

CHAPTER 128

SEWERAGE

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Ordinance No. 5 of 1966, Legal Notice No. 112 of 1970, Act No. 17 of 1974

AN ACT TO PROVIDE FOR THE OPERATION, MAINTENANCE AND
CONTROL OF SEWERAGE SYSTEMS AND FOR MATTERS CON-
NECTED THEREWITH

[24 February 1966]

Short title

1. This Act may be cited as the Sewerage Act.

Interpretation

2.—(1) In this Act, unless the context otherwise requires—

“approved drain layer” means any person approved by a council under the provisions of section 12;

“council” means the council of a town and, subject to the provisions of section 22 and, in so far as it has been applied to any sewerage system or sewerage works constructed or maintained by the Government and specified by the Minister under his powers in subsection (2), includes the Government;

“Permanent Secretary” means the Permanent Secretary for Works and Transport*;

“town” means a city or town constituted under the provisions of the Local Government Act. (Cap. 125.)

(Amended by Act 17 of 1974, s. 2.)

(2) This Act shall apply to any town, and may be applied to such sewerage system or sewerage works constructed or maintained by the Government as shall be specified by the Minister by notification in the Gazette. (Substituted by Act 17 of 1974, s. 2.)

Powers of council

3.—(1) A council may, with the approval of the Minister, by notification in the Gazette, declare any area within a town to be a sewerage area and formulate and carry out a scheme for the disposal of sewerage in such area. (Amended by Legal Notice 112 of 1970.)

(2) Before a council declares any area to be a sewerage area under the provisions of subsection (1), the council shall publish, once in the Gazette and 4 times in a newspaper published in Fiji and circulating in the town, a notice of intention to make such a declaration and calling on all persons to submit, within a period of 1 month, to the Minister, any objection which such person may wish to make. (Amended by Legal Notice 112 of 1970.)

(3) The Minister shall consider any objections made under the provisions of subsection (2) and shall allow or disallow such objections and the council shall alter or modify its declaration as may be required by such decision. (Amended by Legal Notice 112 of 1970.)

(4) A council shall, subject to the provisions of sections 8 and 9 of the Constitution, have full powers—

(a) to maintain a sewerage system constructed and lawfully in existence immediately before 24 February 1966;

(b) to construct a sewerage system or new sewerage works subject to the conditions hereinafter provided;

(c) to make connecting sewers from the main and branch sewers or any of them up to the limit of any premises proposed to be placed in connection with the same; and

(d) for any and every such purpose, to enter upon, take and use any lands required to be taken or used for such purpose: (Cap. 1.)

Provided that the council shall do as little damage as may be in the execution of the several powers herein contained. (Amended by Act 17 of 1974, s. 3.)

(5) It is hereby declared that the powers of Government under this Act, so far as they affect any sewerage system or sewerage works which are within the

* See Legal Notices Nos. 163 of 1971 and 143 of 1975.

boundaries of a town and which have been specified by the Minister under his powers in subsection (2) of section 2, shall not affect or derogate from the powers of the appropriate council. (*Inserted by Act 17 of 1974, s. 3.*)

Powers of Government

3A. The Government shall, subject to the provisions of sections 8 and 9 of the Constitution, have full powers—

- (a) to construct a sewerage system or sewerage works and to maintain any such sewerage system or sewerage works;
- (b) to make connecting sewers from the main and branch sewers or any of them up to the limit of any premises existing or proposed to be placed in connection with the same; and
- (c) for any and every such purpose to enter upon, take and use any land required to be taken or used for such purpose:

Provided that the Government shall do as little damage as may be in the execution of the several powers herein contained.

(*Inserted by Act 17 of 1974, s. 4.*)

Notice and plan of works to be served on Permanent Secretary

4.—(1) At least 60 days before commencing the construction of any new sewerage works contemplated under the provisions of this Act (not being repairs, renewals or amendments of existing works of which the character and position are not altered), a council shall serve a notice upon the Permanent Secretary describing the proposed works, together with a plan of the works showing the mode and position in which such works are intended to be executed and shall, upon being required to do so by the Permanent Secretary from time to time, furnish such further information in relation thereto as he may desire.

(2) The Permanent Secretary shall make a report on the proposed works to the Minister who may thereupon, in his discretion, approve of any such works or plan subject to such amendments or conditions as may seem fit or may disapprove the same and shall give notice of such approval or disapproval to the council. (*Amended by Legal Notice 112 of 1970.*)

(3) If the Minister fails to give any such notice of approval or disapproval to the council within 60 days after the service of the notice upon the Permanent Secretary, the Minister shall be deemed to have approved such works or plan. (*Amended by Legal Notice 112 of 1970.*)

(4) Notwithstanding anything contained in this Act, the council shall not be entitled to execute any such works as above specified, except so far as the same may be of a description and in accordance with a plan which has been approved or is to be deemed to have been approved by the Minister as abovementioned, but, where any such works, description and plan are so approved or to be deemed approved, the council may cause such works to be executed in accordance with such description and plan, subject in all respects to the provisions of this Act. (*Amended by Legal Notice 112 of 1970.*)

(5) If the council makes default in complying with any of the requirements or restrictions of this section, it shall be liable to a fine not exceeding \$100 for every such default and, in the case of a continuing offence, to a further fine not exceeding \$4 for every day after the first day during which such default continues.

(6) The provisions of this section shall not apply to the city of Suva nor to any other town specified by the Minister by notification in the Gazette. (*Amended by Legal Notice 112 of 1970.*)

Council may enter and survey lands and bore, dig and cut, etc.

5. A council may, subject to the provisions of sections 8 and 9 of the Constitution, enter into and upon any lands whatsoever required for the purposes of this Act and survey and take levels of the same and set out and ascertain such parts thereof as it thinks necessary and proper for making, erecting or repairing any works or machinery authorised by this Act, and may also bore, dig, cut, trench, get, remove, take and carry away and lay earth, clay, stone, rubble, gravel or sand for making works, which may be got in carrying on the said works or out of any lands of any person adjoining any part of such works which the council is hereby empowered to enter for the purpose of getting such material, and to make such roads as may be requisite for removing the same and also to place, lay and work the same in such lands: (*Cap. 1.*)

Provided that—

- (a) the council shall not be entitled to take earth, stone or other such material from any private garden, yard, lawn or pleasure ground;
- (b) the council shall do as little damage as may be in the execution of the several powers referred to in this section.

(Amended by Act 17 of 1974, s. 5.)

Council may open up streets

6. It shall be lawful, subject to the provisions of sections 8 and 9 of the Constitution, for a council, from time to time as occasion may arise, to open up any street, lane, road, path, passage and access of any description in the town for the purposes of this Act:

Provided that it shall keep open alternative routes and shall provide outlets when streets are opened up or access to premises is obstructed, and shall replace all road materials and, as far as possible, restore all streets and places to the condition previous to being opened up.

(Amended by Act 17 of 1974, s. 6.)

Compensation for land damaged by council

7.—(1) Every person whose land has been or shall hereafter be used by the council in carrying into effect any of the provisions of this Act shall be entitled to reasonable compensation for any damage sustained by him by reason of such use of his land, such compensation to be ascertained and awarded in the manner provided in subsection (2).

(2) In all cases in which compensation is claimed, it shall be lawful for the council to agree with the claimant for payment of such sum of money by way of compensation as the council may think reasonable and, upon any such agreement being made, the sum so agreed upon shall be paid accordingly, and, in all cases, it shall be lawful for the council to tender to the claimant such sum by way of compensation as the council thinks fit and, in case the council and claimant do not agree upon the amount to be paid, the same shall be determined by arbitration.

Sewerage rate

8.—(1) A council, under and in pursuance of the powers conferred upon it in that behalf by any other Act, shall establish a special rate and shall, by means of

that special rate, levy in each year the amount required during the ensuing year for sewerage purposes under the provisions of this Act, including the cost of maintenance and also the amount necessary to meet interest and sinking fund on the sums advanced against any loan raised for sewerage purposes and on sums advanced against any loan, and also an amount which shall be applied by the council in defraying in each year respectively the cost of removing and disposing of nightsoil from premises which cannot be required to be connected to the sewerage system of the town in accordance with the provisions of section 10.

(2) Should the proceeds of the special rate established under the provisions of subsection (1) prove inadequate, the deficit shall be raised in the following year by special rate as part of the sums required to be raised during that year and shall be applied in the manner provided thereby. (*Amended by Act 17 of 1974, s. 7.*)

(2A) The Government, under and in pursuance of its powers, whether under this Act or not, in respect of any sewerage system or sewerage works constructed or maintained by it—

(a) shall have the right to fix and levy capital contributions; and

(b) shall establish a sewerage rate by means of which it may levy in each year, or in such other period as it may, from time to time, determine, the amount required for sewerage purposes during the previous or ensuing year or period, as the case may be. (*Inserted by Act 17 of 1974, s. 7.*)

(3) The said special rate shall be levied on the unimproved value of all rateable land within the town but the council may levy the rate separately in the several wards and may do so in such manner that the rate made and levied in any 1 or more of such wards may vary from that in another or others.

Payments by Government in respect of Crown property

9. The Chief Accountant shall annually credit the council with or pay to it, as the case may be, such an amount as is equal to the amount in respect of the special rate for sewerage purposes which would be leviable upon premises the property of the Crown.

Owner may be required to connect if within 100 feet of sewer

10.—(1) In respect of any premises or any part thereof within 100 feet of any sewer constructed under the provisions of this Act or of any Act repealed by this Act, the council may, by notice in writing, require the owner of such premises to do all or any of the following things within the time specified in such notice:—

(a) to provide, construct and lay a private drain from any land or building or from any existing septic tank and to connect such private drain with such sewer lying within such distance as aforesaid as the council may think fit:

Provided that it shall not be lawful for any person other than the council by itself or by its agents, servants or workmen to construct and lay such portion of any such private drain as aforesaid as extends from such sewer as aforesaid to the intercepting chamber at the boundary of any such land or building as aforesaid;

(b) to cleanse and repair and relay and alter the course and direction and discharge of any existing private drain of or belonging to such premises;

(c) to require the owner of any premises to cause the sewerage and surface water respectively arising therefrom to be drained by separate drains to separate overfalls;

- (d) to execute, provide and do generally any works, materials and things which, in the opinion of the council, are necessary or expedient for the efficient drainage of such premises and every part thereof.
- (2) Every notice under the provisions of subsection (1) shall—
- (a) specify the works, materials and things to be executed, provided or done thereunder, and the sewer with which any private drain is required to be connected; and
- (b) limit a time within which the same works, materials and things shall be so executed, provided and done.
- (3) If an owner fails to do the work specified in a notice given under the provisions of this section and as therein directed or, if the owner so requests, the council may—
- (a) cause such work to be done at the cost and expense of the owner; and
- (b) recover from the owner all such costs and expenses, including the cost and expense of replacing the surface of any road damaged in the course of such work, together with interest at the rate of 6 per cent per annum from the date of the completion of the works.
- (4) In the event of the owner of any premises requesting the council to do all or any of the works referred to in this section before the council may have required him to do all or any of such works, then and in such case, the council may—
- (a) cause all or any of such works to be done at the cost and expense of the owner; and
- (b) recover from the owner all such costs and expenses, together with interest at the rate of 6 per cent per annum from the date of the completion of the works.
- (5) Upon the production to the Registrar of Titles of a certificate in duplicate signed by the Town Clerk of the town in the form contained in the Schedule, the amount, including interest thereon at the rate of 6 per cent per annum, therein certified to be payable by the owner of the premises in respect of which the work has been done, shall form a charge on the land comprising such premises, and the Registrar of Titles shall thereupon register such charge as a mortgage in favour of the council as mortgagee under the provisions of the Land Transfer Act. (Cap. 131.)
- (6) In case default be made in payment of the principal sum or of any instalment of principal or of interest due and payable in respect of such work as aforesaid, the council may exercise all or any of the powers of a mortgagee under the provisions of the Land Transfer Act. (Cap. 131.)

Where owner elects to perform work

11. Whenever—
- (a) in the exercise of the power given under the provisions of section 10, a council requires the owner of any premises or part thereof to do all or any of the works specified in that section; and
- (b) the owner, in compliance with such demand, elects to perform the work or works himself,
- it shall not be lawful for him to employ, for the purpose of the said work or works, any person other than an approved drain layer.

Drain layers

- 12.—(1) A council may approve any person as a drain layer for the purpose of carrying out the work of connecting, constructing, extending, altering or repairing

house sewers or doing any other work required to be done under the provisions of this Act.

(2) Before approving any drain layer, a council shall satisfy itself of the competency of the applicant, who shall enter into an agreement with the council—

- (a) to carry out the requirements of this Act or of any by-laws or regulations made thereunder or of any by-laws or regulations in force immediately before 24 February 1966 relating to sewerage and still in force; and
- (b) to comply with all such instructions and conditions as the council may, from time to time, give or impose.

(3) An approved drain layer shall be responsible in respect of all acts and deeds done by persons employed by him or acting under his instructions as though the acts and deeds were done by the approved drain layer himself.

(4) Each council shall maintain a register of drain layers approved by such council, which register shall be open during normal office hours for inspection by members of the public.

Control of drain layers

13.—(1) If, in the opinion of a council, an approved drain layer—

- (a) does anything contrary to the provisions of this Act or of the by-laws or regulations made thereunder; or
 - (b) in any way fails to carry out the work to its satisfaction,
- then the approval of such drain layer may be withdrawn.

(2) The withdrawal of such approval shall not prejudice the right to recover damages caused by the neglect or default of the person from whom it is withdrawn.

No sewer to be connected without approval

14.—(1) It shall not be lawful for any person to connect any sewer or drain with a sewerage system without the knowledge and approval in writing of the appropriate council.

(2) Any person contravening the provisions of this section shall be liable to a fine not exceeding \$250 for every day until the removal of such connection after notice in writing to remove the same has been given by the council.

(Amended by Act 17 of 1974, s. 8.)

By-laws or regulations

15.—(1) It shall be lawful for a council from time to time to make by-laws, or, in the case of the Government, for the Minister to make regulations, regulating the dimensions, material, form, construction, maintenance, cleansing and repairing of sewers and of the traps and other apparatus connected therewith and for the extension of the system and generally for such other purposes as may be found necessary for carrying out the provisions of this Act. *(Amended by Act 17 of 1974, s. 9.)*

(2) Such by-laws or regulations may impose a maximum penalty not exceeding \$100 for any breach thereof and shall be subject to the approval of the Minister. *(Amended by Legal Notice 112 of 1970; Act 17 of 1974, s. 9.)*

Powers of Minister when council defaults

16.—(1) If—

- (a) a council fails to carry into effect—
 - (i) the provisions of this Act or of any by-laws or regulations made thereunder or of any by-laws or regulations in force immediately before 24 February 1966 relating to sewerage and still in force; or

(ii) the provisions of the agreement subject to which a council took over a sewerage system; or
 (b) in the opinion of the Minister, the public health is imperilled by reason of the condition of such system,
 the Minister may appoint a commissioner who shall forthwith assume, for such time as may be directed by the Minister, the care, control and management of the system. (*Amended by Legal Notice 112 of 1970.*)

(2) Upon the appointment of the Commissioner, the council shall be divested of the care, control and management of the system, but shall be liable to make good any expense or cost incurred by the Commissioner, in his absolute discretion, in the exercise of such care, control and management.

Obstruction of council

17. Any person who obstructs or endeavours to obstruct a council or any officer, servant or workman employed by it in the exercise of any of the powers in this Act contained shall be guilty of an offence and shall be liable to a fine not exceeding \$100. (*Amended by Act 17 of 1974, s. 10.*)

Damage to works

18.—(1) Any person who wilfully or negligently injures or damages or causes to be injured or damaged any of the works constructed under the provisions of this Act or of any Act hereby repealed shall be liable to a fine not exceeding \$250 and, in addition, he shall be liable for the cost of repairing any such injury or damage. (*Amended by Act 17 of 1974, s. 11.*)

(2) Nothing herein contained shall operate as a bar to proceedings under any other Act for the time being in force:

Provided always that no person shall be liable to be punished twice for the same offence.

Application of penalties, etc.

19. All fines, penalties and forfeitures recovered under the provisions of this Act by or on behalf of a council shall be paid into and form part of the municipal* fund of such council.

[20. * * * * * (*Repealed by Act 17 of 1974, s. 12.*)]

Saving

21. All by-laws, regulations and notices in force immediately before 24 February 1966 validly made under the provisions of the Suva Sewerage Ordinance (repealed by this Act or the Towns Ordinance†, shall, in so far as they are not inconsistent with the provisions of this Act, remain in force until revoked as if such by-laws, regulations and notices had been made or issued under the provisions of this Act.

Non-application to Government

22. It is hereby declared that the provisions of subsections (1), (2), (3) and (4) of section 3, section 4, subsections (1) and (3) of section 8, and sections 9, 10, 16 and 19 of this Act shall not apply to the Government.

(*Inserted by Act 17 of 1974, s. 13.*)

* See section 37 of the Local Government Act (Cap. 125.)

† Repealed by section 140 of the Local Government Act (Cap. 125.)

SCHEDULE
(Section 10 (5))

CERTIFICATE UNDER SECTION 10 (5) OF THE SEWERAGE ACT

[No. of certificate]

It is hereby certified, under the provisions of section 10 of the Sewerage Act, that the sum of [*here insert amount*] has been expended by the City/Town Council in connecting [*here insert description of premises, owner and nature of title*] with the system of sewerage (or as the case may be), such amount bearing interest at 6 per cent per annum as from the date hereof and being payable by instalments of \$ per the first of such instalments being payable on the day of , 19 .

Dated this day of , 19 .

TOWN CLERK

Controlled by Ministry of Communications, Transport and Works

CHAPTER 128

SEWERAGE

SECTION 2—APPLICATION OF ACT

The Act applies to any system or work which connects to or will be connected to or which is served by or will be served by any of the following Treatment Plants:—

1. Kinoya Sewage Treatment Plant.
Legal Notice No. 171 of 1974
 2. Labasa Sewage Treatment Plant.
Legal Notice No. 54 of 1979
 3. Lami—Wailada Industrial Estate Sewage Treatment Plant.
Legal Notice No. 125 of 1976
 4. Lautoka Sewage Treatment Plant.
Legal Notice No. 47 of 1983
 5. Nadi Regional Sewage Treatment Plant.
Legal Notice No. 171 of 1974
 6. Nadi—Sewage Treatment Plant at the Housing Authority's Estate at Namaka.
Legal Notice No. 99 of 1977
 7. Nasinu—Sewage Treatment Plant at the Housing Authority's Estate at Nepani.
Legal Notice No. 103 of 1978
 8. Natabua Sewage Treatment Plant.
Legal Notice No. 54 of 1979
 9. Nausori Regional Sewage Treatment Plant
Legal Notice No. 59 of 1985
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SECTION 3—DECLARATION OF SEWERAGE AREA

The following areas of land have been declared to be sewerage areas:—

Legal Notice No. 166 of 1980

1. **LABASA SEWERAGE AREA**

All that area of land situated in the Tikina of Labasa in the Province of Macuata extending, in regular widths varying from approximately 2,314 metres to 20 metres, from approximately 160 metres east of Nasekula Village to the eastern boundary of Vaturekuka Government Station (Survey Plan No. M197).

This area is shown verged red and is more particularly delineated on plan P.P.83 deposited in the Office of the Director of Lands and Surveyor-General in Suva and available for inspection at the Office of the Labasa Town Council.

Local Government Notice No. 9 of 1977

2. **NAUSORI SEWERAGE AREA**

All that area of land being part of the town of Nausori and lying on the left bank of the Rewa River, and stretching from Vunivivi Road and Dunstan Street on the west to Wainibokasi Road and Waicuku Creek on the east and extending northward from the high water mark of the Rewa River to the right bank of the creek immediately to the north of Cunningham Street and to the southern boundary of the land represented by Survey on Plan R. 1833 deposited with the Director of Lands.

The area is more particularly represented and delineated in yellow on Plan P.P. 142 kept by the Permanent Secretary for Lands and Mineral Resources and is available for inspection in the offices of the Permanent Secretary for Urban Development, Housing and Social Welfare and in the office of the Nausori Town Council.

SECTION 8—DECLARATION OF SEWERAGE RATE

Gazette Notice No. 1199 of 1980

It is declared that, notwithstanding any notice or other thing previously given, made or done under or by virtue of subsection (2A) of section 8 of the Sewerage Act—

- (a) the sewerage rate established under that subsection in respect of any sewerage system or sewerage works constructed or maintained by the Government shall be leviable in the year commencing on 1 July 1980, and in each year thereafter, at the following rates, that is to say:—
 - (i) in respect of sewage other than trade waste, at the rate of 12 cents for every cubic (or part thereof) of water consumed; and
 - (ii) in respect of any trade waste, at such rate as the Commissioner of Water Supply shall deem proper having regard to the strength and volume of the waste;
- (b) without prejudice to the right of the Government to payment of any capital contribution levied under that subsection before 1 July 1980, no capital contribution shall be so levied on or after that day;
- (c) subject to paragraph (d), any capital contribution levied before 1 July 1980 and paid by any person shall be appropriated in payment of any sewerage rate established as aforesaid and payable by that person;
- (d) the capital contribution so levied and paid by the Nadi Town Council shall be refunded to the Council and the capital contribution so levied and paid in respect of the sewerage system at Nadi Airport shall be refunded to the Civil Aviation Authority of Fiji; and
- (e) the sewerage rate established as aforesaid in respect of any sewerage system or sewerage works shall be payable at intervals of 3 months by the person liable under the Water Supply Act for the payment of the water supply charges for such system or works;

and it is further declared that Legal Notice No. 8 of 1975 and Legal Notice No. 72 of 1976 are revoked with effect from 30 June 1980.

SECTION 15—NADI SEWERAGE BY-LAWS

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Short title

1. These By-laws may be cited as the Nadi Sewerage By-laws.

Interpretation

2. In these By-laws, unless the context otherwise requires—
 - “drain” means any line of pipes lawfully connected or intended to be connected with any sewer;
 - “Town Engineer” means the Town Engineer appointed by the Council;
 - “sewer” means a conduit provided for the purpose of carrying the liquid wastes of the community otherwise known as sewage or sullage;
 - “surface-water drain” means any drain for the purpose of carrying off surface water, including storm water, from any premises, and includes the stoneware or any other pipe and open channel referred to in by-law 6 of these By-laws;
 - “the Council” means the Nadi Town Council;
 - “connection” means the junction of a sewer from a building or buildings with the public sewer;
 - “trade waste” means all waste products and by-products of and liquids flowing from any engine or machinery, and shall include all waste products, by-products and liquids arising or accruing from the manufacture of any articles or thing of whatsoever description.

Powers of the Council

- 3.—(1) The Council, or any person authorised by it in that behalf, shall be the judge of the adequacy of the means taken to comply with any of these By-laws and of the suitability of the material, the design and the quality of the workmanship.
(2) The Council may, in suitable cases, allow, by order in writing, the use of materials other than those specified, if it considers such material equally suitable.

Rain water

4. No rain water shall be permitted to enter the sewerage system.

Trade waste

- 5.—(1) No person shall cause or permit any liquid or refuse from any manufacturing process owned, managed or controlled by him to discharge into any sewer or drain connected therewith, except with the permission, in writing, of the Council, or of some person authorised by it in that behalf, first had been obtained, and subject to such condition as to works, material and things as the Council or such authorised person may deem expedient for the protection and maintenance of any sewer.
(2) No steam or liquid at a temperature of over 100°F shall be discharged into any sewer.

Surface water

- 6.—(1) All premises shall be provided with a good and sufficient surface water drain constructed of stoneware pipes or any other pipe of a quality to be approved by the Council or with an open channel constructed of brick, stoneware, masonry, concrete or other material to be approved by the Council and such pipes or open channel shall discharge into the side open or covered drain of an adjacent street or into such other stream or channel as the Council may direct.

(2) The dimensions of such pipes or channels shall be determined by the Council.

(3) Connection to a covered street drain shall be made through a pipe equipped with a grating at the commencement and laid at a gradient not less than that of the connecting drain.

(4) There shall be no syphons in the drains serving the lots.

Sub-soil, water drains

7.—(1) The sub-soil of the site of every new building shall be effectually drained by means of suitable earthenware field pipes, properly laid to suitable outfall, whenever the dampness of the site renders such a precaution necessary.

(2) No field pipe shall be laid in such a manner or in such a position as to communicate with any sewer or with any drain constructed or adapted to be used for conveying sewage.

Notice of intention to construct, etc., pipe drains

8.—(1) The owner or occupier of any premises who intends to construct or alter the pipe drains or other means of communicating with any sewer or the traps or apparatus connected therewith shall, before commencing such work, give notice in writing of such intention.

(2) Such notice shall be delivered at the Council's office on a form to be supplied by the Council.

Deposit of plans

9.—(1) Every owner of the premises who, under notice from the Council issued under section 10 of the Act, intends to connect any premises with the sewer and carry out such works specified in such notice within a specified time shall, not less than 1 calendar month, previous to the date on which such notice expires, cause a ground plan to be made of the premises proposed to be drained, drawn neatly and accurately on forms to be approved by the Council to a scale of 20 feet to 1 inch, and such plan shall also show the line of the proposed drains and the sizes figured there on accurate longitudinal sections with a horizontal scale the same as the plan and vertical scale of 10 feet to 1 inch.

(2) The said plan must show the proposed position of gullies, inspection chambers, connecting pipe, proposed drains and their sizes, etc., and existing drains when such exist.

(3) With the plans referred to in this by-law, the owner or occupier of the building shall deposit a detailed description of the intended mode of constructing, forming or fixing any such drains, inspection chambers, etc.

(4) The description shall be set out on a form to be supplied by the Council.

Alterations to sewers

10. No person shall remove or make any alteration in any drain pipe, soil pipe, water closet, urinal or any other fitting communicating with any sewer unless he shall have previously obtained the authority of the Council to do so.

Notice of covering up drains or other drainage works

11. Every person who constructs or alters any drain or other drainage work shall, before proceeding to cover up any foundations, drains, or appliances connected with the drainage, give at least 24 hours' notice to the Council, in writing, that such foundations, drains or appliances are ready for inspection.

(2) Such notice shall be on a form to be supplied by the Council.

Tests

12. The Town Engineer will conduct or cause to be conducted water or air tests, or both, to ascertain the soundness of the system and the owner shall furnish all the necessary tools, appliances, labour and assistance for such tests.

Notice of completion

13.—(1) Every person who constructs or alters any drain, or other drainage work, shall give the Council notice, in writing, specifying the date and hour at which such drains or works will be ready for final inspection.

(2) Such notice shall be on a form to be supplied by the Council.

Connection with sewer

14.—(1) No connection of any drain to any sewer or to any existing private drain connected to a sewer shall be made until a certificate has been issued by the Council on a form, prescribed for the purpose, that the whole of such drain and appliances connected therewith comply with the requirements of these By-laws.

(2) Such connection shall be made by a duly authorised officer of the Council through an approved drain layer after the receipt of an application for the connection, accompanied with a certificate on prescribed form and the deposit of such sum of money as Council may prescribe from time to time.

(3) The amount of deposit for the connection shall include the cost of digging the service road to expose the public sewer, reinstatement and supervision.

(4) All materials and labour required for the connection shall be supplied by the owner.

Drain layers

15.—(1) All the works of constructing, extending, altering or repairing of house sewers shall be carried out by drain layers registered for the purpose with the Town Council.

(2) Before registering a person as a drain layer, the Council shall satisfy itself of the competency of the applicant.

(3) The initial fee for registering a drain layer shall be \$2.00.

(4) The quarterly licence fee for a drain layer shall be \$1.00.

Separate premises on combined drain

16.—(1) No combined drain shall be connected with or discharge into any sewer without the consent of the Council or some person authorised by it in that behalf in writing first had and obtained and subject to such work, materials and things as the Council may deem expedient for the protection and maintenance of any sewer.

(2) The owner or occupier of any premises connected with such combined drain shall, when required in writing by the Council or by any person authorised by it in that behalf so to do, cleanse, repair, re-lay and alter the course and direction of discharge of such combined drain.

(3) The Council may, if it thinks fit, do all or any of the work and things and supply all such material as are required by this by-law and also, in its discretion, may declare such combined drain to be a public drain.

(4) Neither such election or declaration as aforesaid shall prevent the Council from imposing upon the owner or occupier of the several premises connected with such combined drain all or any part of the cost of such work, things or materials.

Quality of work

17.—(1) All work shall be executed with the best material and workmanship of their respective kinds to the satisfaction of the Council.

(2) The quality of the several kinds of materials used in any of the work shall, in all cases, be determined by the Council and no other material shall be used but such as shall be approved by it.

Unsuitable material

18.—(1) Should it be intended to use any material which, in the judgment of the Council, is of bad or inferior quality, such material shall be not used upon the works, but shall be forthwith conveyed away at the cost of the owner, if the Council so order.

(2) Samples of fittings which the Council is prepared to approve may be seen at the Council's office.

Excavations

19.—(1) In the case of pipe trenches in soapstone, the excavation shall be carried 3 inches below the invert, if required by the Council, and a level bed of fine concrete (6-1) provided.

(2) Holes shall be left at the joints of as small a size as possible for the sockets to rest in so that the pipes shall have a uniform bearing for the barrel.

(3) Great care shall be exercised in filling the trenches.

(4) The soil filled around and 1 foot above the top of the pipes shall be free from large stones and filled in with the utmost care so as to obtain the greatest possible compactness and solidity.

Cement

20.—(1) Portland or local cement shall be used upon the work and shall conform to the requirements in all respects of the British Standards Specification.

(2) For pipe jointing it shall all come under the head of medium setting time.

(3) All cement shall be specially cooled before being used.

Composition of concrete

21.—(1) The concrete shall be composed of absolutely clean, broken stone ballast or such other material approved by the Council and sufficient clean, sharp sand as specified to make an absolutely solid and watertight concrete.

(2) The concrete shall be measured 6 parts stone and sand to 1 part cement.

Standard of pipes

22.—(1) All pipes, bends, junctions, traps, etc., shall be of the best quality stoneware thoroughly vitrified.

(2) The pipes must be true in form, thoroughly salt glazed, sound and well burnt throughout their thickness very smooth internally, impervious to moisture, free from cracks, flaws, blisters, fire checks and all other imperfections.

(3) The pipes must be internally of the specified diameter and subject to test by the Council and shall have the following dimensions:—

Diameter	Minimum thickness of barrel	Minimum thickness of socket	Minimum depth of socket
4"	3/4"	3/4"	3"
6"	1"	3/4"	3"

- (4) The sockets must be true and amply strong.
- (5) Samples of these goods will be kept at the Council's office for reference and all pipes, and fittings must be equal in quality and dimensions to these samples.

Pipe jointing and laying

23.—(1) The pipe jointing shall consist of specially cooled Portland or local cement as hereinbefore specified.

(2) A gasket of tarred oakum shall, in the first instance, be pressed into the joint around the entire circumference of the pipe for the purpose of keeping the true alignment and for preventing the cement from penetrating to the internal surfaces.

(3) All pipes shall be laid with a straight edge and line and shall be kept dead true to grade and direction.

(4) No pipes shall in any case to be trimmed off if they do not fit.

(5) All pipes and fittings shall be laid upon a bed of Portland or local cement concrete (6-1) of a thickness to be determined by the Council, but in no case less than 3 inches.

Water entering sewers

24. The pipes must be kept clean during construction and efficient means provided to prevent water entering the sewers.

Cast-iron drains

25.—(1) Cast-iron drain pipes shall be according to the following weight and specification:—

4 in. diameter, 12 lb. per lineal foot,

6 in. diameter, 30 lb. per lineal foot.

(2) All fittings used in connection with such pipes shall correspond with them in weight and quality.

Drains under buildings

26.—(1) Every drain shall be so constructed as not to pass under any building, except in any case where the Council may decide that any other mode of construction is impracticable.

(2) In any case where the Council permits a drain to pass under any building, such drain shall be so laid in the ground that there shall be a distance of at least 1 foot 6 inches between the top of such drain at its highest point and the surface of the ground, and such drain shall be constructed of stoneware pipes surrounded with 6 inches of Portland or local cement concrete (6-1) or of cast-iron pipes as specified, in each case as the Council shall determine.

Standard of cast-iron

27.—(1) All cast-iron used upon the work shall be of the best quality fine and close-grained, sound and clean in every respect and coated hot with a composition composed of pitch, coaltar and linseed oil mixed in such proportions as will produce a coating on the metal of a smooth, glossy and tenacious nature.

(2) All pipes must be truly cylindrical and concentric.

Soil pipes

28. Soil pipes shall be of lead 7 lb. perfect super or cast iron at least ¼" thick as specified for drains.

Ventilating pipes

29.—(1) The drain intended for carrying foul water from a building shall be provided with at least 1 ventilating pipe situated as near as practicable to the building and as far away as possible from the point at which the drain empties into the sewer or other carrier.

(2) Such ventilating pipe shall be carried up vertically to such a height that the top shall be at least 6 feet higher than any window, door or opening situated within a distance of 30 feet therefrom.

(3) Such a pipe shall be of minimum 3 inches diameter.

Self cleansing drains

30.—(1) Every drain shall be so arranged as to be self cleansing in order that it may at all times be free from deposit.

(2) Where this cannot be effected without flushing, proper flushing apparatus shall be provided by and at the expense of the owner of the premises in such manner as the Council may direct.

Keeping of drains free

31. Every owner or occupier shall—

- (a) at all times, see that all drains, traps and other fittings upon his premises are in good order, sound, clean and free from obstruction;
- (b) prevent rags, leaves and other refuse from entering the drains; and
- (c) protect all openings to the drains by proper gratings.

Kitchen sink wastes

32.—(1) Kitchen sink wastes shall be of 6 lb. lead pipe 2 inch diameter, unless the Council shall otherwise direct.

(2) Anti-syphonage pipes shall be constructed where necessary.

(3) Where the waste is longer than 6 feet, a proper trap of 7 lb. lead of the same diameter as the pipe shall be used.

(4) All such traps shall have an eye for cleaning.

Stoneware gully traps

33. Stoneware gully traps shall be of approved design and shall be so placed as to exclude surface or rainwater at any time, and the owner or occupier must, at all times, see that such water is conducted away from such traps and prevent the flooding of premises.

Water-closets

34.—(1) Subject to the consent in writing of the Council to any other mode of construction, every internal water-closet shall be constructed in such a position that 1 of its sides at least shall be an external wall.

(2) All water-closets shall be provided with adequate light and ventilation.

(3) Detached water-closets shall be substantially built to the satisfaction of the Council.

(4) The closet pan shall be the "wash down" type, consisting of best quality white glazed fire-clay or other approved non-absorbent material and shall be capable of being thoroughly cleaned to the trap.

(5) The joint between the trap and the drain pipe shall be in such a position as to be easily made and inspected.

(6) No china pans shall be used.

(7) Where the pan is fixed to a floor supported on piles, the joint between the pan and drain shall be made with 7 lb. lead pipe and heavy brass ferrule or the pan must be supported on a concrete pier, which shall extend back far enough to surround the drain pipe 6 inches of concrete.

Urinals

35.—(1) Where urinals are installed, they shall be fire-clay or other approved non-absorbent material and must be provided with approved flushing apparatus.

(2) The floors under or around urinals must be constructed of non-absorbent material.

(3) Where the urinals are constructed outside of a building, they must be covered in such a manner as to prevent rain water from having access to the drain.

(4) Where urinals are constructed inside a building—

(a) they must only be fixed in well-lighted and ventilated places and on an external wall; and

(b) the method and quantity of flushing must be approved by the Council.

Waste pipe from bath, etc.

36.—(1) The waste pipe from a bath or set of lavatories shall be 1½ inches diameter fitted with a deep seal trap of 6 lb. lead with a cleansing screw.

(2) Where directed, the waste shall be provided with a 1½ inch vent pipe for the bath and 1¼ inch vent pipe for the lavatories.

(3) The wastes shall discharge as provided in the manner prescribed in by-law 32.

(4) The waste pipe for a single lavatory shall be 1¼ inch diameter fitted with a 6 lb. lead trap with a cleansing screw.

(5) The area of the grating shall be such that the discharge shall not be impeded.

(6) All waste pipes shall be as short as possible and discharge in the manner prescribed in by-law 32.

(7) Where showers are installed, the floor beneath shall be constructed of approved impervious material which shall extend up the walls to catch effectually all splashing water.

(8) The wastes from such showers shall be at least 1½ inch diameter trapped with a 7 lb. deep seal trap.

(9) Where a fine concrete floor is used, the waste water may be conducted to the gully placed outside the building by a short glazed channel.

Anti-syphonage pipes

37. Anti-syphonage pipes shall be provided where, in the opinion of the Council, they are found to be necessary in connection with the system.

Provision of manholes or inspection chambers

38.—(1) At every change of alignment, gradient or diameter of a drain, there shall be a manhole or an inspection chamber.

(2) The chamber shall be constructed of cement concrete blocks on a cement concrete bed and be internally plastered.

(3) In the chamber, a channel with a half round invert of concrete plastered with cement mortar shall be formed to the width and full depth of the pipe drain.

- (4) The walls shall be brought up to the surface of the ground and covered with a cast-iron air tight cover and frame.
- (5) Chambers shall be of such size as to allow necessary examination or clearance of drains.
- (6) The minimum internal sizes of chambers shall be as follows:—
Up to 3 feet depth—2' 6" × 1' 6"
For depths between 3 feet to 5 feet—3' 0" × 2' 6"
For larger depths—a conical or domical manhole of internal diameter of 4 feet at the bottom tapering to 1' 9" at the top or a precast concrete manhole of 3' 6" diameter with 1' 9" diameter cover at top.
- (7) Manhole covers and their frames shall be of cast iron.
- (8) The size of manhole covers shall be such that there will be clear opening of at least 21" diameter for manholes exceeding 3 feet in depth or, in the case of square or rectangular covers, a clear width of at least 18".
- (9) Covers shall be water tight and shall fit properly in their frames.

Penalty

39. Any person who, when required in writing by the Council to comply with the provisions of any of these By-laws, fails or neglects to comply with such written request, shall be guilty of a breach of these By-laws and shall be liable, on conviction, to a fine not exceeding \$100 for each such offence.

SECTION 15—NAUSORI SEWERAGE BY-LAWS

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Legal Notice No. 1 of 1978

PART I—PRELIMINARY

Short title

1. These By-laws may be cited as the Nausori Sewerage By-laws.

Interpretation

2. In these By-laws, unless the context otherwise requires—
 - “connection” means the junction of a foul drain from premises with a sewer;
 - “Council” means the Nausori Town Council;
 - “foul drain” means any pipe or conduit or series of these, inspection chambers or other appliances used to convey the discharge from any water closet, slop sink, septic closet, soil pipe, urinal, gully trap or any trade waste source to a sewer or sewerage tank;
 - “prescribed form” means a form approved by the Council;
 - “sewer” means any pipe or conduit inspection chamber or other appliances used to convey the discharge from connecting foul drains from more than 1 building;
 - “sewerage engineer” means the sewerage engineer appointed by the Council;
 - “soil pipe” means the pipe connecting a water closet to the under ground foul drain;
 - “surface-water drain” means any pipe or conduit or series of these, inspection chambers or other appliances used to convey surface water;
 - “trade waste” means the liquid wastes from industrial manufacturing process, trade or business as distinct from sanitary sewage.

PART II—SUBMISSIONS AND NOTICES

Deposit of plans

3.—(1) Every owner of premises who, whether by notice from the Council issued under section 10 of the Act or not, intends to connect any premises with the sewer and carry out such works specified in such notice within a specified time or any works proposed shall, not less than 1 calendar month prior to the date on which the notice expires, cause a ground plan to be made of the premises proposed to be drained, drawn neatly and accurately on forms to be approved by the Council to a scale of 1 to 200, and such plan shall also show the line of the proposed drains and sewers and the sizes figured thereon, accurate longitudinal sections with a horizontal scale the same as the plan and a vertical scale of 1 to 100.

(2) The said plan must—

(a) show the proposed position of gullies, ventilating shafts, inspection chambers, etc., and existing drains, when such exist; and

(b) be approved by the Council, in writing, before any work is commenced.

(3) Along with the plans referred to in this by-law, the owner or occupier of the building shall deposit a detailed description of the intended mode of constructing, forming or fixing any such drains, inspection chambers, etc.

(4) The description shall be set out on a form to be supplied by the Council.

Alterations to sewers

4. No person shall remove or make any alteration in any drain pipe, water closet, urinal, trap, or other fitting communicating with any sewer, unless he shall have previously obtained the authority of the Council in writing so to do.

Notice of intention to construct works

5.—(1) The owner or occupier of any premises who intends to construct or alter the pipe drains or sewers connected therewith shall, after receiving written approval from the Council, give at least 24 hours' prior notice in writing of his intention to commence work.

(2) Such notice shall be on a form to be supplied by the Council and delivered at the Council's Office.

Notice of covering up drains, sewers, or other associated works

6.—(1) Every person who constructs or alters any drain, sewer or other associated works should, before proceeding to cover up any such work, give at least 24 hours' notice to the Council in writing that such works are ready for inspection.

(2) Such notice shall be on a form to be supplied by the Council.

Connection with sewer

7.—(1) No connection of any foul drain to any sewer or to any existing private drain connected to a sewer shall be made unless—

(a) the workmanship on such foul drain is in compliance with the requirements of these By-laws; and

(b) a certificate has been issued by the Council in the appropriate form.

(2) Such connection shall be made by an officer of the Council or by a registered drain layer duly authorised on receipt of the certificate mentioned in paragraph (1) and on payment of the connection fees that the Council may prescribe from time to time.

(3) The Council may accept a deposit not less than a prescribed sum towards the payment of such fees, which shall include the cost of digging to expose the public sewer, reinstatement and supervision.

(4) All materials and labour required for the said connection shall be supplied by the owner.

PART III—GENERAL

Foul drains

8. Unless otherwise directed by the Council, all foul drains shall be connected to a sewer.

Sub-soil water

9. No sub-soil water shall be connected to a foul drain or sewer.

Surface or rain water

10.—(1) No surface or rain water shall be permitted to enter the sewerage system.

(2) All premises shall be provided with a good and sufficient surface water drain constructed of stoneware-pipes or any other pipe of a quality to be approved by the Council or with an open channel constructed of either brick, stoneware, masonry, concrete or other material to be approved by the Council, and such stoneware pipes or open channel shall discharge into the side channel of the adjacent street or into such other stream or channel as the Council may direct.

(3) The dimensions of such pipes or channel shall be determined by the Council.

Trade-waste

11.—(1) No person shall cause or permit any trade waste or refuse from any manufacturing process trade or business owned, managed or controlled by him to discharge into any sewer or drain connected therewith, except with the permission, in writing, of the Council, or of some person authorised by it in that behalf, first had and obtained and subject to such condition as to works, materials and things as the Council or such authorised person may deem expedient for the protection and maintenance of any sewer or drain.

(2) No steam or liquid at a temperature of over 40°C shall be discharged into any sewer.

Grease traps

12. Whenever, in the opinion of the Council, it is necessary, and in cases of drains from restaurants, hotels and butcheries, a grease trap of approved design and construction shall be installed and maintained by the owner.

Keeping of drains and sewers free

13. Every owner or occupier shall—

- (a) at all times, ensure that all drains, sewers, traps and other fittings upon his premises are in good order, sound and free from obstruction;
- (b) prevent rags, leaves and other refuse from entering the drains; and
- (c) protect all openings to the drain by proper gratings.

Tests

14.—(1) The sewerage engineer shall conduct or cause to be conducted water or air tests, or both, to ascertain the soundness of the system, and the owner shall furnish all the necessary tools, appliances, labour and assistance for such tests.

(2) Where an owner is unable to furnish all the tools and appliances for such tests, the Council may, if it thinks fit, supply the same, and labour for using them.

(3) In any such case, the charge to be paid by the owner for the use of tools and appliances shall be a sum at a rate not exceeding \$2.50 per day, in addition to the cost per day of all labour and assistance considered reasonably necessary by the Council for carrying out the test.

Drain layers

15.—(1) All the works of constructing, extending, altering or repairing of drains shall be carried out by drain layers registered for the purpose with the Town Council.

(2) Before registering a person as a drain layer, the Council shall satisfy itself of the competency of the applicant.

(3) The initial fee for registering a drain layer shall be \$5.00.

(4) The quarterly licence fee for a drain layer shall be \$1.00.

PART IV—GENERAL DESIGN

Self cleansing drains and sewers

16. Every drain and sewer shall be so arranged as to be self cleansing in order that they may be at all times free from deposit.

Size of pipes

17. No pipe other than those of the following sizes shall be used:—

Foul drains—100 mm diameter

Sewers—minimum 150 mm diameter

Ventilation Pipe—minimum 75 mm diameter

Soil pipe—100 mm diameter

Waste pipe from bath—38 mm diameter

Waste pipe from sink, washbasin—38 mm diameter

Pipe gradients

18. The following are the minimum gradients for drains, sewers and connections:—

150 mm diameter sewers, less than 10 properties connecting.....	1 in 80
150 mm diameter sewers, over 10 properties connecting.....	1 in 120
100 mm diameter connections.....	1 in 40

Bends

19. Bends in foul drains may be permitted if a change in direction cannot be avoided, but only in the following positions and up to a maximum change of alignment of 30°:—

(a) immediately adjacent to an inspection chamber, when the chamber cannot accommodate any necessary junctions as well as the change in alignment of the main foul drain;

(b) on a single drain pipe to a soil and vent pipe;

(c) on a junction to a sewer up to a maximum of 45° in a horizontal or vertical direction.

Junctions

20.—(1) Junctions shall be permitted on foul drains to enable connections from each source of sewage or trade waste.

(2) No more than 1 building shall be permitted to connect to a junction of a sewer.

(3) The side branch of a sewer junction shall slope upwards at an angle of 45° and a suitable bend fitted to adjust to the slope of the foul drain.

Drains under buildings

21.—(1) Every drain shall be so constructed as not to pass under any building, except in any case where the Council may decide that any other mode of construction is impracticable.

(2) In any case where the Council permits a drain to pass under any building, such drain shall be so laid that there shall be a distance of 500 mm at least between the top of such drain at its highest point and the surface of the ground, and such drain shall be surrounded with 150 mm of concrete (6-1) or of cast-iron pipes in each case as the Council shall determine.

Position of inspection chambers

22. Inspection chambers shall be placed in the following positions on foul drains and sewers:—

- (a) at changes in diameter of pipe;
- (b) at changes in gradient of pipe;
- (c) at changes in alignment of sewers;
- (d) at changes in alignment of foul drains, greater than 30°;
- (e) at the upper end of a sewer.

Inspection chamber sizes and construction

23.—(1) Inspection chambers shall be completely water-tight structures.

(2) The walls of the chamber may be constructed in concrete blocks rendered on the inside with 20 mm thick cement plaster, insitu concrete (6:1) or precast concrete units.

(3) The base slab may be insitu concrete, reinforced where necessary, and the cover slab either insitu reinforced concrete or a precast unit.

(4) The chamber walls shall be constructed over and around the pipes so that they are sealed into the manhole and, where precast units are used, a 150 mm concrete surround shall be placed around the bottom 300 mm of the unit to ensure a good seal and foundation.

(5) In the chamber, a channel or channels with half round invert of concrete finished with 20 mm thick cement plaster to the full width and depth of each pipe shall—

- (a) be formed and shaped true to line or to suitable curves to enable the sewage to flow quickly and freely through the chamber; and
- (b) be finished smooth to the touch.

(6) The cover slab, which shall have an opening to suit the manhole cover, shall be placed at a level on top of the walls so that the manhole cover can be set to the right level.

(7) The cover slab and base slab shall be suitably reinforced to withstand any possible load for its location.

(8) A shaft—

(a) may be used between the cover slab and the cover to a maximum depth of 150 mm; and

(b) if used, shall be constructed in insitu concrete, its walls being 225 mm thick, with a clear opening the same width as the cover.

(9) The manhole cover and frame shall, wherever possible, be finished above ground level and above any level in which surface water can enter the manhole.

(10) The frame of the manhole cover shall be fixed by means of bedding in cement mortar and surrounding with a substantial fillet of mortar finished smooth to ensure its stability and its watertightness.

(11) In chambers deeper than 1.25 m from ground level to invert, step irons—

(a) should be provided fixed into the walls; and

(b) shall be spaced 300 mm horizontally by 300 mm vertically.

(12) Chambers shall be of such a size as to allow necessary examination or for cleaning purposes, the minimum sizes being as follows, and the width of chamber shall be increased suitably where there is a deviation in the pipeline of more than 30°:—

Depth, Ground Level to Invert	Internal size Length width	Type of Wall	Thickness of Base	Thickness of Cover Slab
Up to 0.6 m	0.6 m 0.45 m	150 mm Block work or Insitu concrete	150 mm	150 mm
0.6 m to 0.9 m	0.73 m 0.57 m	— " —	— " —	— " —
0.9 m to 1.4 m	1.0 m 0.68 m	— " —	— " —	— " —
1.4 m to 1.8 m	1.0 m 0.68 m or 1.067 m Diameter	150 mm Insitu Concrete or Precast Units	225 mm	225 mm
1.8 to 4.5 m	1.35 m 0.8 m or 1.067 m Diameter	225 mm Insitu Concrete or Precast Units	225 mm	225 mm

Ventilation pipes

24.—(1) The main drain leading to the boundary trap shall be ventilated at its upper end by a pipe erected vertically to such a height that the top shall be at least 2 metres higher than any window, door or opening situated within a distance of 10 metres therefrom.

(2) Such a pipe shall be—

(a) of a diameter approved by the Council and, in no case, less than 75 mm;

(b) constructed of cast-iron or P.V.C. as specified, P.V.C. pipes above ground level being painted with a suitable primer and 2 coats of gloss paint; and

(c) airtight.

Anti-syphonage pipes

25. Anti-syphonage pipes shall be provided where, in the opinion of the Council, they are found to be necessary for the efficient working of the system.

Kitchen sink wastes

- 26.—(1) Kitchen sink wastes shall be 50 mm diameter of lead or P.V.C. pipe.
(2) Anti-syphonage pipes shall be constructed where necessary.
(3) Where the waste is longer than 2 metres, a proper trap of 3 kilogram lead or the equivalent P.V.C. trap shall be used.
(4) All such traps shall have an eye for cleaning.
(5) The waste shall discharge into a gully situated immediately outside the building.

Waste pipe from bath and washbasins

- 27.—(1) The waste pipe from a bath or set of washbasins shall be 38 mm diameter fitted with a deep seal P.V.C. or 3 kilogram lead trap with a cleansing screw.
(2) Where directed, the waste shall be provided with a 38 mm vent pipe for the bath and a 32 mm vent pipe for the washbasins.
(3) The wastes shall discharge as provided in by-law 26 for kitchen sink wastes.
(4) The waste pipe for a single washbasin shall be 32mm diameter fitted with a P.V.C. or 3 kilogram lead trap with a cleansing screw.
(5) The area of the grating shall be such that the discharge shall not be impeded.
(6) All waste pipes shall be as short as possible and wastes discharged as hereinbefore indicated for sink wastes.
(7) Where showers are installed, the floor beneath shall be constructed of approved impervious material which shall extend up the walls to catch effectually all splashing water.
(8) The wastes from such showers shall be at least 38 mm diameter, trapped with a P.V.C. or 3 kilogram lead deep seal trap.
(9) Where a fine concrete floor is used, the waste water may be conducted to the gully placed outside the building by a short glazed channel.
(10) The gully must be connected to the sewer.

Stoneware gully traps

28. Stoneware gully traps shall be of approved design and shall be so placed as to exclude surface or rainwater at any time.

Water-closets

- 29.—(1) Unless the Council otherwise consents in writing to any other mode of construction, every internal water-closet shall be constructed in such a position that 1 of its sides at least shall be an external wall.
(2) All water-closets shall be provided with adequate light and ventilation.
(3) Detached water-closets shall be substantially built to the satisfaction of the Council.
(4) The joint between the trap and the drain pipe is to be in such a position as to enable easy construction and inspection.

(5) Where the pan is fixed to a floor supported on piles, the joint between the pan and drain shall be made of an approved flexible type or with 3 kilogram lead pipe and heavy brass ferrule.

(6) Each pan shall have a capacity of not less than 9 litres and shall be fixed at such height as will effectually flush the pan.

(7) The said height shall be not less than 1,700 mm from the floor to the top of the cistern, except where an approved type of "low down flush cistern" is used.

(8) Every cistern shall be so fixed that the ball tap is accessible.

(9) Every cistern must be provided with a stop tap.

(10) The cistern must be silent in action and connected to the pan by a 32 mm pipe for high level and 38 mm for low cisterns, properly set with unions, etc., of approved pattern.

(11) Samples of the fittings referred to in paragraphs (6) to (10) may be seen at the Council's Office.

Urinals

30.—(1) The floors under or around urinals shall be constructed of non-absorbent material.

(2) Where the urinals are constructed outside of a building, such urinals shall be covered in such a manner as to prevent rain water from having access to the drain.

(3) Where urinals are constructed inside a building—

(a) they must be fixed only in well-lighted and ventilated places and on an external wall; and

(b) the method and quantity of flushing must be approved by the Council.

PART V—MATERIALS AND WORKMANSHIP

Quality of work

31.—(1) All work shall be executed with the best material and workmanship to the satisfaction of the Council.

(2) The quality and type of material used in any of the work shall, in all cases, be approved or otherwise determined by the Council and no other material shall be used, unless the Council, by resolution, at its own absolute discretion, permits.

Unsuitable material

32.—(1) Where it is intended to use any material which, in the opinion of the Council, is of bad or inferior quality, such material shall not be used upon the works but shall be forthwith conveyed away at the cost of the owner, if the Council so orders.

(2) Samples of fittings which the Council is prepared to approve may be seen at the Council's Office.

Cement

33.—(1) Portland cement or the equivalent local cement shall be used upon the work and shall conform to the requirements in every respect of the relevant British Standard Specification.

(2) All cement shall be kept cool and in a weatherproof store before being used.

Composition of concrete

34.—(1) The concrete shall be composed of absolutely clean broken stone ballast or such other material approved by the Council and clean sharp sand to make an absolutely solid and water-tight concrete.

(2) The concrete shall be measured 6 parts stone and sand to 1 part cement by volume.

Standard of pipes

35. All sewer, foul drain, soil and waste pipes, bends, junctions, etc., shall be of the best quality and comply with the following standards:—

Sewer and Foul drain pipe	Asbestos or P.V.C.	NZS	1571	1961
Ventilation and Soil Pipe	P.V.C. or C.I.	NZS	7642	
Waste Pipe	P.V.C. or Lead	B.S. NZS	437 7641	

Cast-iron

36. All cast-iron used upon the work shall be of the best quality and the standard B.S. 4622.

Chamber covers and frames

37.—(1) All chamber covers and frames shall be a single seal type and of cast-iron and of an approved type.

(2) In gardens or areas which are inaccessible to wheeled vehicles, the covers may be of a lightweight standard with a clear opening, minimum width of 450 mm for chambers of depth up to 0.9 mm and 530 mm for depths over 0.9mm.

(3) In driveways, the covers shall be of a medium standard of similar sizes.

(4) In other areas accessible to wheeled vehicles, the cover shall be as in P.W.D. standard drawing SEW.26/1/1/C with a clear opening of 558 mm diameter.

Urinals

38. All urinals shall be of fire-clay or other approved non-absorbent material and of an approved design and flushing arrangement.

Water-closets

39.—(1) The pan shall be of the washdown type made of best quality white glazed fire-clay or other approved non-absorbent material.

(2) No china pans shall be used.

(3) Each pan shall—

(a) be capable of being thoroughly cleansed at each discharge of the flushing cistern;

(b) have a good water seal to a trap not less than 50 mm; and

(c) be provided with an approved cistern of a capacity of not less than 9 litres, which may be of either the "elevated" or "lowdown" type.

Excavations and backfilling

- 40.—(1) Every pipe trench excavation shall be excavated to 4" below the bottom of the barrel of the pipe and not less than 2" under the socket.
- (2) All excavations shall be carried out in a safe manner with any necessary support, shoring or timbering.
- (3) Unless otherwise required by the Council, the bedding material shall be—
- (a) carried up to 100 mm above the pipe; and
 - (b) well graded granular free draining with particles no greater than 15 mm and not more than 20% passing on a 5 mm sieve.
- (4) On top of the bedding, the trench shall be filled with selected backfill, which shall be—
- (a) free from roots, vegetable matter, building rubbish and stones retained on a 75 mm sieve; and
 - (b) lightly compacted to a depth of 200 mm.
- (5) The remainder of the trench shall be backfilled with approved excavated material and well compacted.
- (6) Where pipe trenches are within roadways, the Council may require the trench to be backfilled with other materials.
- (7) Where there are shallow trenches, or in places of heavy traffic loads, concrete may be required as bedding and surround to the pipe.

Pipe jointing and laying

41. Pipes and fittings shall be laid—
- (a) in accordance with the manufacturer's instructions; and
 - (b) true to line and level.

Water entering sewer

42. The pipes must be kept clean during construction and efficient means provided to prevent water entering the sewer.

PART VI—PENALTY

Penalty

43. Any person who contravenes any of the provisions of these By-Laws shall be liable to a fine not exceeding \$100.

SECTION 15—SUVA SEWERAGE BY-LAWS*

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By-laws 28 May 1943, 14 April 1943, 18 November 1946, 30 September 1958

* Made under section 17 of the Suva Sewerage Ordinance (Cap. 84, 1955 Edition of the laws) and saved by section 21 of the Sewerage Act.

Short title

1. These By-laws may be cited as the Suva Sewerage By-laws.

Interpretation

2. In these By-laws, unless the context otherwise requires—
“drain” means any pipe or channel lawfully connected or intended to be connected with any sewer;
“sewerage engineer” means the sewerage engineer appointed by the Council;
“sewer” means any sewer constructed under the provisions of the Suva Sewerage Ordinance 1912 and the Suva Sewerage Ordinance;
(Ordinance 29 of 1912.) (Cap. 84, 1955 Edition.)
“surface-water drain” means any drain for the purpose of carrying off surface water from any premises, and includes the stoneware pipes and open channel (or either of them) referred to in by-law 5;
“the Council” means the Suva City Council constituted under the Local Government Act;
(Cap. 125.)
“trade waste” means all waste products and by-products of and liquids flowing from any engine or machinery, and shall include all waste products, by-products and liquids arising or accruing from the carrying on of any trade or business, or from the manufacture of any article or thing of whatsoever description.

Rain water

3. No rain water shall be permitted to enter the sewerage system.

Tradewaste

- 4.—(1) No person shall cause or permit any liquid or refuse from any manufacturing process owned, managed or controlled by him to discharge into any sewer or drain connected therewith, except with the permission, in writing, of the Council or of some person authorised by it in that behalf, first had and obtained, and subject to such condition as to works, materials and things as the Council or such authorised person may deem expedient for the protection and maintenance of any sewer.
(2) No steam or liquid at a temperature of over 100°F shall be discharged into any sewer.

Surface water

- 5.—(1) All premises shall be provided with a good and sufficient surface water drain constructed of stoneware pipes of a quality to be approved by the Council or with an open channel constructed of brick, stoneware, masonry, concrete or other material to be approved by the Council, and such stoneware pipes or open channel shall discharge into the side channel of an adjacent street or into such other stream or channel as the Council may direct.
(2) The dimensions of such pipes or channel shall be determined by the Council.

Notice of intention to connect with sewer

- 6.—(1) The owner or occupier of any premises who intends to cause a drain from such premises to empty into a sewer shall give notice at least 2 clear days previous to the day on which he intends to execute the work.

(2) Such notice shall be delivered at the Council's office on a form to be supplied by the Council.

Plan to be submitted

7.—(1) Every owner of premises who, under notice from the Council issued under section 10 of the Act, intends to connect any premises with the sewer and carry out such works specified in such notice within a specified time shall, not less than 1 calendar month previous to the date on which the notice expires, cause a ground plan to be made of the premises proposed to be drained, drawn neatly and accurately on forms to be approved by the Council to a scale of 20 feet to 1 inch, and such plan shall also show the line of the proposed drains and the sizes figured thereon, accurate longitudinal sections with a horizontal scale the same as the plan and a vertical scale of 10 feet to 1 inch.

(2) The said plan must show the proposed position of gullies, ventilating shafts, inspection chambers, etc., and existing drains, when such exist.

(3) This plan must be approved by the Council, in writing, before any work is commenced.

Charge for plan

8.—(1) The Council shall, on request made in writing for that purpose by or on behalf of the owner of any premises intended to be drained, prepare or cause to be prepared the plan with sections and descriptions required in by-law 7.

(2) The charges to be paid in advance to the Council for making such plans and sections relative to drainage of premises into sewers shall be as follows, that is to say:—

For a set of 3 plans with sections and descriptions, for 1 house	\$1.00
For each additional house on the same plan	\$0.50
For a plan of any alterations or additions	\$0.50
For a copy of such plan	\$0.50

(3) A register of sewers and drains shall be kept in the Council's office, in which all such plans shall be preserved for future reference.

Alterations to sewers

9. No person shall remove or make any alteration in any drain pipe, soil pipe, water closet, urinal, trap, or other fitting communicating with any sewer, unless he shall have previously obtained the authority of the Council in writing so to do.

Inspection of work

10.—(1) The owner or his authorised agent carrying out the work must give at least 24 hours' notice to the Council when the work is ready for inspection.

(2) All work must be left uncovered and convenient for examination until inspected and approved by the sewerage engineer.

Tests

11.—(1) The sewerage engineer will conduct or cause to be conducted water or air tests, or both, to ascertain the soundness of the system, and the owner shall furnish all the necessary tools, appliances, labour and assistance for such tests.

(2) When an owner is unable to furnish all the necessary tools and appliances for such tests, the Council may, if it thinks fit, supply the same, and labour for using them.

(3) In such case, the charge to be paid by the owner for the use of tools and appliances shall be a sum at the rate not exceeding 40 cents per day, or any part of a day, in addition to the cost per day of all labour and assistance considered necessary by the Council for carrying out the test.

Separate premises on a combined drain

12.—(1) No combined drain shall be connected with or discharge into any sewer without the consent of the Council, or some person authorised by it in that behalf, in writing, first had and obtained and subject to such work, materials and things as the Council may deem expedient for the protection and maintenance of any sewer.

(2) The owner or occupier of any premises connected with such combined drain shall, when required in writing by the Council, or by any person authorised by it in that behalf so to do, cleanse, repair, re-lay and alter the course and direction of discharge of such combined drain.

(3) The Council may, if it thinks fit, do all or any of the work and things and supply all such materials as are required by this by-law and also, in its discretion, may declare such combined drain to be a public drain.

(4) Neither such election or declaration as aforesaid shall prevent the Council from imposing upon the owner or occupier of the several premises connected with such combined drain all or any part of the cost of such work, things or materials.

Quality of work

13.—(1) All work shall be executed with the best material and workmanship of their respective kinds to the satisfaction of the Council.

(2) The quality of the several kinds of materials used in any of the work shall in all cases be determined by the Council and no other material shall be used but such as shall be approved by it.

Unsuitable material

14.—(1) Should it be intended to use any material which, in the judgment of the Council, is of bad or inferior quality, such material shall not be used upon the works, but shall be forthwith conveyed away at the cost of the owner, if the Council so order.

(2) Samples of fittings which the council is prepared to approve may be seen at the Council's office.

Excavations

15.—(1) In the case of pipe trenches in soapstone, the excavation shall be carried 3 inches below the invert if required by the Council and a level bed of fine concrete (6-1) provided.

(2) Holes shall be left at the joints of as small a size as possible for the sockets to rest in, so that the pipes shall have a uniform bearing for the barrel.

(3) Great care shall be exercised in filling the trenches.

(4) The soil filled around and 1 foot above the top of the pipes shall be free from large stones and filled in with the utmost care, so as to obtain the greatest possible compactness and solidity.

Portland cement

16.—(1) Portland cement shall be used upon the work and shall conform to the requirements in all respects of the British Standard Specification.

(2) For pipe jointing, it shall all come under the head of medium setting time.

(3) All cement shall be specially cooled before being used.

Composition of concrete

17.—(1) The concrete shall be composed of absolutely clean broken stone ballast or such other material approved by the Council and sufficient clean sharp sand as specified to make an absolutely solid and water-tight concrete.

(2) The concrete shall be measured 6 parts stone and sand to 1 part cement.

Standard of pipes

18.—(1) All pipes, bends, junctions, traps, etc., shall be of the best quality stoneware thoroughly vitrified.

(2) The pipes must be true in form, thoroughly salt glazed, sound and well burnt throughout their thickness, very smooth internally, impervious to moisture, free from cracks, flaws, blisters, fire checks and all other imperfections.

(3) The pipes must be internally of the specified diameter and subject to tests by the Council and shall have the following dimensions:—

Diameter	Minimum thickness of barrel	Minimum thickness of socket	Minimum depth of socket
4"	3/4"	3/4"	3"
6"	1"	3/4"	3"

(4) The sockets must be true and amply strong.

(5) Samples of these goods will be kept at the Council's office for reference and all pipes and fittings must be equal in quality and dimensions to these samples.

Powers of Council

19. The Council may, by resolution, at its absolute discretion permit the use of pipes made of other suitable materials.

(Inserted by By-laws 30 September 1958.)

Pipe jointing and laying

20.—(1) The pipe jointing shall consist of specially cooled Portland cement as hereinbefore specified.

(2) A gasket of tarred oakum shall, in the first instance, be pressed into the joint around the entire circumference of the pipe for the purpose of keeping the true alignment and for preventing the cement from penetrating to the internal surfaces.

(3) All pipes shall be laid with a straight edge and line and shall be kept dead true to grade and direction.

(4) No pipes shall in any case be trimmed off if they do not fit.

(5) All pipes and fittings shall be laid upon a bed of Portland cement concrete (6-1) of a thickness to be determined by the Council, but in no case less than 3 inches.

Water entering sewers

21. The pipes must be kept clean during construction and efficient means provided to prevent water entering the sewers.

Cast-iron drains

22.—(1) Cast-iron drain pipes shall be used where the Council so determines and such drain pipes shall be according to the following weight and specification:—

4 in. diameter, 18 lb. per lineal foot.

6 in. diameter, 30 lb. per lineal foot.

(2) All fittings used in connection with such pipes shall correspond with them in weight and quality.

Drains under buildings

23.—(1) Every drain shall be so constructed as not to pass under any building, except in any case where the Council may decide that any other mode of construction is impracticable.

(2) In any case where the Council permits a drain to pass under any building, such drain shall be so laid in the ground that there shall be a distance of 1 foot 6 inches at least between the top of such drain at its highest point and the surface of the ground, and such drain shall be constructed of stoneware pipes surrounded with 6 inches of Portland cement concrete (6-1) or of cast-iron pipes as specified, in each case as the Council shall determine.

Standard of cast-iron

24.—(1) All cast-iron used upon the work shall be of the best quality, fine and close-grained, sound and clean in every respect and coated hot with a composition composed of pitch, coal tar and linseed oil mixed in such proportions as will produce a coating on the metal of a smooth, glossy and tenacious nature.

(2) All pipes must be truly cylindrical and concentric.

Ventilating pipes

25.—(1) The main drain leading to the boundary trap shall be ventilated at its upper end by a pipe erected vertically to such a height that the top shall be at least 6 feet higher than any window, door or opening situated within a distance of 30 feet therefrom.

(2) Such pipe shall be of diameter approved by the Council and in no case less than 3 inches.

(3) Such pipe shall be constructed of cast-iron as specified not less than $\frac{5}{16}$ " thick and coated with a preservative as specified for cast-iron drains, or of heavily galvanized iron or steel $\frac{1}{8}$ " thick with screwed joints, or of lead 7 lb per foot super.

Induct vent

26.—(1) An induct vent shall be fixed at the lower end of the drain of a size and weight similar to the educt vent and carried to a height of 6 feet above the ground.

(2) At the top of this pipe, there shall be placed a valve of approved design to prevent a reflux of air.

(3) Where necessary, this pipe must be supported by a 4 in. × 4 in. hardwood post fixed in concrete.

Soil-pipes

27. Soil pipes shall be of lead 7 lb per foot super or cast-iron at least $\frac{1}{4}$ " thick as specified for drains.

Self cleansing drains

28.—(1) Every drain shall be so arranged as to be self cleansing in order that it may be at all times free from deposit.

(2) Where this cannot be effected without flushing, proper flushing apparatus shall be provided by and at the expense of the owner of the premises in such manner as the Council may direct.

Keeping of drains free

29. Every owner or occupier shall—

- (a) at all times, see that all drains, traps and other fittings upon his premises are in good order, sound, clean and free from obstruction;
- (b) prevent rags, leaves and other refuse from entering the drains; and
- (c) protect all openings to the drain by proper gratings.

Kitchen sink wastes

30.—(1) Kitchen sink wastes shall be of 6 lb. lead pipe 2 inch diameter unless the Council shall otherwise direct.

(2) Anti-syphonage pipes shall be constructed where necessary.

(3) Where the waste is longer than 6 feet, a proper trap of 7 lb. lead of the same diameter as the pipe shall be used.

(4) All such traps shall have an eye for cleaning.

(Amended by By-laws 29 November 1946.)

Stoneware gully traps

31. Stoneware gully traps shall be of a approved design and shall be so placed as to exclude surface or rainwater at any time, and the owner or occupier must at all times see that such water is conducted away from such traps and prevent the flooding of premises.

Water-closets

32.—(1) Subject to the consent in writing of the Council to any other mode of construction, every internal water-closet shall be constructed in such a position that 1 of its sides at least shall be an external wall.

(2) All water-closets shall be provided with adequate light and ventilation.

(3) Detached water-closets shall be substantially built to the satisfaction of the Council.

(4) The closet pan shall be of the "wash-down" type, consisting of best quality white glazed fire-clay or other approved non-absorbent material.

(5) No china pans shall be used.

(6) A closet pan shall be capable of being thoroughly cleansed at each discharge of the flushing cistern and shall have a good water-seal to the trap.

(7) The joint between the trap and the drain pipe is to be in such a position as to be easily made and inspected.

(8) Where the pan is fixed to a floor supported on piles, the joint between the pan and drain shall be made with 7 lb. lead pipe and heavy brass ferrule or the pan must be supported on a concrete pier which shall extend back far enough to surround the drain pipe with 6 inches of concrete.

(9) Where closets are intended for use by native races, the pans shall be of the "wash-down" type, consisting of white glazed fireclay of very heavy design and shall be set in concrete (6-1).

(10) Each pan is to be provided with a heavy pattern galvanised iron cistern of a capacity of not less than 2 gallons and must be fixed at such height as will effectually flush the pan, but in no case, except where an approved type of "low

down flush cistern" is permitted by the Council, must the cistern be fixed at a less height than 5 feet 9 inches from the floor to the top of the cistern.

- (11) Every cistern must be fixed so that the ball tap shall be accessible.
- (12) Every cistern must be provided with a stop tap.
- (13) Every cistern must be silent in action and connected to the pan with 1½ inch heavy galvanised iron or lead flush pipe properly set with union, etc., of approved pattern.
- (14) Samples of these fittings may be seen at the Council's office.

Urinals

33.—(1) Where urinals are installed they shall be of fireclay or other approved non-absorbent material and must be provided with approved flushing apparatus.

(2) The floors under or around urinals must be constructed of non-absorbent material.

(3) Where the urinals are constructed outside of a building, they must be covered in such a manner as to prevent rain water from having access to the drain.

(4) Where urinals are constructed inside a building:—

- (a) they must only be fixed in well-lighted and ventilated places and on an external wall; and
- (b) the method and quantity of flushing must be approved by the Council.

Waste pipe from bath, etc.

34.—(1) The waste pipe from a bath or set of lavatories shall be 1½ inch diameter fitted with a deep seal trap of 6 lb. lead with a cleansing screw.

(2) Where directed, the waste shall be provided with a 1½ inch vent pipe for the bath and 1¼ inch vent pipe for the lavatories.

(3) The wastes shall discharge as provided in by-law 30 for kitchen sink wastes.

(4) The waste pipe for a single lavatory shall be 1¼ inch diameter fitted with a 6 lb. lead trap with a cleansing screw.

(5) The area of the grating shall be such that the discharge shall not be impeded.

(6) All waste pipes shall be as short as possible and discharge as hereinbefore provided for sink wastes.

(7) Where showers are installed, the floor beneath shall be constructed of approved impervious material which shall extend up the walls to catch effectually all splashing water.

(8) The wastes from such showers shall be at least 1½ inch diameter, trapped with a 7 lb. deep seal trap.

(9) Where a fine concrete floor is used, the waste water may be conducted to the gully placed outside the building by a short glazed channel.

Anti-syphonage pipes

35. Anti-syphonage pipes shall be provided where, in the opinion of the Council, they are found to be necessary in connection with the system.

Penalty

36. Any person who, when required in writing by the Council to comply with the provisions of any of these By-laws, fails or neglects to comply with such written request, shall be guilty of a breach of these By-laws and shall be liable, on conviction, to a fine not exceeding \$40 for each such offence.

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