rule 53(g) of these Rules.

(3) No person shall construct any such soil-water fitting or the apartment connected with it so that it is approached directly from any room used for the purpose of human habitation, or used for the manufacture, preparation or storage of food for humans, or used as a factory, workshop, workplace or public building.

(4) The soil-water fittings shall be constructed so 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 humans, or used as a factory, workshop, workplace or public building, it shall be enclosed by a solid wall or partition of brick, stone, concrete or other suitable materials, extending the entire height from the floor to the ceiling.

(5) Nothing in subrules (1), (2), (3) and (4) of this rule shall be deemed to prevent the direct communication of a water closet with a bedroom, if the water closet is intended to be used exclusively with the bedroom and there is other water closet accommodation for use in connection with other parts of the building.

(6) If the soil-water fitting is within a dwelling house, at least one side of the apartment in which it is placed shall be an external wall.

57. Window and ventilation requirements for soil-water fitting apartments.

Every person who constructs a soil-water fitting in connection with a building shall provide the apartment in which the soil-water fitting is situated with—

- (a) a window of an area not less than 2 square feet exclusive of the frame, in an external wall and so constructed that at the least 2 square feet shall open; except that in any building other than one used or intended to be used as a dwelling house where a water closet is provided with sufficient means of lighting by artificial or borrowed light, it shall not be necessary to provide a window opening directly into the external air;
- (b) constant ventilation by means of—
 - (i) a ventilator or ventilators having a minimum area of one square foot. No material other than wire gauze or other equally suitable material approved by the authority shall be inserted in the ventilator or ventilators, which shall open into the external air and be adequately protected from the entry of rain; or
 - (ii) an approved air shaft or some other similar effectual method,but where a closet other than a squatting or oriental closet is provided, ventilation may be by means of an opening fanlight.

58. Construction of water closets.

Every person who constructs a water closet in connection with a building shall cause the water closet to be fixed in either of the following manners, but not otherwise—

- (a) he or she shall—
 - (i) cause the whole of the pan and the trap of the water closet to be fixed entirely above the level of the floor of the apartment in which the water closet is constructed and to be provided with a seat of hardwood, hinged at the back, or some other suitable type of seat which has been approved by the authority. He or she shall not cause or permit the pan of the water closet to be enclosed or cased round in any manner, but shall construct it in such a manner that the whole of the pan shall be fully exposed to view;
 - (ii) where so required, cause the floor of the apartment as aforesaid to be constructed of 1:4:8 concrete not less than 3 inches in thickness with ½ inch of 1:3 cement mortar or

of other approved impervious materials, finished with a smooth surface; or

- (b) he or she shall cause the whole of the pan of the water closet to be sunk below the level of the floor of the apartment in which the water closet is constructed and, in the case of a suspended floor, to be supported upon a subfloor so that the upper face of the squatting slab shall be at the level of the floor of the apartment, and he or she shall cause the whole of the pan and trap of the water closet to be firmly embedded in 1:4:8 concrete at least 4 inches in thickness. He or she shall also cause the floor of the apartment to be constructed of 1:4:8 concrete at least 3 inches in thickness, with $\frac{1}{2}$ inch of 1:3 cement mortar finished with a smooth surface, and to be so laid with a slope on all sides of the pan of the water closet that any liquid which may fall upon the floor will flow into the pan of the water closet; except that, where the mode of construction is such that the top of a pan is above the normal floor level, it shall be necessary to provide a platform not less than 9 inches in width all round it measured from the inner edge of the pan, and the entire top of the platform on all sides of the pan shall be sloped towards the pan so that any liquid which may fall upon the platform will flow into the pan of the water closet. If a glazed fireclay squatting slab is not provided, the platform shall be constructed of concrete of a mixture not less than 1:4:8, 3 inches in thickness, except for a space of 3 inches round the flush pipe where a weak mixture of concrete or other material approved by the authority may be used instead, and the whole of the upper surface of the platform shall be rendered with $\frac{1}{2}$ inch of 1:3 cement mortar to a smooth finish; but where a water closet pan and trap is a one-piece fitting, the fitting may be bedded on a layer of 1:4:8 concrete not less than 3 inches in thickness and not less than 15 inches square, and the space between the underside of the concrete floor or platform and the layer packed tightly with sand or a weak mixture of concrete.

59. Septic tanks and sewage filter installations, etc.

No person shall construct any septic tank, storage tank, sewage filter installation, or other works for the treatment, reception or disposal of sewage, except with the written permission of the authority and then only subject to the following conditions and such additional conditions as it may impose—

- (a) he or she shall not construct any such septic tank, storage tank,

sewage filter installation, or other works for the treatment, reception, or disposal of sewage, under any building, nor within 10 feet of any building or any plot boundary nor within 100 feet of any well, spring or stream of water used, or likely to be used, by humans for drinking or domestic purposes, or for manufacturing drinks for the use of humans and otherwise in such a position so as to render any such water liable to pollution, nor so that it shall have, by drain or otherwise, any inlet for rain water or other surface water or any outlet into or means of communication with any sewer;

- (b) he or she shall cause any such septic tank, storage tank, sewage filter installation, or other works for the treatment, reception or disposal of sewage to be constructed in such a manner and in such a position as to afford means of access to it for the purpose of cleansing it and of removing its contents;
- (c) he or she shall—
 - (i) cause any such septic tank, storage tank, sewage filter installation, or other works for the treatment, reception or disposal of sewage to be sufficiently covered over and to be so protected as to prevent any nuisance from it, and so as to prevent the breeding of mosquitoes in connection with it;
 - (ii) cause any such storage tank, sewage filter installation, or other works for the treatment, reception or disposal of sewage, to be adequately and efficiently ventilated if the authority so requires;
- (d) he or she shall not commence the construction of any such septic tank, storage tank, sewage filter installation, or other works for the treatment, reception or disposal of sewage, until the authority is satisfied that adequate and satisfactory provision has been made for its periodic emptying and cleansing or for the innocuous disposal of the effluent or filtrate from it, as the case may be; and
- (e) he or she shall cause the walls, floors and coverings of any septic tank, sewage storage tank, effluent tank, and such parts of the walls of any enclosure tank for the reception of filtering medium that may be necessary, to be constructed of impervious materials and so as to be watertight.

60. Construction of latrines other than water closets.

- (1) No building intended to serve as a latrine having a movable receptacle for the reception of faecal matter shall—

- (a) communicate, except through a well-ventilated passage, with any building used or intended to be used for human habitation or for the manufacture, preparation or storage of food for humans, or as a place for the consumption of food by humans or as a factory, workshop, public building or place of assembly. The ventilated passage shall be of a design and dimensions approved by the authority and, if closed in, shall be provided with openings each at least 6 square feet in area built into two outside walls so as to provide adequate ventilation and light. No materials other than wire gauze or other equally suitable material approved by the authority shall be inserted in the openings;
 - (b) be built within 10 feet of any building used or intended to be used as a kitchen or for the manufacture, preparation or storage of food for humans or as a place for the consumption of food by humans; and
 - (c) except with the written permission of the authority, be so constructed that the floor level of the apartment is more than 3 feet above the surrounding ground level.
- (2) Every earth closet shall be provided with—
- (a) a window of an area not less than 2 square feet clear of the frame, communicating directly with the external air. Where the window is fitted with an opening sash, a fly-proof screen of wire gauze having not less than 14 meshes per linear inch shall be provided. The window, if constructed to be permanently open, shall be suitably and adequately protected from the entry of rain; and
 - (b) a ventilator having a total area clear of the frame of not less than 1 square foot in each of 2 walls. No material other than wire gauze or other equally suitable material approved by the authority shall be inserted in the ventilators which shall open into the external air and be adequately protected from the entry of rain; except that where a window conforming to paragraph (a) of this subrule is provided and the window is so constructed as to be permanently open, it shall not be necessary to provide a ventilator in addition to the window. No material other than wire gauze or other equally suitable material approved by the authority shall be inserted in the window.
- (3) No pit latrine shall be constructed within 30 feet of any building except with the written permission of the authority, and then not within 15 feet of any habitable room or place used for the preparation or consumption

of food.

61. Construction of earth closets.

Every person who constructs any earth closet shall comply with the following requirements—

- (a) the earth closet shall be constructed in such a manner and in such a position as to have ready means of access for the purpose of cleansing the earth closet, and in such a manner and in such a position as to admit of all filth being removed from the earth closet and from the premises to which it may belong, without being carried through any dwelling house or public building or any building in which any person is, or is intended to be, employed in any manufacture, trade or business; and
- (b) the closet shall be situated at least 100 feet from any well, spring, or stream of water, used or likely to be used by humans for drinking or domestic purposes, or for manufacturing drinks for the use of humans, and otherwise in such a position as not to render any such water liable to pollution.

62. Construction of pail closets.

Every person who constructs a pail closet—

- (a) shall construct the apartment of the same dimensions as though it were a water closet;
- (b) shall construct the walls of brick, concrete blocks or other materials approved by the authority and where possible shall cover the internal surfaces of the walls with good cement plaster finished to a smooth face; and
- (c) shall cause the entire floor of any pail closet to be of 1:4:8 concrete not less than 3 inches thick with $\frac{1}{2}$ inch 1:3 cement mortar or any other impervious and nonabsorbent materials and to be finished to a smooth surface.

63. Construction of seat and pail chamber of pail closets.

(1) Every person who constructs a pail closet shall construct the seat, if any, of the pail closet, the aperture in the seat, and the space beneath the seat, of such dimensions as to admit of a movable receptacle for filth being placed and fitted beneath the seat in such a manner and in such a position as may effectually prevent the deposit upon the floor or sides of the space

beneath the seat or elsewhere than in that receptacle of any filth which may from time to time fall or be cast through the aperture in the seat. For this purpose every such closet shall be provided with stops to keep the bucket in its correct position beneath the aperture.

(2) The authority shall specify and approve the shape, capacity, dimensions, material and manufacture of the receptacle.

64. Means of access for cleansing pail closets.

Every person who constructs a pail closet shall construct the seat, if any, of the pail closet to rest upon iron brackets, or piers formed of nonabsorbent material and so that the whole of the seat or a sufficient part of it may be lifted into a vertical position so as to afford adequate access to the space beneath the seat for the purpose of cleansing the space, or of removing from it or placing and fitting in it the appropriate receptacle for filth, or shall otherwise provide adequate means of access to the space for those purposes.

65. Protection from flies in earth closets.

Every person who constructs an earth closet shall cause the closet to be properly and efficiently protected from the ingress of flies.

66. Use of standard pattern of earth closet.

(1) No person shall construct an earth closet otherwise than in accordance with plans and specifications approved by the authority.

(2) Every earth closet shall be so constructed as to secure privacy for each user.

(3) The internal measurements of every pit latrine or similar type of latrine shall not in any case be less than 2 feet 6 inches in width, 4 feet 6 inches in length, or 6 feet in height in any part measured from the upper surface of the floor or the squatting slab, whichever is the higher. The average height of the latrine shall not be less than 6 feet 6 inches.

67. Latrines in factories, etc.

(1) In factories, workshops, workplaces or other premises of a like nature where—

- (a) persons of different races are employed, there shall be provided suitable separate latrine accommodation of the types commonly used by persons belonging to each such race; and
- (b) females are employed, there shall be provided separate latrine accommodation the entrances and windows of which shall be effectively screened from that for males and the accommodation shall be marked in letters not less than 2 inches high "For Women Only". The latrine accommodation for males shall be similarly marked "For Men Only".

(2) Latrines shall be provided within the curtilage of the building in connection with which they are used and shall be so arranged and maintained as to be conveniently accessible to any persons employed there at all times during their employment.

(3) Latrines shall be sited not more than 150 feet from any building in which persons are employed and in the case of any such premises situated outside a town, not less than 5 feet from the plot boundaries.

(4) If night shifts are worked in any factory or other premises where persons are employed, at least 10 percent of the latrines required to be provided under subrule (9) of this rule shall be sited not more than 60 feet from the buildings in which night shifts work, and the latrines shall have a well laid out path of access artificially lighted during the hours when the night shifts are in operation.

(5) Where any factory is also used as a buying centre, sufficient latrine accommodation for each sex shall be provided as near as is practicable to the main entrances or exits used by the public, and the accommodation shall be additional to that required by subrule (9) of this rule.

(6) The external and internal walls of every latrine provided in connection with any factory or other premises where persons are employed shall be limewashed every four months and in the case of latrines provided in connection with other premises, as often as the authority may by notice in writing require.

(7) On sites where persons are temporarily employed, and no latrine accommodation of a permanent nature exists for the use of those persons, temporary latrines of a type approved by the authority shall be provided by the employer or employers of those persons, unless the written sanction of

the authority to dispense with the latrine accommodation has been first obtained. The temporary latrines shall be provided before any other work on the site is commenced.

(8) No dwelling house shall be erected or occupied without latrine accommodation in accordance with the requirements of these Rules; every dwelling house occupied or intended to be occupied by persons normally employing servants shall be provided with latrine accommodation for servants and the latrine accommodation shall be additional to that provided for the occupier and shall be reserved exclusively for the use of servants.

(9) In estimating the latrine accommodation it will be necessary to provide in any premises for the purpose of satisfactory drainage, the following shall be the minimum requirements, but in any case the authority may require special arrangements to be made—

- (a) water closets, or pit latrine stances—
 - (i) dwellings, or schools or colleges which are boarding establishments—one for every 15 persons or fraction of that number which the dwelling or school or college can ordinarily accommodate for purposes of residence;
 - (ii) shops, offices, factories, workshops, workplaces, warehouses, or schools or colleges which are not boarding establishments, or any other premises not specifically mentioned in this rule—one for every 25 persons or fraction of that number up to 100 persons accommodated or employed or intended to be accommodated or employed in or about those premises and thereafter 1 for every 40 persons or fraction of that number;
 - (iii) places of public worship except when exempted by the authority, clubs, theatres, cinemas, restaurants, public bars, public halls or any public places of assembly for persons admitted by ticket or otherwise—1 for every 200 persons or fraction of that number which the building can ordinarily accommodate, with a minimum of one for each sex where the authority considers separate accommodation necessary;
- (b) pail closets—
 - (i) dwellings or schools or colleges which are boarding establishments—one for every 12 persons or fraction of that number which the dwelling or school or college can ordinarily accommodate for purposes of residence;
 - (ii) shops, offices, factories, workshops, workplaces,

warehouses, or schools or colleges which are not boarding establishments, or any other premises not specifically mentioned in this rule—1 for every 12 persons or fraction of that number up to 48 persons accommodated or employed or intended to be accommodated or employed in or about those premises, and thereafter 1 for every 24 persons or fraction of that number;

- (iii) places of public worship except when exempted by the authority, clubs, theatres, cinemas, restaurants, public bars, public halls or public places of assembly for persons admitted by ticket or otherwise—1 for every 50 persons or fraction of that number, with a minimum of one for each sex where the authority considers separate accommodation necessary;
- (c) urinals—
- (i) urinal accommodation shall be provided in any premises where the authority considers the accommodation necessary;
 - (ii) in any premises a reduction of 50 percent in the number of latrines required for males under this rule may be made where latrine accommodation other than pail closets is provided if urinal accommodation in the ratio of one stall or basin or at least 1 foot 10 inches of channel length for every 25 males is provided.
- (10) In schools or colleges—
- (a) used or intended to be used for the accommodation of both boarders and nonboarders, latrine accommodation for the boarders and nonboarders shall be computed in accordance with the requirements of this rule for schools or colleges which are boarding establishments or other than boarding establishments respectively;
 - (b) in which males and females are, or are intended to be, accommodated, separate latrine accommodation shall be provided for pupils for each sex over seven years of age. Separate latrine accommodation shall in all cases be provided for teachers, and if teachers of different sexes are employed, separate latrine accommodation shall be provided for each sex. The latrine accommodation shall be so constructed as to ensure privacy and with the entrances for females effectively screened from those for males; and

- (c) so far as is practicable, no dormitory shall be situated more than 60 feet from a latrine, and no school or college building used or intended to be used by pupils shall be situated more than 150 feet from latrine accommodation.

(11) No owner or occupier of any premises shall by any means prevent or attempt to prevent any person resident or employed in or about any premises from using the latrine accommodation provided for that person under these Rules unless the latrine accommodation is for the time being unfit for use.

(12) When the level of the contents of any pit latrine is within 3 feet of the surrounding ground level, the pit latrine shall be closed for use and the pit completely filled up with earth.

PART V—SPECIFICATIONS AND DETAILED REQUIREMENTS FOR THE
CONSTRUCTION OF SUBSOIL, STORM AND SURFACE WATER DRAINAGE.

68. Drainage of site and roof of buildings.

(1) Every person who erects a new building or carries out any repairs in connection with any of the matters mentioned in this rule shall comply with the following—

- (a) the subsoil of the site of the building shall, wherever the dampness of the site renders it necessary, be effectually drained by means of earthenware field pipes or other suitable pipes properly laid to a suitable outfall, or in any manner which the authority may require;
- (b) the roof of the building, whether flat or otherwise, shall be so constructed as to drain effectually to suitable and sufficient gutters or troughs, unless an apron of concrete or other impervious material sufficient to protect the foundations of the building is provided. Where gutters or troughs are provided they shall be connected with a sufficient number of suitable downpipes or trunks constructed so as to carry away all water which may fall on the roof without causing dampness in any part of any wall or foundation of any building, and shall cause the water to be carried off in a manner approved by the authority;
- (c) should the authority consider it desirable, provision shall be made for carrying off any surface water of a building site in a manner approved by the authority;

- (d) the occupier or, if there is no occupier, the owner of any premises shall maintain all guttering and downpipes on those premises in good order and free from obstructions and in such a manner that water cannot accumulate in them;
- (e) no person shall construct or fix any rain water pipe or trunk which may be provided in connection with any building for the purpose of conveying from it any water which may fall on its roof or flat, so as to discharge directly into a closed drain, but shall cause the rain water pipe or trunk to be constructed or fixed so as to discharge directly into the open air, into an open channel, pavement drain, or over a properly trapped gully, or into that gully above the level of the water in its trap; except that—
 - (i) this paragraph shall not apply in any case where rain water is intended to be conveyed through a closed drain to any receptacle properly constructed and adapted for the storage of the water, and the construction or adaptation of the closed drain or receptacle shall be in a manner approved by the authority; and
 - (ii) where the downpipe discharges into a pavement drain longer than 2 feet, suitable access shall be provided in the bottom section of the downpipe.

69. Materials for gutters and downpipes.

(1) Eaves gutters and downpipes shall be of galvanised iron, steel, asbestos cement, cast iron or other equally suitable material approved by the authority.

(2) If the eaves gutters or downpipes are of galvanised iron or steel, they shall be constructed of metal of a gauge not less than 20 British Standard wire gauge in thickness.

(3) If the eaves gutters or downpipes are of asbestos cement, they shall conform in all respects to British Standard Specification No. 569 (1934); but downpipes which are not cylindrical shall be permitted if the pipes are not of less thickness than that specified for cylindrical pipes.

(4) If the eaves gutters are of cast iron they shall conform in all respects to the relevant British Standard Specification where it exists.

(5) If the downpipes are of cast iron they shall conform in all respects

to British Standard Specification No. 460 (1932); but downpipes which are not cylindrical shall be permitted if the pipes are not of less thickness than that specified for cylindrical pipes.

(6) If the eaves gutters or downpipes are of material not specifically mentioned in this rule but approved by the authority, they shall conform in all respects to the relevant British Standard Specification where it exists.

(7) All eaves gutters shall be supported by suitable brackets not more than 3 feet apart or in a manner approved by the authority, and shall be properly aligned so as to provide continuous and even fall to the point of discharge in such manner that no part of the eaves gutter shall be more than 30 feet distant, in the length of the eaves gutters, from a point of discharge; but with the approval of the authority that distance may be exceeded where the downpipes are connected to storage tanks.

(8) All gutters and downpipes shall be of suitable and adequate size to prevent any overflowing or surcharging.

(9) No downpipe on any building shall project beyond the limits of the plot on which the building stands at any height which is less than 10 feet from the ground level.

70. Pavement drains.

(1) In the case of a downpipe which discharges into a curb channel, the connection between the downpipe and the curb channel shall be constructed of pipes or open or closed channels of sufficient cross-sectional area to carry off effectually all water led to it and in any case not less in cross sectional area than 12 square inches and laid to a gradient of not less than 1 in 60. The top of the pavement drain or its concrete surround shall be flush with the pavement or footpath, and the open end of the pavement drain shall be flush with the face of the curb through which it passes.

(2) The modes of construction for pavement drains shall be as follows—

- (a) by pipes which shall be of either cast iron and comply with not less than “medium” grade on British Standard Specification No. 416 (1935) or asbestos cement and comply with British Standard Specification No. 582 (1934) and shall in either case, including the connecting end, be surrounded with at least 3 inches of 1:3:6

- concrete;
- (b) by concrete channels which shall be in accordance with rule 71(4) of these Rules, or steel or cast iron channels of a type approved by the authority.

(3) The curb through which any such drain may pass shall be made good with 1:3:6 concrete and, together with the repairs to the footpath or pavement through which the drains may pass, shall be to the satisfaction of the authority.

(4) Where the drain is closed and is of a greater length than 2 feet, it shall have sufficient inspection doors or removable slabs as the authority may consider necessary for cleaning.

71. Drains, sewers and channels for surface or storm water.

(1) Any person who constructs or causes to be constructed any drain, private sewer or channel in connection with the disposal of surface or storm water shall comply with the requirements of this rule.

(2) The quality and type of all materials and appliances, including pipes, cement, traps, shafts, etc., used in the construction and repair of the drain, sewer or channel shall not in any case be less in quality and specification than is provided by these Rules.

(3) A private pipe sewer or drain shall comply with the following provisions—

- (a) the sewer or drain shall be constructed of glazed stoneware, cast iron, steel or other equally suitable material approved by the authority, and with watertight, socketed or other approved joints;
- (b) every such sewer or drain formed of iron or steel shall conform in all respects with the requirements of rule 29(g) or (i) and if of stoneware with rule 29(h) of these Rules;
- (c) every such sewer or drain shall be of adequate size to carry off effectually all the water from the area which it serves and not less than 12 square inches in cross-sectional area;
- (d) the sewer or drain shall be laid with a proper fall, the fall complying whenever practicable with the following requirements—

Diameter of pipe	4"	5"	6"	7"	9"	12"
Minimum fall	1-50	1-60	1-75	1-120	1-150	1-200

- (e) where, in the opinion of the authority, the sewer or drain is especially liable to injury from any cause, the authority may require the sewer or drain to be entirely surrounded with 1:3:6 concrete at least 6 inches thick all round the sewer or drain;
 - (f) the sewer or drain shall be laid in accordance with rule 29(c) of these Rules;
 - (g) if the sewer or drain is of cast iron or other approved metal pipes jointed with ordinary socket joints, the joints shall be in accordance with rule 29(d) of these Rules;
 - (h) if the sewer or drain is of stoneware pipes or of pipes of material other than metal (other than pipes with patent joints acceptable to the authority) the joints shall be made in accordance with rule 29(e) of these Rules;
 - (i) all lengths of pipes shall be laid in accordance with rule 29(f) of these Rules;
 - (j) the private sewer or drain and fittings shall be so constructed as to be watertight;
 - (k) if the private sewer or drain is of material not specifically mentioned before in these Rules but approved by the authority, the pipes shall conform in all respects to the relevant British Standard Specification where it exists;
 - (l) if the private sewer or drain has bends, junctions, gullies, traps or other fittings of either salt-glazed ware or salt-glazed glass enamelled fireclay, the fittings shall conform with rule 29(k) of these Rules; and
 - (m) the construction and jointing of pipe sewers, drains and drop leads shall be in accordance with rules 29(i), (l), (m), (n) and 30 of these Rules.
- (4) A channel shall be either open or covered as the authority may require and shall be constructed as follows—
- (a) the size and gradient of the channel shall be such that the waters from the surfaces which the channel serves shall be effectually carried off. The channel shall not in any case have an effective

- cross-sectional area of less than 18 square inches or, except in special circumstances, a gradient of less than 1 in 60;
- (b) the channel shall be constructed—
 - (i) *in situ* and made entirely of concrete or of concrete and bricks or of salt-glazed ware and concrete or bricks; or
 - (ii) of precast concrete sections,
 the minimum width or diameter of the channels at the invert shall not be less than 4 inches;
 - (c) the channel, if cast *in situ*, shall have a foundation of 1:3:6 concrete at least 3 inches thick and if precast shall be laid on a concrete foundation if so required by the authority;
 - (d) the sides of cast *in situ* channels shall be not less than 3 inches thick, shall be vertical externally, be battered not steeper than 8:1 internally and be constructed of—
 - (i) 1:3:6 concrete; or
 - (ii) brickwork set in 1:4 cement mortar with the tops and inside of the channel rendered with 1:3 cement mortar not less than $\frac{3}{4}$ inch in thickness;
 - (e) precast concrete channels, if made of 1:2:4 concrete and if not reinforced, shall be of the following minimum dimensions with battered internal sides of not less than 8:1—

Top of sides	2 inches
Bottom of sides	2½ inches
Bottom	2 inches

- but if the mix of concrete is weaker than 1:2:4 the channel shall be made of a concrete mix and dimensions as though it were a cast *in situ* channel;
- (f) the sides and invert of the channel shall be finished with a perfectly smooth face, and there shall not be any intrusions of any kind whatsoever into the channel; and
 - (g) channels where required to be covered shall have either slabs of a mixture not weaker than 1:3:6 concrete and of adequate strength and in any case not less than 2 inches thick, or covers of other material approved by the authority.
- (5) Before any inlet to a storm water sewer, a silt trap of a size and type approved by the authority shall be provided if the authority so requires. The silt trap and the whole drainage system shall be kept clean by the owner

or occupier of the plot which is served by that system.

(6) All junctions and bends in branch sewers, drains or channels shall comply with rule 32 of these Rules except that the words “and at half channel height above the main channel” shall be deemed to be omitted.

(7) All inserted junctions of pipe sewers or drains shall be made in accordance with rule 35 of these Rules.

(8) A private sewer not exceeding 6 inches in diameter, drain or covered channel shall be provided with inspection chambers at the following positions—

- (a) so that no part of a sewer not exceeding 6 inches in diameter, drain or covered channel is more than 50 feet distant in the length of the sewer, drain or channel from the centre of an inspection chamber or the open end of a sewer, drain or covered channel discharging on to the ground surface or into a ditch or watercourse or swamp above the maximum level of the water therein or of any other channel; except that—
 - (i) in a private pipe sewer exceeding 6 inches in diameter or a covered channel sewer exceeding in internal cross-sectional area 100 square inches it shall be permissible to provide inspection chambers at such points that no part of the pipe sewer or covered channel sewer shall be more than 125 feet distant in the length of the sewer from the centre of an inspection chamber;
 - (ii) where the point at which any branch or tributary drain or covered channel which does not exceed 50 feet in length joins another drain or covered channel is not more than 50 feet distant from the centre of an inspection chamber therein or the open end of a drain or covered channel and a rodding point is provided at the head of each such branch or tributary drain or covered channel, it shall not be necessary to provide an inspection chamber at that point; and
 - (iii) where covered channels are provided with removable slabs and the channels have not more than 6 inches cover, it shall not be necessary to provide inspection chambers in connection with those channels;
- (b) on a private sewer, drain or channel which is not an open channel at a point within and as near to the curtilage as possible where the

private sewer, drain or channel discharges into the public sewer; except that a chamber in this position may not be required if the chamber as required by paragraph (c) of this subrule is situated at a lower point on the same private sewer, drain or channel;

- (c) at such other places as the authority may consider necessary;
- (d) every inspection chamber in connection with a private sewer or drain shall be constructed in accordance with rule 37(2) to (14) of these Rules.

(9) Suitable grills or gratings to exclude all solid matter shall be provided in every system of drains or channels for storm water at a point as near as practicable to where the system connects with the public sewer. All storm water shall pass through the grills or gratings which shall be easily accessible for cleaning and if necessary shall be built in conjunction with an inspection chamber as set out in subrule (8) of this rule.

(10) The occupier or, if there is no occupier, the owner of the premises, shall clean the grill or grating as may be necessary from time to time to allow water to pass freely through the drain or channel.

(11) Should any flooding occur through neglect to comply with subrule (10) of this rule, proceedings may be taken against the occupier or, if there is no occupier, the owner of the premises, to recover the cost of any damage occasioned by the flooding; but the proceedings shall not in any way prejudice the rights of the authority also to take proceedings under section 79 of the Act.

(12) There shall not be an inlet of any kind whatsoever into a drain or channel for storm water within a building; but where other means are impracticable, a trapped gully fixed inside a building and fitted with a suitable grating may be permitted for the purpose of carrying off flood water from a cellar or basement.

(13) No person shall so construct a building or channel drain, either with or without slabs or other covering, so that the channel shall run beneath a building or any part of it; but nothing in this subrule shall be held to apply to an open channel carried under any open-sided covered way or through a passage open at both ends, more than 6 feet wide or less than 30 feet in length.

(14) Where storm water is required to pass under or through a

building, it shall be conveyed by a pipe which shall conform to rule 29(n) of these Rules for foul drains in all respects.

(15) In a closed drain exceeding 100 feet in length and where entries to the drain are by means of trapped gullies or similar water seals, ventilation openings shall be provided at the lowest and highest points in the drains to the satisfaction of the authority; except that the requirements of this subrule shall not apply to any drainage system used or intended to be used solely for conveying rain water to a storage tank.

(16) Any channel constructed within 5 feet of any plot boundary shall be covered with removable perforated or solid slabs unless the channel is situated within a plot enclosed with a boundary wall or fence.

72. Connection with public sewer.

(1) Where a public sewer is a pipe sewer a connection shall be made by means of a 45° junction provided for the purpose or, if this does not exist, by means of a saddle junction or by cutting out a pipe on the sewer and inserting a suitable junction pipe in accordance with rule 35 of these Rules.

(2) Where a public sewer is a concrete channel, either open or closed, the connection shall be made by cutting away sufficiently the top of the side of the sewer to join the branch securely to the sewer by means of 1:3 cement mortar or in other manner approved by the authority; the junction shall not cause any diminution to the cross sections of either the sewer or drain.

73. Lateral drain to pipe sewer.

(1) Where a public sewer is a pipe sewer, the lateral drain shall be a pipe drain and shall comply with rule 34 of these Rules.

(2) Where the lateral drain to a storm water sewer is other than a pipe drain, it shall conform to the following requirements—

- (a) the drain shall join the sewer obliquely in the direction of flow;
- (b) the drain shall be laid in a direct line and shall comply with the requirements of rule 34(4), (5) and (6) of these Rules insofar as they are applicable; and
- (c) where the cover to the drain in a highway or carriage drive is less than 1 foot, the drain shall be surrounded with 1:3:6 concrete at least 4 inches in thickness all round.

74. Rain water tanks.

A tank for the collection of rain water shall be so constructed and in such position as the authority may determine.

75. One pipe system.

In any building where the one pipe system will, in the opinion of the authority, produce substantial economies or improvement in appearance, the authority may, at its discretion and on such conditions as it may prescribe, permit the construction of the one pipe system; provided that—

- (a) the design, layout, type of fitting and workmanship are to the satisfaction of the authority and are in accordance with the requirements of the London County Council byelaws for the time being in force for that system; and
- (b) a right of appeal against any decision of an authority under this rule shall lie with the Advisory Board of Health.

76. Licence for drainage work.

(1) No person shall construct or carry out any drainage work unless that person is in lawful possession of a licence obtained from the authority authorising him or her so to do.

(2) The licence shall be in the form of a plumbers licence or a drainlayers licence, as in the Schedule to these Rules, and any person to whom any such licence is issued by the authority shall be empowered to construct or carry out such works only in respect of the licences specified as follows—

- (a) every person to whom a plumbers licence has been issued by the authority shall be entitled to carry out any plumbing work in connection with the construction, fixing, laying, repair or removal of pipes, valves, traps, drains or other apparatus or appliance connected with the drainage of any premises but not to construct or lay any stoneware drain, inspection chamber, cesspool, septic tank, sewage filter installation or other works for the treatment or disposal of sewage;
- (b) every person to whom a drainlayers licence has been issued by the authority shall be entitled to construct or lay any stoneware drain, inspection chamber, cesspool, septic tank, sewage filter

installation or other works for the treatment or disposal of sewage, but not to carry out the work of a plumber,

but—

- (c) nothing in this rule shall be deemed to prohibit any worker carrying out any such works as aforesaid where the worker shall carry out the work under the direction, supervision and control of a licensed plumber or a licensed drainlayer; and
- (d) this rule shall only apply to such cities, municipalities, towns and other areas as the Minister may by statutory instrument declare.

77. Only competent persons to be licensed.

No plumbers licence and no drainlayers licence shall be issued by the authority to any person until that person has satisfied the authority as to his or her competency to carry out the work of a licensed plumber or of a licensed drainlayer, and the authority may require any person who applies for a plumbers licence or a drainlayers licence to submit himself or herself to examination by such a body of persons as the authority may appoint for the purpose.

78. Registration of licensed persons.

Prior to the issue of a plumbers licence or a drainlayers licence by the authority to any person, that person shall be required to sign a register, which shall be kept by the authority, containing a declaration that he or she accepts the licence subject to, and that he or she shall conform with, the conditions of the licence and with these Rules and any other regulations or rules relating to drainage work.

79. Licence to be produced for inspection.

Any person to whom a plumbers licence or a drainlayers licence has been issued by the authority under these Rules shall, if called upon at any reasonable time to do so, produce his or her licence for the inspection of any duly authorised officer of the authority.

80. Cancellation of licence.

The authority may at any time cancel any licence issued to any plumber or drainlayer under these Rules if the authority is satisfied that the licensed plumber or the licensed drainlayer has, either by himself or herself or his or

her workers, caused or permitted any plumbing or drainlaying work to be carried out in a negligent or unworkmanlike manner to the injury of any person or property, or contrary to any of the provisions of these Rules or any other regulations or rules relating to drainage work; but prior to the cancellation of any such licence the person whose licence it is proposed to cancel shall be given an opportunity of appearing before the authority, or before a committee appointed by the authority, and being heard in his or her own defence.

Schedule.

rules 6(1), 12(1), 13, 20(1),
25(1)(a), 25(3), 76(2).

Forms.

rule 20(1).

Form D1.

Application for Approval of Drainage Plans.

I, _____, apply for permission to construct the works shown on the plan annexed to this application for the drainage of the premises owned (*or* occupied) by me situated at _____, and I undertake and agree to conform in the construction of those works with the law relating to that construction.

PARTICULARS.

Description of building _____

		Male	Female
Number of persons normally living on premises	Africans	_____	_____
	Asians	_____	_____
	Europeans	_____	_____
Number of persons normally employed on premises	Africans	_____	_____
	Asians	_____	_____
	Europeans	_____	_____

Whether on completion of works application will be made to connect with a public sewer _____

Proposed and existing system of drainage _____

Proposed and existing means of disposal of soil and waste water _____

Proposed and existing means of disposal of rain water _____

African sanitary fittings No. _____ Type _____

Asian sanitary fittings No. _____ Type _____

European sanitary fittings No. _____ Type _____

Means of disposal of manufacturing effluents (if any) _____

Name and address of architect (if any) _____

Name and address of contractor or agent doing work _____

Date

Signature

(Annexure to form of application for approval of drainage plans)

Plan Showing Property to be Drained and the
Position of Adjoining Streets or Roads.

Drains for sewage to be shown by RED lines.

Drains for surface and storm water by BLUE line.

Channels for surface and storm water by BLUE dotted lines.

Existing sewers and drains by BLACK lines.

Scale: _____ feet to an inch.

Date

Signature

REFERENCES.

A.S.P.	Antisiphon pipe	S.	Sinks
B.	Bath	S.P.	Soil pipes
C.	Cesspool	S.V.P.	Soil ventilating pipes
F.A.I.	Fresh air inlet	So.	Soakaway
G.T.	Gully trap	S.T.	Septic tank
I.C.	Inspection chamber	U.	Urinal
In.	Interceptor	V.P.	Ventilating pipes
L.	Lavatory basin	V.W.P.	Ventilated wastepipe
R.W.P.	Rain water pipes	W.C.	Water closets

Levels which give the height above mean sea level Mombasa of the inverts of both foul and storm water drains immediately at the points at which the authority will be required to connect the systems of drains to the public sewers must be shown.

Position at which it is proposed to connect with the sewer is to be shown by the distance from the centre of the manhole next down stream.

Approved by _____ on _____

Tested and inspected by _____ on _____

Any deviation from the above plan to be shown by lines or notes in GREEN ink.

rule 25(1).

Form D2.

Notice to Authority that Drainage Works are Ready for Inspection and Testing.

To the _____ authority.

I, _____, give you notice that the drainage works at the premises situated at _____ which were authorised by you on _____ day of _____, 20 ____, (see Application No. _____ and Block Plan No. _____) are now completed and ready for inspection and testing.

Date

Signature

Form D3.

Notice of the Intention of Local Authority to Lay or Repair Sewer or Lateral Drain Through Private Land.

To owner (or occupier) of _____
(describe the premises).

Whereas the _____ authority is satisfied that it is necessary for the purpose of satisfactory drainage to carry out the construction (or repair) of a sewer (or lateral drain) consisting of _____ (description) of _____ (dimensions) in (or through or under) certain lands owned (or occupied) by you, that is to say, _____ (describe property and where the notice is served on the owner, state who is the occupier).

Now, therefore, take notice that, in pursuance of section 76(1) and (2) (or section 82) of the Public Health Act, the authority, by their servants or workers (or by their contractor) on or after the _____ day of _____, 20 ____, will proceed to construct (or repair) the sewer (or lateral drain) in (or through or under) your said land (or the land occupied by you as aforesaid).

(In the case of construction of a sewer or lateral drain.)

Plans showing the course of the sewer (or lateral drain) and all details connected with it are deposited at _____, and will until the _____ day of _____, 20 ____, be open to your inspection between the hours of _____ and _____.

By Order,

Date Proper Officer of the Authority

Form D4.

Notice of Intention of Owner of Premises to Lay or Repair a Drain or Private Sewer Through Private Land.

To the _____ authority and the owner (or occupier) of _____

(describe the premises).

I, _____, give you notice that, in pursuance of section 82 of the Public Health Act, I intend by my servants or workers (or by my contractor) on or after _____ day of _____, 20 ____, to proceed to construct (or repair) a drain (or private sewer) in, through or under certain land owned (or occupied) by you (or state name and description where the notice is served on the authority) that is to say, _____
(describe property and, where the notice is served on the owner, state who is the occupier).

(In the case of the construction of a drain or private sewer.)

Plans showing the course of the drain (or private sewer) and all details connected with it are annexed to this notice.

(In the case of a notice on an owner or occupier.)

You are required to submit to the authority in writing any objections you have to the construction (or repair) of that drain (or private sewer) within twenty-one days from the date of service of this notice upon you.

(In the case of a notice on the authority.)

The following owners or occupiers of the land affected have been served with the requisite notice on the dates shown against their names—

(Here set them out.)

Date

Signature

rule 6.

Form D5.

Notice by Person Requiring Communication with a Public Sewer.

To the _____ authority.

I give you notice that I require the foul water, or storm water drainage system of the property belonging to me (*or* occupied by me), which is described in the Schedule to this notice to empty into the sewer situate at _____.

The plans of the drainage works of the premises were approved by you on the _____ day of _____, 20 ____, and the works have been completed in accordance with those plans and have been inspected on your behalf by _____ whose certificate is annexed to this notice.

The estimated cost of constructing the lateral drain will be met by a deposit of cash (*or* secured by bond executed by _____ and _____ or borrowed from the Government in pursuance of my application dated _____).

No liquid or matter other than domestic sewage (*or* storm water) will be discharged from the premises into the sewer (except _____ for which the sanction of the authority is sought).

Date

Signature

Schedule.

(Description of property.)

rule 13.

Form D6.

Notice Requiring Execution of Drainage Work in Existing Buildings.

To the owner (or occupier) of _____ (*describe the premises*).

Take notice that the _____ authority, being satisfied on the report of their _____ (*state the official's designation*) dated the _____ day of _____, 20____, that the following defects exist in the above premises owned (or occupied) by you—

(Set out the defects in accordance with section 86(1)(a) to (d) of the Public Health Act.)

This is to require you in pursuance of the provisions of the Public Health Act to remedy the defects within _____ weeks from the service upon you of this notice in the manner following—

(Set out the works to be executed.)

And further take notice that if this notice is not complied with within the specified time the _____ authority may at the expiration of that time take legal proceedings against you and may further do the work required to be done and recover the expenses incurred in so doing in the manner provided by the Public Health Act.

By Order of _____ Authority

Date

Proper Officer of the Authority

rule 13.

Form D7.

Notice Requiring the Replacement of Earth Closets, Etc. by Water Closets.

To the owner of _____ (*describe the premises*).

Take notice that the _____ authority being satisfied on the report of their _____ (*state official's designation*) that the undermentioned latrines provided for or in connection with that building should be replaced by water closets, that is to say _____ (*specify the latrines to be replaced*) and that a sufficient water supply and public sewer are available, you are required in pursuance of section 87 of the Public Health Act to replace the latrines by water closets within _____ weeks from the service upon you of this notice and in due course to apply to have your drains made to communicate with the public sewer situated at _____.

And further take notice that if this notice is not complied with within the specified time the _____ authority may, at the expiration of that time, take legal proceedings against you and may further do the work required to be done and recover the expenses incurred in so doing in the manner provided by the Public Health Act.

By Order,

Date

Proper Officer of the Authority

Form D8.
Notice Requiring Reconstruction of Insufficient or Defective Latrine
Accommodation.

To the owner of _____
(describe the premises.)

Take notice that the _____ authority being satisfied on the report of their _____ *(state the official's designation)*, dated the _____ day of _____, 20____, that the building described in this notice is without sufficient latrine accommodation, or that the following latrines _____ *(here specify them)* are in such a state as to be prejudicial to health *(or to constitute a nuisance)* and cannot without reconstruction be put into a satisfactory condition, you are required in pursuance of section 88 of the Public Health Act to provide for that building within _____ weeks from the service upon you of this notice, sufficient and satisfactory new latrine accommodation according to the law for that purpose not being less in nature and extent than _____ *(here specify the requirements)*.

And further take notice that if this notice is not complied with within the specified time the authority may at the expiration of that time take legal proceedings against you and may further do the work required to be done and recover the expenses incurred in so doing in the manner provided by the Public Health Act.

By Order,

Date

Proper Officer of the Authority

rule 13.

Form D9.

Notice Requiring Execution of Works in Case of Defective Latrine
Accommodation Capable of Repair.

To the owner (or occupier) of _____ (*describe the premises*).

Take notice that the _____ authority being satisfied on the report of their _____ (*state official's designation*) dated the _____ day of _____, 20 _____, that in respect of the building described in this notice the following latrine accommodation _____ (*here specify it*) is in such a state as to be prejudicial to health or a nuisance but that it can be put into a satisfactory state without reconstruction, you are required in pursuance of section 89 of the Public Health Act to execute the undermentioned works (*or take the following steps*) to remedy the matter within _____ weeks from the service upon you of this notice.

(Here state the works to be executed or steps to be taken.)

And further take notice that if this notice is not complied with within the specified time the authority may at the expiration of that time take legal proceedings against you and further may do the work (*or take the steps*) required to be done and recover the expenses incurred in so doing in the manner provided by the Public Health Act.

By Order,

Date

Proper Officer of the Authority

rule 25(3).

Form D10.
Certificate of Drain Test.

Plot No. _____

This is to certify that the drainage systems on the above plot have been inspected and tested by the undersigned officer of the Public Health Department on the _____ day of _____, 20____, and are found to be sound and to comply with the Public Health (Drainage and Sanitation) Rules with the exceptions stated below.

Foul water drainage _____

Storm water drainage _____

Proper Officer of the Authority

rule 76.

Form D11.
Plumbers Licence.

Licence No. _____

_____ of _____

is licensed as a plumber under the Public Health (Drainage and Sanitation) Rules, and is entitled to carry out any plumbing work in connection with the construction, fixing, laying, repair or removal of pipes, valves, traps, drains, or other apparatus or appliance connected with the drainage of any premises, but not to construct or lay any stoneware drain, inspection chamber, cesspool, septic tank, sewage filter installation or other works for the treatment or disposal of sewage.

Proper Officer of the Authority

rule 76.

Form D12.
Drainlayers Licence.

Licence No. _____

_____ of _____
is licensed as a drainlayer under the Public Health (Drainage and Sanitation) Rules, and is entitled to construct or lay any stoneware drain, inspection chamber, cesspool, septic tank, sewage filter installation or other works for the treatment or disposal of sewage, but not in any way to perform the work of a plumber.

Proper Officer of the Authority

History: S.I. 269-11.

Cross References

British Standard Specifications No. 460 (1932), No. 34 (1934), No. 569 (1934), No. 582 (1934), No. 416 (1935), No. 65 (1937), No. 540 (1937), No. 539 (1937).

Public Health (Building) Rules, S.I. 281-1.
