

Faulty work to be removed.

18. If at any time there is on any premises any drain or sewage-tank or sanitary convenience or sanitary appliance otherwise than in accordance with every provision of these regulations, the local authority may, by notice signed by its Engineer, require the owner or occupier of such premises, within a time specified in the notice, to take up or down or remove such drain, sewage-tank, sanitary convenience, or sanitary appliance, or to make such alterations therein as shall make it comply with the provisions of these regulations; and if the person on whom such notice has been served fails to carry out the work in the manner and within the time specified in the notice he shall be guilty of an offence.

DRAINLAYERS' WORK.

Work which may be done by drainlayers only.

19. No person shall construct, add to, or alter any drain or sewage-tank unless all material used in such construction, addition, or alteration, and all work done in connection therewith, is in accordance with the following specification, that is to say:—

Quality of material used by drainlayers.

- (1.) In respect to the materials used in such work,—
 - (a.) Drainpipes shall be not less than 4 in. in internal diameter; provided that where there is a branch drain connected to any sanitary convenience other than a water-closet or slop-sink, 3 in. pipes may be used if so approved by the Engineer.
 - (b.) Earthenware drainpipes shall be socketed, glazed, well-burned, and free from cracks, blisters, or other imperfections, and they shall be uniformly circular in bore, straight and of even thickness, and the sockets shall be not less than 2 in. in length.
 - (c.) Cast-iron pipes shall be as specified hereinafter in clause 19.
 - (d.) Sand shall be sharp, coarse, and free from impurities, and shall be washed if the Engineer so directs.
 - (e.) Gravel shall be clean and free from soil, dust, or organic matter, and shall be washed if the Engineer so directs, and no part of such gravel shall be of such size that it cannot be passed in any diameter through a ring $1\frac{1}{2}$ in. in internal diameter; provided that $\frac{3}{4}$ in. blue stone-metal screenings may be substituted for gravel in the making of concrete.
 - (f.) Cement shall be of approved brand and quality.
 - (g.) Concrete shall be composed of one volume of cement, three volumes of gravel, and one volume of sand, mixed together while dry, and wetted to the extent approved by the Engineer.
 - (h.) Cement mortar shall be composed of one part Portland or other approved cement and two parts of sand mixed while dry, and wetted to the extent approved by the Engineer; and no mortar shall be used which is not freshly made.

Drains.

Deviations in line of drain.

(2.) The course of every drain shall be in as straight a line as practicable, and whenever it is necessary to deviate from such straight line the deviation shall be made at a manhole or by means of a junction-pipe provided with a cleaning-eye, and every such manhole or junction-pipe shall be constructed and covered as the Engineer may direct.

Gradient of drain.

- (3.) The gradient of every drain shall be—
- For pipes of 3 in. or 4 in. in diameter, in the ratio of not less than 1 ft. in 40 ft. ;
- For pipes of 6 in. in diameter, in the ratio of not less than 1 ft. in 60 ft. ;
- Provided that where any drain cannot be laid in such ratio a flush-tank or other fitting shall be provided if so directed by the Engineer.

Trenches.

(4.) Every trench provided for the purpose of laying drainpipes shall be evenly cut in straight lines, accurately graded before the pipes are laid therein, and of sufficient width to enable the pipes to be properly jointed and to allow of such joints being readily inspected.