BERMUDA STATUTORY INSTRUMENT

HAMILTON SEWERAGE ORDINANCE 1951

[*made under section 9 of the Public Health Act 1949 [title 11 item 1] and section 38 of the Municipalities Act 1923 [title 4 item 1] and brought into operation on 6 November 1951*]

ARRANGEMENT OF ARTICLES

Citation

1 This Ordinance may be cited as the Hamilton Sewerage Ordinance 1951.

House sewer; application and plans

2 Every person proposing or being required to construct—

(a) house sewers (which expression shall in this Ordinance have the meaning given thereto by section 5(2) of the Hamilton Sewerage Act 1917 [*title 4 item 9*]) or a water-closet; or

(b) to re-construct any existing house sewer or water-closet; or

(c) to connect or disconnect any water-closet,

shall, at least seven days before the work is to be commenced, make a written application to the Corporation for permission to connect such house sewers or water-closet with the sewerage system, and shall deposit at the same time with the Corporation a plan of the premises to be drained, drawn to a scale of not more than eight feet to the inch—

(i) having the lines of the proposed sewers, their branches and inlets, shown thereon in red, together with their sizes, type, and the relative levels of the lower floor of the building and the street fronting the same; and

(ii) having the lines of all existing sewers shown in blue.

Separate connections
3 Each building shall, where practicable, have a separate and independent connection with the sewerage system, and where this is impracticable, a twin drain or some other method approved by the Corporation shall be adopted.

Restriction on commencement of work
4 No work shall be commenced on any premises until the connection from the street sewer to the disconnecting pit has been completed, except in case of flooding or other emergency.

Work beneath street
5 All work beneath the street will be done by employees of the Corporation.

Straight lines
6 All house sewers shall, where practicable, be laid in straight lines and outside of buildings.

Specifications
7 (1) All house sewers shall be formed of socketed cast iron pipes, or of impermeable glazed earthenware pipes, free from defects, and of a smooth surface inside, and each pipe shall be, in section, a true circle and perfectly straight.

(2) All earthenware pipes of six inches diameter and under shall be at least five-eighths of an inch thick; and all iron pipes of similar dimensions shall be at least three-sixteenths of an inch thick and shall be coated internally with some composition approved by the Corporation.

(3) All house sewers shall be of adequate size, and, if constructed or adapted for conveying sewage, shall have an internal diameter of at least four inches.

Jointing
8 (1) Earthenware and cast iron pipes shall be carefully put together, the butt end of one pipe being forced into the socket end of the next pipe as closely as practicable, and the space between them, in case of earthenware pipes, shall be filled in with Portland cement of good quality mixed with a clean sharp sand, and the cement shall be thoroughly worked in so as to fill the whole space and to cover the joint externally.

(2) The inside of each pipe shall be carefully wiped out so as to remove any cement that may work through the joint.

(3) If the sewer is of cast iron, and is jointed with socket joints, the joints shall be at least two and a half inches in depth, and shall be made with molten lead or lead wool, properly caulked; and the annular space for the lead in the case of four inch pipes, shall be at least a quarter of an inch in width, and in the case of five or six inch pipes shall be at least three-eighths of an inch in width.

Depth

9 (1) Where practicable all house sewers shall be laid at least twelve inches below the surface of the ground, measuring to the upper side of the pipes, and the ground shall be carefully excavated to true hanging lines and so made up that the pipes shall have a firm bearing throughout their entire length.

(2) All four inch sewers shall be laid to a fall of at least three inches in ten feet (or one in forty) ; five inch sewers to a fall of at least three inches in twelve feet six inches (or one in fifty); and six inch sewers to a fall of at least two inches in ten feet (or one in sixty).

Junctions

10 (1) All junctions shall be curved, and shall be made at the sides of the pipes, joining the pipes in the direction of the flow.

(2) No "T" or right angle junctions shall be used.

Taper pipes; channels in inspection chambers

11 (1) Taper pipes shall be used where the size of the sewer is reduced.

(2) Channels shall be provided in inspection chambers and shall be formed either of half pipes or cement worked to a perfectly smooth finish.

Restriction on sewers under buildings

12 (1) No sewer intended for conveying sewage shall be laid under a building, except where no other mode of construction is practicable.

(2) When any such sewer is laid under a building, the part thereof which is under the building shall, where practicable, be laid in a straight line for the whole distance beneath such building, and if of earthenware shall be completely embedded in and covered with good cement concrete, at least six inches thick all round, composed of one part cement, two parts sand, and one part broken stone.

(3) Where any such sewer is of cast iron, it shall not be necessary to cover it with concrete.

(4) Adequate means of access to such sewer shall be provided at each end of the part thereof which is under the building.

Soft ground
13 If sewer pipes are run through soft or yielding ground they shall be surrounded with a mass of cement concrete of such form and thickness as may be directed by the Corporation Inspector:

Provided that if heavy cast iron pipes securely jointed as required by article 8(3) are used they need not be surrounded with cement concrete.

Laying pipes
14 In laying the sewer pipes the ground shall be hollowed out to receive the collars, so that the body of the pipes may have a firm bearing throughout their length.

Watertightness; testing
15 (1) Every sewer intended for the conveyance of sewage shall be so constructed as to be watertight, and to be capable of resisting a pressure of at least two foot head of water.

(2) No sewer shall be deemed to have been laid to the satisfaction of the Corporation until it has been properly tested and approved by the Corporation Inspector, or other person appointed for such purpose; and each sewer shall be tested with water once at least after the pipes have been laid and jointed, and, if necessary, both before and after the ground has been filled in.

Waste pipes
16 All outlets or waste pipes from sinks, baths, and lavatories—

(a) shall be trapped as close as practicable to the fixture and before entering any soil pipe; or

(b) may discharge into trapped gullies fitted with moveable iron gratings, and fixed in the open area on the outside of the building.

Prohibition of certain traps
17 No trap of the kinds known as bell, whistle, dip or D traps, or other non-self-cleansing trap, shall be used in house sewers.

Rain-water pipes
18 No rain-water pipe shall be used as a ventilating pipe in connection with sewers.

Soil pipes
19 (1) All soil pipes shall be of lead or iron at least four inches internal diameter, and all joints shall be gas and watertight, and carried

upwards without diminution of their internal diameter, with as few bends as possible, to such distance above the wall plate as may be approved by the Corporation Inspector, and shall be fitted with a wire top cage, or ventilating cowl, and shall not be placed near any chimney stack, window, dormer, or other opening.

(2) Where practicable they shall be placed outside buildings.

Connections between iron and lead pipes

20 (1) In connecting iron soil pipes to lead pipes, a brass thimble piece shall be passed over the end of the soil pipe, and then wiped on to it.

(2) Tarred yarn shall then be inserted in the space between the thimble and the iron socket, and the joint run with lead and properly caulked.

Connection between lead and earthenware pipes

21 (1) In connecting lead soil pipes to earthenware pipes, the thimble piece shall be wiped on to the soil pipe in the manner required by article 20, and the joint to the earthenware pipe shall be filled in with cement.

(2) This method shall be adopted when connections are made the earthenware traps of water-closets and lead soil pipes.

Intercepting traps; inspection chambers

22 (1) Before being connected with the street sewer the main house sewer shall be trapped by means of a sewer intercepting trap or syphon fitted with a cleansing arm provided with an airtight stopper, and such trap shall be fixed between the street sewer and an inspection chamber formed of brickwork, stone, or concrete built and rendered internally in cement to a smooth finish.

(2) The chamber shall be provided with an airtight cover, and shall be ventilated by means of a pipe at least three inches internal diameter, carried up from the top of the chamber as a fresh air inlet and terminating with a box with a mica valve or, alternatively, with an approved type of ventilator.

Siting of inspection chambers

23 Every inspection chamber shall where practicable be constructed in the yard or area of the premises to be drained.

Ventilating pipes

24 (1) At least two untrapped openings shall be provided for the sewers of each premises, one of which shall be at or near the surface of the ground to communicate with the sewers by means of a suitable pipe

which shall be taken into the inspection chamber as required by article 23.

(2) Such opening shall in every case be on the house side of the intercepting trap.

(3) The other opening shall be made by carrying up from the as far as may be practicable from the first opening a ventilating pipe of least four inches internal diameter to such distance above the wall plate as may be approved by the Corporation Inspector, and the outlet of such pipe all not be placed near any chimney stack, window, dormer or other opening.

(4) Zinc pipes shall not be used as ventilating pipes.

(5) Asbestos cement pipes may be used as ventilating pipes only ere they are to be completely built into masonry or concrete.

Exclusion of rain and surface water
25 All rain and surface water shall be rigidly excluded from any sewer constructed or adapted for conveying sewage to the sewerage system, and connection therewith for rain-water or surface drainage will be permitted.

Overflow and warning pipes
26 The overflow and warning pipes from cisterns shall where practicable discharge in the open air, and shall not in any case have any direct communication with a soil pipe or sewer.

Inspection of sewers before covering in
27 No sewer shall be covered in until it has been inspected and approved the Corporation Inspector, and due notice shall be given by the applicant the Inspector when the sewer is ready for inspection, and if any sewer is covered in without such notice having been given, then the Corporation shall empowered to uncover the work and to recover the incidental expenses the applicant.

Approval of water-closets and urinals
28 (1) The situation, dimensions, materials and construction of every water closet and of every urinal shall be subject to the approval of the Corporation Inspector, and every water closet shall have a window of an area of not less than 2 feet by 1 foot, exclusive of the frame, opening directly into the open air or shall be sufficiently ventilated by approved mechanical means, and shall be sufficiently lighted; when opening directly into the open air the window space shall not be less than 2 square feet for every 50 square feet of area.

(2) Every water-closet shall be fitted with a good apparatus of the wash down or short hopper class and with approved waste preventing cisterns, giving at least a two gallon flush at each discharge, the connection between the cistern and the water-closet being made by a pipe of at least one and a quarter inches internal diameter.

(3) Every urinal shall be furnished with an automatic flushing system or such other appliance for properly flushing the same, as may be approved by the Corporation Inspector.

Trapping of water-closets

29 (1) All water-closets on the lower floor of any premises, and all sinks, gullies and other inlets except vertical soil pipes shall be efficiently trapped by syphon or other approved traps before being connected with the sewers.

(2) All water-closets on the upper floors shall be trapped before being connected with the vertical soil pipes.

(3) No D traps or containers shall be used in connection with any water-closet.

Anti-syphon pipes

30 Where there is more than one water-closet connected with the same vertical soil pipe, anti-syphonage pipes shall be provided if so directed by the Corporation Inspector.

Back-venting

31 Where a urinal or a water-closet is constructed to discharge into a soil pipe which also receives the discharge from another urinal, water-closet, bath, sink, or lavatory basin the trap of the urinal or water-closet shall be ventilated by a pipe—

(a) which shall be of an internal diameter of not less than one and a half inches;

(b) which shall be connected with the soil pipe from the urinal or water-closet at a point not less than three and not more than twelve inches from the highest part of the trap, on that side of the water seal which is nearer to the soil pipe;

(c) which shall have either an open end as high as the top of the soil pipe or shall be carried into a soil pipe at a point not less than three feet above the highest connection to the soil pipe.

Slop sinks and urinals

32 (1) Any slop sink or urinal constructed or adapted to be used for receiving any solid or liquid excremental filth for conveyance to any

sewer, shall have constructed or fixed immediately beneath it an efficient syphon trap, so constructed as to be capable of maintaining a sufficient water seal between such slop sink or urinal and any sewer pipe or waste pipe in connection therewith; and there shall not be constructed or fixed in or in connection with such slop sink or urinal any trap of the kinds known as bell, dip or D traps, or other non-self-cleansing trap.

(2) The ventilation of the trap of every such slop sink or urinal shall comply with all the requirements of such of the foregoing and of the following articles which are applicable to the ventilation of the trap of a water-closet and to the construction of a soil pipe.

(3) The internal diameter of a waste pipe of any such slop sink shall be at least three inches, and, where the internal diameter of such waste pipe is three inches, the weight of such pipe for every ten feet of length shall, if such waste pipe is constructed of lead, be at least sixty pounds, and if such waste pipe is constructed of cast iron, the weight of such pipe for every six feet of length shall be at least forty pounds:

Provided that in any case where only one or two urinal basins are connected to such waste pipe the internal diameter thereof may be not less than two inches.

Water-closets to be kept clean

33 The occupier of any premises shall cause every water-closet belonging to such premises to be thoroughly cleansed from time to time as often as may be necessary so as to keep the water-closet in a cleanly condition.

Supervision by Corporation Inspector

34 All drainage work shall be executed with good materials of their several kinds, and the sewers laid in accordance with the sections furnished by the Corporation Inspector, and all work shall be carried out under his supervision and inspection and to his satisfaction.

Relative positions of owner and occupier

35 Whenever under the Hamilton Sewerage Act 1917 [*title 4 item 9*], or the Public Health Act 1949 [*title 11 item 1*], any work is required to be executed by the owner or occupier of any house, building or premises the occupier will not be required to execute such work unless or until the Corporation is satisfied that it is impracticable or inconvenient to procure such work to be executed by the owner, whether by reason of his absence from Bermuda or from other cause, unless, in the opinion of the Corporation, the execution of such work has been rendered necessary by the act or default of the occupier.

Offences

36 Any person who contravenes any article of this Ordinance commits an offence against this Ordinance and against the Public Health Act 1949 [*title 11 item 1*].

[*see section 186 of the Public Health Act 1949*]

Revocation

37 [*omitted*]