

- (e.) If the building be more than 54 ft. and not more than 66 ft. the thickness of the external walls and party walls exceeding 40 ft. in length must be at the least  $21\frac{1}{2}$  in. from the top of the footing to the under-side of the floor next but one below the topmost floor, and at the least  $17\frac{1}{2}$  in. from the under-side of the floor next but one below the topmost floor to the under-side of the topmost floor, and at the least 13 in. from the under-side of the topmost floor to the top of the wall. The thickness of the external walls and party walls not exceeding 40 ft. in length must be at the least  $21\frac{1}{2}$  in. from the top of the footing to the under-side of the floor next but two below the topmost floor, and at the least  $17\frac{1}{2}$  in. from the under-side of the floor next but two below the topmost floor to the under-side of the floor next below the topmost floor, and at the least 13 in. from the under-side of the floor next below the topmost floor to the top of the wall. If either of the two lowest stories is built of rubble stonework, the thickness of the external and party walls shall be at the least 27 in. for the height of the lowest story, and at the least  $22\frac{1}{2}$  in. for the height of the story above the lowest story.
- (f.) If the wall be more than 66 ft. and not more than 78 ft. high and does not exceed 45 ft. in length, the thickness must be at the least 22 in. from the top of the footing to the under-side of the first floor,  $17\frac{1}{2}$  in. from the under-side of the first floor to the under-side of the floor next below the topmost floor, and at least 13 in. from the under-side of the floor next below the topmost floor to the top of the wall; but if it exceeds 45 ft. in length the thickness must be at the least  $26\frac{1}{2}$  in. from the top of the footing to the under-side of the first floor, 22 in. from the under-side of the first floor to the under-side of the second floor, 17 in. from the under-side of the second floor to the under-side of the topmost floor, and 13 in. from the under-side of the topmost floor to the top of the wall. If either of the two lowest stories is built of masonry work, the thickness of the external or party walls shall be at the least  $30\frac{1}{2}$  in. for the height of the lowest story, and at the least  $26\frac{1}{2}$  in. for the height of the story above the lowest story.
- (g.) If the wall be more than 78 ft. and not more than 90 ft. high and does not exceed 45 ft. in length, the thickness must be at the least  $26\frac{1}{2}$  in. from the top of the footing to the under-side of the first floor, 22 in. from the under-side of the first floor to the under-side of the second floor,  $17\frac{1}{2}$  in. from the under-side of the second floor to the under-side of the floor next below the topmost floor, and at least 13 in. from the under-side of the floor next below the topmost floor to the top of the wall; but if it exceeds 45 ft. in length the thickness must be at the least  $26\frac{1}{2}$  in. from the top of the footing to the under-side of the first floor, 22 in. from the under-side of the first floor to the under-side of the third floor,  $17\frac{1}{2}$  in. from the under-side of the third floor to the under-side of the topmost floor, and 13 in. from the under-side of the topmost floor to the top of the wall. If either of the two lowest stories is built of masonry work, the thickness of the external and party walls should be at the least  $30\frac{1}{2}$  in. for the height of the lowest story, and at the least  $26\frac{1}{2}$  in. for the height of the story above the lowest story.
- (h.) If the wall be more than 90 ft. and not more than 100 ft. high and does not exceed 45 ft. in length, the thickness must be at least  $26\frac{1}{2}$  in. from the top of the footing to the under-side of the first floor, 22 in. from the under-side of the first floor to the under-side of the third floor,  $17\frac{1}{2}$  in. from the under-side of the third floor to the under-side of the floor next below the topmost floor, and 13 in. from the under-side of the floor next below the topmost floor to the top of the wall; but if it exceeds 45 ft. in length the thickness must be at the least  $26\frac{1}{2}$  in. from the top of the footing to the under-side of the first floor, 22 in. from the under-side of the first floor to the under-side of the third floor,  $17\frac{1}{2}$  in. from the under-side of the third floor to the under-side of the topmost floor, and 13 in. from the under-side of the topmost floor to the top of the wall. If either of the two lowest stories is built of masonry work, the thickness of the external and party walls shall be at least  $30\frac{1}{2}$  in. for the height of the lowest story, and at the least  $26\frac{1}{2}$  in. for the height of the story above the lowest story.

52. The footings of all brick or stone walls must be built wholly of stone or brick up to the surface of the ground with mortar or cement in such a manner as to produce solid work,

or of substantial concrete, and the bottom course of every footing must be at the least 8 in. wider than the wall standing thereon.

53. The walls and piers of all buildings being erected in brick shall be properly and solidly bonded together with close joints filled with cement or lime mortar, and shall have stout galvanized hoop-iron of not less than 18-gauge and  $1\frac{1}{4}$  in. in width, or woven-wire bonding, built in every 36 in. in height, one strand of hoop-iron or wire bonding for every  $4\frac{1}{2}$  in. in thickness of walls, the hoop-iron being fastened together and being as continuous as possible. In the laying of the bricks not more than three rows of stretchers shall be laid to one row of headers, and all walls and piers shall be built to a line and be carried up plumb and straight.

54. No person shall build any hollow, external, or party wall having an interior space between the inner and outer thickness of the brick, stone, or concrete work except such thickness shall be thoroughly tied with metal or other suitable ties placed at such distances apart as shall be approved by the Inspector; but in the event of any person building such a wall, then the width of the cavity in the same shall not be reckoned as part of the thickness required in the foregoing schedule; and any such hollow wall not more than two stories nor exceeding 30 ft. in height may be erected at a total width of 12 in. for the full height, instead of width required by the said schedule.

55. All external walls shall, if required by the Inspector, be rendered with cement mortar or other approved water-proofing-material.

56. Sizes of plates, joists, and roods to be as for wooden buildings.

57. The following provisions shall apply to the quality, making, and use, as the case may be, of the several materials hereinafter set out in this subclause when such materials are used in or for any work affected by these by-laws, that is to say:—

Sand shall be sharp, coarse, and free from all impurities and dirt.

Gravel for concrete shall be clean, and free from soil, clay, dust, or other impurities; none shall be used larger than will pass in any direction through a ring  $2\frac{1}{2}$  in. in diameter for foundations, or  $1\frac{1}{2}$  in. in diameter for work above ground.

Cement of approved brands only shall be used, and none that shows any sign of injury from damp or other cause shall be allowed to be used in the work.

Lime shall be good stone lime of approved quality.

Mortar: Lime mortar shall consist of not more than two parts of sand to one part of lime. Cement mortar shall consist of not more than three parts of sand to one part of cement.

Concrete: Lime concrete shall be composed of not more than four parts of approved aggregate to one part of lime. Cement concrete shall be composed of not more than seven parts of approved aggregate to one part of cement for foundations, and not more than five parts of approved aggregate to one part of cement for cornices and other projections.

Bricks: All bricks shall be hard, well-burnt kiln bricks, or patent pressed bricks, free from defects, and suitable in all respects for the work in which they are intended to be used.

Timber: All timber shall be of good quality and suitable in all respects for the purposes for which it is intended to be used. No board or scantling shall contain more than one-third of sap, and no timber of the kind known as white-pine shall be used in the construction of any buildings.

58. *Water-supplies.*—The owner of any premises on which any person lives or is employed, or on which any food or drink for sale for human consumption is prepared, kept, or stored, shall, to the satisfaction of the Inspector, provide, keep, and maintain on such premises a pure, wholesome, and adequate supply of water for the use of persons living or employed on such premises, and for the due and cleanly performance of the work done on the same.

59. The owner of every water-tank or cistern shall cause an easily removable plug, pipe, or access-cap to be fixed into the bottom of such tank in order that it may be cleaned out easily from time to time.

60. It shall be the duty of every person in charge of any premises on which a water-tank stands to clean out and empty such tank once every six months at least; and the proof of such work having been done shall devolve upon such person.

61. No overflow-pipe from any water-tank shall be connected, or allowed to remain connected, to any drain or into the ground in any manner whatsoever. Every such pipe shall discharge into the open air or over a trapped gully, or on to a cement channel.

62. *Drainage.*—All buildings and land shall be provided and maintained by the owner with suitable and sufficient means of disposal of the whole of the surface, sewage, and waste water as shall be approved by the Board or the Inspector.