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BUILDING REGULATIONS

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The Department of Finance(a) in exercise of the powers conferred on it by Articles 3, 5, 8, 9, 10 and 11 of the Building Regulations (Northern Ireland) Order 1972(b) and of all other powers enabling it in that behalf and after consultation with the Building Regulations Advisory Committee and such other bodies as appear to it to be representative of the interests concerned hereby makes the following regulations:—

PART A

INTERPRETATION AND GENERAL

Title and commencement

A1. These regulations may be cited as the Building Regulations (Northern Ireland) 1977 and shall come into operation on 1st October 1977.

Interpretation

A2.—(1) In these regulations, unless the context otherwise requires—

"agriculture" includes horticulture, fruit growing, seed growing, dairy farming and livestock breeding and keeping, the use of land as grazing lands, meadow land, market gardens and nursery grounds, and the use of land for woodlands where that use is ancillary to the farming of land for other agricultural purposes;

"boundary" means, in relation to a building, the boundary of the land belonging to the building (such land being deemed to include any abutting part of any street, canal or river but only up to the centre line thereof); and "boundary of the premises" shall be construed so as to include any such part to the same extent;

"conservatory" means a conservatory of which the roof (and the ceiling, if any) is transparent or translucent;

"district council" has the meaning assigned to it by the Local Government Act (Northern Ireland) 1972(c) and references to "the district council" shall mean the district council having the function of enforcing these regulations;

"drain" means any pipe or drain used solely for or in connection with the drainage of one building or of any buildings or yards appurtenant to buildings within the same curtilage;

"enactment" includes any instrument made under any statute;

"garage" shall include a carport;

"habitable room" means a room used or intended to be used for dwelling purposes but not (except where so expressly provided) any room used only for kitchen or scullery purposes;

"kitchen or scullery purposes" means the purposes of preparing, storing, treating, cooking or manufacturing food or drink intended for human consumption or the cleansing of utensils or appliances which come into contact with such food or drink;

"newton" means that force which when applied to a body having a mass of one kilogramme gives it an acceleration of one metre per second squared;

(a) Formerly Ministry: *see* 1973 c. 36 Sch. 5 para. 8(1)
(b) S.I. 1972/1996 (N.I. 19)
(c) 1972 c. 9 (N.I.)

"non-combustible" means capable of being classified as non-combustible if subjected to the test for non-combustibility prescribed in BS 476: Part 4: 1970; and "combustible" shall be construed accordingly;

"partially exempted building" means a building referred to in regulation A5(2);

"private sewer" means any part of a sewer within the curtilage of a building;

"sewer" includes all sewers, pipes or drains other than a drain as defined in this regulation and includes any apparatus used in connection with a sewer;

"site", in relation to a building, means the area of ground covered or to be covered by the building, including its foundations;

"statutory undertaking" means an undertaking authorised by any enactment being a railway, road transport, air transport, water transport, inland navigation, dock or harbour undertaking or any undertaking for the supply of electricity or gas or the Post Office;

"under former control"—

(*a*) in relation to any building, means a building the erection of which was—

(i) completed before 1st October 1973; or

(ii) completed on or after 1st October 1973 in accordance with plans deposited with the local authority before that date, with or without any departures or deviations from those plans; or

(iii) begun before but completed on or after 1st October 1973 (being a building the erection of which was exempt from compliance with the provisions of all relevant byelaws in force immediately before that date); and

(*b*) in relation to any alteration or extension of a building, or the execution of any works or installation of any fittings, means any such alteration or extension, execution or installation which was—

(i) completed before 1st October 1973; or

(ii) completed on or after 1st October 1973 in accordance with plans deposited with the local authority before that date, with or without any departures or deviations from those plans; or

(iii) begun before but completed on or after 1st October 1973 (being an alteration or extension, execution of works or installation of fittings which was exempt from compliance with the provisions of all relevant byelaws in force immediately before that date).

(2) In these regulations, any of the following operations shall be deemed to be the erection of a building—

(*a*) the re-erection of any building or part of a building when an outer wall of that building or (as the case may be) that part of a building has been pulled down, or burnt down, to within 3 metres of the surface of the ground adjoining the lowest storey of the building or of that part of the building;

(*b*) the re-erection of any frame building or part of a frame building when that building or part of a building has been so far pulled down or burnt down, as to leave only the framework of the lowest storey of the building or of that part of the building; and

(*c*) the roofing over of any open space between walls or buildings.

(3) In these regulations, unless the context otherwise requires, any reference to a building shall extend to and include any part of a building, and any reference to the purpose for which a building is used shall extend to, include or mean the purpose for which it is intended to be used.

(4) In these regulations—

(*a*) "basement storey" (except in Parts E and EE) means a storey which is below the ground storey; or, if there is no ground storey, means a storey the floor of which is situated at such a level or levels that some point on its perimeter is below the level of the finished surface of the ground adjoining the building in the vicinity of that point;

"ground storey" (except in Parts E and EE) means a storey the floor of which is situated at such a level or levels that any given point on its perimeter is at or about but not below the level of the finished surface of the ground adjoining the building in the vicinity of that point; or, if there are two or more such storeys, means the higher or highest of these;

"single storey building" means a building consisting of a ground storey only;

"upper storey" means any storey other than a basement storey or ground storey; and

(*b*) unless the context otherwise requires, wherever these regulations describe a building or part by reference to a number of storeys, that number does not include basement storeys.

(5) In these regulations, any reference to a British Standard or British Standard Code of Practice shall be construed as a reference to a British Standard or a British Standard Code of Practice published by the British Standards Institution.

(6) Any note in a Table or schedule shall be treated for all purposes as a substantive provision.

(7) Any reference in these regulations to a publication shall be construed as follows—

(*a*) in regulation B2 and in any other case where no date is included in the reference, the reference is to the edition thereof current at 30th November 1975 together with any amendments, supplements or addenda thereto published at that date;

(*b*) in any case where a date is included in the reference, the reference is to the edition of that date, together with such amendments, as are mentioned in Schedule 11; and

(*c*) any reference to any publication is a reference to so much only thereof as is relevant in the context in which such publication is quoted.

(8) The abbreviations and symbols listed in the following Table are used in these regulations—

Abbreviation or Symbol	Definition
BS	British Standard
CP	British Standard Code of Practice
dB	decibel
°	degree
°C	degree Celsius
Hz	hertz
kg	kilogramme
kN	kilonewton
kW	kilowatt
m	metre
m^2	square metre
m^3	cubic metre
mm	millimetre
mm^2	square millimetre
min	minute
N	newton
W	watt

(9)(*a*) For the purposes of this paragraph, the expression "work size" in relation to a building component manufactured to comply with a British Standard means the size specified in the relevant British Standard as the size to which the component is required to conform, account being taken of any permissible deviations specified in that British Standard.

(*b*) Subject to the provisions of sub-paragraph (*c*), where in these regulations a size limit is expressly prescribed or necessarily implied for a dimension of a building component or assembly of such components, that limit shall apply as follows—

(i) if the dimension is that of a component complying with a British Standard which specifies a relevant work size, that limit shall apply to the relevant work size;

(ii) if the dimension is that of a timber component which does not comply with a British Standard relating to the particular component but consists of softwood which is dimensionally in accordance with BS 4471: Part 1: 1969, that limit shall apply to the basic size in the case of sawn timber, and to the finished size in the case of planed timber;

(iii) if the dimension is the thickness of a wall or other assembly of bricks or blocks (being bricks or blocks complying with a British Standard which specifies a relevant work size) and that dimension is determined by one of the dimensions of a brick or block, that limit shall apply to the relevant work size of the brick or block; and

(iv) in all other circumstances, that limit shall apply to the actual size of the component or assembly of components.

(*c*) Notwithstanding the provisions of sub-paragraph (*b*), any reference to the internal diameter of a pipe shall be taken as a reference to its nominal diameter or size.

Deemed-to-satisfy provisions

A3. Where any provision (in these regulations called a deemed-to-satisfy provision) states that the use of a particular material, method of construction or specification shall be deemed to satisfy the requirement of any regulation or part thereof, that provision shall not be construed so as to require any person necessarily to use such material, method of construction or specification.

Transitional provisions

A4.—(1) In this regulation—

"work" means the erection of a building, the alteration or extension of a building, the execution of works, the installation of a fitting or the making of a material change of use.

(2) These regulations shall not apply to—

(*a*) plans which were deposited with the district council before 1st October 1977; and

(*b*) work carried out in accordance with such plans with or without any departure or deviation from those plans; and

(*c*) work completed before that date.

(3) Notwithstanding the revocations effected by regulation A17, the Building Regulations (Northern Ireland) 1973(**d**) as amended(**e**) shall, on and after 1st October 1977 continue to apply to—

(*a*) plans deposited in accordance with building regulations before that date; and

(*b*) work carried out in accordance with such plans with or without any departure or deviation from those plans; and

(*c*) work completed on or after 1st October 1973 but before 1st October 1977, other than work to which building bye-laws continue to apply in accordance with paragraph 2 of Schedule 2 to the Building Regulations (Northern Ireland) Order 1972.

Exemptions

A5.—(1) These regulations shall not apply to any of the following buildings or the execution of works or the installation of fittings in or in connection with such buildings—

(*a*) any buildings belonging to any statutory undertaking and held or used by them for the purposes of their undertaking provided that this exemption shall not extend to houses or buildings used as offices or showrooms other than to buildings so used which form part of a railway station;

(*b*) buildings used for the purposes of agriculture, other than dwelling houses, where constructed more than 24 metres from the nearest part of a special road within the meaning of the Special Roads Act (Northern Ireland) 1963(**f**) or more than 24 metres from the middle of a first or second class road or 9 metres from the middle of other classes of road or 9 metres from the boundary of the lands on which such buildings are erected:

(**d**) S.R. & O. (N.I.) 1973 No. 105 (I, p. 437)
(**e**) S.R. & O. (N.I.) 1973 No. 506 (II, p. 3003); S.R. N.I. 1975 No. 112 (I, p. 715)
(**f**) 1963 c. 12 (N.I.)

Provided that no part of a building so constructed is within the permitted boundary of any building of purpose group I, II or III as determined by regulation E2, and for the purpose of this regulation "permitted boundary" means a notional line drawn round that other building at least the distance from every part of it which would ensure that, if the line were the actual boundary and that building were newly constructed there would be no contravention of regulation E7 in relation to it.

(*c*) a building erected in connection with any mine or quarry other than a house or a building used as offices or showrooms;

(*d*) a moveable dwelling including a tent, caravan, shed or similar structure used for human habitation, or

(*e*) a building the construction of which is subject to the Explosives Acts 1875 and 1924(**g**).

(2)(*a*) For the purposes of this paragraph "partially exempted building" means any building, other than an air supported structure, which belongs to one of the classes described in Part A of Schedule 1.

(*b*) In the application of these regulations to—

(i) the erection of any partially exempted building; or

(ii) the execution of any works or installation of any fittings in connection with such building; or

(iii) the alteration or extension of such building in such a way that it will remain a partially exempted building, as so altered or extended,

it shall not be necessary to comply with any provisions of these regulations except the provisions specified in columns (2), (3) and (4) of Schedule 1 in relation to the class to which such building belongs (which in the case of an alteration or extension means the class to which the building as altered or extended belongs).

Application to erection of buildings

A6. Subject to the provisions of regulation A5, Parts A to L of these regulations shall apply to the erection of a building.

Application to alterations and extensions

A7.—(1) Subject to the provisions of regulation A5, Parts A to L except Part EE shall apply to—

(*a*) a structural alteration or extension of an existing building (irrespective of when that building was erected); and

(*b*) the existing building as affected by that alteration or extension to the extent (subject to the provisions of regulation A9 and K3) of prohibiting any alteration or extension, which would cause a new or greater contravention of any regulation.

(2) In applying the regulations under paragraph (1)(*a*) the alteration or extension shall be treated as if it were part of a building being newly erected identical to and to be used for the same purposes as the building as altered or extended.

(3) In determining for the purposes of paragraph (1)(*b*) whether the alteration or extension would cause a new or greater contravention of any regulation, the following provisions shall apply—

(**g**) 1875 c. 17 (38 & 39 Vict.) and 1924 c. 5 (N.I.) (14 & 15 Geo. 5)

(*a*) the regulations shall be applied in each of the following ways—

(i) to the building as altered or extended treated as if it were being newly erected in its proposed form for the purposes for which it will be used when altered or extended; and

(ii) to the existing building treated as if it were being newly erected in its existing form but for the purposes for which it will be used when altered or extended; and

(*b*) the alteration or extension shall be regarded as being such as would cause a new or greater contravention if (when the regulations are applied as directed in sub-paragraph (*a*)) the building as altered or extended—

(i) contravenes any regulation which does not apply to the existing building; or

(ii) contravenes any regulation which is satisfied by the existing building; or

(iii) contravenes to a greater extent any regulation which is contravened by the existing building.

Application to works and fittings

A8. Subject to any express provision to the contrary and to the provisions of regulation A5—

Part A (Interpretation and general)

In Part B (Materials), regulation B1

Part M (Heat-producing appliances and incinerators)

Part N (Drainage, private sewers and cesspools)

Part P (Sanitary conveniences)

Part Q (Ashpits, wells, tanks and cisterns)

shall apply to the execution of any works and the installation of any fittings (whether by way of new work or by way of replacement) to which any of those Parts respectively relate.

Application to material change of use

A9.—(1) For the purposes of these regulations a change in the purposes for which a building, or part of a building, is used shall be deemed to be a material change of use in any one of the following cases but in no other case:

CASE A Where a building or a part of a building, being a building or part which was not originally constructed for occupation as a house or part thereof or which, though so constructed, has been appropriated to other purposes, becomes used as a house or part thereof; and in such case the following provisions of these regulations shall apply—

Part A (Interpretation and general)

Part C (Preparation of site and resistance of moisture) except regulations C2 and C9

Part E (Structural fire precautions) except regulations E7 and E15

Part J (Refuse disposal)

In Part K (Open space, ventilation and height of rooms)—

(*a*) if building not originally a house:

regulations K1, K2 and K4 to K7

(*b*) if originally a house:

regulations K1, K2, K3(4) and K4 to K7

In Part L (Chimneys, flue pipes, hearths and fireplace recesses)—

(*a*) buildings erected under former control:

regulations L1 to L3, L4 (except sub-paragraphs (1)(*c*)(ii) and (1)(*d*)), L5, L7 to L13 and L15 to L22

(*b*) other buildings: all regulations.

CASE B Where a building or a part of a building, being a building or part which was originally constructed for occupation as a house by one family only, becomes occupied by two or more families and is so altered or extended as to create separate dwellings; and in such case the following provisions of these regulations shall apply—

Part A (Interpretation and general)

In Part E (Structural fire precautions)—

(*a*) buildings or parts of buildings which, as so altered or extended as aforesaid, comprise not more than one basement storey, a ground storey and two upper storeys:

all regulations except regulations E7, E9(7), E10(4), E13 and E15

(*b*) other buildings or parts of buildings:

all regulations except regulations E7 and E15

Part J (Refuse disposal)

In Part K (Open space, ventilation and height of rooms)—

regulations K1, K2 and K4 to K7

In Part L (Chimneys, flue pipes, hearths and fireplace recesses)—

(*a*) buildings erected under former control:

regulations L1 to L3, L4 (except sub-paragraphs (1)(*c*)(ii) and (1)(*d*)), L5, L7 to L13 and L15 to L22

(*b*) other buildings: all regulations.

CASE C Any case not falling within the definition of any other Case specified in this paragraph, where the purpose for which a building, or part of a building, is used is changed to such an extent that the purpose group of that building or part, as determined by regulation E2, is changed; and in such case (subject to the provisions of regulation A5) the following provisions of these regulations shall apply—

Part A (Interpretation and general)

In Part E (Structural fire precautions)—

(*a*) in every case other than those specified under sub-paragraphs (*b*) and (*c*):

all regulations

(*b*) in any case where the purpose group of a building or part of a building is changed to purpose group II and, after any alteration or extension associated with the change of use has been completed, the height of that building or (if separated as described in regulation E5(1)(*b*)) that part does not exceed 15 m measured in accordance with regulation E3:

all regulations except regulations E7, E9(7), E10(4) and E13 and except that regulation E5(2) shall not apply so as to require a minimum period of fire resistance of more than one hour for an element of structure forming part of a basement storey

(*c*) in any case where the purpose group of a building or part of a building is changed to purpose group IV, V, VI, VII or VIII and, after any alteration or extension associated with the change of use has been completed, the height of that building or (if separated as described in regulation E5(1)(*b*)) that part does not exceed 15 m measured in accordance with regulation E3:

all regulations except, in so far only as it relates to a compartment floor, regulation E9(7).

CASE D Any case not falling within the definition of Case A where either—

(*a*) the purpose for which a building or part of a building was constructed to be used was such that it was expressly exempted from the requirements of all or any of the building bye-laws or building regulations in force at that time and the purpose for which it is used is changed to such an extent that, if it had been constructed for that purpose, it would not have been so exempted; or

(*b*) the purpose for which a building or part of a building is used is such that (irrespective of when that building or part was erected) it falls within any one of the descriptions of partially exempted buildings in Schedule 1 and the purpose for which it is used is changed to such an extent that it ceases to fall within that description;

and in such case (subject to the provisions of regulation A5) the following provisions of these regulations shall apply to the building or part of the building—

Part A (Interpretation and general)

Part B (Materials)

Part C (Preparation of site and resistance to moisture) except regulation C2

Part D (Structural stability)

Part E (Structural fire precautions) except regulations E7 and E15

Part F (Thermal insulation)

Part G (Sound insulation)

Part H (Stairways, ramps, balustrades and vehicle barriers)

Part J (Refuse disposal)

In Part K (Open space, ventilation and height of rooms)—
regulations K1, K2 and K4 to K7

In Part L (Chimneys, flue pipes, hearths and fireplace recesses)—

(*a*) buildings erected under former control:

regulations L1 to L3, L4 (except sub-paragraphs (1)(*c*)(ii) and (1)(*d*)), L5, L7 to L13 and L15 to L22

(*b*) other buildings: all regulations.

(2) Where a material change of use neither involves nor is accompanied by an alteration or extension, the provisions referred to in paragraph (1) shall apply to the building or part of the building in which the change of use occurs as if it were a new building identical to the building as it exists and to be used for the same purpose or purposes as the building will have after the change of use.

(3) Where a material change of use involves or is accompanied by an alteration or extension—

(*a*) the provisions referred to in paragraph (1) (other than regulation A8) shall apply to the building or part of the building in which the change of use occurs as if it were part of a new building identical to the building as altered or extended and to be used for the same purpose or purposes as that building will have after the change of use;

(*b*) the application of regulation A7 by paragraph (1) shall be effective to apply any requirements additional to those directly applied by that paragraph.

Giving of notices and deposit of plans

A10.—(1) Subject to the provisions of paragraphs (2) and (3), any person who intends to—

(*a*) erect any building; or

(*b*) make any structural alteration of or extension to a building; or

(*c*) execute any works or instal any fitting in connection with a building; or

(*d*) make any material change of use of a building,

shall, if any provisions of these regulations apply to such operation or such change of use, give notices and deposit plans, sections, specifications and written particulars in accordance with the relevant rules of Schedule 2.

(2) The provisions of paragraph (1) relating to the making of a structural alteration shall not apply to the carrying out of structural work associated with an operation to which either sub-paragraph (3)(*a*) or (3)(*b*) relates if the extent of the work does not exceed that described therein.

(3) The provisions of paragraph (1) relating to the installation of a fitting shall not apply to—

(*a*) the installation of an appliance to which Part M relates (other than a high-rating appliance or an appliance described in sub-paragraph (*b*) of this paragraph) by way of replacement of an existing appliance if compliance with the relevant regulations in that Part does not require the carrying out of any structural work other than such work as may be necessary in order to comply with regulation M4(11); or

(*b*) the installation, whether or not by way of replacement, of a Class II gas appliance or of a Class I or Class II incinerator which employs gas as a means of igniting refuse if compliance with the relevant regulations in Part M does not require the carrying out of any structural work other than the construction of the flue pipe which is wholly within the room or internal space in which the appliance is installed and conveys the products of combustion from the appliance to an existing flue in a chimney or flue pipe or to the external air through an existing opening in an external wall; or

(*c*) the installation of a fitting to which Part N, P or Q relates by way of replacement of an existing fitting if compliance with the relevant regulations in that Part does not require the carrying out of any structural work.

(4) In paragraph (3) of this regulation, words and expressions have the same meaning as in Part M.

Notice of commencement and completion of certain stages of work

A11.—(1) In this regulation—

(*a*) "builder" means any person carrying out or intending to carry out any such operation as is referred to in regulation A10(1)(*a*), (*b*) or (*c*) to which any of these regulations apply; and

(*b*) in the calculation of a period of forty eight hours in respect of the giving of forty eight hours' notice under paragraph (2), no account shall be taken of a Saturday, Sunday, Christmas Day, Good Friday, Bank or public holiday or day appointed for public thanksgiving or mourning.

(2) Subject to the provisions of paragraph (6), a builder shall furnish the district council with—

(*a*) not less than forty eight hours' notice in writing of the date and time at which the operation will be commenced; and

(*b*) not less than forty eight hours' notice in writing before the covering up of any excavation for a foundation, any foundation, any damp-proof course or any concrete or other material laid over a site; and

(*c*) not less than forty eight hours' notice in writing before any drain or private sewer to which these regulations apply will be haunched or covered in any way; and

(*d*) notice in writing not more than seven days after the work of laying such drain or private sewer has been carried out, including any necessary work of haunching or surrounding the drain or private sewer with concrete and backfilling the trench.

(3) If the builder neglects or refuses to give any such notice, he shall comply with any notice in writing from the district council requiring him within a reasonable time to cut into, lay open or pull down so much of the building, works or fittings as prevents the district council from ascertaining whether any of these regulations have been contravened.

(4) If the builder, in accordance with any notice in writing received from the district council which specifies the manner in which any building or works or fittings contravenes the requirements of these regulations, has altered or added to the building, works or fittings so as to secure compliance with these regulations, he shall, within a reasonable time after the completion of such alteration or addition, give notice in writing to the district council of its completion.

(5) Subject to the provisions of paragraph (6), the builder shall give to the district council notice in writing of—

(*a*) the erection of a building, not more than seven days after completion, or (if a building or part of a building is occupied before completion) not less than seven days before occupation as well as not more than seven days after completion;

(*b*) any alteration or extension of a building, not more than seven days after completion; and

(*c*) the execution of works or the installation of fittings in connection with a building, not more than seven days after completion.

(6) The requirements of this regulation shall not apply to the installation of any fitting if the giving of notices and the deposit of plans, sections, specifications and written particulars are not required under the provisions of regulation A10.

Testing of drains and private sewers

A12. An authorised officer of the district council shall be permitted to make such tests of any drain or private sewer as may be necessary to establish compliance with any of the provisions of Part N.

Sampling of materials

A13. An authorised officer of the district council shall at all times be permitted to take such samples of the materials to be used in the erection, alteration or extension of a building, or the execution of works or the installation of fittings, as may be necessary to enable the district council to ascertain whether such materials comply with the provisions of these regulations.

Exercise of power of dispensation or relaxation

A14. The power under Article 9(1) of the Building Regulations (Northern Ireland) Order 1972 to dispense with or relax any requirement of the regulations specified below shall, in accordance with Article 9(2) of the said Order, be exercisable by the district council.

Part B (Materials)

Part C (Preparation of site and resistance to moisture)

Part E (Structural fire precautions)

and

Part EE (Means of escape in case of fire)
except in either case when applied to—

(*a*) a building, or part of a building, which exceeds 7,000 m^3 in capacity; or

(*b*) a building, or part of a building, in any complex of buildings in multi-occupation, being a complex which exceeds 4,000 m^2 in area and consists of or incorporates a shopping precinct; or

(*c*) an air supported structure.

Part F (Thermal insulation)

Part G (Sound insulation)

Part H (Stairways, ramps, balustrades and vehicle barriers)

Part J (Refuse disposal)

Part K (Open space, ventilation and height of rooms)

Part L (Chimneys, flue pipes, hearths and fireplace recesses)

Part M (Heat-producing appliances and incinerators)

Part N (Drainage, private sewers and cesspools)

Part P (Sanitary conveniences)

Part Q (Ashpits, wells, tanks and cisterns):

Provided that this regulation shall not apply to any application made by a district council.

Application for dispensation or relaxation

A15.—(1) Any application for a direction dispensing with or relaxing any requirement of these regulations shall be submitted in duplicate.

(2) Any notification by the district council to an applicant that they have refused his application for dispensation or relaxation of any requirement of these regulations shall indicate the provisions of Article 10 of the Building Regulations (Northern Ireland) Order 1972.

(3) Before giving a direction the Department or, as the case may be, the district council may if it thinks fit send—

(*a*) to the applicant a copy of its draft direction, and

(*b*) to any other person or body appearing to it to be interested a copy of the application and of its draft direction,

inviting comment on the draft direction, and it shall take into account any comments received before making the direction final.

(4) Before giving a direction the Department or, as the case may be, the district council may if it thinks fit afford to the applicant or any other person appearing to it to be interested, an opportunity of appearing before and being heard by a person appointed by the Department or, as the case may be, the district council for the purpose.

(5) After giving a direction the Department or, as the case may be, the district council shall notify the applicant and any other person who received a copy of the draft direction under regulation A15(4), of the direction and its reasons therefor.

Appeals and prescribed periods

A16.—(1) An appeal to the Department against refusal to relax regulations or rejection of plans by a district council shall set out the grounds of appeal and a copy shall be sent to the district council.

(2) The district council on receiving the copy of the appeal shall at once transmit to the Department a copy of the application and a copy of all documents furnished by the applicant for the purposes of his application.

(3) The district council shall at the same time give to the Department in writing any representations which they desire to make as regards the appeal and shall send a copy to the appellant.

(4) The prescribed period for the purposes of Article 11(2) of the Building Regulations (Northern Ireland) Order 1972 (rejection of plans by district councils) shall be fifty six days.

(5) The prescribed period for the purposes of paragraphs (1) and (2) of Article 10 of the Building Regulations (Northern Ireland) Order 1972 shall be fifty six days.

Revocations

A17. The regulations specified in the Table to this regulation are hereby revoked, but without prejudice to the validity of anything done thereunder before the date of the coming into operation of these regulations and subject to the transitional provisions in regulation A4 hereof.

TABLE TO REGULATION A17

Regulations revoked (1)	References (2)
The Building Regulations (Northern Ireland) 1973	S.R. & O. (N.I.) 1973 No. 105
The Building (Amendment) (No. 2) Regulations (Northern Ireland) 1973	S.R. & O. (N.I.) 1973 No. 506
The Building (Amendment) (No. 3) Regulations (Northern Ireland) 1975	S.R. N.I. 1975 No. 112

PART B

MATERIALS

Fitness of materials

B1. Any materials used—

(*a*) in the erection of a building;

(*b*) in the structural alteration or extension of a building;

(*c*) in the execution of works or the installation of fittings, being works or fittings to which any provision of these regulations applies; or

(*d*) for the backfilling of any excavation on a site in connection with any building or works or fittings to which any provision of these regulations applies,

shall be—

(i) of a suitable nature and quality in relation to the purposes for and conditions in which they are used;

(ii) adequately mixed or prepared; and

(iii) applied, used or fixed so as adequately to perform the functions for which they are designed.

Deemed-to-satisfy provisions regarding the fitness of materials

B2. *The use of any material or any method of mixing or preparing materials or of applying, using or fixing materials which conforms with a British Standard or a British Standard Code of Practice prescribing the quality of material or standards of workmanship shall be deemed to be a sufficient compliance with the requirements of regulation B1 if the use of that material or method is appropriate to the purpose for and conditions in which it is used.*

Unsuitable materials

B3.—(1) No part of an external wall or roof of a building shall consist of flexible or rigid sheet material supported directly or indirectly by air or other gaseous substances.

(2)(*a*) Materials described in the Table to this regulation shall be deemed to be unsuitable for use as the weather resisting part of the external wall or roof of a building, either without exception or with the exception specified in that Table.

(*b*) In determining for the purposes of this regulation whether a material is used as the weather-resisting part of an external wall or roof, no account shall be taken of that material being either—

(i) painted; or

(ii) coated, surfaced or rendered with any other material which, when so used, does not in itself constitute effective resistance against weather.

TABLE TO REGULATION B3

(Materials unsuitable for use in buildings as the weather-resisting parts of external walls or roofs)

Description of material (1)	Particulars of unsuitability	
	External walls (2)	Roofs (3)
1. Wood wool building slabs	Unsuitable without exception	Unsuitable without exception
2. Plasterboard	,,	,,
3. Fibrous plaster	,,	,,
4. Canvas or cloth	,,	,,
5. Felt	,,	Unsuitable except felt used in a roof covering of a type and construction complying with the recommendations of CP 144 : Part 3 : 1970
6. Timber boarding	Unsuitable except boarding which— (*a*) is manufactured from— (i) the heartwood of timber specified in Table 1 to Schedule 3; or (ii) timber specified in Table 2 to Schedule 3 subjected to a preservative treatment specified in Table 3 to Schedule 3; and (*b*) has in either case, a thickness of not less than— (i) in the case of feather-edge boarding, 16 mm at the thicker edge and 6 mm at the thinner edge; or (ii) in all other cases, 16 mm	Unsuitable without exception

TABLE TO REGULATION B3 (*continued*)

Description of material (1)	Particulars of unsuitability	
	External walls (2)	Roofs (3)
7. Fibre building board	Unsuitable except tempered hardboard which complies with the appropriate specification in BS 1142: Part 2: 1971	Unsuitable without exception
8. Wood chipboard	Unsuitable without exception	"
9. Straw slabs	"	"
10. Plywood	Unsuitable except where not less than 8 mm thick and satisfactorily manufactured for external use	"
11. Plastering or rendering on wood laths or metal lathing	Unsuitable except a rendered finish on metal lathing which complies with the recommendations of CP 221 : 1960	"
12. Sheet steel	Unsuitable except galvanised sheet steel complying with Class 1A of BS 2989: 1975 or Type 200 of BS 3083: 1959, or sheet steel vitreous enamelled or coated with bitumen or other organic substance of like durability during the course of manufacture	Unsuitable except galvanised sheet steel complying with Class 1A of BS 2989: 1975 or Type 200 of BS 3083: 1959, or sheet steel vitreous enamelled or coated with bitumen or other organic substance of like durability during the course of manufacture
13. Asbestos-cement sheets and slates	Unsuitable except asbestos-cement sheets and slates complying with BS 690 : Part 2: 1971, BS 690: Part 3: 1973 or BS 690 : Part 4: 1974	Unsuitable except asbestos-cement sheets and slates complying with BS 690 : Part 2: 1971, BS 690 : Part 3: 1973 or BS 690 : Part 4: 1974

BUILDINGS

PART C

PREPARATION OF SITE AND RESISTANCE TO MOISTURE

Interpretation of Part C

C1. In this Part—

"excepted building"—

(*a*) means a building which is intended to be used wholly for storage of goods or for the accommodation of plant or machinery and in which the only persons habitually employed are engaged solely in the general care, supervision, regulation, maintenance, storage or removal of such goods, plant or machinery; and

(*b*) without prejudice to the foregoing generality, includes a building which is intended to be used wholly for a purpose such that compliance with the requirements of any regulation in this Part would not serve to increase protection to the health of persons employed in that building; and

"floor" includes any base or structure between the surface of the ground, or the surface of any hardcore laid upon the ground, and the upper surface of the floor.

Preparation of site

C2.—(1) The site of any building, other than an excepted building, shall be effectively cleared of turf and other vegetable matter.

(2) Wherever the dampness or position of the site of a building renders it necessary, the subsoil of the site shall be effectively drained or such other steps shall be taken as will effectively protect the building against damage from moisture.

(3) Where, during the making of an excavation in connection with a building, works or fittings, an existing subsoil drain is severed, adequate precautions shall be taken to secure the continued passage of subsoil water through such drain or otherwise to ensure that no subsoil water entering such drain causes dampness of the site of the building.

Protection of floors next to the ground

C3.—(1) Such part of a building (other than an excepted building) as is next to the ground shall have a floor which is so constructed as to prevent the passage of moisture from the ground to the upper surface of the floor.

(2) Any floor which is next to the ground shall be so constructed as to prevent any part of the floor being adversely affected by moisture or water vapour from the ground.

(3) No hardcore laid under such floor shall contain water-soluble sulphates or other deleterious matter in such quantities as to be liable to cause damage to any part of the floor.

Deemed-to-satisfy provisions for suspended timber floors

C4. *Where a floor is constructed as a suspended floor and incorporates timber, the requirements of regulation C3(1) and (2) shall be deemed to be satisfied if—*

(*a*) *the ground surface is covered with a layer of concrete not less than 100 mm thick, composed of cement and fine and coarse aggregate conforming to BS 882 : Part 2 : 1973 in the proportions of 50 kg of cement to not more than 0·1 m³ of fine aggregate and 0·2 m³ of coarse aggregate, properly laid on a bed of hardcore consisting of clean clinker, broken brick or similar inert material free from water-soluble sulphates or other deleterious matter in such quantities as to be liable to cause damage to the concrete; and*

(*b*) *the concrete is finished with a trowel or spade finish and so laid that its top surface is not below the highest level of the surface of the ground or paving adjoining any external wall of the building; and*

(*c*) *there is a space above the upper surface of the concrete of not less than 75 mm to the underside of any wall plate, and of not less than 125 mm to the underside of the suspended timbers, and such space is clear of debris and has adequate through ventilation; and*

(*d*) *there are damp-proof courses in such positions as to ensure that moisture from the ground cannot reach any timber or other material which would be adversely affected by it.*

Deemed-to-satisfy provisions for floors of solid construction incorporating timber

C5. *Where a floor is constructed as a solid floor and incorporates timber, the requirements of regulation C3(1) and (2) shall be deemed to be satisfied if—*

(*a*) *the ground surface is covered in the manner described in regulation C4(a); and*

(*b*) *either—*

(i) *the concrete incorporates a damp-proof sandwich membrane consisting of a continuous layer of hot applied soft bitumen or coal tar pitch not less than 3 mm thick, or consisting of not less than three coats of bitumen solution, bitumen/rubber emulsion or tar/rubber emulsion; or*

(ii) *the timber is laid or bedded directly upon a damp-proof course of asphalt or pitchmastic not less than 12·5 mm thick; or*

(iii) *(where the floor incorporates wood blocks not less than 16 mm thick) the blocks are dipped in an adhesive of hot soft bitumen or coal tar pitch and so laid upon the concrete that the adhesive forms a continuous layer; and*

(*c*) *such membrane, damp-proof course or layer of adhesive is—*

(i) *situated at a level not lower than the highest level of the surface of the ground or paving adjoining any external wall of the building; and*

(ii) *continuous with, or joined and sealed to, any barrier to moisture inserted in any adjoining floor, wall, pier, column or chimney so as to ensure compliance with any relevant requirements of regulations C3 or C6; and*

(*d*) *where the timber is fixed to wooden fillets embedded in concrete, the fillets are treated in accordance with the provisions of BS 3452 : 1962 or BS 4072 : 1974.*

Protection of walls against moisture

C6. Any wall, pier or column of a building and any chimney shall be so constructed as not to transmit moisture from the ground—

(*a*) to any material which is used in its construction or in the construction of any other part of the building and is of such a nature as to be liable to be adversely affected by such moisture; or

(*b*) (unless the building is an excepted building or the chimney is a separate building) to the inside of the building.

Deemed-to-satisfy provisions for protection of walls against moisture

C7. *The requirements of regulation C6 shall be deemed to be satisfied if the wall, pier, column or chimney—*

(*a*) *has a damp-proof course which, in the case of an external wall or of a pier, column or chimney forming part of an external wall, is at a height of not less than 150 mm above the finished surface of the adjoining ground and any paving laid on the adjoining ground; and*

(*b*) *has such other additional barriers to moisture in continuation of the damp-proof course required by sub-paragraph (a) as may be necessary to ensure that moisture is not transmitted to any timber or other material which would be adversely affected by it or (unless the building is an excepted building or the chimney is a separate building) to the inside of the building; and*

(*c*) *being a wall, pier, column or chimney which extends below the level of the damp-proof course required by sub-paragraph (a) is constructed below that level wholly of materials not likely to be adversely affected by moisture from the ground.*

Weather resistance of external walls

C8. Any external wall, including any parapet, pier or column forming part of an external wall, and any chimney shall be so constructed as not to transmit moisture due to rain or snow to any part of the building which would be adversely affected by such moisture and (unless the building is an excepted building or the chimney is a separate building) shall be so constructed as adequately to resist the penetration of such moisture to the inside of the building.

Prevention of damp in certain cavity walls

C9.—(1) Where damp-proof courses are inserted in the leaves of any cavity wall constructed of bricks or blocks in order to satisfy the requirements of regulation C6, the cavity shall extend not less than 150 mm below the level of the lower damp-proof course unless the structure forming the bottom of the cavity complies with the requirements of paragraph (2) as to a bridging.

(2) In any such wall, wherever a cavity is bridged otherwise than by—

(*a*) a wall tie; or

(*b*) a bridging which occurs at the top of a wall in such a position that it is protected by a roof,

a damp-proof course or flashing shall be inserted in such a manner as will prevent the passage of moisture from the outer leaf to the inner leaf of the wall.

(3) Wherever there is an opening in such a wall, the jambs shall have a suitable vertical damp-proof course unless the cavity is closed in such other manner as will prevent the passage of moisture from the outer leaf to the inner leaf of the wall.

Weather resistance of roofs

C10. The roof of any building shall be weatherproof and so constructed as not to transmit moisture due to rain or snow to any part of the structure of the building which would be adversely affected by such moisture.

PART D

STRUCTURAL STABILITY

Interpretation of Part D

D1. In this Part—

"dead load" means the force due to the static mass of all walls, partitions, floors, roofs and finishes, including all other permanent construction;

"imposed load" means the load assumed to be produced by the intended occupancy or use, including distributed, concentrated, impact, inertia and snow loads, but excluding wind loads; and

"wind load" means all loads due to the effect of wind pressure or suction.

Calculation of loading

D2.—(1) For the purposes of paragraph (3) of this regulation—

"beam" includes any joist, purlin, rafter, rib or truss;

"floor" includes any part of a floor to be used as a corridor and any balcony used in connection with a floor;

"plan area" in relation to a floor, ceiling or roof means the area thereof measured on plan; and

"slab" includes boarding, roof decking and any beams which are spaced apart at a distance of not more than 1 m between centres.

(2) Subject to the provisions of regulation D17, in determining for the purposes of this Part the loads to which a building will be subjected—

(*a*) dead loads shall be calculated in accordance with CP3: Chapter V: Part 1: 1967; and

(*b*) imposed loads shall be calculated—

(i) in accordance with CP3: Chapter V: Part 1: 1967; or

(ii) in the case of the imposed load on a floor, ceiling or roof of a house having not more than three storeys and intended for occupation by one family only, either in accordance with that code or in accordance with paragraph (3) of this regulation:

Provided that, if any actual imposed load will exceed or is likely to exceed the load so calculated, that actual load shall be substituted for the load so calculated;

and

(*c*) wind loads shall be calculated in accordance with CP3: Chapter V: Part 2: 1972:

Provided that—

(i) in no case shall the factor S3 be taken as less than 1; and

(ii) if a building falls outside the range of those for which that code gives force and pressure coefficients, values shall be used which are appropriate in relation to that building, having regard to its construction, size, proportions, shape, profile and surface characteristics.

(3) The imposed load on any floor, ceiling or roof of a house having not more than three storeys and intended for occupation by one family only may be taken to be equivalent to a uniformly distributed load per square metre of plan area of not less than—

(*a*) in the case of a floor or of a roof to which there is access other than solely for the purposes of maintenance or repair, 1·44 kN/m^2:

Provided that—

(i) if it causes greater stresses than that load, there shall be substituted for that load, in the case of a slab, 3·5 kN per metre width of slab uniformly distributed over the span of the slab or, in the case of a beam, 8·5 kN uniformly distributed over the span of the beam; and

(ii) in the application of this paragraph to a slab or beam forming part of a cantilever balcony, the projection of the cantilever shall be regarded as the span;

(*b*) in the case of a ceiling, 720 N/m^2; or

(*c*) in the case of a roof (whether flat or pitched) to which there is only such access as may be necessary for the purposes of maintenance or repair, 720 N/m^2 less 50 N for every 3° by which the pitch exceeds 30°.

Foundations

D3. The foundations of a building shall—

(*a*) safely sustain and transmit to the ground the combined dead load, imposed load and wind load in such a manner as not to cause any settlement or other movement which would impair the stability of, or cause damage to, the whole or any part of the building or of any adjoining building or works; and

(*b*) be taken down to such a depth, or be so constructed, as to safeguard the building against damage by swelling, shrinking or freezing of the subsoil; and

(*c*) be capable of adequately resisting any attack by sulphates or any other deleterious matter present in the subsoil.

Deemed-to-satisfy provision for foundations

D4. *The requirements of regulation D3 shall be deemed to be satisfied if the foundations of a building are constructed in accordance with CP 2004: 1972.*

Deemed-to-satisfy provisions for reinforced concrete foundations

D5.—(1) *Subject to the provisions of paragraph (2), if the foundations of a building are constructed wholly or in part of reinforced concrete, the requirements of regulation D3(a) shall be deemed to be satisfied, in so far as those parts of the foundations constructed of reinforced concrete are concerned, if the work complies with either—*

(a) *CP 110 : Part 1: 1972 (as read with CP 110 : Part 2: 1972 and CP 110 : Part 3: 1972): or*

(b) *CP 114: 1969*

(2) *The recommendations of the publications specified in paragraph (1)(a) shall not be used in conjunction with those of the publication specified in paragraph (1)(b).*

Deemed-to-satisfy provision for foundations of buildings having not more than four storeys (other than factories or storage buildings)

D6. *If foundations form part of a building having not more than four storeys (other than a factory or storage building), the requirements of regulation D3(a) shall be deemed to be satisfied if such foundations are constructed in accordance with CP 101: 1972.*

Deemed-to-satisfy provisions for strip foundations

D7. *If the foundations of a building are constructed as strip foundations of plain concrete situated centrally under the walls, the requirements of regulation D3(a) shall be deemed to be satisfied if—*

(a) *there is no made ground or wide variation in the type of subsoil within the loaded area and no weaker type of soil exists below the soil on which the foundations rest within such a depth as may impair the stability of the structure; and*

(b) *the width of the foundations is not less than the width specified in the Table to this regulation in accordance with the related particulars specified in the Table; and*

(c) *the concrete is composed of cement and fine and coarse aggregate conforming to BS 882 : Part 2: 1973 in the proportion of 50 kg of cement to not more than 0·1 m^3 of fine aggregate and 0·2 m^3 of coarse aggregate; and*

(d) *the thickness of the concrete is not less than its projection from the base of the wall or footing and is in no case less than 150 mm; and*

(e) *where the foundations are laid at more than one level, at each change of level the higher foundations extend over and unite with the lower foundations for a distance of not less than the thickness of the foundations and in no case less than 300 mm; and*

(f) *where there is a pier, buttress or chimney forming part of a wall, the foundations project beyond the pier, buttress or chimney on all sides to at least the same extent as they project beyond the wall.*

TABLE TO REGULATION D7

(Minimum width of strip foundations)

(1) Type of subsoil	(2) Condition of subsoil	(3) Field test applicable	(4) Minimum width in millimetres for total load in kilonewtons per lineal metre of loadbearing walling of not more than					
			20 kN/m	30 kN/m	40 kN/m	50 kN/m	60 kN/m	70 kN/m
I Rock	Not inferior to standstone, limestone or firm chalk	Requires at least a pneumatic or other mechanically operated pick for excavation	In each case equal to the width of wall					
II Gravel Sand	Compact Compact	Requires pick for excavation. Wooden peg 50 mm square in cross-section hard to drive beyond 150 mm	250	300	400	500	600	650
III Clay Sandy clay	Stiff Stiff	Cannot be moulded with the fingers and requires a pick or pneumatic or other mechanically operated spade for its removal	250	300	400	500	600	650
IV Clay Sandy clay	Firm Firm	Can be moulded by substantial pressure with the fingers and can be excavated with graft or spade	300	350	450	600	750	850
V Sand Silty sand Clayey sand	Loose Loose Loose	Can be excavated with a spade. Wooden peg 50 mm square in cross-section can be easily driven	400	600	**Note: In relation to types V, VI, and VII, foundations do not fall within the provisions of regulation D7 if the total load exceeds 30 kN/m**			
VI Silt Clay Sandy clay Silty clay	Soft Soft Soft Soft	Fairly easily moulded in the fingers and readily excavated	450	650				
VII Silt Clay Sandy clay Silty clay	Very soft Very soft Very soft Very soft	Natural sample in winter conditions exudes between fingers when squeezed in fist	600	850				

Structure above foundations

D8. The structure of a building above the foundations shall safely sustain and transmit to the foundations the combined dead load, imposed load and wind load without such deflection or deformation as will impair the stability of, or cause damage to, the whole or any part of the building.

Deemed-to-satisfy provision for structural work of steel

D9. *The requirements of regulation D8 shall be deemed to be satisfied as to any structural work of steel if the work complies with BS 449 : Part 2: 1969, as read with Supplement No. 1 (PD 3343) to BS 449 : Part 1: 1970 and Addendum No. 1 (April 1975) to BS 449 : Part 2: 1969.*

Deemed-to-satisfy provision for structural work of aluminium

D10.—(1) *Subject to paragraph (2), the requirements of regulation D8 shall be deemed to be satisfied as to any structural work in one of the principal or supplementary aluminium alloys designated in section 1.1 of CP 118: 1969 if the work complies with that publication.*

(2) *For the purposes of section 5.3 of CP 118: 1969 the structure shall be classified as a safe-life structure.*

Deemed-to-satisfy provisions for structural work of reinforced, prestressed or plain concrete

D11.—(1) *Subject to the provisions of paragraph (2), the requirements of regulation D8 shall be deemed to be satisfied as to any structural work (whether cast in-situ or precast) of reinforced, prestressed or plain concrete if the work complies with—*

(*a*) *CP 110 : Part 1: 1972 (as read with CP 110 : Part 2: 1972 and CP 110 : Part 3: 1972); or*

(*b*) *in the case of work of reinforced, prestressed or precast concrete, CP 114: 1969, CP 115: 1969 or CP 116: 1969 (as read with CP 116: Addendum No. 1: 1970) whichever is appropriate.*

(2) *The recommendations of the publications specified in paragraph (1)(a) shall not be used in conjunction with those of any publication specified in paragraph (1)(b).*

Deemed-to-satisfy provisions for structural work of timber

D12. *The requirements of regulation D8 shall be deemed to be satisfied as to any structural work of timber if—*

(*a*) *the work complies with CP 112 : Part 2: 1971; or*

(*b*) *in the case of work which—*

(i) *consists of a floor, ceiling or roof of a house which has not more than three storeys and is intended to be occupied by one family only; and*

(ii) *includes any timber member within the meaning of Schedule 4, that member complies with the rules contained in Schedule 4 and the work in all other respects complies with CP 112 : Part 2: 1971; or*

(*c*) *in the case of work which consists of a roof of trussed rafter construction, the work complies with CP 112 : Part 3: 1973.*

Deemed-to-satisfy provisions for structural work of bricks, blocks or plain concrete

D13. *The requirements of regulation D8 shall be deemed to be satisfied as to any structural work of bricks, blocks or plain concrete if—*

(*a*) *the work complies with CP 111 : Part 2 : 1970; or*

(*b*) *in the case of work comprising a wall constructed of bricks or blocks to which Schedule 5 applies, the thickness of such wall is determined in accordance with the rules of that schedule and the work in all other respects complies with CP 121 : Part 1 : 1973.*

Deemed-to-satisfy provision for walls of stone, flints or clunches of bricks

D14. *The requirements of regulation D8 shall be deemed to be satisfied as to any wall constructed of stone, flints, clunches of bricks or other burnt or vitrified material, if such wall is one to which Schedule 5 applies and it is constructed in accordance with the rules of that schedule.*

Deemed-to-satisfy provision for chimneys of bricks, blocks or plain concrete

D15.—(1) *The requirements of regulation D8 shall be deemed to be satisfied as to any wholly external part of a chimney or similar structure constructed of bricks, blocks or plain concrete which is not supported by adequate ties or otherwise made secure if its height measured from the level of the highest point in line of junction with the roof, gutter or other part of the building and from any higher level to the top of such external part (including, in the case of a chimney, any pot or other flue terminal) is not more than four and a half times its width at that level.*

(2) *For the purpose of this regulation, the width of a chimney or similar structure at any level shall be taken to be the least horizontal dimension at that level which can be shown on an elevation of the chimney or structure from any direction.*

Deemed-to-satisy provision for composite construction in structural steel and concrete

D16. *The requirements of regulation D8 shall be deemed to be satisfied as to any composite construction in structural steel and concrete if the work complies with CP 117 : Part 1 : 1965.*

Further requirements for the structure of certain buildings

D17.—(1) In addition to the requirements of regulation D8, the provisions of this regulation shall apply to a building having five or more storeys (including basement storeys, if any).

(2) In this regulation—

"portion", in relation to a structural member, means that part of a member which is situated or spans between adjacent supports or between a support and the extremity of a member:

Provided that, in the case of a wall, a portion shall be taken to have a length which is the lesser of the following, namely, the length determined in accordance with the preceding provisions of this definition or two and a quarter times the height of the portion (or, if its height varies, its greatest height);

"storey" means that part of a building which is situated between either—

(*a*) the top surfaces of two vertically adjacent floors of the building; or

(*b*) the top surface of the uppermost floor and the roof covering of the building;

"structural failure" means the failure of a structural member fully to perform its function in contributing to the structural stability of the building of which it forms part;

"structural member" means a member essential to the structural stability of a building.

(3) In the application of this regulation—

(*a*) dead load shall be determined in accordance with the provisions of regulation D2(2)(*a*);

(*b*) imposed load shall be determined in accordance with the provisions of regulation D2(2)(*b*) except that the imposed load on any structural member may be reduced by not more than two thirds for the purposes of paragraph (4) and shall be reduced by two thirds for the purposes of paragraph (5):

Provided that—

(i) any load especially allowed for plant, machinery or equipment shall not be reduced;

(ii) in the case of a warehouse, garage or building for storage purposes no reduction shall be made; and

(iii) in the case of a factory or workshop, the load shall not be reduced below 5 kN/m^2;

(*c*) wind load may be taken as not less than one third of the load determined in accordance with the provisions of regulation D2(2)(*c*); and

(*d*) the load which would cause structural collapse shall be assumed to exceed the combined dead load, imposed load and wind load on the structure together with, for the purposes of paragraph (5) of this regulation, the loads specified in sub-paragraphs (*b*) and (*c*) of that paragraph, by at least 5%.

(4) A building to which the provisions of this regulation apply shall be so constructed that if any portion of any one structural member (other than a portion which satisfies the conditions specified in paragraph (5)) were to be removed—

(*a*) structural failure consequent on that removal would not occur within any storey other than the storey of which that portion forms part, the storey next above (if any) and the storey next below (if any); and

(*b*) any structural failure would be localised within each such storey.

(5) The conditions referred to in paragraph (4) are that the portion should be capable of sustaining without structural failure the following loads applied simultaneously—

(*a*) the combined dead load, imposed load and wind load;

(*b*) a load of 34 kN/m^2 applied to that portion from any direction; and

(*c*) the load, if any, which would be directly transmitted to that portion by any immediately adjacent part of the building if that part were subjected to a load of 34 kN/m^2 applied in the same direction as the load specified in sub-paragraph (*b*).

Deemed-to-satisfy provision for localisation of structural failure

D18.—(1) *In this regulation "storey" and "structural failure" shall have the same respective meanings as in regulation D17(2).*

(2) *The requirements of regulation D17(4)(b) shall be deemed to be satisfied if the area within which structural failure would occur would not exceed 70 m^2 or 15% of the area of the storey, measured in the horizontal plane, whichever is the less.*

Deemed-to-satisfy provisions for the structure of certain buildings constructed of reinforced, prestressed or plain concrete

D19.—(1) *Subject to the provisions of paragraphs (2) and (3), if the structure of a building consists of work (whether cast in-situ or precast) of reinforced, prestressed or plain concrete, the provisions of regulation D17 shall be deemed to be satisfied if—*

(a) the work complies with the recommendations relating to the effect of misuse or accident in Section 2 of CP 110 : Part 1 : 1972 and with all relevant recommendations relating to the provision of ties in that publication; or

(b) in the case of work of reinforced, prestressed or precast concrete, the work complies with the recommendations relating to the effect of misuse or accident in clause 301 of CP 114 : 1969, CP 115 : 1969 or CP 116 : 1969 (as read with CP 116 : Addendum No. 1 : 1970) whichever is appropriate and with all relevant recommendations relating to the provision of ties in that publication.

(2) *The recommendations of the publication specified in paragraph (1)(a) shall not be used in conjunction with those of any publication specified in paragraph (1)(b).*

(3) *If, for the purposes of regulation D11, reliance is placed on any one of the publications referred to in paragraph (1) of this regulation, then reliance may be placed only on that publication for the purposes of this regulation.*

(4) *For the purposes of CP 116 : 1969 and CP 116 : Addendum No. 1 : 1970 the building shall be classified as a Group 1 structure.*

Use of high alumina cement for structural work

D20. Regulation B2 and the deemed-to-satisfy provisions of this Part shall not apply in relation to structural work, including foundations, in which high alumina cement is used.

PART E

Structural Fire Precautions

Interpretation of Part E

E1.—(1) In this Part and in Schedules 6 and 7—

"basement storey" means a storey which is below the ground storey; or, if there is no ground storey, means a storey the floor of which is situated at such a level or levels that some point on its perimeter is more than 1.2m below the level of the finished surface of the ground adjoining the building in the vicinity of that point;

"compartment" means any part of a building which is separated from all other parts by one or more compartment walls or compartment floors or by both such walls and floors; and, if any part of the top storey of a building is within a compartment, the compartment shall also include any roof space above such part of the top storey;

"compartment wall" and "compartment floor" mean respectively a wall and a floor which complies with regulation E9 and which is provided as such for the purposes of regulation E4 or to divide a building into compartments for any purpose in connection with regulation E5, E6 or E7;

"door" includes any shutter, cover or other form of protection to an opening in any wall or floor of a building, or in the structure surrounding a protected shaft, whether the door is constructed of one or more leaves;

"element of structure" means—

(*a*) any member forming part of the structural frame of a building or any other beam or column (not being a member forming part of a roof structure only);

(*b*) a floor, including a compartment floor, other than the lowest floor of a building;

(*c*) an external wall;

(*d*) a separating wall;

(*e*) a compartment wall;

(*f*) structure enclosing a protected shaft;

(*g*) a loadbearing wall or loadbearing part of a wall; and

(*h*) a gallery;

"externally non-combustible" means externally faced with, or otherwise externally consisting of, non-combustible material;

"fire stop" means a barrier or seal which would prevent or retard the passage of smoke or flame within a cavity or around a pipe or duct where it passes through a wall or floor or at a junction between elements of structure; and "fire-stopped" shall be construed accordingly;

"ground storey" means a storey the floor of which is situated at such a level or levels that any given point on its perimeter is at or about, or not more than 1.2m below, the level of the finished surface of the ground adjoining the building in the vicinity of that point; or, if there are two or more such storeys, means the higher or highest of these;

"height of a building" has the meaning ascribed to it in regulation E3;

"open carport" means a carport of not more than one storey, which is open on two or more of its sides; and for the purpose of this definition a side which includes or consists of a door shall not for that reason be regarded as an open side;

"permitted limit of unprotected areas" means the maximum aggregate area of unprotected areas in any side or external wall of a building or compartment, calculated as prescribed in Part I of Schedule 7;

"protected shaft" means a stairway, lift, escalator, chute, duct or other shaft which enables persons, things or air to pass between different compartments and complies with the requirements of regulation E10;

"relevant boundary", in relation to a side or external wall of a building or compartment, means that part of the boundary of the premises (as defined in regulation A2(1)) or of the notional boundary (as prescribed in regulation E7(1)(*c*)) which is adjacent to that side or wall and either coincides with, is parallel to or is at an angle of not more than 80° with that side or wall;

"separating wall" means a wall or a part of a wall which is common to two adjoining buildings;

"unprotected area", in relation to an external wall or side of a building, means—

(*a*) a window, door or other opening;

(*b*) any part of the external wall which has fire resistance less than that specified by this Part for that wall; and

(*c*) any part of the external wall which has combustible material more than 1 mm thick attached or applied to its external face, whether for cladding or any other purpose.

(2) Any reference in this Part to a building shall, in any case where two or more houses adjoin, be construed as a reference to one of those houses.

(3) If any part of a building other than a single storey building—

(*a*) consists of a ground storey only;

(*b*) has a roof to which there is only such access as may be necessary for the purposes of maintenance or repair; and

(*c*) is completely separated from all other parts of the building by a compartment wall or compartment walls in the same continuous vertical plane,

that part may be treated, for the purposes of this Part, as a part of a single storey building.

(4) Any reference in this Part to a roof or part of a roof of a specified designation shall be construed as a requirement that the roof or part of a roof shall be so constructed that a specimen constructed to the same specification, if exposed to test by fire in accordance with BS 476 : Part 3 : 1958, would comply with the relevant test criteria specified in relation to that designation:

Provided that any roof or part of a roof shall be deemed to be of the specified designation if it conforms with one of the specifications set out against that designation in Schedule 8.

(5) Any requirement in this Part that an element of structure, door or casing shall have fire resistance of a specified period shall be construed as meaning that it shall be so constructed that a specimen constructed to the same specification, if exposed to test by fire in accordance with BS 476 : Part 8: 1972, would (subject to the provisions set out in the Table to this regulation) satisfy the requirements of that test as to stability, integrity and insulation for not less than the specified period:

Provided that an element of structure, door or casing shall be deemed to have the requisite fire resistance if—

(*i*) *it is constructed to the same specification as that of a specimen which prior to 1st June 1975 was either exposed to test by fire in accordance with BS 476 : Part 1: 1953 and (subject to the provisions set out in the Table to this regulation) satisfied the requirements of that test as to collapse, passage of flame and insulation for not less than the specified period or was assessed by an appropriate authority as capable of satisfying those requirements; or*

(*ii*) *in the case of a wall, beam, column, stanchion or floor to which Schedule 6 relates, it is constructed in accordance with one of the specifications set out in that schedule and the notional period of fire resistance given in that schedule as being appropriate to that type of construction and other relevant factors is not less than the specified period.*

TABLE TO REGULATION E1

(Provisions as to method of test and minimum period of fire resistance referred to in paragraph (5))

Part of building	Method of test	Minimum period as to—		
		BS 476: Part 8: 1972		
		stability	integrity	insulation
		BS 476: Part 1: 1953		
		collapse	*passage of flame*	*insulation*
(1)	(2)	(3)	(4)	(5)
1. External wall situated 1 m or more from relevant boundary	exposure of inside of wall to test by fire	*	*	15 min.
2. External wall situated less than 1m from any point on relevant boundary 3. Separating wall 4. Compartment wall 5. Structure (other than an external wall) enclosing protected shaft	exposure of each side of structure separately to test by fire	*	*	*
6. Compartment floor	exposure of underside of floor to test by fire	*	*	*
7. Floor of upper storey in building of purpose group I which has 2 storeys	exposure of underside of floor to test by fire	† 30 min.	† 15 min.	† 15 min.
8. Casing referred to in regulation E12(3)(*c*)	exposure of exterior to test by fire	30 min.	30 min.	§ 30 min.

* = "as period of fire resistance specified"
†These requirements are referred to in Part VIII of Schedule 6 as "modified ½ hour"
§No requirement if the distance between the casing and every pipe within the enclosure except a pipe penetrating the casing exceeds 50mm.

TABLE TO REGULATION E1—*continued*

Part of building	Method of test	Minimum period as to—		
		BS 476: Part 8: 1972		
		stability	integrity	insulation
		BS 476: Part 1: 1953		
		collapse	*passage of flame*	*insulation*
(1)	(2)	(3)	(4)	(5)
9. Door other than a door described in item 10 or 11	exposure to test by fire when fitted in its frame	*	*	no requirement
10. Door referred to in both regulation E11(5) and regulation E9(1)(*a*)(i) or E13(2)(*b*) or E18(6)(*c*)(ii)	exposure to test by fire when fitted in its frame	30 min.	20 min.	no requirement
11. Door referred to in both regulation E11(6) and regulation E10(7)(*a*) or E10(7)(*b*)	exposure to test by fire when fitted in any rebated frame	30 min.	30 min.	no requirement

* = "as period of fire resistance specified"

Designation of purpose groups

E2. For the purposes of this Part every building or compartment shall be regarded according to its use or intended use as falling within one of the purpose groups set out in the Table to this regulation and, where a building is divided into compartments used or intended to be used for different purposes, the purpose group of each compartment shall be determined separately:

Provided that where the whole or part of a building or compartment (as the case may be) is used or intended to be used for more than one purpose, only the main purpose of use of that building or compartment shall be taken into account in determining into which purpose group it falls.

TABLE TO REGULATION E2

(Designation of purpose groups)

Purpose group (1)	Descriptive title (2)	Purposes for which building or compartment is intended to be used (3)
I ..	Small residential ..	Private dwelling-house (not including a flat or masionette)*
II ..	Institutional ..	Hospital, home, school or other similar establishment used as living accommodation for, or for treatment, care or maintenance of, persons suffering from disabilities due to illness or old age or other physical or mental disability or under the age of five years, where such persons sleep in the premises
III ..	Other residential ..	Accommodation for residential purposes other than any premises comprised in groups I and II
IV ..	Office	Office, or premises used for office purposes, meaning thereby the purposes of administration, clerical work (including writing, book-keeping, sorting papers, filing, typing, duplicating, machine-calculating, drawing and the editorial preparation of matter for publication), handling money and telephone and telegraph operating, or as premises occupied with an office for the purposes of the activities there carried on
V ..	Shop	Shop, or shop premises, meaning thereby premises not being a shop but used for the carrying on there of retail trade or business (including the sale to members of the public of food or drink for immediate consumption, retail sales by auction, the business of lending books or periodicals for the purpose of gain, and the business of a barber or hairdresser), and premises to which members of the public are invited to resort for the purpose of delivering there goods for repair or other treatment or of themselves carrying out repairs to, or other treatment of, goods
VI ..	Factory	Factory within the meaning ascribed to that word by section 175 of the Factories Act (N.I.) 1965(h)

**Note: By regulation E20 certain small garages and open carports are treated as being of purpose group I.*

(h) 1965 c. 20 (N.I.)

TABLE TO REGULATIION E2—*continued*

Purpose group (1)	Descriptive title (2)	Purposes for which building or compartment is intended to be used (3)
VII ..	Other place of assembly	Place, whether public or private, used for the attendance of persons for or in connection with their social, recreational, educational, business or other activities, and not comprised within groups I to VI
VIII ..	Storage and general	Place for storage, deposit or parking of goods and materials (including vehicles), and any other premises not comprised in groups I to VII*

**Note*: *By regulation E20 certain small garages and open carports are treated as being of purpose group I.*

Rules for measurement

E3. In this Part—

(*a*) the height of a building, or (where relevant) of part of a building as described in regulation E5(1)(*b*), means the height of such building or part, measured from the mean level of the ground adjoining the outside of the external walls of the building to the level of half the vertical height of the roof of the building or part, or to the top of the walls or of the parapet (if any), whichever is the higher;

(*b*) the area of—

(i) any storey of a building or compartment shall be taken to be the total area of that storey bounded by the inner finished surfaces of the enclosing walls or, on any side where there is no enclosing wall, by the outermost edge of the floor on that side;

(ii) any room or garage shall be taken to be the total area of its floor bounded by the inner finished surfaces of the walls forming the room or garage; and

(iii) any part of a roof shall be taken to be the actual visible area of such part measured on a plane parallel to the pitch of the roof; and

(*c*) the cubic capacity of a building or compartment shall be ascertained by measuring the volume of space contained within—

(i) the inner finished surfaces of the enclosing walls or, on any side where there is no enclosing wall, a plane extending vertically above the outermost edge of the floor on that side; and

(ii) the upper surface of its lowest floor; and

(iii) in the case of a building or of a compartment which extends to a roof, the under surface of the roof or, in the case of any other compartment, the under surface of the ceiling of the highest storey within that compartment,

including the space occupied by any other walls or any shafts, ducts or structure within the space to be so measured.

Provision of compartment walls and compartment floors

E4.—(1) Any building of a purpose group specified in column (1) of the Table of this regulation which has—

(*a*) any storey the floor area of which exceeds that specified as relevant to a building of that purpose group and height in column (3) of the Table; or

(*b*) a cubic capacity which exceeds that specified as so relevant in column (4) of the Table,

shall be so divided into compartments by means of compartment walls or compartment floors or both that—

(i) no such compartment has any storey the floor area of which exceeds the area specified as relevant to the building in column (3) of the Table; and

(ii) no such compartment has a cubic capacity which exceeds that specified as so relevant in column (4) of the Table:

Provided that if any building of purpose group V is fitted throughout with an automatic sprinkler system which complies with the relevant recommendations of CP 402.201: 1952, this paragraph shall have effect in relation to that building as if the limits of dimensions specified in columns (3) and (4) of the Table were doubled.

(2) In any building which exceeds 28 m in height, any floor which separates one storey from another storey, other than a floor which is—

(*a*) within a maisonette; or

(*b*) above the ground storey but at a height not exceeding 9 m above the adjoining ground,

shall be constructed as a compartment floor.

(3) The following walls and floors shall be constructed as compartment walls or compartment floors—

(*a*) any floor in a building of purpose group II;

(*b*) any wall or floor separating a flat or maisonette from any other part of the same building;

(*c*) any wall or floor separating part of a building from any other part of the same building which is used or intended to be used mainly for a purpose falling within a different purpose group in the Table to regulation E2; and

(*d*) any floor immediately over a basement storey if such storey—

(i) forms part of a building of purpose group I which has three or more storeys or a building or compartment of purpose group III or V; and

(ii) has an area exceeding 100 m^2.

TABLE TO REGULATION E4

(Dimensions of buildings and compartments)

Purpose group	Height of building	Limits of dimensions	
		Floor area of storey in building or compartment (in m^2)	Cubic capacity of building or compartment (in m^3)
(1)	(2)	(3)	(4)
Part 1—Buildings other than single storey buildings			
II (Institutional)	Any height	2000	No limit
III (Other residential)	Not exceeding 28m	3000	8500
" " "	Exceeding 28m	2000	5500
V (Shop)	Any height	2000	7000
VI (Factory)	Not exceeding 28m	No limit	28000
" "	Exceeding 28m	2000	5500
VIII (Storage and general)	Not exceeding 28m	No limit	21000
" " " "	Exceeding 28m	1000	No limit
Part 2—Single storey buildings			
II (Institutional)	Any height	3000	No limit
III (Other residential)	Any height	3000	No limit

Fire resistance of elements of structure

E5.—(1) In this regulation and in the Table to this regulation—

(*a*) (subject to any express provision to the contrary) any reference to a building of which an element of structure forms part means the building or (if a building is divided into compartments) any compartment of the building of which the element forms part; and

(*b*) any reference to height means the height of a building, not of any compartment in the building, but if any part of the building is completely separated throughout its height both above and below ground from all other parts by a compartment wall or compartment walls in the same continuous vertical plane, any reference to height in relation to that part means the height solely of that part.

(2) Subject to the provisions of this regulation and of regulation E6, every element of structure shall have fire resistance of not less than the relevant period set out in the Table to this regulation:

Provided that:

(*a*) any external wall shall not have fire resistance of less than half an hour;

(*b*) any separating wall shall not have fire resistance of less than one hour;

(*c*) any compartment wall or compartment floor which separates a part of a building falling within purpose group II or III from any other part of the building falling within a purpose group other than purpose group II or III shall not have fire resistance of less than one hour;

(*d*) any element of structure which forms part of more than one building or compartment shall be so constructed as to comply with the greater or greatest of the relevant requirements specified in the Table; and

(*e*) any element of structure shall not have fire resistance of less than the minimum period required by these regulations for any element which it carries.

(3) Any compartment wall separating a flat or maisonette from any other part of the same building shall not be required to have fire resistance exceeding one hour unless—

(*a*) the wall is a loadbearing wall or a wall forming part of a protected shaft; or

(*b*) the part of the building from which the wall separates the flat or maisonette is of a different purpose group and the minimum period of fire resistance required by the provisions of this regulation for any element of structure in that part is one and a half hours or more.

(4) Nothing in paragraph (2) shall apply to—

(*a*) any part of an external wall which is non-loadbearing and may, in accordance with regulation E7, be an unprotected area; or

(*b*) in the case of a single storey building or a building consisting of a ground storey and one or more basement storeys, any element of structure which forms part of the ground storey and consists of—

(i) part of an external wall which does not support a gallery and which may, in accordance with regulation E7, be an unprotected area; or

(ii) a structural frame or a beam or column:

Provided that any beam or column (whether or not it forms part of a structural frame) which is within or forms part of a wall, and any column which gives support to a wall or gallery, shall have fire resistance of not less than the minimum period, if any, required by these regulations for that wall or that gallery; or

(iii) an internal loadbearing wall or a loadbearing part of a wall unless that wall or part is, or forms part of, a compartment wall or a separating wall, or forms part of the structure enclosing a protected shaft or supports a gallery.

TABLE TO REGULATION E5

(Minimum periods of fire resistance)

In this Table—

"cubic capacity" means the cubic capacity of the building or, if the building is divided into compartments, the compartment of which the element of structure forms part; and

"floor area" means the floor area of each storey in the building or, if the building is divided into compartments, of each storey in the compartment of which the element of structure forms part.

Part 1—Buildings other than single storey buildings

Purpose group	Maximum dimensions			Minimum period of fire resistance (in hours) for elements of structure(*) forming part of—		
	Height (in m)	Floor area (in m^2)	Cubic capacity (in m^3)	ground storey or upper storey	basement storey	
(1)	(2)	(3)	(4)	(5)	(6)	
I (Small residential)						
House having not more than three storeys	No limit	No limit	No limit	½	1(*a*)	x
House having four storeys ...	No limit	250	No limit	1(*b*)	1	
House having any number of storeys	No limit	No limit	No limit	1	1½	
II (Institutional)	28	2000	No limit	1	1½	
	over 28	2000	No limit	1½	2	
III (Other residential)						
Building or part(†) having not more than two storeys ...	No limit	500	No limit	½	1	x
Building or part(†) having three storeys	No limit	250	No limit	1(*b*)	1	
Building having any number of storeys	28	3000	8500	1	1½	
Building having any number of storeys	No limit	2000	5500	1½	2	
IV (Office)	7.5	250	No limit	0	1(*c*)	x
	7.5	500	No limit	½	1	
	15	No limit	3500	1(*b*)	1	
	28	5000	14000	1	1½	
	No limit	No limit	No limit	1½	2	

TABLE TO REGULATION E5—*continued*

Part 1—continued

Purpose group	Maximum dimensions			Minimum period of fire resistance (in hours) for elements of structure(*) forming part of—		
	Height (in m)	Floor area (in m^2)	Cubic capacity (in m^3)	ground storey or upper storey	basement storey	
(1)	(2)	(3)	(4)	(5)	(6)	
V (Shop)	7.5	150	No limit	0	1(*c*)	x
	7.5	500	No limit	½	1	
	15	No limit	3500	1(*b*)	1	
	28	1000	7000	1	2	
	No limit	2000	7000	2	4	y
VI (Factory)	7.5	250	No limit	0	1(c)	x
	7.5	No limit	1700	½	1	
	15	No limit	4250	1(*b*)	1	
	28	No limit	8500	1	2	
	28	No limit	28000	2	4	
	over 28	2000	5500	2	4	
VII (Assembly)	7.5	250	No limit	0	1(*c*)	x
	7.5	500	No limit	½	1	
	15	No limit	3500	1(*b*)	1	
	28	5000	14000	1	1½	
	No limit	No limit	No limit	1½	2	
VIII (Storage and general) ...	7.5	150	No limit	0	1(*c*)	x
	7.5	300	No limit	½	1	
	15	No limit	1700	1(*b*)	1	
	15	No limit	3500	1	2	
	28	No limit	7000	2	4	
	28	No limit	21000	4	4	
	over 28	1000	No limit	4	4	

Notes to Part 1

For the purpose of regulation E5(2), the period of fire resistance to be taken as being relevant to an element of structure is the period included in column (5) or (6), whichever is appropriate, in the line of entries which specifies dimensions with all of which there is conformity or, if there are two or more such lines, in the topmost of those lines.

(*) A floor which is immediately over a basement storey shall be deemed to be an element of structure forming part of a basement storey.

(†) The expression "part" means a part which is separated as described in regulation E(5)(1)(*b*).

(*a*) The period is half an hour for elements forming part of a basement storey which has an area not exceeding 50 m².

(*b*) This period is reduced to half an hour in respect of a floor which is not a compartment floor, except as to the beams which support the floor or any part of the floor which contributes to the structural support of the building as a whole.

(*c*) No fire resistance is required if the elements form part of a basement storey which has an area not exceeding 50 m².

x The items thus marked are applicable only to buildings, not to compartments, except in relation to purpose group III; see also regulations E7(3) proviso (i) and E8(7) proviso (*a*).

y If the building is fitted throughout with an automatic sprinkler system which complies with the relevant recommendations of CP 402.201: 1952, any maximum limits specified in columns (3) and (4) shall be doubled.

TABLE TO REGULATION E5—*continued*

(Minimum periods of fire resistance)

Part 2—Single storey buildings

Purpose group (1)	Maximum floor area (in m^2) (2)	Minimum period of fire resistance (in hours) for elements of structure (3)	
I (Small residential)	No limit	½	z
II (Institutional)	3000	½	z
III (Other residential)	3000	½	z
IV (Office)	3000 No limit	½ 1	z
V (Shop)	2000 3000 No limit	½ 1 2	z
VI (Factory)	2000 3000 No limit	½ 1 2	z
VII (Assembly)	3000 No limit	½ 1	z
VIII (Storage and general)	500 1000 3000 No limit	½ 1 2 4	z

Notes to Part 2

For the purpose of regulation E5(2), the period of fire resistance to be taken as being relevant to an element of structure is the period included in column (3) in the line of entries which specifies the floor area with which there is conformity, or, if there are two or more such lines, in the topmost of those lines.

z See regulations E7(3) proviso (i) and E8(7) proviso (*b*).

Fire resistance of floors in conjunction with suspended ceilings

E6.—(1) In the Table to this regulation—

(*a*) "height" has the meaning assigned to that expression by regulation E5(1)(*b*); and

(*b*) references to classes are to classes as defined in regulation E15(1).

(2) In the application of regulation E5 to floors, no account shall be taken of any fire resistance attributable to any suspended ceiling other than a suspended ceiling constructed as described in the Table to this regulation.

TABLE TO REGULATION E6

(Suspended ceilings)

Height (in m) (1)	Type of floor (2)	Required fire resistance of floor (3)	Description of suspended ceiling (4)
Less than 15	Non-compartment	1 hour or less ..	Surface of ceiling exposed within the cavity not lower than Class 1
	Compartment ..	Less than 1 hour	
	Compartment ..	1 hour	Surface of ceiling exposed within the cavity not lower than Class O; supports and fixings for the ceiling non-combustible
15 or more	Any	1 hour or less ..	Surface of ceiling exposed within the cavity not lower than Class O and jointless; supports and fixings for the ceiling non-combustible
Any	Any	More than 1 hour	Ceiling of non-combustible construction and jointless; supports and fixings for the ceiling non-combustible

External walls

E7.—(1) For the purposes of this regulation—

(*a*) any reference to Schedule 7 shall be construed as referring to the provisions of Part I of that schedule together with (at the option of the person intending to erect the building) the provisions of Part II, Part III or (if applicable) Part IV;

(*b*) any part of a roof shall be deemed to be part of an external wall or side of a building if it is pitched at an angle of 70% or more to the horizontal and adjoins a space within the building to which persons have access not limited to the purposes of maintenance or repair; and

(*c*) if a building is to be erected on land which will be occupied in common with another building (whether it be the only other building or any one of a number of other buildings) and either the building to be so erected or that other building is a building of purpose group I (except a building described in regulation E20 which complies with regulation E18 or E19) or a building of purpose group III—

(i) in the application of the provisions of this regulation to any side or external wall of the building to be so erected which faces a side or external wall of that other building, a notional boundary shall be assumed to pass between those buildings;

(ii) such notional boundary shall be so situated as to enable the adjacent sides and external walls of both buildings to comply with the requirements of this regulation; and

(iii) if that other building is an existing building, it shall be treated as if it were a new building of the same purpose group and having the same unprotected areas and fire resistance as the existing building.

(2) Any side of a building except as provided by regulation E18 (Small garages) or E19 (Small open carports) shall comply with any relevant requirements relating to permitted limits of unprotected areas specified in Schedule 7.

(3) Any external wall which is situated within a distance of 1 m from any point on the relevant boundary and any external wall of a building which exceeds 15 m in height shall —

(*a*) be constructed wholly of non-combustible materials apart from any external cladding which complies with paragraph (4) or any internal lining which complies with regulation E15; and

(*b*) be so constructed that any fire resistance required by these regulations is attained by the non-combustible part alone:

Provided that the requirements of this paragraph shall not apply to—

(i) an external wall of a building which is within the limits of size indicated by the letter "x" in Part 1 of the Table to regulation E5 or of a building which is not divided into compartments and is within the limits of size indicated by the letter "z" in Part 2 of that table if, in either case, that building does not exceed 15 m in height;

(ii) an external wall of a building or part of a building of purpose group III which consists of flats or maisonettes if that building has not more than three storeys or that part is separated as described in regulation E5(1)(*b*) and has not more than three storeys; or

(iii) an external wall of a part of a building if that wall is situated 1 m or more from the relevant boundary and that part is separated as described in regulation E5(1)(*b*) and does not exceed 15 m in height.

(4) Any external cladding which is situated within a distance of 1 m from any point on the relevant boundary and any external cladding on a building which exceeds 15 m in height shall have a surface complying with the requirements for Class O specified in regulation E15(1)(*e*):

Provided that, if an external wall of such a building is 1 m or more from the relevant boundary, any part of such cladding below a height of 15 m from the ground may consist of timber of not less than 9 mm finished thickness or of a material having a surface which, when tested in accordance with BS 476 : Part 6: 1968, has an index of performance (I) not exceeding 20.

(5) Any beam or column forming part of, and any structure carrying, an external wall which is required to be constructed of non-combustible materials shall comply with the provisions of paragraph (3) as to non-combustibility.

Separating walls

E8.—(1) Subject to the exceptions specified in paragraph (2), any separating wall shall be imperforate and shall form a complete vertical separation between any buildings separated (including any roof space therein).

(2) Nothing in paragraph (1) shall prohibit—

(*a*) the passage through a separating wall of a pipe if the pipe complies with regulation E12; or

(*b*) an opening in a separating wall which is necessary as a means of escape from fire, if the opening is fitted with a door which—

(i) complies with the requirements of regulation E11; and

(ii) has fire resistance which is not less than the period required by regulation E5 for the separating wall.

(3) Subject to the exceptions specified in paragraph (4), any separating wall which forms a junction with a roof shall be carried above the upper surface of the covering of that roof to a distance of not less than 375 mm (measured at right angles to such upper surface).

(4) A separating wall shall not be required to comply with the provisions of paragraph (3)—

(*a*) if the buildings separated by the separating wall are so constructed that—

(i) any part of the roof which is within 1.5 m of the separating wall is designated AA, AB or AC; and

(ii) the deck of such part of the roof is of solid or hollow slab construction of non-combustible material; and

(iii) the junction between the separating wall and such roof is fire-stopped;

or

(*b*) if—

(i) each of the buildings separated by the separating wall is of purpose group I, III, IV or VII; and

(ii) neither building exceeds 12.5 m in height; and

(iii) any part of the roof which is within 1.5 m of the separating wall is covered with non-combustible material or asphalt; and

(iv) the junction between the separating wall and the roof covering is fire-stopped;

or

(*c*) if—

(i) each of the buildings separated by the separating wall is a building of purpose group I having not more than three storeys; and

(ii) any part of the roof which is within 1.5 m from the separating wall is designated AA, AB or AC; and

(iii) the junction between the separating wall and the roof is fire-stopped.

(5) If any external wall is carried across the end of a separating wall, such external wall and separating wall shall be bonded together or the junction of such walls shall be fire-stopped.

(6) Any combustible material which is built into or carried through, across the end of or over the top of a separating wall shall not be of such a type or used in such a way as will render ineffective the resistance of that wall to the effects or spread of fire:

Provided that—

(*a*) if a building is constructed in compliance with the requirements of paragraph (4)(*b*), nothing in this paragraph shall prohibit the continuation over the top of the separating wall of—

(i) any boarding, with or without sarking felt or sarking paper, if such boarding is used as a base for the roof covering and the boarding is solidly bedded on mortar or other not less suitable material where it rests on the separating wall; or

(ii) any wood wool slabbing, with or without sarking felt or sarking paper, if the slabbing is solidly bedded on mortar or other not less suitable material where it rests on the separating wall; or

(iii) any tiling or slating battens (other than such battens used in connection with (ii) above), if the battens are solidly bedded on mortar or other not less suitable material where they rest on the separating wall and the space between them is filled with mortar or other not less suitable material up to the underside of the roof covering; and

(*b*) if a building is constructed in compliance with the requirements of paragraph (4)(*c*), nothing in this paragraph shall prohibit the roof covering from passing over the top of the wall or any combustible material falling within the provisions of sub-paragraph (*a*)(i), (ii) or (iii) from forming part of a roof which is designated AA, AB or AC.

(7) Any separating wall shall be constructed wholly of non-combustible materials apart from any surface finish which complies with regulation E15 and the required fire resistance shall be attained independently of any such combustible surface finish:

Provided that the requirements of this paragraph shall not apply to—

(*a*) a wall separating buildings which are not divided into compartments and are within the limits of size indicated by the letter "x" in Part 1 of the Table to regulation E5; or

(*b*) a wall separating single storey buildings which are not divided into compartments and are within the limits of size indicated by the letter "z" in Part 2 of the Table to regulation E5.

(8) Any beam or column forming part of, and any structure carrying, a separating wall which is required to be constructed of non-combustible materials shall itself comply with the requirements of paragraph (7) as to non-combustibility.

Compartment walls and compartment floors

E9.—(1) Any compartment wall or compartment floor shall be imperforate with the exception of any one or more of the following—

(*a*)(i) in the case of a compartment wall separating a flat or maisonette from any space in common use giving access to that flat or maisonette, an opening fitted with a door which complies with the requirements of regulation E11 and has fire resistance of not less than half an hour; or

(ii) in any other case, an opening fitted with a door which complies with the requirements of regulation E11 and has fire resistance of not less than the minimum period required by regulation E5 for the wall or floor;

(*b*) an opening for a protected shaft;

(*c*) an opening for a ventilation duct (other than a duct in, or consisting of, a protected shaft) if any space surrounding the duct is fire-stopped and the duct is fitted with an automatic fire shutter where it passes through the wall or floor;

(*d*) an opening for a pipe which complies with the requirements of regulation E12;

(*e*) an opening for a chimney, appliance ventilation duct or duct encasing one or more flue pipes, in each case complying with the relevant requirements of paragraphs (5) and (6) and of Part L; or

(*f*) an opening for a refuse chute which complies with the requirements of Part J.

(2) Where a compartment wall or floor joins any compartment wall, external wall or separating wall or any structure enclosing a protected shaft, such structures shall be bonded together at the junction or the junction shall be fire-stopped.

(3) Where any compartment wall forms a junction with a roof, such wall shall be carried above the upper surface of the roof covering for a distance of not less than 375 mm, measured at right angles to the surface of the roof, unless either—

(*a*) the roof complies with the requirements of regulation E8(4)(*a*); or

(*b*) the compartment wall is in a building of purpose group III, IV or VII not exceeding 12.5 m in height, and the roof complies with the requirements of regulation E8(4)(*b*)(iii) and (iv):

Provided that nothing in this paragraph shall prohibit the continuation over the top of the wall of any construction which complies with the requirements of regulation E8(6).

(4) Any combustible material which is built into or carried through or across the ends of any compartment wall or compartment floor or carried over the top of any compartment wall shall not be of such a type or used in such a way as will render ineffective the resistance of that wall or floor to the effects or spread of fire.

(5) If any chimney, appliance ventilation duct or duct encasing one or more flue pipes passes through a compartment floor or compartment wall—

(*a*) any flue in the chimney; or

(*b*) the passage in the appliance ventilation duct; or

(*c*) the space within the duct encasing the flue pipe or pipes,

shall be separated from that compartment floor or compartment wall and from each compartment adjoining that floor or wall by non-combustible construction having fire resistance of not less than half the minimum fire resistance required by regulation E5 for the compartment floor or compartment wall through which it passes.

(6) If any chimney, appliance ventilation duct or duct encasing one or more flue pipes forms part of a compartment wall—

(*a*) any flue in the chimney; or

(*b*) the passage in the appliance ventilation duct; or

(*c*) the space within the duct encasing the flue pipe or pipes,

shall be separated from any compartment adjoining that wall by non-combustible construction having, at any level, fire resistance of not less than half the minimum fire resistance required by regulation E5 for the compartment wall at that level.

(7) Any compartment wall or compartment floor which is required by regulation E5 to have fire resistance of one hour or more (except where that requirement arises solely by virtue of proviso (*c*) to regulation E5(2)), shall be constructed wholly of non-combustible materials apart from—

(i) any floor finish; or

(ii) any surface finish to a wall or ceiling which complies with the requirements of regulation E15; or

(iii) any ceiling which complies with the description specified in the Table to regulation E6;

and, apart from any such ceiling, the required fire resistance of the wall or floor shall be obtained without assistance from any combustible material permitted by this sub-paragraph:

Provided that the requirements of this paragraph shall not apply to—

(*a*) the following walls and floors in a building or part of purpose group III which consists of flats or maisonettes—

(i) if that building has three storeys or that part is separated as described in regulation E5(1)(*b*) and has three storeys, any wall or floor other than a wall within a basement storey or a floor immediately over a basement storey;

(ii) if that building has four storeys or that part is separated as described in regulation E5(1)(*b*) and has four storeys, any floor other than a floor immediately over a basement storey; and

(*b*) any existing floor in a building or part of purpose group IV, V, VI, VII or VIII which is altered or extended if, after alteration or extension, that building does not exceed 15 m in height or that part is separated as described in regulation E5(1)(*b*) and does not exceed 15 m in height.

(8) Any beam or column forming part of, and any structure carrying, any compartment wall or compartment floor which is required to be constructed of non-combustible materials, shall itself comply with the provisions of paragraph (7) as to non-combustibility.

Protected shafts

E10.—(1) In this regulation, "protecting structure" means any wall or floor or other structure which encloses a protected shaft other than—

(*a*) a wall which also forms part of an external wall, separating wall or compartment wall; or

(*b*) a floor which is also a compartment floor or a floor laid directly on the ground; or

(*c*) a roof.

(2) No protected shaft shall be constructed for use for any purposes additional to those specified in regulation E1(1) other than for the passage of a pipe or duct or as sanitary accommodation or washrooms, or both.

(3) Subject to the provisions of this regulation, any protected shaft shall be completely enclosed.

(4)(*a*) Any protecting structure which is required by regulation E5 to have fire resistance of one hour or more shall be constructed wholly of non-combustible materials apart from any surface finish which complies with the requirements of regulation E15:

Provided that the requirements of this sub-paragraph shall not apply to protecting structure which is situated within the ground storey or an upper storey of a building or part thereof in purpose group III consisting of flats or maisonettes if that building has three storeys or that part is separated as described in regulation E5(1)(*b*) and has three storeys.

(*b*) Any beam or column forming part of, and any structure carrying, protecting structure which is required to be constructed of non-combustible materials shall itself comply with the provisions of sub-paragraph (*a*) as to non-combustibility.

(5) Any wall, floor or other structure enclosing a protected shaft but not being protecting structure may contain such openings as shall be in accordance with other provisions of these regulations.

(6) There shall be no opening in any protecting structure other than any one or more of the following—

(i) an opening for a pipe which complies with the requirements of regulation E12;

(ii) an opening fitted with a door which has fire resistance complying with the provisions of paragraph (7) and complies with the provisions of regulation E11;

(iii) (if the protected shaft contains a lift) an opening which complies with the provisions of paragraph (8); and

(iv) (if the protected shaft serves as, or contains, a ventilating duct) an inlet to or outlet from that duct or an opening for that duct.

(7) Any door fitted in an opening in protecting structure shall have fire resistance for the following minimum period—

(*a*) if the protected shaft is in a building of purpose group III, IV or VII and is wholly or partly above the level of the adjoining ground, not less than half an hour; or

(*b*) in any other case, either not less than half the period required by other provisions of this Part for the protecting structure surrounding the opening or not less than half an hour (whichever is the greater).

(8) Any protected shaft containing a lift or lifts—

(*a*) shall be ventilated to the external air by means of one or more permanent openings situated at the top of the shaft and having a total unobstructed area of not less than 0.1 m^2 for each lift in the shaft; and

(*b*) shall not contain any pipe conveying gas or oil or any ventilating duct; and

(*c*) may have an opening in its protecting structure for the passage of the cables operating the lift into the room containing the lift motor:

Provided that if the opening is at the bottom of the shaft the opening shall be as small as practicable.

(9)(*a*) If a protected shaft serves as, or contains, a ventilating duct—

(i) the duct shall be fitted internally with automatic fire shutters so constructed, at such intervals and in such positions as may be necessary, as to reduce so far as practicable the risk of fire spreading from a compartment to any other compartment; or such other provision shall be made as will reduce such risk so far as practicable; and

(ii) the duct shall not be constructed of, or lined with, any material which substantially increases such risk.

(*b*) In addition, in the case of a protected shaft containing a ventilating duct, the shaft shall be so constructed with additional barriers to fire between the duct and the shaft as may be necessary to reduce so far as practicable the risk of fire spreading from a compartment to any other compartment.

(10) If a protected shaft consists of a stairway, it shall not contain any pipe conveying gas or oil or any ventilating duct.

Fire-resisting doors

E11.—(1) This regulation shall apply to any door which is required by the provisions of this Part to have fire resistance.

(2) In this regulation—

"automatic self-closing device" does not include rising butt hinges except in relation to a door to which paragraph (5) applies; and

"electro-magnetic or electro-mechanical device susceptible to smoke" refers only to any such device which will allow the door held open by it to close automatically upon the occurrence of each or any one of the following—

(i) detection of smoke by automatic apparatus suitable in nature, quality and location;

(ii) manual operation of a switch fitted in a suitable position;

(iii) failure of electricity supply to the device, apparatus or switch;

(iv) if a fire alarm system is installed in the building, operation of that system.

(3)(*a*) Any door to which this regulation applies shall (subject to paragraph (7)) be fitted with an automatic self-closing device.

(*b*) No means of holding any such door open shall be provided other than a fusible link or, if the door is so constructed and installed that it can readily be opened manually, an electro-magnetic or electro-mechanical device susceptible to smoke.

(*c*) No part of a hinge on which any such door is hung shall be made either of combustible material or of non-combustible material having a melting point less than 800°C.

(4) Any door fitted in an opening which is provided as a means of escape in the event of fire or might be so used shall be so constructed and installed that it can readily be opened manually and shall not be held open by any means other than an electro-magnetic or electro-mechanical device susceptible to smoke:

Provided that there may also be installed so as to close the same opening a door which cannot readily be opened manually if—

(i) such door is fitted with an automatic self-closing device and is held open by a fusible link;

(ii) the manually openable door has fire resistance of not less than half an hour; and

(iii) the required fire resistance is achieved by the two doors together.

(5) Any door to which reference is made in regulation E9(1)(*a*)(i), E13(2)(*b*) or E18(6)(*c*)(ii) shall be either a single leaf door swinging in one direction only or a double leaf door each leaf of which swings in the opposite direction from the other leaf.

(6) Any door which is fitted in protecting structure (as defined in regulation E10(1)) and is not required by the provisions of regulation E10(7) to have fire resistance of more than half an hour may consist of any single or double leaf door (the leaf or each leaf of which swings in one or both directions), other than a double leaf door both leaves of which swing in one and the same direction and have rebated meeting stiles, if—

(*a*) the door opens into a hall, lobby or corridor enclosed by walls or partitions having fire resistance of not less than half an hour; and

(*b*) the clearance between the leaf or leaves of any such door and its frame and (if the door has two leaves) between the leaves is as small as is reasonably practicable.

(7) Notwithstanding paragraph (3)(*a*), a door which is not fitted with a self-closing device may be installed in an opening in the structure which encloses a protected shaft containing exclusively a lift or lifts if either—

(*a*) the door has fire resistance for a period of not less than half an hour and there is also installed so as to close the same opening another door which is fitted with an automatic self-closing device, is held open by a fusible link and has fire resistance for a period not less than that prescribed by the relevant provisions of this Part for the structure surrounding the opening; or

(*b*) (unless the opening is in a compartment wall and is one of two openings provided at the same level to allow access to a lift from different sides) the door has fire resistance for a period not less than that prescribed by relevant provisions of this Part for the structure surrounding the opening.

(8) Without prejudice to the requirements of paragraphs (4) to (7), two fire-resisting doors (each being either a single or a double leaf door) may be installed in an opening if each by itself is capable of closing the opening and the required fire resistance is achieved by the two other doors together.

Penetration of elements of structure by pipes

E12.—(1) In this regulation "pipe"—

(*a*) excludes a flue pipe and any pipe used for ventilation purposes other than a ventilating pipe as defined in regulation N2(1); and

(*b*) includes pipe fittings and accessories.

(2)(*a*) Subject to the provisions of paragraph (3), the nominal internal diameter of that part of a pipe which passes through—

(i) an opening in a separating wall; or

(ii) an opening in a compartment wall or compartment floor other than any such opening which is wholly enclosed within a protected shaft; or

(iii) an opening in protecting structure,

shall not exceed the relevant dimensions prescribed in the Table to this regulation:

Provided that if, on either side of the structure penetrated and within a distance of 1 m (measured along the pipe) from the point of penetration, the pipe which penetrates the structure, being of specification (*a*), is connected to a pipe of specification (*b*) or (*c*) or, being of specification (*b*), is connected to a pipe of specification (*c*), the maximum internal diameter of the pipe shall be determined as though it were of the same specification as the pipe to which it is connected.

(*b*) Any opening shall be as small as is reasonably practicable and shall be fire-stopped around the pipe.

(3) Notwithstanding the requirements of paragraph (2)(*a*), a pipe which forms part of an above ground drainage system comprising pipes which comply with specification (*b*) in the Table and have a nominal internal diameter not exceeding 150 mm in the case of a stack pipe or 100 mm in the case of a branch pipe may pass through an opening in a separating wall between houses or an opening in a compartment wall or compartment floor between flats or maisonettes if—

(*a*) the pipe, being a stack pipe, is contained in each storey within an enclosure or, being a branch pipe, discharges into a stack pipe contained within an enclosure formed in part by the wall penetrated by the branch pipe;

(*b*) any such enclosure—

(i) extends, in each storey, from the floor to the ceiling of that storey or, if the ceiling is suspended beneath a floor, to that floor;

(ii) has each side formed by a separating wall, compartment wall or external wall or by casing;

(iii) has an internal surface, excluding any supporting members, which complies with the requirements for Class O specified in regulation E15(1)(*e*);

(iv) has no access panel situated in a bedroom or circulation space; and

(v) is not used for any other purpose except to accommodate pipes conveying water;

(*c*) any such casing—

(i) is imperforate except for any opening made for the passage of a pipe or fitted with an access panel;

(ii) consists of any material other than sheet metal; and

(iii) (including any access panel) has fire resistance of not less than half an hour; and

(*d*) any opening made for the passage of a branch pipe through a side of an enclosure or for the passage of a stack pipe through a floor at the base or top of an enclosure (including, in the case of a maisonette, any floor within the dwelling) is as small as is reasonably practicable and is fire-stopped around the pipe.

TABLE TO REGULATION E12

(Maximum nominal internal diameter of pipes)

Specification of pipe (1)	Maximum nominal internal diameter of pipe (in mm) (2)
(*a*) Pipe made of any non-combustible material which, if exposed to a temperature of 800°C, will not soften and will not fracture to such an extent as to permit flames or hot gases to pass through the wall of the pipe	150
(*b*) Pipe made of lead or aluminium or alloy thereof; asbestos-cement pipe; or unplasticised polyvinyl chloride pipe complying with BS 4514: 1969	100 if it penetrates structure (other than a separating wall) enclosing a protected shaft not regularly used for the passage of people 38 in all other cases
(*c*) Pipe made of any other material	38

Stairways

E13.—(1) Every stairway (including any landing thereof) which forms part of a building shall, whether the stairway is internal or external, be constructed of non-combustible material except—

(*a*) an internal stairway which is situated—

(i) within a maisonette; or

(ii) within any storey which comprises elements of structure for which the fire resistance required by this Part is less than one hour; or

(iii) within the ground storey or an upper storey of a building or part of purpose group III which consists of flats or maisonettes if that building has not more than three storeys or that part is separated as described in regulation E5(1)(*b*) and has not more than three storeys; or

(iv) within a building or compartment of purpose group V but not within a protected shaft; or

(*b*) an external stairway which is situated between the ground and a floor or flat roof the level of which, at the head of the stairway, is not more than 6 m above the finished surface of the ground adjoining the foot of the stairway:

Provided that nothing in this paragraph shall prohibit the addition of any combustible material to the upper surface of any stairway or landing.

(2) In any building of purpose group I which has three or more storeys, any internal stairway (including any hall or landing associated therewith and any part of a floor which affords passage between flights of the stairway) shall be separated from all other parts of the building by structure complying with the following requirements—

(*a*) the structure shall have fire resistance for not less than the minimum period required by regulation E5 for elements of structure forming part of the storey in which it is situated; and

(*b*) any opening in the structure which gives access to a habitable room or kitchen shall be fitted with a door which has fire resistance of not less than half an hour and complies with the requirements of regulation E11.

Fire-stopping

E14.—(1) Any fire stop required by the provisions of this Part shall be so formed and positioned as to prevent or retard the passage of flame.

(2) Any fire stop shall—

(*a*) if provided around a pipe or duct, be made of non-combustible material or (if it is in a floor or wall constructed of combustible material) of timber not less than 38 mm thick and be so constructed as not to restrict essential thermal movement; and

(*b*) if provided in a cavity, be made of non-combustible material or (if it is in a floor or wall constructed of combustible material) of timber not less than 38 mm thick.

(3) Any fire stop formed as a seal at the junction of two or more elements of structure shall be made of non-combustible material if all such elements are required by this Part to be non-combustible.

(4) Any cavity in an element of structure which—

(*a*) is continuous throughout the whole or part of such element; and

(*b*) has a surface of combustible material exposed within the cavity which is of a class lower than Class O in regulation E15,

shall be fire-stopped—

(i) at any junction with another element of structure or with a ceiling under a roof; and

(ii) in such a position that there is no continuous cavity (without a fire stop) which in one plane exceeds either 8 m in a single dimension or 25 m^2 in area,

but nothing in this paragraph shall prohibit the insertion of combustible filling in a cavity.

Restriction of spread of flame over surfaces of walls and ceilings

E15.—(1) For the purposes of this regulation and the Table thereto—

(*a*) "ceiling" includes any soffit and any rooflight, skylight, or other part of a building which encloses and is exposed overhead within a room, circulation space or protected shaft;

"circulation space" means any space which is solely or predominantly used as a means of access between a room and a protected shaft or between either a room or a protected shaft and an exit from the building or compartment;

"small room" means a room which is totally enclosed and has a floor area not exceeding that specified in column (2) of the Table to this regulation, according to the purpose group of the building or compartment; and

"trim" means any architrave, cover mould, picture rail, skirting or similar narrow member;

(*b*) any reference to the surface of a wall shall be construed as a reference to that surface excluding the surface of any door, door frame, window, window frame, fireplace surround, mantleshelf, fitted furniture or trim;

(*c*) any reference to the surface of a ceiling shall be construed as a reference to that surface excluding the surface of the frame of any rooflight or skylight;

(*d*) any part of a ceiling which slopes at an angle of 70° or more to the horizontal and is not part of a rooflight or skylight shall be deemed to be a wall;

(*e*) any reference to a surface being of Class O shall be construed as a requirement that—

(i) the material of which the wall or ceiling is constructed shall be non-combustible throughout; or

(ii) the surface material (or, if it is bonded throughout to a substrate, the surface material in conjunction with the substrate) shall, if tested in accordance with BS 476 : Part 6: 1968, have an index of performance (I) not exceeding 12 and a sub-index (i) not exceeding 6:

Provided that the face of a plastics material having a softening point less than 120°C if tested by method 102C of BS 2782: 1970 shall not be regarded as a surface of Class O unless—

(i) the material is bonded throughout to a substrate which is not a plastics material and the material in conjunction with the substrate satisfies the test criteria prescribed in (ii) above; or

(ii) the material satisfies the test criteria prescribed in (ii) above and is used as the lining of a wall so constructed that any surface which would be exposed if the lining were not present satisfies the said test criteria and is the face of a material other than a plastics material having a softening point less than 120°C;

(*f*) any reference to a surface being of a class other than Class O shall be construed as a requirement that the wall or ceiling shall be so constructed that a specimen constructed to the same specification, if exposed to test by fire in accordance with BS 476 : Part 7: 1971, would comply with the test criteria as to surface spread of flame specified in relation to that class:

Provided that a wall or ceiling shall be deemed to have a surface of the requisite class if it is constructed to the same specifications as that of a specimen which prior to 1st June 1975 was either proved to satisfy the relevant test criteria prescribed in clause 7 of BS 476 : Part 1: 1953 or was assessed by an appropriate authority as capable of satisfying those criteria;

and

(*g*) in relation to a requirement that a surface shall be of a class not lower than a specified class, Class O shall be regarded as the highest class followed in descending order by Class 1, Class 2, Class 3 and Class 4.

(2) The surface of a wall or ceiling in a room, circulation space or protected shaft shall be of a class not lower than that specified as relevant in the Table to this regulation:

Provided that—

(i) a wall may have a surface of any class not lower than Class 3 to the extent permitted by paragraph (3); and

(ii) a ceiling may either have a surface of any class not lower than Class 3 to the extent permitted by paragraph (4) or may consist of plastics material to the extent permitted by regulation E16.

(3) Any part of the surface of a wall in a room may be of any class not lower than Class 3 if the area of that part (or, if there are two or more such parts, the total area of those parts) does not exceed the lesser of the following—

(*a*) half the floor area of the room; or

(*b*) (in the case of a building or compartment of purpose group I, II or III) 20 m^2 or (in any other case) 60 m^2.

(4) Any part of the surface of a ceiling may be of any class not lower than Class 3 if that part of the surface is the face of a layer of material the other face of which is exposed to the external air and—

(*a*)(i) the ceiling is that of a room in a building or compartment of purpose group II, III, IV, V or VII or that of a circulation space in a building or compartment of any purpose group; and

(ii) the area of that part does not exceed 2.5 m^2; and

(iii) the distance between that part and any other such part is not less than 3.5 m; or

(*b*)(i) the ceiling is that of a room in a building or compartment of purpose group VI or VIII; and

(ii) the area of that part does not exceed 5 m^2; and

(iii) the distance between that part and any other such part is not less than 1.8 m; and

(iv) that part and all other such parts are evenly distributed over the whole area of the ceiling and together have an area which does not exceed 15% of the floor area of the room; or

(*c*) the ceiling is that of a balcony, verandah, open carport, covered way or loading bay which (irrespective of its floor area) has at least one of its longer sides wholly and permanently open; or

(*d*) the ceiling is that of a garage, conservatory or outbuilding which (irrespective of whether it forms part of a building or is a building which is attached to another building or wholly detached) has a floor area not exceeding 40 m^2.

TABLE TO REGULATION E15

(Surfaces of walls and ceilings)

Purpose group of building or compartment (1)	Maximum floor area of small room (in m^2) (2)	Class of surface for both walls and ceilings (except where separately specified)		
		Small rooms (see col. (2)) (3)	Rooms other than small rooms (4)	Circulation spaces and protected shafts (5)
I (Small residential)—House having not more than two storeys ..	4	3	(Wall) 1 (Ceiling) 3	(Wall) 1 (Ceiling) 3
Any other house ..	4	3	1	0
II (Institutional) ..	4	1	(Wall) 0 (Ceiling) 1	0
III (Other residential) ..	4	3	1	0
IV (Office)	30	3	1	0
V (Shop)	30	3	1	0
VI (Factory)	30	3	1	0
VII (Assembly) ..	30	3	1	0
VIII (Storage and general)	30	3	1	0

Exceptions permitting ceilings to consist of plastic materials

E16.—(1) The provisions of regulation E15(1) shall apply for the interpretation of this regulation.

(2) Any part of the ceiling of a room or circulation space may consist of—

(*a*) rigid polyvinyl chloride sheeting which is classified as self-extinguishing when tested in accordance with method 508A of BS 2782: 1970 if the face of the sheeting which is not the surface of the ceiling is exposed to the external air; or

(*b*) one or more panels of such plastics materials as are permitted by paragraph (3) if the upper and lower surfaces of any part of the ceiling which is not formed by a panel of plastics material and the surfaces of all other parts of the structure which enclose the space over the ceiling are of a class not lower than that prescribed in the Table to regulation E15 for the ceiling of such a room or circulation space.

(3) Panels to which paragraph (2)(*b*) refers may consist of one or more sheets or membranes of either—

(*a*) polyvinyl chloride which has a degree of flammability of not more than 75 mm when tested in accordance with method 508C of BS 2782: 1970 or which has very low flammability when tested and classified in accordance with method 508D of BS 2782: 1970, if—

(i) the nominal thickness of the sheet or membrane (or, if a panel consists of two or more sheets or membranes their nominal aggregate thickness) does not exceed 1 mm; and

(ii) no panel has an area exceeding 4 m^2; or

(*b*) any plastics material which has a softening point of not more than 120°C when tested by method 102C of BS 2782: 1970 and a burning rate of not more than 50 mm/min when tested in a thickness of 3 mm in accordance with method 508A of BS 2782: 1970, if—

(i) the nominal thickness of the sheet or membrane (or, if a panel consists of two or more sheets or membranes, their nominal aggregate thickness) does not exceed 3 mm;

(ii) the aggregate area of the plastics material, if situated in a building or compartment of purpose group II, III or VII, does not exceed 30% of the floor area of the room or 15% of the floor area of the circulation space, as the case may be, or, if situated in a building or compartment of any other purpose group, does not exceed 50% of the floor area of the room or 15% of the floor area of the circulation space, as the case may be;

(iii) no panel has any side exceeding 5 m in length or an area exceeding 4 m^2 if situated in a room or 2 m^2 if situated in a circulation space; but if two or more panels are grouped so that each is less than 575 mm from another, the said maximum dimensions shall be applied to the smallest rectangle which would wholly enclose all such panels; and

(iv) every panel is loosely mounted in such a way that it will fall out of its mountings when softened by heat.

Roofs

E17.—(1) No part of the roof of a building which —

(*a*) has a cubic capacity exceeding 1500 m^3; or

(*b*) is wholly or partly of purpose group VI or VIII; or

(*c*) is a house in a continuous terrace of more than two houses,

shall be so constructed as to be designated BD, CA, CB, CC, CD, DA, DB, DC or DD, or be covered with thatch or wood shingles.

(2) Any part of a roof which is designated BA, BB or BC shall be not less than 6 m from any point on a boundary.

(3) Any part of a roof which is designated AD, BD, CA, CB, CC or CD or is covered with thatch or wood shingles shall be not less than 12 m from any point on a boundary unless such part is—

(*a*) of an area not exceeding 3 m^2; and

(*b*) separated from any other part of the same roof which is so designated or covered with thatch or wood shingles by an area of roof which is at least 1.5 m wide and which is covered by non-combustible material,

in which case such designated part or part covered with thatch or wood shingles shall be not less than 6 m from any such point.

(4) Any part of a roof which is designated DA, DB, DC or DD shall be—

(*a*) not less than 22 m from any point on a boundary; and

(*b*) of an area not exceeding 3 m^2; and

(*c*) separated from any other part of the same roof which is so designated by an area of roof which is at least 1.5 m wide and covered with non-combustible material.

(5) If any part of a roof cannot be designated under regulation E1(4) on account of the low softening temperature of its covering material, such part shall be not less than 12 m or twice the height of the building (whichever is the greater) from any point on a boundary, unless such part is—

(*a*) of an area not exceeding 3 m^2; and

(*b*) separated from any other part of the same roof which is covered with the same material or any other material which for the same reason cannot be so designated by an area of roof which is at least 1.5 m wide and covered with non-combustible material,

in which case such part shall be not less than 6 m from any such point.

(6) Nothing in this regulation shall prevent any part of a roof being constructed of such glass or rigid polyvinyl chloride sheeting as cannot be designated in accordance with regulation E1(4) (but which, in the case of such sheeting, is classified as self-extinguishing when tested in accordance with method 508A of BS 2782: 1970) where either—

(*a*) that part of the roof is not less than 6 m from any boundary; or

(*b*) that part of the roof is less than 6 m from any boundary and the roof is that of a garage, conservatory or outbuilding having a floor area not exceeding 40 m^2 (whether or not attached to or forming part of another building) or is the roof of, or a canopy over, a balcony, verandah, open carport, covered way or detached swimming pool.

Small garages

E18.—(1) The following provisions (subject to the provisions of regulation E19 regarding small open carports) shall apply to any garage which has a floor area not exceeding 40 m^2.

(2) If such garage is a separate building and—

(*a*) is not less than 2 m from any boundary and any house within the boundary; or

(*b*) (being less than 2 m from any boundary) complies with the requirements of paragraph (3); or

(*c*) (being less than 2 m from any house within the boundary) complies with the requirements of paragraph (4),

it shall not be required to comply with any regulation in this Part except regulation E17 and any other provisions expressly referred to in this regulation.

(3) Any such garage which is less than 2 m from any boundary shall be so constructed that any part of an external wall which is less than 2 m from the boundary is externally non-combustible and the walls of the garage have an internal surface which fulfils the requirements for Class O specified in regulation E15(1)(*e*).

(4) Any such garage which is less than 2 m from any house within the same boundary shall be so constructed that any part of an external wall which is less than 2 m from such house is externally non-combustible and the walls of the garage have an internal surface which fulfils the requirements for Class O specified in regulation E15(1)(*e*); but these requirements shall not apply if every part of any external wall of such house which is less than 2 m from the garage—

(*a*) is externally non-combustible; and

(*b*) has resistance to external fire of not less than half an hour; and

(*c*) has no unprotected area which exceeds 0.1 m^2 or is less than 1.5 m from any other unprotected area in that part.

(5) In the application of the foregoing paragraphs (3) and (4), any exposed surface of a frame member forming the structure of a wall shall not be deemed to be part of the internal surface of that wall.

(6) If a garage to which paragraph (1) applies is attached to or forms part of a house, it shall be so constructed that—

(*a*) any floor immediately over such garage has fire resistance of not less than half an hour; and

(*b*) any wall between such garage and such house has fire resistance of not less than half an hour; and

(*c*) any opening in such wall is—

(i) at its lowest point, not less than 100 mm above the level of the garage floor; and

(ii) fitted with a door, shutter or cover which has fire resistance of not less than half an hour and complies with the requirements of regulation E11.

Small open carports

E19.—(1) Any open carport (as defined in regulation E1(1)) which has a floor area not exceeding 40 m^2 and complies with the conditions of this regulation shall not be required to comply with any regulation in this Part except regulation E17.

(2) The conditions of this regulation are as follows —

(*a*) that such carport is a detached building; or

(*b*) that such carport is part of a detached building which consists additionally only of a garage which also has a floor area not exceeding 40 m^2 and would, if it were a separate building, comply with the provisions of regulation E18; or

(*c*) that such carport is a single storey part of a building which consists additionally only either of a house alone or of a house and garage (the garage having a floor area not exceeding 40 m^2) and that, if the presence of the carport were disregarded—

(i) the house, where there is no garage, would comply with the requirements of regulation E7; or

(ii) the house and garage, if they would then constitute one building, would comply with the requirements of regulation E7; or

(iii) the house and the garage, if they would then constitute separate buildings, would comply with the requirements of regulations E7 and E18 respectively:

Provided that, where this regulation applies by virtue of the erection of an open carport as an extension to an existing house or garage or both, the conditions in sub-paragraphs (*b*) and (*c*) shall be applicable as though any reference therein to compliance with regulations E7 and E18, or either of them, were omitted.

Purpose group of small garages and open carports

E20. Notwithstanding the provisions of regulation E2, for the purposes of every relevant provision of this Part a detached building which consists only of a garage or of an open carport or of both, where the garage or the open carport or (as the case may be) each of them has a floor area not exceeding 40 m^2, shall be regarded as falling within purpose group I as set out in the Table to regulation E2.

PART EE

Means of Escape in Case of Fire

Application of Part EE

EE1. This Part shall apply to—

(*a*) any part of a building which consists of a flat or maisonette so situated that its floor or, in the case of a maisonette, at least one of its floors is 4.5 m or more above the surface of the ground adjacent to any side of the building; and

(*b*) any building, or part of a building, which falls (in accordance with regulation E2) within purpose group IV or V other than any such building or part or portion thereof which consists of—

(i) a shop having a sales floor area not exceeding 280 m^2 per floor on not more than three storeys one of which may be a basement storey; or

(ii) an office having more than four storeys (including any basement storey or storeys) served by only one stairway.

Interpretation of Part EE

EE2.—(1) In this Part—

"basement storey" has the meaning ascribed to that expression in regulation E1(1);

"building" excludes any partially exempted building as defined in regulation A5(2); and

"office" and "shop" respectively include "premises used for office purposes" and "shop premises" as defined in column (3) of the Table to regulation E2.

(2) In so far as regulation EE3 necessitates structural fire precautions, its requirements shall be additional to those of Part E.

Provision of means of escape

EE3. In any building or part of a building to which this regulation applies there shall be provided—

(*a*) means of escape consisting of exits and escape routes of such number, size, layout, design and construction as may reasonably be required in the circumstances of the case to enable the occupants to reach a place of safety in the event of a fire; and

(*b*) such other works as may be necessary for securing that such means of escape can be safely and effectively used at all material times.

Deemed-to-satisfy provisions for the provision of means of escape

EE4. *Without prejudice to the requirements of Part E, the requirements of regulation EE3 shall be deemed to be satisfied if the building or part of a building complies with the relevant recommendations of CP3: Chapter IV: Part 1: 1971 (flats and maisonettes), CP3: Chapter IV: Part 2: 1968 (shops and departmental stores) or CP3: Chapter IV: Part 3: 1968 (office buildings) as the case may be.*

PART F

THERMAL INSULATION

Application of Part F

F1.—(1) Subject to the provisions of paragraph (2), this Part shall apply to any building, or part of a building, which is intended to be used as a dwelling.

(2) This Part shall not apply to any external wall, floor or roof of any part of a dwelling which consists of a shed or store entered from outside or of a garage, boathouse, conservatory or porch.

Interpretation of Part F

F2.—(1) In this Part and in Schedule 9—

"dwelling" means a house, flat or maisonette;

"partially ventilated space" means a space which—

(*a*) is either—

(i) a passage, stairway or other common space which is not part of, but adjoins, a dwelling; or

(ii) a part of a dwelling which consists of a shed or store entered from outside or of a garage, boathouse, conservatory or porch; and

(*b*) is ventilated by means of permanent vents having an aggregate area not exceeding 30% of its wall boundary area;

"perimeter walling" means those walls which together enclose all parts of a dwelling other than a partially ventilated space or a ventilated space;

"permanent vent" means an opening or duct which communicates with the external air and is designed to allow the passage of air at all times;

"U value" means thermal transmittance coefficient, that is to say, the rate of heat transfer in watts through 1 m^2 of a structure when the combined radiant and air temperatures at each side of the structure differ by 1°C and is expressed in $W/m^2°C$;

"ventilated space" means a space which—

(*a*) is either—

(i) a passage, stairway or other common space which is not part of, but adjoins, a dwelling; or

(ii) a part of a dwelling which consists of a shed or store entered from outside or of a garage, boathouse, conservatory or porch; and

(*b*) is ventilated by means of permanent vents having an aggregate area exceeding 30% of its wall boundary area;

"wall boundary area" means the total superficial area of all walling, including any opening, bounding a partially ventilated space or a ventilated space; and

"window opening" means any structural opening which is provided for a window irrespective of its size and function or for a hinged or sliding door or panel having a glazed area of 2 m^2 or more.

(2) For the purposes of this Part—

(*a*) unless the context otherwise requires, any reference to a dwelling is a reference solely to those parts of a dwelling which are enclosed by perimeter walling;

(*b*) any part of a roof which has a pitch of 70° or more shall be treated as an external wall; and

(*c*) any floor which is so situated that its upper surface is exposed to the external air shall be treated as a roof in relation to that part of the building beneath it.

Maximum U value of walls, floors, roofs and perimeter walling

F3.—(1) The U value of any part of a wall, floor or roof which encloses a dwelling and is described in column (1) of the Table to this regulation (including surface finishes thereof and excluding any openings therein) shall not exceed the appropriate value specified in column (2) of that Table.

(2) The calculated average U value of perimeter walling (including any opening therein) shall not exceed 1·8.

(3) For the purposes of paragraphs (1) and (2) any lintel, jamb or sill associated with an opening in a wall may (at the option of the person intending to erect the building) be regarded either as part of that wall or as part of that opening.

(4) For the purposes of calculating the average U value of perimeter walling—

(*a*) the U value of any wall between a dwelling and another dwelling, or between a dwelling and an internal space which is within the same building and not ventilated by means of permanent vents, shall be assumed to be 0·5;

(*b*) the U value of any window opening situated in walling required to have a U value not exceeding 1·0 shall be assumed to be 5·7 if it has single glazing or 2·8 if it has double glazing; and

(*c*) any other opening shall be assumed to have a U value equivalent to that of the wall in which it is situated.

TABLE TO REGULATION F3

(Maximum U value of walls, floors and roofs)

Element of building (1)	Maximum U value of any part of element (in $W/m^2°C$) (2)
1. External wall	1·0
2. Wall between a dwelling and a ventilated space	1·0
3. Wall between a dwelling and a partially ventilated space	1·7
4. Wall between a dwelling and any part of an adjoining building to which Part F is not applicable	1·7
5. Wall or partition between a room and a roof space, including that space and the roof over that space	1·0
6. External wall adjacent to a roof space over a dwelling, including that space and any ceiling below that space	1·0
7. Floor between a dwelling and the external air	1·0
8. Floor between a dwelling and a ventilated space	1·0
9. Roof, including any ceiling to the roof or any roof space and any ceiling below that space	0·6

Deemed-to-satisfy provisions regarding thermal insulation

F4.—(1) *The requirements of regulation F3(1) relating to the U value of any part of a wall, floor or roof shall be deemed to be satisfied if the wall, floor or roof is constructed in accordance with a specification contained in Part I, II or III respectively of Schedule 9.*

(2) *The requirements of regulation F3(2) relating to the average U value of perimeter walling shall be deemed to be satisfied if any one of the conditions prescribed in rule 2 of Part IV of Schedule 9 is satisfied.*

PART G

SOUND INSULATION

Sound insulation of walls

G1.—(1) Any wall which—

(*a*) separates any dwelling from another dwelling or from another building; or

(*b*) separates any habitable room in a dwelling from any other part of the same building which—

(i) is not used exclusively with that dwelling; and

(ii) is a place used for purposes other than occasional repair or maintenance, or is a machinery room or tank room,

shall in conjunction with its associated structure be so constructed as to provide adequate resistance to the transmission of airborne sound.

(2) Any wall which separates any habitable room in a dwelling from any refuse chute in the same building shall have an average mass (calculated over any portion of the wall measuring 1 metre square and including the mass of any plaster) of not less than 1320 kg/m².

(3) Any wall which separates any part of a dwelling, other than a habitable room, from any refuse chute in the same building shall have an average mass (calculated over any portion of the wall measuring 1 metre square and including the mass of any plaster) of not less than 220 kg/m².

Deemed-to-satisfy provisions for sound insulation of walls

G2. *The requirements of regulation G1(1) shall be deemed to be satisfied if—*

(1) *the wall and its associated structure are identical with, or are similar to and unlikely to provide less resistance to the transmission of sound than, a wall and its associated structure which, when tested in accordance with regulation G6 at all frequencies set out in the Table to this regulation, limit the transmission of airborne sound so that the reduction at each frequency given in column (1) of that Table does not fall short of the appropriate value given in column (2) of that Table by an amount which causes the aggregate of such deviations to exceed 23 dB; or*

(2) *the wall is constructed in accordance with any of the specifications contained in Part I of Schedule 10 and the wall—*

(a) *extends for a distance of at least 460 mm beyond an external flanking wall; or*

(b) *is tied into or bonded to one leaf of an external flanking wall of bricks, blocks or concrete—*

(i) *which is of a construction having an average mass (calculated over any portion of the leaf measuring 1 metre square) of not less than 120 kg/m²; and*

(ii) *in which any window or door opening on one side of the separating wall is not less than 690 mm, measured horizontally, from any such opening on the other side of that wall unless the height of each opening does not exceed two thirds of the height of the storey and the external flanking wall above and below the openings extends for a distance of not less than 3 m, measured horizontally, on both sides of the separating wall; or*

(c) *extends to the outer face of an external flanking wall of timber or other light construction other than tile hanging and at the top and bottom of each storey is tied into or bonded to—*

(i) *a solid floor next to the ground; or*

(ii) *a suspended concrete floor having an average mass (calculated over any portion of the floor measuring 1 metre square) of not less than 220 kg/m²; or*

(iii) *a concrete roof having an average mass (calculated over any portion of the roof measuring 1 metre square) of not less than 145 kg/m².*

Table to Regulation G2

(Sound reduction: walls)

Frequency (in Hz) (1)	*Sound reduction (in dB) (2)*
100	*40*
125	*41*
160	*43*
200	*44*
250	*45*
315	*47*
400	*48*
500	*49*
630	*51*
800	*52*
1000	*53*
1250	*55*
1600	*56*
2000	*56*
2500	*56*
3150	*56*

Sound insulation of floors

G3.—(1) Any floor which separates a dwelling situated below that floor from—

(*a*) another dwelling; or

(*b*) any other part of the same building which—

(i) is not used exclusively with that dwelling; and

(ii) is a place used for purposes other than occasional repair or maintenance, or is a machinery room or tank room,

shall in conjunction with its associated structure be so constructed as to provide adequate resistance to the transmission of airborne and impact sound.

(2) Any floor (other than a floor to which paragraph (1) applies) which separates a dwelling situated above that floor from any other part of the same building which—

(*a*) is not used exclusively with that dwelling; and

(*b*) is a place used for purposes other than occasional repair or maintenance, or is a machinery room or tank room,

shall in conjunction with its associated structure be so constructed as to provide adequate resistance to the transmission of airborne sound.

Deemed-to-satisfy provisions for the insulation of floors required to resist the transmission of airborne and impact sound

G4. *The requirements of regulation G3(1) shall be deemed to be satisfied if—*

(1) *the floor and its associated structure are identical with, or are similar to and unlikely to provide less resistance to the transmission of sound than, a floor and its associated structure which, when tested in accordance with regulation G6 at all the frequencies set out in the Table to this regulation—*

(*a*) *limit the transmission of airborne sound so that the sound reduction at each frequency given in column (1) of that Table does not fall short of the appropriate value given in column (2) of that Table by an amount which causes the aggregate of such deviations to exceed 23 dB; and*

(*b*) *limit the transmission of impact sound so that the sound pressure level produced in any part of the dwelling at each frequency given in column (1) of that Table does not exceed the appropriate value given in column (3) of that Table by an amount which causes the aggregate of such deviations to exceed 23 dB; or*

(2) *the floor is constructed in accordance with any of the specifications contained in Part II of Schedule 10 and—*

(*a*) *in the case of a concrete floor, the floor extends to the outer face of the inner leaf of any adjoining external wall and is tied into or bonded to every adjoining separating wall and every other internal wall which gives support to the floor; or*

(*b*) *in the case of a timber floor—*

(i) *the floor is bounded below on at least three sides by walls having an average mass (calculated over any portion of the wall measuring 1 metre square) of not less than 415 kg/m²; and*

(ii) *every external flanking wall extends for not less than 600 mm, measured vertically from the underside of the floor, without any window or door opening therein other than a window or door opening above a balcony forming an extension to the floor.*

Deemed-to-satisfy provisions for the insulation of floors required to resist the transmission of airborne sound only

G5. *The requirements of regulation G3(2) shall be deemed to be satisfied if—*

(1) *the floor and its associated structure are identical with, or are similar to and unlikely to provide less resistance to the transmission of sound than, a floor and its associated structure which, when tested in accordance with regulation G6 at all the frequencies set out in the Table to this regulation, limit the transmission of airborne sound so that the reduction at each frequency given in column (1) of that Table does not fall short of the appropriate value given in column (2) of that Table by an amount which causes the aggregate of such deviations to exceed 23 dB; or*

(2) *the floor is constructed in accordance with any of the specifications contained in Part II or Part III of Schedule 10, subject to the conditions of regulation G4(2)(a) if the floor is a concrete floor or the conditions of regulation G4(2)(b) if the floor is a timber floor.*

Table to Regulations G4 and G5

(Sound reduction: floors)

Frequency (in Hz)	*Sound reduction (in dB)*	*Octave band sound pressure level (in dB)*
(1)	**(2)**	*(3)*
100	*36*	*63*
125	*38*	*64*
160	*39*	*65*
200	*41*	*66*
250	*43*	*66*
315	*44*	*66*
400	*46*	*66*
500	*48*	*66*
630	*49*	*65*
800	*51*	*64*
1000	*53*	*63*
1250	*54*	*61*
1600	*56*	*59*
2000	*56*	*57*
2500	*56*	*55*
3150	*56*	*53*

Measurement of sound transmission

G6.—(1) *For the purposes of regulations G2, G4 and G5, the measurements of sound transmission and the values of sound transmission in relation to any wall or floor shall be determined in accordance with the following provisions of this regulation:*

Provided that—

(*a*) *where the construction of any part of a wall or floor differs from that of the remaining part of the wall or floor each part shall be treated for the purposes of this regulation as a separate wall or floor; and*

(*b*) *every wall or floor or part of a wall or floor in a building with nominally identical construction shall be treated as forming part of a single wall or floor as the case may be.*

(2) *Measurements shall be in accordance with Sections TWO A and THREE A of BS 2750: 1956, and the method of normalising the results for both airborne and impact sound shall be that given in clause 3 e (ii) thereof.*

(3) *The value of the sound transmission of a particular construction shall be taken to be the average of measurements made between not less than four pairs of rooms each pair having a separating wall or floor, as the case may be, of an area of not less than 7 m^2 and each room having a volume of not less than 25 m^3.*

PART H

Stairways, Ramps, Balustrades and Vehicle Barriers

Interpretation of Part H

H1.—(1) In this Part—

"associated landing" means that portion of any floor, balcony, platform or similar place, or of any paving or ground, which is situated at the top or bottom of a stairway, ramp or stepped ramp;

"balcony" includes a gallery;

"balustrade" includes a wall, screen or railing;

"deemed length" has the meaning assigned by paragraph (2)(*a*);

"dwelling" means a house, flat or maisonette;

"flight" means that part of a stairway or stepped ramp which consists of a step or consecutive steps;

"going"—

(*a*) in relation to a tread, means the distance (measured on plan) between its nosing and the nosing of the tread, ramp or landing next above it; and

(*b*) in relation to a landing, means the distance (measured on plan) across the landing along the projection of the centre line of the flight, ramp or section thereof at the top or bottom of which the landing is situated;

"landing"—

(*a*) means a platform situated between consecutive flights of a stairway; and

(*b*) unless the context otherwise requires, includes an associated landing;

"length", in relation to a tread, means the least distance (measured on plan) between the sides of the tread;

"nosing" means the front edge of a tread and includes the edge of the top surface of any landing or ramp which is situated at the top of a flight;

"parallel tread" means a tread having a uniform width throughout that part of its length which is within the width of the stairway;

"pitch" means the angle between the pitch line and the horizontal;

"pitch line" means a notional line which connects the nosings of all treads in a flight with the nosing of the landing or ramp at the top of the flight, extends down to the landing or ramp at the bottom of the flight and (subject to the provisions in relation to head J in the Table to regulation H3) forms the greatest possible angle to the horizontal;

"ramp" means any part of a building which provides a route of travel for pedestrians or wheelchair users and has an inclined surface;

"rise" means the vertical distance —

(*a*) between two consecutive treads; or

(*b*) between a tread and the top surface of a landing or ramp immediately above or below that tread; or

(*c*) if a threshold forms or surmounts the nosing of a tread or landing, between the top of the threshold and the top surface of the tread or landing at the bottom of the step;

"small room" means any room having a floor area not exceeding 4 m^2 in the case of a building or compartment of purpose group I, II or III or 30 m^2 in any other case;

"stairway" means any part of a building which provides a route of travel and is formed by a single flight or by a combination of two or more flights and one or more intervening landings;

"step" does not include any threshold which—

(*a*) has a height not exceeding 40 mm in the case of an internal doorway or 75 mm in the case of an external doorway; or

(*b*) is provided for the purposes of regulation E18(6)(*c*);

"stepped ramp" means any part of a building which provides a route of travel and is formed by a combination of one or more flights and one or more ramps;

"tapered tread" means a tread which has a greater width at one side than at the other and a going which changes at a constant rate throughout its length;

"tread" means the upper surface of a step;

"vehicle park" does not include a car showroom, a garage or carport of purpose group I or a single storey building comprising two or more garages each of which has an area not exceeding 40 m^2; and

"width"—

(*a*) in relation to a tread, means the least distance from the nosing of the tread to the face of the riser or, if there is no riser, to the back edge of the tread; and

(*b*) in relation to a stairway, ramp or stepped ramp or section thereof, means its unobstructed width, that is to say, clear of handrails and other projections; and, for this purpose, no account shall be taken of any string not exceeding 30 mm in thickness.

(2) For the purposes of this Part—

(*a*) if consecutive tapered treads are of different lengths, each such tread shall be deemed to have a length equal to the length of the shorter or shortest of those treads; and "deemed length" shall be construed accordingly;

(*b*) any reference to a specified purpose group shall be construed as a reference to that purpose group as designated in the Table to regulation E2;

(*c*) the purpose group of a building or compartment shall be determined in accordance with regulation E2 except that, if a building or compartment is used or intended to be used for more than one purpose, it shall be regarded as being of the purpose group appropriate to that one of the uses in relation to which this Part prescribes the most onerous standard; and

(*d*) any portion of a stairway, ramp or stepped ramp serving more than one compartment shall, if the compartments are of different purpose groups, be regarded as serving that one of the compartments in relation to which this Part prescribes the most onerous standard.

General requirements for stairways, ramps and stepped ramps

H2.—(1) Within every house of more than one storey there shall be provided between such storeys access by means of a stairway complying with the relevant provisions of this Part;

Provided that nothing in this regulation shall require the provision of a stairway to any storey within a house if that storey is used only as general storage accommodation.

(2) Any stairway, ramp or stepped ramp shall comply with the following requirements insofar as they are relevant—

(*a*) subject to paragraph (3)(*a*), there shall be a landing at the top and bottom of—

(i) any stairway;

(ii) any ramp which does not form part of a stepped ramp; and

(iii) any stepped ramp;

(*b*) subject to paragraph (3)(*b*), any such landing and any landing situated between consecutive flights of a stairway shall be level and free from obstruction;

(*c*) over the whole width of any stairway, ramp or stepped ramp (including its associated landings) there shall be clear headroom of not less than 2 m measured vertically from the pitch line or, where there is no pitch line, from the top surface of any ramp or landing;

(*d*) if any flight or ramp is subdivided into sections—

(i) the width of each section shall be not less than 1 m; and

(ii) a handrail shall be provided between adjacent sections;

(*e*) subject to paragraph (3)(*c*), no door, shutter or threshold shall be placed across any flight or ramp or (except a wicket gate) between any landing and any flight or ramp;

(*f*) if any stairway, ramp or stepped ramp (other than one which is external and serves exclusively one dwelling) is intended to serve as a means of escape or might be so used—

(i) equipment for artificially lighting all parts thereof (including its associated landings) shall be installed; and

(ii) any such installation shall either incorporate means whereby the lighting may be controlled by any person using the stairway, ramp or stepped ramp or means whereby the lighting may be caused to operate whenever light is required by such a person; and

(*g*) if any tread, ramp or landing is permitted by regulation H3 or H4 to be formed of slats or perforated material and is so formed, no opening in any part of the upper surface thereof within the width of the flight, ramp or landing shall exceed 20 mm in width.

(3) Notwithstanding the requirements of paragraphs (2)(*a*), (2)(*b*) and (2)(*e*) respectively—

(*a*) the provision of a landing between an external doorway of a building and a stairway or ramp shall not be required if—

(i) the door opens inwards; and

(ii) the total rise of the stairway or ramp does not exceed 600 mm;

(*b*) a landing of even ground or paving at the top or bottom of an external flight or ramp may slope at a gradient not exceeding 1 in 12; and

(*c*) a door or shutter may be placed in line with a single step which provides access to a shop window or small room.

Further requirements for stairways

H3.—(1) Subject to the provisions of paragraph (2), any stairway (including its associated landings) shall comply with the requirements set out in the Table to this regulation insofar as they are relevant.

(2) For the purposes of paragraph (1), any stairway serving a building or compartment of purpose group II or VII in respect of which column (4) of the Table to this regulation is relevant to part and column (5) is relevant to the remainder shall be considered as a stairway to which column (4) is relevant to the whole if the part to which column (4) is relevant is the part furthest from the nearest accessible way out of the building.

(3) Any stairway shall be so constructed that—

(*a*) there are not more than 36 rises in consecutive flights without a change in the direction of travel of 30° or more;

(*b*) the pitch of any flight is not greater than the pitch of any other flight which is further from the nearest accessible way out of the building; and

(*c*) if it is exposed to the weather, the total rise from the bottom to the top of the stairway does not exceed 6 m.

(4) Any flight shall be so constructed that—

(*a*) subject to the provisions of paragraph (5), each tread (irrespective of whether its nosing is straight or curved on plan) is either a parallel tread or a tapered tread;

(*b*) subject to the provisions of paragraph (6), the rise of any step is uniform throughout its length and is the same as the rise of every other step in the flight;

(*c*) each tread is level;

(*d*) the width of each tread, measured at any part, is not less than the going of the tread at that part;

(*e*) the length of each tread is not less than the width of the stairway;

(*f*) the nosing of any tread which has no riser below it overlaps on plan the back edge of the tread next below it by not less than 15 mm;

(*g*) all parallel treads have the same going;

(*h*) all consecutive tapered treads have—

(i) the same going measured at the centre of the length (or, if applicable, the deemed length) of each tapered tread;

(ii) the same rate of taper; and

(iii) their narrow ends at the same side of the flight; and

(*j*) if the flight forms part of a building of purpose group I, a building or compartment of purpose group II used by persons under the age of five years or a building or compartment of purpose group III, there is no open rise or opening in a riser of such size as would permit the passage through it of a sphere having a diameter of 100 mm.

(5) Notwithstanding the requirements of paragraph (4)(*a*), either side or both sides of the two treads at the bottom of a flight may be rounded or splayed if the tread otherwise complies with the requirements for a parallel or tapered tread.

(6) The requirements of paragraph (4)(*b*) shall not apply to a step which is at the top or bottom of a flight and adjoins ground or paving outside a building if that step has a rise measured at the centre of the flight which is the same as the rise of the other steps in the flight.

(7) The treads and landings of any stairway to which column (4) of the Table to this regulation relates shall not be constructed of slats or perforated material.

TABLE TO REGULATION H3

(Specific requirements for stairways)

Head	Building or compartment of purpose group I or III		Building or compartment of purpose group II or VII	Building or compartment of purpose group II, III, IV, V, VI, VII or VIII
	any stairway within a dwelling or serving exclusively one dwelling	any stairway for common use in connection with two or more dwellings	any stairway— (*a*) within or serving a building or compartment of purpose group II other than a stairway for use solely by staff; or (*b*) serving a part of a building or compartment of purpose group VII more than 100 m² in area and used for assembly purposes	any stairway other than a stairway to which column (2), (3) or (4) relates
(1)	(2)	(3)	(4)	(5)
A. Width of stairway (subject to the provisions of Part EE)	Not less than— (*a*) 600 mm in the case of a stairway providing access only to— (i) one room, not being a living room or kitchen; or (ii) a bathroom and a watercloset; or (*b*) 800 mm in any other case	Not less than 900 mm	Not less than 1 m	Not less than— (*a*) 800 mm in the case of a stairway within or serving a part of a building or compartment which is not capable of being used or occupied by more than 50 persons; or (*b*) 1 m in any other case

TABLE TO REGULATION H3—*continued*

Head	Building or compartment of purpose group I or III		Building or compartment of purpose group II or VII	Building or compartment of purpose group II, III, IV, V, VI, VII or VIII
	any stairway within a dwelling or serving exclusively one dwelling	any stairway for common use in connection with two or more dwellings	any stairway— (*a*) within or serving a building or compartment of purpose group II other than a stairway for use solely by staff; or (*b*) serving a part of a building or compartment of purpose group VII more than 100 m^2 in area and used for assembly purposes	any stairway other than a stairway to which column (2), (3) or (4) relates
(1)	(2)	(3)	(4)	(5)
B. Additional requirements for stairways over 1·8 m in width	—	—	Each flight to be so subdivided into sections that each section is— (*a*) not less than 1 m nor more than 1·8 m in width; and (*b*) separated from any other such section by a handrail complying with the requirements set out against head K	Each flight to be so subdivided into sections that each section is— (*a*) not less than 1 m nor more than 1·8 m in width; and (*b*) separated from any other such section by a handrail complying with the requirements set out against head K
C. Pitch of flight	Not exceeding 42°	Not exceeding 38°	—	—

D. Number of rises per flight. This requirement shall not apply to any step giving access to a dais, stage, shop window or a small room only or situated at an external doorway	Except at the bottom of a stairway, not fewer than 2 nor more than 16	Not fewer than 2 nor more than 16	Not fewer than 3 nor more than 16	Not fewer than 3 nor more than 16
E. Height of rise	Not less than 75 mm nor more than 220 mm	Not less than 75 mm nor more than 190 mm	Not less than 75 mm nor more than 180 mm	Not less than 75 mm nor more than 190 mm
F. Going of step (subject to the provisions of head J)	Not less than 220 mm	Not less than 240 mm	Not less than 280 mm	Not less than 250 mm
G. Aggregate of the going and twice the rise of a step (subject to the provisions of head J). This requirement shall not apply to a flight which has only one rise	Not less than 550 mm nor more than 700 mm	Not less than 550 mm nor more than 700 mm	Not less than 550 mm nor more than 700 mm	Not less than 550 mm nor more than 700 mm
H. Going of landings (subject to the provisions of Part EE)	Not less than the width of the stairway	Not less than the width of the stairway	Not less than the width of the stairway or (if the stairway is subdivided) the width of the wider or widest section	Not less than the width of the stairway or (if the stairway is subdivided) the width of the wider or widest section
J. Tapered treads	(*a*) The going of any part of a tread within the width of the stairway to be not less than 75 mm *(*b*) The going to be not less than 220 mm *(*c*) The aggregate of the going and twice the rise to be not less than 550 mm nor more than 700 mm *(*d*) The pitch to be not more than 42°	(*a*) The angle (measured on plan) formed by the nosing of the tread and the nosing of the tread or landing immediately above it to be not more than 15° *(*b*) The going to be not less than 240 mm *(*c*) The aggregate of the going and twice the rise to be not less than 550 mm nor more than 700 mm *(*d*) The pitch to be not more than 38°	(*a*) The angle (measured on plan) formed by the nosing of the tread and the nosing of the tread or landing immediately above it to be not more than 15° *(*b*) The going to be not less than 280 mm *(*c*) The aggregate of the going and twice the rise to be not less than 550 mm nor more than 700 mm	(*a*) The going of any part of a tread within the width of the stairway to be not less than 75 mm (*b*) The angle (measured on plan) formed by the nosing of the tread and the nosing of the tread or landing immediately above it, to be, in the case of a stairway 1 m or more in width, not more than 15°

TABLE TO REGULATION H3—*continued*

J. Tapered treads (*continued*)	*For the purposes of (*b*), (*c*) and (*d*) above, the going, rise and pitch shall be measured at the central points of the length (or, where applicable, the deemed length) of a tread if the stairway is less than 1 m in width, or at points 270 mm from each end of the length (or where applicable the deemed length) of a tread if the stairway is 1 m or more in width	*For the purposes of (*b*), (*c*) and (*d*) above, the going, rise and pitch shall be measured at points 270 mm from each end of the length (or where applicable the deemed length) of a tread	*For the purposes of (*b*) and (*c*) above, the going and rise shall be measured at points 270 mm from each end of the length (or where applicable the deemed length) of a tread	*(*c*) The going to be not less than 250 mm. *(*d*) The aggregate of the going and twice the rise to be not less than 550 mm nor more than 700 mm *For the purposes of (*c*) and (*d*) above, the going and rise shall be measured at the central points of the length (or, where applicable, the deemed length) of a tread if the stairway is less than 1 m in width, or at points 270 mm from each end of the length (or, where applicable, the deemed length) of a tread if the stairway is 1 m or more in width
K. Handrails. These requirements shall not apply to any side of a flight formed by fixed seating	Irrespective of the purpose group of the building or compartment— (*a*) any flight with a total rise of more than 600 mm shall be provided with a handrail— (i) on each side of the flight if the width of the flight is 1 m or more; and (ii) on the side where the tapered treads have the greater going if the flight is less than 1 m in width and contains tapered treads; and (iii) on at least one side in any other case; and (*b*) any such handrail shall— (i) be so designed as to afford adequate means of support to persons using the flight; (ii) be continuous for the length of the flight (except that any handrail need not extend beside the two steps at the foot of a stairway); (iii) be securely fixed at a height of not less than 840 mm nor more than 1 m (measured vertically above the pitch line); and (iv) be terminated by a scroll or other suitable means			

Further requirements for ramps

H4.—(1) Subject to the provisions of paragraph (2), any ramp (including its associated landings) shall comply with the requirements set out in the Table to this regulation insofar as they are relevant.

(2) For the purposes of paragraph (1), any ramp serving a building or compartment of purpose group II or VII in respect of which column (4) of the Table to this regulation is relevant to part and column (5) is relevant to the remainder shall be regarded as a ramp to which column (4) is relevant to the whole if the part to which column (4) is relevant is the part furthest from the nearest accessible way out of the building.

(3) Any ramp to which column (4) of the Table to this regulation relates shall not be constructed of slats or perforated material.

TABLE TO REGULATION H4

(Specific requirements for ramps)

Head	Building or compartment of purpose group I or III		Building or compartment of purpose group II or VII	Building or compartment of purpose group II, III, IV, V, VI, VII or VIII
	Any ramp within a dwelling or serving exclusively one dwelling	Any ramp for common use in connection with two or more dwellings	Any ramp— (*a*) within or serving a building or compartment of purpose group II other than a ramp for use solely by staff; or (*b*) serving a part of a building or compartment of purpose group VII more than 100 m^2 in area and used for assembly purposes	Any ramp other than a ramp to which column (2), (3) or (4) relates
(1)	(2)	(3)	(4)	(5)
A. Width of ramp (subject to the provisions of Part EE)	Not less than— (*a*) 600 mm in the case of a ramp providing access only to— (i) one room, not being a living room or kitchen; or (ii) a bathroom and a watercloset; or (*b*) 800 mm in any other case	Not less than 900 mm	Not less than 1 m	Not less than— (*a*) 800 mm in the case of a ramp within or serving a part of a building or compartment which is not capable of being used or occupied by more than 50 persons; or (*b*) 1 m in any other case

TABLE TO REGULATION H4—*continued*

Head	Building or compartment of purpose group I or III		Building or compartment of purpose group II or VII	Building or compartment of purpose group II, III, IV, V, VI, VII or VIII
	Any ramp within a dwelling or serving exclusively one dwelling	Any ramp for common use in connection with two or more dwellings	Any ramp— (*a*) within or serving a building or compartment of purpose group II other than a stairway for use solely by staff; or (*b*) serving a part of a building or compartment of purpose group VII more than 100 m^2 in area and used for assembly purposes	Any ramp other than a ramp to which column (2), (3) or (4) relates
(1)	(2)	(3)	(4)	(5)
B. Slope of ramp	Not more than 1 in 12	Not more than 1 in 12	Not more than 1 in 12	Not more than 1 in 12
C. Going of landings (subject to the provisions of Part EE)	Not less than the width of the ramp	Not less than the width of the ramp	Not less than the width of the ramp or (if the ramp is subdivided) the width of the wider or widest section	Not less than the width of the ramp or (if the ramp is subdivided) the width of the wider or widest section
D. Handrails. These requirements not to apply to any side of a ramp formed by fixed seating	Irrespective of the purpose group of the building or compartment— (*a*) any ramp with a total rise of more than 600 mm shall be provided with a handrail— (i) on each side if the width of the ramp is 1 m or more; and (ii) on at least one side in any other case; and (*b*) any such handrail shall— (i) be so designed as to afford adequate means of support to persons using the ramp; (ii) be continuous for the length of the ramp; (iii) be securely fixed at a height of not less than 840 mm nor more than 1 m (measured vertically above the top surface of the ramp); and (iv) be terminated by a scroll or other suitable			

Further requirements for stepped ramps

H5. Any stepped ramp (including its associated landings) shall be so constructed that—

(*a*) any flight and any associated landing situated at the top or bottom of a flight complies with the relevant requirements of regulation H3;

(*b*) any ramp and any associated landing situated at the top or bottom of a ramp complies with the relevant requirements of regulation H4; and

(*c*) the length of any ramp is not less than 1 m nor more than 2 m measured along the centre line of the route of travel.

Guarding of stairways, ramps, stepped ramps, landings, balconies and other places

H6.—(1) A balustrade shall be provided in each of the following positions—

(*a*) at each side of any flight or ramp except (if there is no opening or hole in the ground or floor near the bottom of the stairway)—

(i) beside the two steps at the bottom of a stairway; or

(ii) beside a stairway with a total rise of not more than 600 mm; and

(*b*) at the perimeter of each of the following wherever such provision is necessary to ensure reasonable safety for persons having access thereto—

(i) any landing or floor;

(ii) any part of a balcony, platform, roof, vehicle park or other place to which persons have access for purposes other than maintenance or repair;

(iii) any rooflight in such a part of a roof;

(iv) the ground or paving adjacent to any area into which an external stairway or ramp descends to an extent exceeding 600 mm (measured vertically) below the level of that ground or paving.

(2) Any balustrade required by paragraph (1) shall be designed as a guard and so constructed as to comply with the following provisions—

(*a*) subject to paragraph (3), the height of the balustrade (measured vertically from the pitch line in the case of a balustrade guarding a flight or from the top surface of the place guarded in any other case) shall be not less than the height prescribed in the Table to this regulation;

(*b*) the balustrade shall be capable of resisting the appropriate load specified in Table 3 of CP3: Chapter V: Part 1: 1967;

(*c*) any glazed part of the balustrade shall be formed of glass blocks, toughened glass or laminated safety glass; and

(*d*) if the balustrade forms part of a building of purpose group I, a building or compartment of purpose group II used by persons under the age of five years or a building or compartment of purpose group III, there shall be no opening in the balustrade of such size as would permit the passage through it of a sphere having a diameter of 100 mm except (in the case of a balustrade guarding a flight) any triangular opening formed by a tread, a rise and the bottom edge of the balustrade if that bottom edge is not more than 50 mm above the pitch line.

(3) Notwithstanding the requirements of paragraph (2)(*a*), the top of a portion of any balustrade guarding a landing at the top of a flight or ramp may be continuous with, and at the same angle as, the top of a balustrade guarding that flight or ramp.

TABLE TO REGULATION H6

(Minimum height of balustrade)

Description of balustrade (1)	Minimum height of balustrade (2)
1. Balustrade (including any superimposed padded rest) which guards a balcony in a building of purpose group VII and is immediately in front of fixed seating	790 mm
2. Balustrade guarding a flight which is within a dwelling or serves only one dwelling	840 mm
3. Balustrade guarding a flight other than a balustrade described in item 2	900 mm
4. Balustrade guarding a ramp, landing or floor which is within a dwelling or serves only one dwelling	
5. Any balustrade not described in items 1 to 4	1·1 m

Vehicle barriers

H7. Any floor or roof used as a vehicle park and any part of a building used as a vehicular route thereto shall be guarded (except across any entrance or exit) at every part of the perimeter of the area so used which is at or above the level of any adjacent floor, roof, vehicular route, street or ground by a barrier complying with clause 9 of CP3: Chapter V: Part 1: 1967.

PART J

REFUSE DISPOSAL

Refuse storage container chambers constructed in buildings comprising more than one dwelling

J1.—(1) This regulation shall apply to any chamber which forms part of a building comprising more than one dwelling and which is constructed to accommodate refuse storage containers into which refuse may be delivered through a hopper or chute.

(2) Such chamber shall be so constructed that—

(*a*) the walls, floor and roof are made of suitable non-combustible material, and any part of a wall or floor which separates the chamber from the building of which it forms part is constructed as if it were a compartment wall or compartment floor within the meaning of Part E having fire resistance of one hour or such fire resistance as is required by regulation E5 (whichever is the greater); and

(*b*) the inner surfaces of the chamber are impervious to moisture; and

(*c*) the floor of the chamber is laid to a fall towards a trapped gulley situated inside or immediately outside the chamber; and

(*d*) it has as its sole means of access—

(i) for the removal and replacement of the containers, a flush door which is situated in an external wall of the chamber and has fire resistance of not less than half an hour as defined in regulation E1(5); and

(ii) for the deposit of refuse in the containers, either a refuse chute which complies with the provisions of regulation J2, or a hopper which complies with the provisions of regulation J4; and

(*e*) (where delivery is by way of hopper only) it is ventilated to the external air by means of—

(i) a fly-proof ventilator placed as high as practicable in an external wall of the chamber and so positioned as not to transmit foul air in such a manner as to become prejudicial to health or a nuisance; or

(ii) a pipe or shaft which complies with regulation J3.

Refuse chutes in buildings comprising more than one dwelling

J2.—(1) This regulation shall apply to any refuse chute constructed for use with a refuse storage container chamber to which regulation J1 applies.

(2) Such refuse chute shall be—

(*a*) constructed of suitable non-combustible materials of such thickness, and so put together and arranged, as to prevent the ignition of any part of the building in the event of any refuse within the chute, or in the chamber at the bottom of the chute, catching fire; and

(*b*) so constructed that the inner surfaces of the chute are impervious to moisture; and

(*c*) so constructed as to prevent the lodgement of any refuse within the chute; and

(*d*) circular in cross-section with an internal diameter of not less than 375 mm; and

(*e*) fitted with adequate means of access for inspection and cleansing; and

(*f*) fitted, for the insertion of refuse, with one or more hoppers which comply with the provisions of regulation J4; and

(*g*) ventilated to the external air by means of a pipe or shaft which complies with the provisions of regulation J3; and

(*h*) fitted at its lower extremity with a shutter capable of closing the outlet of the chute.

Pipes or shafts ventilating refuse storage container chambers or refuse chutes

J3. Any pipe or shaft ventilating either a refuse storage container chamber to which regulation J1 applies or a refuse chute to which regulation J2 applies shall—

(*a*) comply with the provisions of regulation J2(2)(*a*); and

(*b*) be not less than 17 000 mm^2 in cross-sectional area; and

(*c*) be so constructed that the outlet is protected against the entry of rain; and

(*d*) be carried upwards to such a height and so positioned as not to transmit foul air in such a manner as to become prejudicial to health or a nuisance.

Hoppers for refuse storage container chambers or refuse chutes

J4.—(1) This regulation shall apply to any hopper constructed for use with a refuse storage container chamber to which regulation J1 applies or with a refuse chute to which regulation J2 applies.

(2) Such hopper shall be—

(*a*) situated in a place which is either freely ventilated or has adequate means of mechanical ventilation; and

(*b*) constructed of suitable non-combustible material; and

(*c*) so constructed and installed as—

(i) efficiently to discharge any refuse placed in it into the refuse storage container or refuse chute; and

(ii) to be incapable of remaining in any position other than the open or the closed position; and

(iii) to prevent, as far as possible, whether in an open or closed position, the emission of dust or foul air from the refuse storage container chamber or refuse chute; and

(*d*) in the case of a hopper for use in conjunction with a refuse chute, so constructed and installed as not to project into the chute.

(3) No such hopper shall be situated within a dwelling.

PART K

Open Space, Ventilation and Height of Rooms

Open space outside windows of habitable rooms

K1.—(1) In this regulation—

"window" includes any glazed opening in an external wall of a building, but does not include any part of such wall which is constructed of glass blocks;

"lower window level" means the lowest level of the glass in a window, or 1·2 m above the floor of the room containing the window, whichever is higher;

"upper window level" means the highest level of the glass in a window;

"window height" means the height from the lower window level to the upper window level;

"the wall" means any wall containing a window in respect of which any calculation under this regulation is to be made, and includes—

(*a*) where the window is in two walls at the corner of a room, either one of those walls, or a plane joining the vertical extremities of the window opening; and

(*b*) where the window is in a curved wall, a plane joining the vertical extremities of the window;

"top of the wall" means—

(*a*) if the building has a flat roof, the underside of that roof; or

(*b*) if it has a pitched roof, the lowest part of the eaves of that roof; or

(*c*) if the roof (whether flat or pitched) has a parapet, the top of that parapet.

(2) This regulation shall apply to any habitable room (except a room used for the lawful detention of persons other than mentally disordered persons) which has one or more windows.

(3) If such room has one window only, there shall be a minimum zone of open space outside the window such as to leave adjacent to the window an upright shaft of space wholly open to the sky (with the exception of any projection permitted by paragraph (6)), the base of the shaft being formed by a plane inclined upwards at an angle of 30° to the horizontal from the wall at the lower window level and its sides coinciding with the following four vertical planes—

(*a*) an outer plane which is parallel to the wall and which—

(i) is at a distance from the wall of 3·6 m, or such distance as may be required by paragraph (7), or (subject to a limit of 15 m) one half the distance between the upper window level and the top of the wall containing the window, whichever is greatest; and

(ii) has a width equal to its required distance from the wall; and

(iii) is so located that some part of it is directly opposite some part of the window; and

(*b*) an inner plane which coincides with the external surface of the wall and which—

(i) has a width such that the product of that width and the window height equals one tenth of the floor area of the room containing the window; and

(ii) is located wholly between the sides of the window or, where it is required to be wider than the window, is so located that it extends across the whole width of the window, and overlaps it on either or both sides; and

(*c*) two lateral planes joining the corresponding extremities of the inner plane and outer plane.

(4) If such room has two or more windows, there shall be either—

(*a*) a zone of open space outside any one window which complies with the requirements of paragraph (3); or

(*b*) zones of open space outside two or more of such windows, in each case complying with the requirements of paragraph (3), except that the width of the inner planes shall be such that the total of the products of the width of each inner plane and the corresponding window height equals one tenth of the floor area of the room.

(5) Any zone of open space required by this regulation shall be wholly—

(*a*) unobstructed by any rising ground or by any building or other structure or erection (with the exception of any projection permitted by paragraph (6)); and

(*b*) over—

(i) land exclusively belonging to the building containing the window; or

(ii) the portion of any street, canal or river adjacent to the building or the land, but only to the centre line thereof; or

(iii) land which may under regulation K2 be treated as available for the purposes of this sub-paragraph; or

(iv) over any such land and any such portion of a street, canal or river as aforesaid.

(6) The following projections shall be permitted in front of the inner plane described in paragraph (3)(*b*)—

(*a*) the structure of the window if it is a bay window or oriel window; or

(*b*) a conservatory on the same storey as the window; or

(*c*) a verandah or other similar projection which is on the same storey as the window and either has a roof of glass or other translucent material or projects not more than 1·5 m horizontally in front of the inner plane; or

(*d*) any projection above the upper window level extending not more than 1·5 m horizontally in front of the inner plane.

(7) If any projection permitted by paragraph (6)(*d*) extends more than 600 mm in front of the inner plane, the minimum distance between the outer plane and inner plane specified in paragraph (3)(*a*)(i) shall be increased by the amount in excess of 600 mm by which such projection extends horizontally in front of the inner plane:

Provided that nothing in this paragraph shall affect the calculation of the width of the outer plane specified in paragraph (3)(*a*)(ii).

Shared land on housing estates

K2. For the purposes of regulation K1(5)(*b*)(iii) (which specifies the land over which the zone of open space is to be located), if—

(*a*) there is any land laid out and developed as an estate with defined boundaries; and

(*b*) buildings containing habitable rooms are erected or intended to be erected on the land; and

(*c*) such arrangements by contract or otherwise are made by the developer as will ensure that defined land within the estate will be used in common by the occupants of the buildings as of right for the purposes of amenity,

any part of such land so used in common (other than land over which the minimum zone of open space relevant to a window in any other building on the estate is located) may be treated as available in respect of a window in any building on such estate.

Preservation of zones of open space

K3.—(1) No building shall be so altered or extended as to cause the zone of open space outside the window or windows of any habitable room in the building to contravene the provisions of regulation K1, or (if that zone already contravenes those provisions) to cause the zone to contravene the provisions to any greater extent:

Provided that a private dwelling-house erected under former control may be altered or extended at the rear by the addition of a kitchen, scullery, washhouse, watercloset or bathroom, if there is an area of open space of not less than 9 m^2 at ground level which is adjacent to the part of the house so altered or extended and exclusively belonging to such house.

(2) If any building constructed under former control is re-erected after having been burnt down or pulled down to the extent described in regulation A2(2)(*a*) or (*b*), the area of open space at ground level adjacent to and exclusively belonging to the building as re-erected shall be not less extensive than the area of open space which existed immediately before the building was burnt down or pulled down.

(3) No building or other structure or erection shall be so erected, altered or extended as to cause the zone of open space outside any window of a habitable room in any other building to be diminished so as to contravene the provisions of regulation K1 or (if the existing zone of open space already contravenes those provisions) to cause the zone of open space to contravene those provisions to any greater extent.

(4) Where any building or part of a building was originally constructed as a private dwelling-house and has been appropriated to other purposes, nothing in this Part shall prohibit its use as a private dwelling-house if the area of open space at ground level, adjacent to and exclusively belonging to the building is not less extensive than the area of open space which existed immediately before the appropriation to other purposes took place.

Means of ventilation

K4.—(1) For the purposes of this regulation—

"habitable room" includes a room used for kitchen or scullery purposes but does not include a room intended to be used for the lawful detention of any person other than a mentally disordered person;

"ventilation opening" means any openable part of a window or any hinged panel, adjustable louvre or other means of ventilation which opens directly to the external air, but excluding any opening associated with a mechanically operated system.

(2) If any storey of a building contains a dwelling or part of a dwelling, that storey shall have effective means of ventilation.

(3) Subject to the provisions of paragraph (5), any habitable room shall (unless it is adequately ventilated by mechanical means) have one or more ventilation openings so constructed that—

(*a*) their total area is equal to not less than one twentieth of the floor area of the room; and

(*b*) some part of such area is not less than 1·75 m above the floor.

(4) For the purposes of paragraph (3), a door which opens directly to the external air shall be deemed to be a ventilation opening if—

(*a*) such door contains a ventilator with an area of not less than 10 000 mm^2 capable of being opened (without the door being opened); or

(*b*) the room contains one or more ventilation openings having a total area of not less than 10 000 mm^2, in addition to such door.

(5) A habitable room opening into an enclosed verandah, conservatory or similar place shall be deemed to comply with the provisions of this regulation if such room and such enclosed place together have one or more ventilation openings which, if they ventilated a room having a floor area equal to the combined floor area of such habitable room and such enclosed place, would comply with the requirements of paragraph (3).

Ventilation openings on to courts

K5.—(1) For the purposes of this regulation—

"top of the wall" has the meaning ascribed to that expression in regulation K1(1) ; and

"ventilation opening" has the meaning ascribed to that expression in regulation K4(1).

(2) No ventilation opening constructed in compliance with the requirements of regulation K4 shall be so situated as to open on to a court enclosed on every side, unless the distance from the ventilation opening to the opposite wall of the court is either—

(*a*) 15 m or more; or

(*b*) not less than half the vertical distance between the top of such opening and the top of the wall containing the opening.

(3) No ventilation opening constructed in compliance with the requirements of regulation K4 shall be so situated as to open on to a court which has one side unobstructed by any building or other erection, and of which the length, measured from such unobstructed side, exceeds twice the width, unless such ventilation opening—

(*a*) is in the side of the court opposite the unobstructed side; or

(*b*) (if it is situated in either of the long sides) is within a distance from the unobstructed side not exceeding twice the width of the court; or

(*c*) (if it is situated in either of the long sides) is in such a position that the distance from such opening to the opposite wall of the court is either—

(i) 15 m or more; or

(ii) not less than half the vertical distance between the top of such opening and the top of the wall containing the opening.

Ventilation of larders

K6.—(1) Any larder for the storage of perishable food (other than an enclosed space having means of refrigeration) shall (unless it is adequately ventilated by mechanical means) be ventilated to the external air by means of—

(*a*) one or more windows; or

(*b*) two or more ventilators capable of being closed, of which one is in the upper part and another in the lower part of the larder.

(2) Any such window or windows shall be—

(*a*) fitted with a durable fly-proof screen; and

(*b*) so constructed that a total area of not less than 85 000 mm^2 is capable of being opened.

(3) Any such ventilator shall be—

(*a*) fitted with a durable fly-proof screen; and

(*b*) so constructed as to permit (when open) the passage of air through an opening having an unobstructed area of not less than 4500 mm^2; and

(*c*) either situated in an external wall of the building or separately connected with the external air by a duct not less than 16 000 mm^2 in cross-sectional area and having a smooth internal surface.

Ventilation of common stairways

K7. Any part of a stairway which is—

(*a*) intended for common use within any building constructed for occupation as separate dwellings by more than one family; and

(*b*) above the ground storey; and

(*c*) not open to the external air,

shall have adequate means of ventilation.

Height of habitable rooms

K8.—(1) Any habitable room in a building shall be so constructed that (except beneath a beam or beneath the ceiling to a bay window) the height of such room shall be not less than 2·3 m:

Provided that, if such room is wholly or partly in the roof of the building, its height shall be not less than 2·3 m over an area of the floor of the room equal to not less than one half of the area of that room measured on a plane 1·5 m above the floor.

(2) The height of such room, measured beneath any beam in that room, and the clear headroom in any bay window in such room, shall be not less than 2 m.

(3) For the purposes of this regulation, no account shall be taken of the projection of any joist or rafter in the ceiling of a room.

PART L

Chimneys, Flue Pipes, Hearths and Fireplace Recesses

Application and interpretation of Part L

L1.—(1) In this Part—

"appliance" means—

(*a*) a heat-producing appliance (including a cooker) which is designed to burn—

(i) solid fuel (in this Part called a "solid fuel appliance"); or

(ii) oil (in this Part called an "oil-burning appliance"); or

(iii) gaseous fuel (in this Part called a "gas appliance"); and

(*b*) an incinerator employing any means of igniting refuse, including electricity;

"appliance ventilation duct" means a duct forming a passage which in one part serves to convey combustion air to one or more gas appliances, in another part serves to convey the products of combustion from one or more gas appliances to the external air and intermediately serves both purposes;

"chimney" includes any part of the structure of a building forming any part of a flue other than a flue pipe;

"constructional hearth" means a hearth forming part of the structure of a building;

"Class I appliance" means—

(*a*) a solid fuel appliance or oil-burning appliance having, in either case, an output rating not exceeding 45 kW; or

(*b*) an incinerator having a refuse combustion chamber exceeding 0·03 m^3 but not exceeding 0·08 m^3 in capacity,

and "Class I" shall be construed accordingly;

"Class II appliance" means—

(*a*) a gas appliance having an input rating not exceeding 45 kW; or

(*b*) an incinerator having a refuse combustion chamber not exceeding 0·03 m^3 in capacity,

and "Class II" shall be construed accordingly;

"discharge" means the discharge of the products of combustion;

"external wall" includes any external cladding or internal lining;

"floor" includes any ceiling which is applied or fixed to the underside of the floor;

"flue" means a passage for conveying the discharge of an appliance to the external air and includes any part of the passage in an appliance ventilation duct which serves the purpose of a flue;

"flue pipe" means a pipe forming a flue, but does not include a pipe built as a lining into either a chimney or an appliance ventilation duct;

"gas fire" means an appliance with a flue for heating one room, mainly by the emission of radiant heat, and not comprising any water heating component;

"high-rating appliance" means—

(*a*) a solid fuel appliance or oil-burning appliance having, in either case, an output rating exceeding 45 kW; or

(*b*) a gas appliance having an input rating exceeding 45 kW; or

(*c*) an incinerator having a refuse combustion chamber exceeding 0·08 m^3 in capacity,

and "high-rating" shall be construed accordingly;

"insulated metal chimney" means a chimney comprising a flue lining, non-combustible thermal insulation and a metal outer casing;

"main flue" means a flue serving more than one appliance;

"roof" includes any ceiling which is applied or fixed to the underside of a roof and is in a plane parallel to that of the roof covering;

"room-sealed appliance" means a gas appliance which draws its combustion air from a point immediately adjacent to the point where it discharges its products of combustion and is so designed that the inlet, outlet and combustion chamber of the appliance, when installed, are isolated from the room or internal space in which the appliance is situated except for a door for ignition purposes;

"subsidiary flue" means a flue conveying the discharge of one appliance into a main flue;

"superimposed hearth" means a hearth not forming a part of the structure of a building.

(2)(*a*) The provisions of this regulation and of regulation L2(1)(*a*), (4)(*a*) and (6) shall apply to the construction of a chimney which is a separate building.

(*b*) The provisions of this regulation and of the regulations specified in regulation L22(1) shall apply to the construction of an insulated metal chimney which serves a Class I or Class II appliance.

(*c*) Except as specified in this paragraph, the provisions of this Part shall not apply to chimneys described in this paragraph.

(3) Any provision in this Part which applies to a chimney, flue pipe, fireplace recess or constructional hearth serving a Class I appliance shall also apply where a solid fuel fire is intended to burn directly on a hearth without the installation of any appliance whatsoever.

(4) In relation to any Class I oil-burning appliance to which reference is made in regulation M5, regulations L3 to L7 and L10 shall not apply unless compliance therewith is required by the provisions of regulation M4.

General structural requirements

L2.—(1)(*a*) Any chimney, flue pipe, constructional hearth or fireplace recess (whether serving a high-rating, Class I or Class II appliance) shall be—

(i) constructed of non-combustible materials of such a nature, quality and thickness as not to be unduly affected by heat, condensate or the products of combustion; and

(ii) so constructed and of such thickness, or, in the case of a flue pipe, so placed or shielded, as to prevent the ignition of any part of any building.

(*b*) Nothing in sub-paragraph (*a*)(i) shall prohibit—

(i) the placing in a chimney or fireplace recess serving a Class I or Class II appliance of a damp-proof course of combustible material if it is solidly bedded in mortar; or

(ii) the placing in a chimney or fireplace recess serving a Class I appliance of any combustible material in a position not prohibited by regulation L10; or

(iii) the use of flue blocks having suitable combustible material incorporated during manufacture between the inner wall and surrounding material of the flue block, or, if necessary to provide an expansion gap, the placing of such material between a flue lining and the surrounding material in a chimney; or

(iv) the laying of combustible material upon the surface of a hearth in a position not prohibited by regulation L4(2).

(2) Any chimney or flue pipe (whether serving a high-rating, Class I or Class II appliance) shall be so constructed as to prevent any products of combustion escaping internally into the building.

(3) Any flue pipe (whether serving a high-rating, Class I or Class II appliance) shall—

(*a*) be so placed or shielded as to ensure that, whether the pipe is inside or outside the building, there is neither undue risk of accidental damage to the flue pipe nor undue danger to persons in or about the building; and

(*b*) be properly supported; and

(*c*) discharge either into a chimney or into the external air.

(4)(*a*) The outlet of any flue other than a flue described in sub-paragraph (*b*) shall be so situated as to prevent the discharge therefrom into the external air from entering any opening in a building in such concentration as to be prejudicial to health or a nuisance.

(*b*) The outlet of a flue which serves a Class I or Class I appliance and is not the flue of a chimney which is a separate building shall comply with regulation L13 or L21 as the case may be.

(5) If provision is made for a solid fuel fire to burn directly on a hearth, secure means of anchorage for an effective fireguard shall be provided in the adjoining structure.

(6) If a flue serves an appliance which burns solid fuel or oil or is an incinerator, an opening into the flue shall be constructed so as to enable the flue to be cleaned and shall be fitted with a closely fitting cover of non-combustible material:

Provided that the requirements of this paragraph shall not apply if, while the appliance is in position, the flue is accessible for cleaning through the appliance or (if the flue communicates with a fireplace recess) through the appliance or the fireplace recess.

Fireplace recesses for Class I appliances

L3.—(1) Any fireplace recess serving a Class I appliance shall have a constructional hearth which complies with the requirements of regulation L4.

(2) Subject to paragraph (3), any fireplace recess serving a Class I appliance which is constructed of bricks or blocks of concrete or burnt clay or of concrete cast *in situ* shall be so constructed that—

(*a*) the jamb on each side of the recess is not less than 200 mm thick; and

(*b*) the back of the recess is a solid wall not less than 200 mm thick or a cavity wall each leaf of which is not less than 100 mm thick; and

(*c*) any such thickness extends for the full height of the recess:

Provided that—

(i) if the recess is situated in an external wall and no combustible external cladding is carried across the back of the recess, the back of the recess may be a solid wall less than 200 mm thick but not less than 100 mm thick; and

(ii) if any part of a wall, other than a wall separating buildings or dwellings within a building, serves as the back of each of two recesses built on opposite sides of the wall, that part of the wall may be a solid wall less than 200 mm but not less than 100 mm thick.

(3) For the purposes of paragraph (2), no account shall be taken of the thickness of any part of a fireback or other appliance or the thickness of any material between an appliance and the fireplace recess.

(4) No opening shall be made in the back of a fireplace recess other than an opening which—

(*a*) is made solely for the purpose of allowing the passage of convected air; and

(*b*) does not communicate with a flue.

Constructional hearths for Class I appliances

L4.—(1) Any constructional hearth serving a Class I appliance shall—

(*a*) be not less than 125 mm thick; and

(*b*) (if it adjoins a floor constructed wholly or partly of combustible material, or if combustible material is laid on the hearth as a continuation of the finish of the adjoining floor in accordance with the provisions of paragraph (2)) be so constructed that any part of the exposed surface of the hearth, which is not more than 150 mm, measured horizontally, from the said floor or combustible material, is not lower than the surface of the floor and not lower than the remainder of the exposed surface of the hearth; and either

(*c*) (if it is constructed in conjunction with a fireplace recess)—

(i) extend within the recess to the back and jambs of the recess; and

(ii) project not less than 500 mm in front of the jambs; and

(iii) extend outside the recess to a distance of not less than 150 mm beyond each side of the opening between the jambs; or

(*d*) (if it is constructed otherwise than in conjunction with a fireplace recess) be of such dimensions as to contain a square having sides measuring not less than 840 mm.

(2) No combustible material shall be laid on a constructional hearth serving a Class I appliance, as a continuation of the finish of the adjoining floor, which—

(*a*) (if the appliance is installed directly upon or over the constructional hearth) would be nearer to the base of the appliance when installed than the distances specified in regulation M4(4); or

(*b*) (if the appliance is installed upon or over a superimposed hearth which complies with the requirements of regulation M4(3)(*c*)) would extend under the superimposed hearth to a distance of more than 25 mm or be nearer to the base of the appliance when installed than 150 mm, measured horizontally.

(3) No combustible material, other than timber fillets supporting the edges of a hearth where it adjoins a floor, shall be placed under a constructional hearth serving a Class I appliance within a distance of 250 mm, measured vertically, from the upper surface of the hearth, unless such material is separated from the underside of the hearth by an air space of not less than 50 mm.

(4) Nothing in this regulation shall prohibit—

(*a*) the construction of a pit to hold the ash container of an appliance if—

(i) the sides and bottom of the pit are constructed of non-combustible material not less than 50 mm thick;

(ii) there is no opening in the sides or bottom of the pit other than the outlet of any duct constructed in compliance with sub-paragraph (*b*), or (if a side of the pit is formed by an external wall of the building) an opening situated so as to permit the removal of the container from outside the building and fitted with a closely fitting cover of non-combustible material;

(iii) no combustible material is built into a wall below or beside the pit within 225 mm of the inner surface of the pit; and

(iv) any combustible material placed elsewhere than in a wall below or beside the pit is separated from the outer surface of the pit by an airspace of not less than 50 mm; or

(*b*) the construction below the upper surface of a constructional hearth of a duct to be used solely for the admission of combustion air to an appliance either from outside the building, or (if the floor adjoining the hearth is a floor next to the ground and is constructed as a suspended floor) from the space beneath the floor, if the duct is smoke-tight and constructed of non-combustible material.

Walls and partitions adjoining hearths for Class I appliances

L5. Subject to the requirements of regulation M4(7), if any part of a wall or partition, other than a wall forming the back or a jamb of a fireplace recess which complies with the requirements of regulation L3, adjoins, or is within 150 mm of, a constructional hearth serving a Class I appliance, that part shall be constructed to a height of not less than 1·2 m above the upper surface of the hearth of solid non-combustible material not less than 75 mm thick.

Chimneys for Class I appliances

L6.—(1) Any chimney serving a Class I appliance shall be either—

(*a*) lined with any one of the following—

(i) clay flue linings complying with BS 1181: 1971; or

(ii) rebated or socketed flue linings made from kiln-burnt aggregate or high alumina cement; or

(iii) clay pipes and fittings which comply with BS 65 & 540: Part 1: 1971 and are of British Standard type, socketed, imperforate and acid resistant; or

(*b*) constructed of concrete flue blocks made of, or having inside walls made of, kiln-burnt aggregate and high alumina cement and so made that no joints between blocks other than bedding joints adjoin any flue;

Provided that, notwithstanding the requirements of this paragraph, a chimney may be lined with a flexible flue liner if—

(i) the chimney is already lined or constructed in accordance with this paragraph; or

(ii) the chimney is not so lined or constructed but was erected under former control.

(2) Any linings or blocks described in paragraph (1) shall be jointed and pointed with cement mortar and any linings described in paragraph (1)(*a*) shall be so built into the chimney that the socket of each component is uppermost.

(3) If a chimney serving a Class I appliance is either—

(*a*) constructed of bricks or blocks of concrete or burnt clay or of concrete cast *in situ* and in any case lined with one of the materials specified in paragraph (1)(*a*); or

(*b*) constructed of flue blocks in compliance with paragraph (1)(*b*),

any flue in the chimney shall be surrounded and separated from any other flue in the chimney by solid material not less than 100 mm thick, excluding the thickness of any flue lining:

Provided that—

(i) if the chimney forms part of a wall separating buildings or dwellings within a building and is not back-to-back with another chimney, that part of the chimney which is below the roof and separates a flue from the adjoining building or dwelling shall comprise either a solid wall not less than 200 mm thick or a cavity wall, each leaf of which is not less than 100 mm thick; and for the purposes of this sub-paragraph, any such thickness shall not include the thickness of any flue lining; or

(ii) if the chimney forms part of an external wall and is constructed of blocks complying with paragraph (1)(*b*), and there is a distance of not less than 140 mm between the flue and any timber external cladding or other combustible material adjoining the outer surface of that part of the chimney which separates the flue from the external air, such part may be less than 100 mm thick but not less than 65 mm thick.

(4) If a flue in a chimney serving a Class I appliance communicates with a fireplace recess, the dimensions of every part of the flue, measured in cross-section, shall be such as will contain a circle having a diameter of not less than 175 mm:

Provided that nothing in this paragraph shall prohibit restriction of the flue to form a throat.

(5) If a flue in a chimney serving a Class I appliance does not communicate with a fireplace recess, the flue shall terminate at its lower end in a chamber which—

(*a*) has means of access for inspection and cleaning fitted with a non-combustible closely fitting cover; and

(*b*) is capable of containing a condensate collecting vessel.

(6) No part of a flue in a chimney serving a Class I appliance shall make an angle with the horizontal of less than 45°.

(7) Nothing in this regulation shall apply to any part of a flue in a chimney pot or other flue terminal.

Flue pipes for Class I appliances

L7.—(1) No flue pipe serving a Class I appliance (whether encased or not) shall pass through any roof space, floor, internal wall or partition:

Provided that nothing in this regulation shall prohibit a flue pipe from passing through—

(*a*) a floor supporting a chimney, so as to discharge vertically into the bottom of a flue in that chimney; or

(*b*) a wall forming part of a chimney, so as to discharge into the side of a flue in that chimney.

(2) The cross-sectional area of any flue pipe serving a Class I appliance shall not be less than the cross-sectional area of the outlet of that appliance.

(3) For the purposes of this regulation, the expression "roof space" shall not include any void between the roof covering and any ceiling which is applied or fixed to the underside of the roof and is in a plane parallel to that of the roof covering.

Deemed-to-satisfy provisions regarding materials for the construction of flue pipes for Class I appliances

L8. *A flue pipe serving a Class I appliance shall be deemed to satisfy such requirements of regulation L2(1)(a)(i) as relate to the nature, quality and thickness of its materials if—*

(*a*) *it is constructed of cast iron complying with BS 41: 1973 or of mild steel not less than 4·75 mm thick; or*

(*b*) *(being a pipe serving an appliance which is neither an open fire nor capable of being used as an open fire) any part of the pipe which is within 1·8 m of its junction with the appliance is constructed of materials specified in sub-paragraph (a) and any other part of the pipe is of heavy quality asbestos cement complying with BS 835: 1973; or*

(*c*) *(being a pipe serving a free-standing appliance which is an open fire and is not capable of being used as a closed stove) the pipe connects the outlet of the appliance to a chimney, is not more than 460 mm long and is made of sheet steel having a thickness of not less than 1·2 mm.*

Deemed-to-satisfy provisions regarding placing and shielding of flue pipes for Class I appliances

L9.—(1) *A flue pipe serving a Class I appliance shall be deemed to satisfy such requirements of regulation L2(1)(a)(ii) as relate to its placing or shielding if it complies with the relevant provisions of this regulation.*

(2) *If the flue pipe passes through a roof or external wall otherwise than for the purpose of discharging in the manner described in regulation L10(2) or (3), the flue pipe shall be—*

(*a*) *at a distance of not less than three times its external diameter from any combustible material forming part of the roof or wall; or*

(*b*)(*i*) *(in the case of a pipe passing through a roof) separated from any combustible material forming part of the roof by solid non-combustible material not less than 200 mm thick; or*

(*ii*) *(in the case of a pipe passing through an external wall) separated from any combustible material forming part of the wall by solid non-combustible material not less than 200 mm thick (if the combustible material is below or beside the pipe), or not less than 300 mm thick (if the combustible material is above the pipe); or*

(*c*) *enclosed in a sleeve of metal or asbestos-cement which—*

(*i*) *is carried through the roof or wall to project not less than 150 mm beyond any combustible material forming part of the roof or wall; and*

(*ii*) *has between the sleeve and the pipe a space of not less than 25 mm packed with non-combustible thermal insulating material; and*

(*iii*) *(if the roof or wall is of hollow construction with an air space between the outer surface of the sleeve and any combustible material in the roof or wall) is so fitted that such material is not less than 25 mm from the outer surface of the sleeve and not less than one and a half times the external diameter of the pipe from the outer surface of the pipe; or*

(*iv*) *(if the roof or wall is of solid construction) is so fitted that any combustible material forming part of the roof or wall is not less than 190 mm from the outer surface of the pipe and is separated from the outer surface of the sleeve by solid non-combustible material not less than 115 mm thick.*

(3) *Where the flue pipe is adjacent to a wall or partition, it shall be at a distance of—*

(*a*) *not less than three times its external diameter from any combustible material forming part of the wall or partition; or*

(*b*) *not less than one and a half times its external diameter from any such combustible material, if such material is protected by a shield of non-combustible material which—*

(*i*) *is so placed that there is an air space of not less than 12·5 mm between the shield and the combustible material or between the shield and any non-combustible material which covers the combustible material; and*

(*ii*) *is of such width, and is fixed between the wall or partition and the pipe in such a position in relation to the pipe, that it projects on either side of it for a distance of not less than one and a half times the external diameter of the pipe.*

(4) *If the flue pipe passes under any floor, roof or ceiling, it shall be at a distance of—*

(*a*) *not less than four times its external diameter from any combustible material forming part of the floor, roof or ceiling; or*

(*b*) *not less than three times its external diameter from any such combustible material, if such material is protected by a shield of non-combustible material which—*

(*i*) *has an air space of not less than 12·5 mm between the shield and the combustible material or between the shield and any non-combustible material which covers the combustible material; and*

(*ii*) *is of such width, and is fixed between the floor, roof or ceiling and the pipe in such a position in relation to the pipe that it projects on either side of it for a distance of not less than two and a half times the external diameter of the pipe.*

Proximity of combustible material—Class I appliances

L10.—(1) Subject to paragraphs (2) and (3), no combustible material shall be so placed in any chimney or fireplace recess serving a Class I appliance, or in any wall of which such a chimney or recess forms part, as to be nearer to a flue, to the inner surface of the recess, or to an opening into a flue or through the back or jambs of the recess, than 150 mm (in the case of a wooden plug) or 200 mm (in the case of any other material).

(2) Where a flue pipe serving a Class I appliance discharges into the side of a flue in a chimney, any combustible material placed in the chimney, or in any wall of which the chimney forms part, shall be separated from the flue pipe by solid non-combustible material not less than 200 mm thick (if such material is beside or below the pipe) or not less than 300 mm thick (if such material is above the pipe).

(3) Where a flue pipe serving a Class I appliance discharges into the bottom of a flue in a chimney supported by a slab, floor or roof, any combustible material forming part of or placed in the slab, floor or roof shall be separated from the flue pipe by solid non-combustible material not less than 200 mm thick.

(4) Where the thickness of solid non-combustible material surrounding a flue in a chimney serving a Class I appliance is less than 200 mm, no combustible material, other than a floorboard, skirting board, dado rail, picture rail, mantelshelf or architrave, shall be so placed as to be nearer than 38 mm to the outer surface of the chimney.

(5) No metal fastening which is in contact with combustible material shall be so placed in any chimney or fireplace recess serving a Class I appliance, or in any wall of which such a chimney or recess forms part, as to be nearer than 50 mm to a flue, to the inner surface of the recess, or to an opening into a flue or through the back or jambs of the recess.

Openings into flues for Class I appliances

L11. No opening shall be made into any flue in a chimney or flue pipe serving a Class I appliance except—

(*a*) an opening made for inspection or cleaning and fitted with a closely fitting cover of non-combustible material; or

(*b*) an air inlet which is in the same room or internal space as the appliance, is fitted with a cover of non-combustible material and is capable of being closed; or

(*c*) an opening which is in the same room or internal space as the appliance and is fitted with a draught stabiliser or explosion door of non-combustible material.

Flues communicating with more than one room or internal space—Class I appliances

L12. No flue in a chimney or flue pipe serving a Class I appliance shall communicate with more than one room or internal space in a building:

Provided that nothing in this regulation shall prohibit—

(i) the installation of a back-to-back grate; or

(ii) the installation of two or more gas-fired incinerators in accordance with the requirements of regulation M6(2); or

(iii) the making of an opening which complies with the description contained in regulation L11(*a*) for the purpose of giving access to a flue from a room or internal space other than that in which the appliance is installed.

Outlets of flues for Class I appliances

L13. The outlet of any flue in a chimney or flue pipe serving a Class I appliance shall be so situated that the top of such chimney or flue pipe (exclusive of any chimney pot or other flue terminal) is not less than—

(*a*) 1 m above the highest point of contact between the chimney or flue pipe and the roof:

Provided that where a roof has a pitch on both sides of the ridge of not less than 10° with the horizontal, and the chimney or flue pipe passes through the roof at or within 600 mm of the ridge, the top of the chimney or flue pipe (exclusive of any chimney pot or other flue terminal) may be less than 1 m but not less than 600 m above the ridge; and

(*b*) 1 m above the top of any part of a window or skylight capable of being opened, or of any ventilator, air inlet to a ventilation system or similar opening, which is situated in any roof or external wall of a building and is not more than 2·3 m, measured horizontally, from the top of the chimney or flue pipe; and

(*c*) 1 m above the top of any part of a building (other than a roof, parapet wall or another chimney or flue pipe) which is not more than 2·3 m, measured horizontally, from the top of the chimney or flue pipe.

Chimneys for Class II appliances

L14.—(1) Subject to the provisions of paragraph (5), any chimney serving a Class II appliance not being an appliance ventilation duct, shall be either—

(*a*) lined with any one of the following—

(i) acid-resistant tiles embedded in, and pointed with, high alumina cement mortar; or

(ii) pipes which comply with specification (a) of regulation L16; or

(iii) clay flue linings which comply with BS 1181: 1971 and are jointed and pointed with high alumina cement mortar; or

(*b*) constructed of dense concrete blocks made of, or having inside walls made of, high alumina cement, and in either case jointed and pointed with high alumina cement mortar;

Provided that nothing in sub-paragraph (*b*) shall prohibit the use of bricks or of dense concrete blocks made otherwise than with high alumina cement, in either case jointed and pointed with cement mortar, for the construction of a chimney without flue linings if—

(i) the flue serves one appliance only; and

(ii) the appliance served by the flue is of a type described in column (2) of the Table to this regulation; and

(iii) the length of the flue is such as is permitted by the Table having regard to the particulars of the flue and the type of appliance specified therein.

(2) Any flue in a chimney serving a Class II appliance (including an appliance ventilation duct) shall be surrounded and separated from any other flue in the chimney by solid material not less than 25 mm thick:

Provided that where two or more flue pipes are encased in a duct, nothing in this regulation shall require such flue pipes to be so separated.

(3) No fastening, other than a non-combustible support to a flue liner, shall be built into, or placed in, any chimney serving a Class II appliance (including an appliance ventilation duct) within 25 mm of any flue.

(4) Nothing in this regulation shall apply to any part of a flue in a chimney pot or other flue terminal.

(5) Notwithstanding the requirements of paragraph (1) of this regulation, a chimney serving a Class II appliance (not being an appliance ventilation duct) may be lined with a flexible flue liner if—

(*a*) the chimney is already lined or constructed in accordance with that paragraph; or

(*b*) the chimney is not so lined or constructed but was erected under former control.

TABLE TO REGULATION L14

(Maximum length of certain flues)

Situation of flue	Type of appliance	Maximum length of flue (in m)	
		If flue is circular or square, or is rectangular and has the major dimension not exceeding three times the minor dimension	If flue is rectangular and has the major dimension exceeding three times the minor dimension
(1)	(2)	(3)	(4)
(*a*) Flue formed by a chimney or flue pipe which is internally situated (that is to say, otherwise than as (*b*) below)	Gas fire	21	12
	Heater installed in drying cabinet or airing cupboard; or instantaneous water heater	12	(not permitted)
	Air heater or continuously burning water heater	6	(not permitted)
(*b*) Flue formed by a chimney having one or more external walls; or by a flue pipe which is situated externally or within a duct having one or more external walls	Gas fire	11	6
	Heater installed in drying cabinet or airing cupboard; or instantaneous water heater	6	(not permitted)

Flue pipes for Class II appliances

L15. Any flue pipe serving a Class II appliance shall, if it is constructed of pipes of the spigot and socket type, have the socket of each component uppermost.

Deemed-to-satisfy provisions regarding materials for the construction of flue pipes for Class II appliances

L16. *A flue pipe serving a Class II appliance shall be deemed to satisfy such requirements of regulation L2(1)(a) as relate to the nature, quality and thickness of its materials if it complies with any of the following specifications:*

(*a*) *clay pipes and fittings which comply with BS 65 and 540: Part 1: 1971, are of British Standard type, socketed, imperforate and acid resistant and are jointed and pointed with high alumina cement mortar;*

(*b*) *cast iron spigot and socket flue pipes and fittings which comply with BS 41: 1973 and are coated on the inside with acid-resistant vitreous enamel and jointed with an acid-resistant compound;*

(*c*) *sheet metal flue pipes and fittings which comply with BS 715: 1970 excluding the reference to epoxy resin from Table 2 of that publication;*

(*d*) *stainless steel pipes and fittings;*

(*e*) *asbestos-cement flue pipes and fittings which—*

(*i*) *comply with BS 835: 1973 or (except where they form a flue serving an incinerator) BS 567: 1973; and*

(*ii*) *(unless the flue serves one appliance only, and that appliance is of a type specified in column (2) of the Table to regulation L14, and the length of the flue is such as is permitted by that Table having regard to the particulars of the flue and the type of appliance specified therein), are coated on the inside with an acid-resistant compound which either is prepared from vinyl acetate polymer or has a rubber derivative base; and are jointed with an acid-resistant compound.*

Deemed-to-satisfy provisions regarding placing and shielding of flue pipes for Class II appliances

L17.—(1) *A flue pipe serving a Class II appliance shall be deemed to satisfy such requirements of regulation L2(1)(a)(ii) as relate to its placing and shielding if —*

(*a*) *no part of the flue pipe is less than 50 mm from any combustible material; and*

(*b*) *where it passes through a roof, floor, ceiling, wall or partition constructed of combustible materials, the flue pipe is enclosed in a sleeve of non-combustible material and is separated from the sleeve by an air space of not less than 25 mm.*

(2) *A flue pipe serving a Class II appliance (being a pipe which is situated neither in the room or internal space in which the appliance is installed nor in an enclosed space to which no person has access) shall be deemed to satisfy such requirements of regulation L2(3)(a) as relate to the placing and shielding of a pipe within a building if—*

(*a*) *it is enclosed, either separately or together with one or more other flue pipes serving Class II appliances, in a casing constructed of suitable, but not necessarily imperforate, non-combustible material; and*

(*b*) *there is a distance of at least 25 mm between the inside of the casing and the outside of any flue pipe; and*

(*c*) *no combustible material is built into, or enclosed within, the casing.*

Sizes of flues for Class II appliances

L18.—(1) The measurements in cross-section of a flue serving a Class II appliance (except where any part of that flue is in a ridge terminal) shall be such that—

(*a*) no dimension is less than 63 mm; and

(*b*) if the flue is rectangular in section and is not in an appliance ventilation duct, the major dimension is not more than—

(i) six times the minor dimension if the flue serves only one gas fire or five times the minor dimension if the flue serves only one appliance other than a gas fire; or

(ii) one and a half times the minor dimension, if the flue is a main flue; or

(*c*) if the flue is rectangular in section and is in an appliance ventilation duct, the major dimension is not more than twice the minor dimension.

(2) The cross-sectional area of a flue serving one Class II gas fire shall be not less than 12 000 mm^2 and the area of the aperture in any local restrictor unit in the flue shall be not less than 6000 mm^2.

(3) The cross-sectional area of a flue serving one Class II appliance other than a gas fire shall be not less than the area of the outlet of that appliance.

(4) The cross-sectional area of a main flue serving two Class II gas appliances (other than gas fires) installed in the same room or internal space shall be not less than the larger of the following, that is to say—

(*a*) the area of the larger of the outlets of the appliances; or

(*b*) the area specified in the Table to this regulation, according to the total input rating of the appliances.

(5) Subject to the requirements of regulation M10(*d*)(iv), the nominal cross-sectional area of a main flue serving two or more Class II appliances installed in different storeys of a building shall be not less than 40 000 mm^2.

(6) The cross-sectional area of a flue in an appliance ventilation duct shall be such as will ensure that the requirements of regulation M10(*b*)(iii) are satisfied.

TABLE TO REGULATION L18

(Minimum cross-sectional area of a flue serving two Class II gas appliances (other than gas fires) installed in the same room or internal space)

Total input rating of appliances (in kW)		Minimum cross-sectional area of flue (in mm^2)
Exceeding (1)	Not exceeding (2)	(3)
—	13	3750
13	18	5750
18	30	7000
30	35	9000
35	45	11500

Openings into flues for Class II appliances

L19. No opening shall be made into a flue serving a Class II appliance except—

(*a*) an opening made for inspection or cleaning, and fitted with a gas-tight cover of non-combustible material; or

(*b*) (if the flue serves an appliance other than a room-sealed appliance or incinerator) an opening which is in the same room or internal space as the appliance and serves as an air inlet or is fitted with a draught diverter or a draught stabiliser.

Flues communicating with more than one room or internal space—Class II appliances

L20.—(1) No flue serving a Class II appliance shall communicate with more than one room or internal space in a building except—

(*a*) a flue constructed to serve two or more Class II gas appliances installed in accordance with regulation M10; or

(*b*) a flue constructed to serve two or more Class II incinerators installed in accordance with regulation M11:

Provided that nothing in this paragraph shall prohibit the making of an opening as described in regulation L19(*a*), for the purpose of giving access to a flue from any room or internal space other than that in which the appliance is installed.

(2) A main flue serving two or more Class II gas appliances installed in different storeys of a building (being neither a flue in an appliance ventilation duct nor a flue through which the passage of the products of combustion is assisted by a mechanically operated system of extraction) shall be so constructed that—

(*a*) it is not formed by a chimney comprising part of an external wall or by a flue pipe encased in a duct comprising part of an external wall or situated externally; and

(*b*) it is without offsets; and

(*c*) it is not inclined at an angle greater than 10° from the vertical; and

(*d*) each appliance discharges into it by way of a subsidiary flue complying with paragraph (3).

(3) A subsidiary flue serving a Class II gas appliance, being a flue which discharges into a main flue to which paragraph (2) relates, shall—

(*a*) discharge into such main flue at a point not less than 1·2 m above the outlet of the appliance which it serves; and

(*b*) make an angle of not less than 45° with the horizontal except where any other angle is necessary for the purpose of connecting the subsidiary flue to the appliance or to the main flue.

Outlets of flues for Class II appliances

L21.—(1) The outlet of any flue serving a Class II appliance shall be—

(*a*) fitted with a flue terminal designed to allow free discharge, to minimise down-draught and to prevent the entry of any matter which might restrict the flue; and

(*b*) so situated externally that a current of air may pass freely across it at all times; and

(*c*) so situated in relation to any opening (that is to say, any part of a window or skylight capable of being opened or any ventilator, air inlet to a ventilation system or similar opening in any roof or external wall of a building) that—

(i) (if the appliance is a gas appliance) no part of the outlet is less than 600 m from any opening; or

(ii) (if the appliance is an incinerator) no part of the outlet is less than 1 m above the top of any opening if such opening is less than 2·3 m, measured horizontally, from the outlet.

(2) The outlet of a main flue serving two or more Class II gas appliances installed in different storeys of a building (being neither a flue in an appliance ventilation duct nor a flue through which the passage of the products of combustion is assisted by a mechanically operated system of extraction) and into which each appliance discharges by way of a subsidiary flue, shall be so situated that—

(*a*) the outlet is not less than 6 m above any appliance served by the flue; and

(*b*) where the chimney or flue pipe passes through a pitched roof, the outlet is above the level of the ridge of the roof; or

(*c*) where the chimney or flue pipe passes through a flat roof, the outlet is not below the highest of the following levels—

(i) 600 mm above the roof;

(ii) 600 mm above any parapet which is within 1·5 m, measured horizontally, of the outlet;

(iii) the level of the top of any other part of the structure which is within 1·5 m, measured horizontally, of the outlet;

(iv) a level corresponding to the height of any part of the structure which is at a distance exceeding 1·5 m, measured horizontally, from the outlet reduced by one third of the difference between such distance and 1·5 m.

Insulated metal chimneys serving Class I or Class II appliances

L22.—(1) An insulated metal chimney serving a Class I or Class II appliance shall be so constructed as to comply with the relevant requirements of regulations L2(4) and (6), L6(4) and (7), L11, L12, L13, L18(1), (2), (3) and (4), L19, L20(1) and L21 and with the provisions of paragraph (2) of this regulation:

Provided that regulation L20(1)(*a*) shall have effect as though there were substituted for the reference to regulation M10 a reference to regulation M10(*a*).

(2) The provisions to which reference is made in paragraph (1) are as follows—

(*a*) the chimney shall be constructed of components complying with BS 4543: 1970;

(*b*) joints between components shall not be situated within the thickness of any wall, floor, ceiling or roof;

(*c*) if the chimney serves a Class I appliance, no part of the flue shall make an angle with the horizontal of less than 60° except where necessary to connect the chimney to the appliance;

(*d*) no combustible material shall be so placed as to be nearer to the outer surface of the chimney than the distance (X) adopted for the purposes of the test procedure specified in Appendix C to BS 4543: 1970;

(*e*) the chimney shall be readily accessible for inspection and replacement throughout its length;

(*f*) if any part of the chimney is situated within a cupboard or storage space—

(i) that part shall be enclosed by a removable casing constructed of suitable imperforate material;

(ii) the distance between the inside of the casing and the outside of the chimney shall be not less than the distance specified in sub-paragraph (*d*); and

(iii) no combustible material shall be enclosed within the casing; and

(*g*) no part of the chimney shall pass through or be attached to any building or part of a building other than a building or part in the same occupation as that within which the appliance served by the chimney is situated.

WORKS AND FITTINGS

PART M

HEAT-PRODUCING APPLIANCES AND INCINERATORS

Interpretation of Part M

M1. In this Part—

(*a*) the provisions of regulation L1(1) shall apply except that neither "appliance" nor "incinerator" shall include an incinerator employing electricity as a means of igniting refuse;

(*b*) "permanent vent" means a purpose-made opening or duct which is designed to allow the passage of air at all times; and

"ventilation opening" has the meaning ascribed to that expression in regulation K4(1).

Prevention of emission of smoke—(Clean Air)

M2. In any building (other than a building erected under former control) there shall not be installed for the purposes of heating or cooking in that or any other building any appliance which discharges the products of combustion into the atmosphere, unless that appliance is designed to burn as fuel either gas, hard coke or anthracite:

Provided that nothing in this regulation shall prohibit the installation of—

(i) a furnace which complies with section 3 of the Clean Air Act (Northern Ireland) 1964(i) (which requires that new furnaces shall so far as practicable be smokeless); or

(ii) an appliance of a class exempted conditionally or unconditionally from the provisions of section 11 of the Clean Air Act (Northern Ireland) 1964 (which relates to smoke control areas) by any order for the time being in force under subsection (7) of that section.

High-rating appliances

M3. No high-rating appliance shall be installed in a building unless—

(*a*) it discharges into a flue; and

(*b*) the outlet of the flue is so situated as to comply with the requirements of regulation L2(4)(*a*); and

(*c*) any chimney, flue pipe, fireplace recess or constructional hearth which serves it, complies with the relevant requirements of regulation L2(1), (2), (3) and (6); and

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(i) 1964 c. 16 (N.I.)

(*d*) any other part of the building is so constructed, situated or protected as to ensure that it will not be ignited by heat from the appliance; and

(*e*) provision is made for the introduction of combustion air in sufficient quantity to ensure the efficient operation of the appliance and the proper discharge from the appliance through the flue which serves it.

Class I appliances

M4.—(1) Subject to the special provisions relating to certain Class I oil-burning appliances set out in regulation M5, no Class I appliance shall be installed in a building unless the installation complies with the provisions of this regulation.

(2) Provision shall be made for the introduction of combustion air into the room or other internal space in which the appliance is installed in sufficient quantity to ensure the efficient operation of the appliance and (except in the case of an appliance to which regulation M5(4)(*b*) refers) the proper discharge from the appliance through the flue which serves it.

(3) The appliance shall be placed upon or over—

(*a*) a constructional hearth which complies with the relevant provisions of Part L; or

(*b*) a constructional hearth built under former control and conforming with the provisions of Part L, other than regulations L4(1)(*c*)(ii) or L4(1)(*d*); or

(*c*) a superimposed hearth constructed of non-combustible materials, not less than 48 mm thick and placed wholly or partly upon a constructional hearth which complies with either sub-paragraph (*a*) or sub-paragraph (*b*).

(4) Where the appliance is installed upon or over a constructional hearth without an intervening superimposed hearth, the distance measured horizontally from the base of the appliance to the edges of the hearth, or (if combustible material is laid on the hearth as a continuation of the finish of the adjoining floor) from the base of the appliance to the combustible material, shall be not less than—

(*a*) at the front, 300 mm (if the appliance is an open fire or a stove which can, when opened, be operated as an open fire) or 225 mm (in any other case); and

(*b*) at the back and sides, 150 mm, or (if the hearth extends to a wall or partition) such smaller distance as will not contravene the requirements of paragraph (7).

(5) If the appliance is installed upon or over a superimposed hearth, the appliance shall be so placed that—

(*a*) it is wholly over the constructional hearth beneath that superimposed hearth; and

(*b*) no part of the base of the appliance is within 150 mm, measured horizontally, of any combustible material beside or upon the constructional hearth; and

(*c*) the distance measured horizontally from the base of the appliance to the edges of the superimposed hearth is not less than the dimensions given in paragraph (4).

(6) If the appliance is not a free-standing appliance and is placed on or over a constructional hearth in a fireplace recess, the recess shall be so constructed as to comply with the relevant provisions of Part L.

(7) The appliance shall be so placed that no part of its back or sides is within 150 mm, measured horizontally, of a wall or partition (other than a wall forming part of a fireplace recess which complies with the relevant provisions of Part L) unless that part of the wall or partition which is situated between the floor and the level of 300 mm above the top of the appliance is—

(*a*) constructed of solid non-combustible material; and

(*b*) not less than 200 mm thick (if the wall or partition is less than 50 mm from the appliance) or 75 mm thick (in any other case).

(8) Any part of the building (other than a wall or partition to which the provisions of paragraph (7) relate) which is in proximity to the appliance and above the level of the adjoining floor and is constructed of combustible materials, shall be so situated or protected as to ensure that it will not be ignited by heat from the appliance.

(9) The appliance shall discharge into—

(*a*) a flue in a chimney which complies with the relevant provisions of Part L; or

(*b*) a flue in a chimney built under former control and conforming with the relevant provisions of Part L excluding regulation L6; or

(*c*) a flue in a flue pipe which complies with the relevant provisions of Part L.

(10) Subject to the exception in respect of incinerators contained in regulation M6(2), the flue into which the appliance discharges shall serve no other appliance:

Provided that nothing in this paragraph shall prohibit the installation of two solid fuel appliances or two oil-burning appliances so as to discharge into the same flue if—

(*a*) both appliances are in the same room; and

(*b*) each appliance is a closed slow-burning appliance; and

(*c*) the aggregate rating of the appliances does not exceed 45 kW; and

(*d*) the cross-sectional area of the flue is not less than the area of the larger of the flue connections.

(11) An appliance which is an open fire and is not capable of being used as a closed stove shall not be installed unless secure means of anchorage for an effective fireguard are, if not provided in the appliance itself, provided in the adjoining structure.

Special provisions for certain Class I oil-burning appliances

M5.—(1) In this regulation, any reference to hearth temperature, surface temperature or flue gas temperature is a reference to that temperature as determined respectively in accordance with Test procedure No. 11, Measurement method 8 or Measurement method 3 prescribed in BS 4876: 1972.

(2) Paragraphs (3), (4) and (5) of regulation M4 shall not apply to the installation of a Class I oil-burning appliance if—

(*a*) the hearth temperature of the appliance does not exceed 100°C and is so limited by means other than the interposition of unprotected insulating material between the burner and the base of the appliance; and

(*b*) the appliance is placed on, or incorporates, an imperforate rigid seating which is constructed of non-absorbent, non-combustible material and is of such dimensions that no part of the front, back or sides of the appliance extends (if projected on plan) beyond the edges of the seating.

(3) Paragraphs (6), (7) and (8) of regulation M4 shall not apply to the installation of a Class I oil-burning appliance if the surface temperature of the side panels of the appliance does not exceed 100°C.

(4) Paragraph (9) of regulation M4 shall not apply to the installation of a Class I oil-burning appliance if—

(*a*) the flue gas temperature of the appliance does not exceed 260°C and the appliance discharges into—

(i) a flue in a chimney (not being an appliance ventilation duct) which is lined or constructed as prescribed in regulation L14 (excluding the proviso to paragraph (1) thereof); or

(ii) a flue in a flue pipe which complies with regulation L15 and with any one of the specifications set out in regulation L16 (excluding the words in brackets in specification (*e*)(ii) therein) and is installed in accordance with regulation L17; or

(*b*) the appliance has an output rating not exceeding 3 kW and is designed to operate without being connected to a flue.

Additional provisions and exception for Class I incinerators

M6.—(1) No Class I incinerator shall be installed in a building unless—

(*a*) an after-burner or other means of smoke elimination is fitted; and

(*b*) there are means of access for cleaning the flue which serves it.

(2) Notwithstanding anything contained in regulation M4(10), a gas-fired incinerator may be installed in each of two or more storeys of a building so as to discharge into the same flue if—

(*a*) the discharge through the flue is assisted by a mechanically operated system of extraction; and

(*b*) there are means for automatically cutting off the gas supply in the event of failure of the system of extraction; and

(*c*) each incinerator is fitted with a flame-failure device.

Deemed-to-satisfy provisions for the supply of combustion air to Class I appliances

M7.—(1) *The provisions of this regulation shall not apply if the room or space in which the appliance is installed is served by a warm air heating system or by a mechanical ventilation or air conditioning system.*

(2) *The requirements of regulation M4(2) shall be deemed to be satisfied if the room or space in which the appliance is installed has—*

(*a*) *in the case of an open fire which is not capable of being used as a closed stove or of an appliance to which regulation M5(4)(b) refers, a ventilation opening; or*

(*b*) *in any other case, a permanent vent which—*

(i) *has an unobstructed cross-sectional area of not less than the minimum area specified in the Table to this regulation; and*

(ii) communicates directly either with the external air or with a void space which is situated beneath the lowest floor of the building and has a permanent vent the unobstructed cross-sectional area of which is not less than the minimum area prescribed for the purposes of sub-paragraph (b)(i).

Table to Regulation M7

(Minimum unobstructed cross-sectional area of permanent vent)

Number of appliances installed in room or space (1)	*Minimum unobstructed cross-sectional area of permanent vent* (2)
1	*Area equivalent to—* *(i) cross-sectional area of flue connection; or* *(ii) 550 mm² for each kilowatt (or part thereof) of the maximum output per hour of the appliance,* *whichever is the greater*
2 or more	*Area equivalent to—* *(i) cross-sectional area of larger or largest flue connection; or* *(ii) 550 mm² for each kilowatt (or part thereof) of the aggregate maximum output per hour of the appliances,* *whichever is the greater*

Class II appliances

M8.—(1) No Class II appliance shall be installed in a building unless the installation complies with the following provisions of this regulation.

(2) Unless the appliance is a room-sealed appliance or is a gas heater installed in a cabinet or cupboard as specified in regulation M9(1)(*c*)(ii), provision shall be made for the introduction of combustion air into the room or other internal space in which the appliance is installed in sufficient quantity to ensure the efficient operation of the appliance and, in the case of a flued appliance, the proper discharge from the appliance through the flue which serves it.

(3) Below the appliance there shall be a hearth constructed of non-combustible material not less than 12·5 mm thick which—

(*a*) extends not less than 150 mm beyond the back and sides of the appliance or, if there is a wall within 150 mm from the appliance, up to that wall; and

(*b*) extends forward not less than 225 mm, measured horizontally, from any flame or incandescent material within the appliance:

Provided that this paragraph shall not apply if the appliance—

(i) is so installed that no part of any flame or incandescent material is less than 225 mm above the floor; or

(ii) satisfies the test requirements specified in clause 14 of BS 1250: Part I: 1966.

(4) The back, top and sides of the appliance, including any draught-diverter associated with it, shall be separated from any combustible material forming part of the building (other than the floor or hearth beneath the appliance) by a shield of non-combustible material not less than 25 mm thick or by an air space of not less than 75 mm:

Provided that this paragraph shall not apply if the appliance satisfies the test requirements specified in clause 14 of BS 1250 : Part I: 1966.

(5) Subject to the exceptions in respect of gas appliances contained in regulation M9, the appliance shall discharge into either—

(*a*) a flue in a chimney, appliance ventilation duct or flue-pipe which complies with the relevant provisions of Part L relating to Class II appliances; or

(*b*) a flue in a chimney built under former control which complies with the relevant provisions of Part L relating to Class II appliances (excluding regulation L14); or

(*c*) in the case of a gas fire, a flue in a chimney which complies with the relevant provisions of Part L relating to Class I appliances (excluding, if the chimney was built under former control, regulation L6).

(6) Subject to the exceptions contained in regulation M10 (in the case of a Class II gas appliance) or regulation M11 (in the case of a Class II incinerator), the flue into which the appliance discharges shall serve no other appliance.

(7) An appliance which is required by paragraph (5) to discharge into a flue shall not be installed in a bathroom unless—

(*a*) the appliance is a room-sealed appliance; or

(*b*)(i) the appliance has an input rating not exceeding 12 kW and does not heat water for a bath; and

(ii) the room has a permanent vent which communicates directly with the external air and has an unobstructed cross-sectional area which is not less than that of the flue or 7500 mm^2 whichever is the greater.

Exceptions permitting discharge of Class II gas appliances otherwise than into a flue

M9.—(1) Notwithstanding anything contained in regulation M8(5)—

(*a*) a gas cooker may be installed so as to discharge into the room in which it is situated if the room has a ventilation opening;

(*b*) a room-sealed gas appliance may be installed so as to discharge directly into the external air, if—

(i) the inlet and outlet of the appliance are incorporated in a terminal which is designed to allow free intake of combustion air and discharge of the products of combustion and to prevent the entry of any matter which may restrict the inlet or outlet; and

(ii) where the outlet is wholly or partly beneath any opening (that is to say, any ventilation opening, permanent vent, inlet to a ventilation system or similar opening), no part of the outlet is within 300 mm, measured vertically, of the bottom of that opening; and

(iii) where the outlet of the appliance is less than 2 m above the level of any ground, balcony, flat roof or place to which any person has access and which adjoins the wall in which the outlet is situated, the outlet is protected by a guard of durable material;

(*c*) a gas heater may be installed in a drying cabinet or airing cupboard so as to discharge otherwise than into a flue if—

(i) the cabinet or cupboard has an outlet into a flue which has a cross-sectional area of not less than 12 000 mm^2 and complies with the provisions of Part L relating to flues serving Class II appliances and the room in which the cabinet or cupboard is situated has a ventilation opening; or

(ii) the cabinet or cupboard has an inlet and an outlet connected to an appliance ventilation duct constructed in compliance with the relevant provisions of Part L and the door of the cabinet or cupboard, when opened, operates so as automatically to close the inlet and outlet; or

(iii) the input rating of the appliance does not exceed 2 kW and the room or internal space in which the cabinet or cupboard is situated has means of ventilation which comply with the requirements of paragraph (2);

(*d*) a water heating gas appliance may be installed so as to discharge otherwise than into a flue, if the room or internal space in which the appliance is situated has a capacity exceeding 6 m^3 and has means of ventilation which comply with the requirements of paragraph (2) and the appliance does not heat water for a bath and complies with any one of the following specifications—

(i) an instantaneous water heater having an input rating not exceeding 12 kW; or

(ii) a storage water heater having an input rating not exceeding 3 kW or, if the storage capacity does not exceed 45 litres, having an input rating not exceeding 4·5 kW; or

(iii) a wash-boiler or washing-machine having an input rating not exceeding 6 kW; or

(iv) a water heating appliance (other than an instantaneous water heater, storage water heater, wash-boiler or washing-machine) having an input rating not exceeding 3 kW;

(*e*) a space heating gas appliance may be installed so as to discharge otherwise than into a flue if the room or internal space in which the appliance is situated has means of ventilation which comply with the requirements of paragraph (2) and the input rating of the appliance does not exceed—

(i) (if the appliance is installed in a room) 150 W per 3 m^3 of space in that room; or

(ii) (if the appliance is installed in an internal space other than a room) 300 W per 3 m^3 of space surrounding the appliance:

Provided that if more than one space heating gas appliance is so installed in a room or internal space, the total rating of the appliances shall not exceed the rating specified in this sub-paragraph.

(2) No appliance described in paragraph (1)(*c*)(iii), (*d*) or (*e*) shall be installed in a room or internal space so as to discharge otherwise than into a flue unless such room or space has—

(*a*) a ventilation opening; and

(*b*) if the capacity of the room or space is within the limits specified in column (2) of the Table to this regulation, a permanent vent which—

(i) communicates either directly with the external air or with a ventilated hall, passage or internal space (not being a habitable room); and

(ii) has an unobstructed cross-sectional area which is not less than the minimum area specified in column (3) of the Table, according to the type of appliance and the capacity of the room or internal space in which the appliance is installed.

TABLE TO REGULATION M9

(Minimum unobstructed area of permanent vent)

Type of appliance (1)	Capacity of room or internal space in which the appliance is installed (in m^3) (2)	Minimum unobstructed area of vent (in mm^2) (3)
Instantaneous water heating appliance	Exceeding 6 but not exceeding 11	3 250
Any other water heating appliance	Exceeding 6 but not exceeding 11	9 500
	Exceeding 11 but not exceeding 21	3 250
Space heating appliance; or heater installed in drying cabinet or airing cupboard	Not exceeding 57 ..	9 500 (if vent opens directly to external air) or 19 000 (in any other case)
	Exceeding 57	As above, but increased by 3250 and 6500 respectively for each kW or part thereof by which the input rating of the appliance exceeds 3 kW.

Exceptions permitting discharge from two or more Class II gas appliances into the same flue

M10. Notwithstanding anything contained in regulation M8(6)—

(*a*) two or more Class II gas appliances (other than gas fires) may be installed in the same room or internal space so as to discharge into the same flue if—

(i) the flue is a main flue which complies with the relevant provisions of Part L; and

(ii) each appliance is fitted with a draught-diverter;

(*b*) a Class II room-sealed gas appliance may be installed in a room or internal space in each of two or more storeys of a building so as to discharge into the same appliance ventilation duct if—

(i) the duct complies with the relevant provisions of Part L; and

(ii) any appliance having an input rating exceeding 7·5 kW is equipped with a flame-failure device; and

(iii) under any conditions of normal operation of the appliances, the combustion air entering the uppermost appliance will not contain more than 2% in volume of carbon dioxide;

(*c*) a Class II gas appliance may be installed in a room or internal space in each of two or more storeys of a building so as to discharge into the same flue if—

(i) the flue is a main flue which complies with the relevant provisions of Part L; and

(ii) the discharge through the flue is assisted by a mechanically operated system of extraction; and

(iii) there are means for automatically cutting off the gas supply in the event of failure of the system of extraction; and

(iv) each appliance is fitted with a flame-failure device;

(*d*) a Class II gas appliance may be installed in a room or internal space in each of two or more storeys of a building so as to discharge into the same flue if—

(i) in each such room or internal space the number of windows or parts of windows capable of being opened, and the number of such windows or parts of windows having a similar aspect, are the same as in each other such room or internal space; and

(ii) the flue is a main flue which complies with the relevant provisions of Part L; and

(iii) each appliance discharges into the main flue by way of a subsidiary flue which complies with the relevant provisions of Part L; and

(iv) all appliances are of the same type, being any one of the types specified in the Table to this regulation, and the number and total input rating of such appliances do not exceed those specified in the Table according to the type of appliance and the cross-sectional area of the main flue; and

(v) each appliance is fitted with a flame-failure device.

TABLE TO REGULATION M10

(Class II gas appliances discharging by way of subsidiary flues into a main flue)

Type of appliance	Nominal cross-sectional area of main flue			
	Not less than 40 000 but less than 62 000 mm²		62 000 mm² or more	
	Maximum number of appliances	Total rating (in kW)	Maximum number of appliances	Total rating (in kW)
(1)	(2)	(3)	(4)	(5)
Convector fire with controlled flue flow, having a maximum rate of flow of 70 m³/hr.	5	30	7	45
Instantaneous water heater ..	10	300	10	450
Storage water heater, central heating unit or air heater	10	120	10	180

Additional provisions and exceptions for Class II incinerators

M11.—(1) No Class II incinerator shall be installed in any building unless there are means of access for cleaning the flue.

(2) Notwithstanding anything contained in regulation M8(6), a Class II incinerator may be installed in each of two or more storeys of a building so as to discharge into the same flue if—

(*a*)(i) the flue is a main flue which complies with the relevant provisions of Part L; and

(ii) each incinerator discharges into the main flue through a subsidiary flue complying with the relevant provisions of Part L; or

(*b*)(i) the flue is a main flue which complies with the relevant provisions of Part L; and

(ii) the discharge through the flue is assisted by a mechanically operated system of extraction; and

(iii) there are means for automatically cutting off the gas supply in the event of failure of the system of extraction; and

(*c*) each incinerator is fitted with a flame-failure device.

Deemed-to-satisfy provisions for the supply of combustion air to Class II appliances

M12.—(1) *The provisions of this regulation shall not apply if the room or space in which the appliance is installed is served by a warm air heating system or by a mechanical ventilation or air conditioning system.*

(2) *The requirements of regulation M8(2) shall be deemed to be satisfied if the room or space in which the appliance is installed has—*

(*a*) *in the case of a gas fire, a ventilation opening; or*

(*b*) *in the case of a flued appliance other than a gas fire, a permanent vent which complies with the requirements specified in regulation M7(2)(b); or*

(*c*) *in the case of a flueless appliance, such means of ventilation as are specified in regulation M9(1).*

PART N

Drainage, Private Sewers and Cesspools

Application of Part N

N1.—(1) Regulations N10 to N16 shall apply to any part of a drainage system intended for use in connection with a building, where that part is either wholly below the ground, or is a continuation, in the direction of the flow, of any part of the drainage system which is below the ground.

(2) Regulations N4 to N9 shall apply to any part of the drainage system of a building other than a part to which paragraph (1) applies.

(3) This Part shall not apply to any drain used solely for the conveyance of subsoil water.

Interpretation of Part N

N2.—(1) In this Part—

"inspection chamber" means any chamber constructed on a drain so as to provide access thereto for inspection and cleansing;

"rainwater pipe" means a pipe (not being a drain) which conveys only rainwater;

"soil appliance" includes a watercloset or urinal receptacle, bed-pan washer, bed-pan sink and slop sink;

"soil pipe" means a pipe (not being a drain) which conveys soil water either alone or together only with waste water or rainwater or both;

"ventilating pipe" means a pipe (not being a drain) open to the external air at its highest point, which ventilates a drainage system either by connection to a drain or to a soil pipe or waste pipe and does not convey any soil water, waste water or rainwater;

"waste appliance" includes a slipper bath, lavatory basin, bidet, domestic sink, cleaner's bucket sink, drinking fountain, shower tray, wash fountain, washing trough and washtub;

"waste pipe" means a pipe (not being a drain or overflow pipe) which conveys waste water, either alone or together only with rainwater; and

"waste water" means used water not contaminated by soil water or trade effluent.

(2) Any reference in this Part to a pipe shall, unless the context otherwise requires, include a reference to a number of pipes and fittings jointed together to form a continuous line of pipes.

Water seals in traps

N3. Such provision shall be made in the drainage system of a building, whether above or below the ground, as may be necessary to prevent the destruction under working conditions of the water seal in any trap in the system or in any appliance which discharges into the system.

Soil pipes, waste pipes and ventilating pipes

N4.—(1) Subject to paragraphs (2) and (3), any soil pipe, waste pipe or ventilating pipe shall be of adequate size for its purpose but in no case shall the internal diameter of a soil pipe or waste pipe be less than the internal diameter of any pipe or of the outlet of any appliance which discharges into it.

(2) Without prejudice to the generality of paragraph (1), the internal diameter of a soil pipe shall be not less than—

(*a*) 50 mm, if it exclusively serves one or more urinals; or

(*b*) 75 mm, in any other case.

(3) Without prejudice to the generality of paragraph (1) the internal diameter of a waste pipe shall be not less than 32 mm, if it serves a lavatory basin.

(4) Any soil pipe, waste pipe or ventilating pipe shall—

(*a*) be composed of suitable materials of adequate strength and durability; and

(*b*) have all joints formed in a manner appropriate to the materials of which the pipe is composed and in such a way that the joints shall—

(i) remain airtight; and

(ii) not cause electrolytic corrosion due to the association of dissimilar materials; and

(iii) not form any obstruction in the interior of the pipe; and

(*c*) (if it is necessary to have a bend) be so constructed that the bend does not form an acute angle but has the largest practicable radius of curvature and that there is no change in the cross-section of the pipe throughout the bend; and

(*d*) be adequately supported throughout its length without restraining thermal movement, any fitting which gives such support being securely attached to the building; and

(*e*) be so constructed as to be capable of withstanding a smoke or air test for a minimum period of three minutes at a pressure equivalent to a head of not less than 38 mm of water; and

(*f*) be so placed as to be reasonably accessible for maintenance and repair throughout its length; and

(*g*) have such means of access as are necessary to permit internal cleansing.

Further requirements for soil pipes and waste pipes

N5.—(1) Any soil pipe from a soil appliance and any waste pipe from a waste appliance shall have fitted close to such appliance a suitable and readily accessible trap of adequate diameter, having an adequate water seal and means of access for internal cleansing:

Provided that this paragraph shall not apply to—

(*a*) any soil pipe serving only a soil appliance or any waste pipe serving only a waste appliance if the appliance has an integral trap;

(*b*) any waste pipe serving a bath or lavatory basin where two or more baths or lavatory basins are so fixed in a range that such waste pipe discharges into a semi-circular and accessible open channel of glazed stoneware, or other equally suitable material, formed or fixed in, on or above the floor immediately beneath such baths or lavatory basins and discharging over or into a suitable trap; or

(*c*) any waste pipe serving a lavatory basin or shower tray where a number of lavatory basins or shower trays or both are so fixed in a range that each such waste pipe discharges into a common waste pipe which—

(i) does not exceed 5 m in length; and

(ii) is fitted with a suitable trap; and

(iii) has means of access suitable and adequate for the internal cleansing of the trap and of the whole length of the pipe.

(2) Subject to paragraph (3)—

(*a*) a soil pipe or waste pipe serving an appliance situated within a building shall not be placed outside the external walls thereof unless the building is—

(i) a building erected under former control (including such a building as altered or extended); or

(ii) a building having not more than three storeys; and

(*b*) A waste pipe which is situated outside the external walls of a building shall not discharge waste water into a hopper head or in any other way which would expose the water to the external air.

(3) Notwithstanding the requirements of paragraph (2), any waste pipe which serves an appliance situated within any part of a building the floor of which part is at or about the level of the adjoining ground may discharge into an external trap if the trap has a suitable grating so fitted that the discharge of waste water is effected above the level of the water in the trap but below the level of the grating and the pipe discharges in such a way as not to cause dampness in any building.

Overflow pipes

N6. Any overflow pipe connected to a waste appliance shall either—

(*a*) discharge into a waste pipe in such a way as to be disconnected from the drainage system by the trap installed in accordance with regulation N5; or

(*b*) otherwise so discharge as not to cause dampness in, or damage to, any part of any building.

Further requirements for ventilating pipes

N7. Any ventilating pipe shall be—

(*a*) carried upwards to such a height and so positioned as not to transmit foul air in such a manner as to become prejudicial to health or a nuisance; and

(*b*) fitted at its topmost end with a durable wire cage or other cover which does not unduly restrict the flow of air.

Rainwater gutters

N8. Any gutter which is on a building and intended for collecting rainwater shall be—

(*a*) of adequate size for its purpose; and

(*b*) composed of suitable materials of adequate strength and durability; and

(*c*) adequately supported throughout its length without restraining thermal movement, any fitting which gives such support being securely attached to the building; and

(*d*) so arranged as not to cause dampness in, or damage to, any part of a building; and

(*e*) jointed in a manner appropriate to the material or materials of which it is composed so as to remain watertight; and

(*f*) fitted with an adequate outlet or outlets so placed as to drain the whole length of the gutter.

Rainwater pipes

N9.—(1) Any rainwater pipe which is situated outside a building shall be—

(*a*) of adequate size for its purpose; and

(*b*) composed of suitable materials of adequate strength and durability; and

(*c*) adequately supported throughout its length without restraining thermal movement, any fitting which gives such support being securely attached to the building; and

(*d*) so arranged as not to cause dampness in, or damage to, any part of a building.

(2) Any rainwater pipe which is situated within a building shall be—

(*a*) so constructed that it complies with the requirements of regulation N4(4); and

(*b*) of adequate size for its purpose.

(3) No rainwater pipe shall be constructed so as to discharge into, or to connect with, any pipe or drain used or intended to be used for conveying soil water or waste water, unless provision is made in the design of the sewerage system for the discharge of rainwater.

Materials and construction of drains and private sewers

N10.—(1) Any drain or private sewer shall—

(*a*) be of sufficient strength having regard to the manner in which it is bedded or supported and the maximum loads and forces to which it may be subjected, and (where necessary) protected against injury; and

(*b*) (together with its joints and fittings) be constructed of materials of sufficient durability having regard to the matter passing through it and (if below ground) the nature of the ground and subsoil water through which it passes; and

(*c*) have all joints formed in such a manner—

(i) as is appropriate to the materials of which such drain or sewer is made; and

(ii) that the joints remain watertight under all working conditions, including any differential movement as between the pipe and the ground or any structure through or under which it passes; and

(iii) that the joints do not form any obstruction in the interior of such drain or private sewer; and

(*d*) be laid in a straight line between points where changes of direction or gradient occur; and

(*e*) be so designed and constructed, of such size, and (unless the contents are pumped) laid at such a gradient as to ensure that it is self-cleansing and efficiently carries away the maximum volume of matter which may be discharged into it.

(2) The internal diameter of any drain or private sewer shall, at any point, be not less than that of the outlet of any appliance, pipe or drain the discharge from which passes through it at that point:

Provided that the internal diameter shall not be less than 100 mm in the case of any drain or private sewer which is intended for the conveyance of soil water or water contaminated with trade effluent, or not less than 75 mm in any other case.

(3) Where any drain or private sewer passes through a building, that part which is within the building shall—

(*a*) be adequately supported throughout its length without restricting thermal movement, any fitting giving such support being securely attached to the building; and

(*b*) be so placed as to be reasonably accessible throughout its length for maintenance and repair.

Tests for drains and private sewers

N11. Any drain or private sewer shall, after the work of laying the drain or private sewer has been carried out (including any necessary work of haunching or surrounding the drain or private sewer with concrete and backfilling the trench) be capable of withstanding a suitable test for watertightness.

Means of access to drains and private sewers

N12.—(1) Any drain or private sewer shall have such means of access as may be necessary for inspection and cleansing, and without prejudice to the generality of the foregoing—

(*a*) there shall be an inspection chamber—

(i) at each point where there is such a change of direction or gradient as would prevent any part of the drain or private sewer being readily cleansed without such a chamber;

(ii) on a drain, within 12·5 m from a junction between that drain and another drain, a private sewer or a public sewer, unless there is an inspection chamber situated at that junction;

(iii) on a private sewer, within 12·5 m from a junction between that sewer and another private sewer or a public sewer, unless there is an inspection chamber situated at that junction; and

(iv) at the highest point of a private sewer unless there is a rodding eye at that point; and

(*b*) no part of a drain or private sewer shall be at a distance of more than 45 m (measured along the line of the drain or private sewer) from an inspection chamber situated on the same drain or private sewer.

(2) Subject to the requirements of paragraph (3), any such inspection chamber shall—

(*a*) be so designed and constructed of brickwork, concrete or other not less suitable and durable material as to—

(i) sustain the loads which may be imposed upon it;
(ii) exclude subsoil water; and
(iii) be watertight; and

(*b*) be of such size and form as to permit ready access to the drain or private sewer for inspection, cleansing and rodding; and

(*c*) have a removable and non-ventilating cover of adequate strength, constructed of suitable and durable material; and

(*d*) where the depth of the inspection chamber so requires, have such step irons, ladder or other fitting as will provide safe access to the level of the drain or private sewer; and

(*e*) where the part of the drainage system within the inspection chamber is constructed of open channels, be provided with benching having a smooth impervious finish and so formed as to guide the flow of matter towards the pipe into which the main channel discharges and to provide a safe foothold.

(3) Any inspection chamber within a building, other than an inspection chamber giving access to part of a drain or private sewer which is constructed with inspection fittings having watertight covers, shall be—

(*a*) so constructed, in conjunction with its frame and cover, as to be watertight when subjected to the maximum internal pressure which could be caused by blockage of the drainage system at any point below the inspection chamber; and

(*b*) fitted with a removable and non-ventilating cover of adequate strength, constructed of suitable and durable material which is—
(i) fitted in a frame with an airtight seal; and
(ii) secured to the frame by removable bolts made of corrosion-resistant material.

Inlets to drains to be trapped

N13. Any inlet to a drain, other than a junction between the drain and a soil pipe, a waste pipe or a ventilating pipe, shall be effectively trapped by means of a suitable trap having a seal not less than 50 mm in depth:

Provided that this regulation shall not apply to any inlet to a drain used solely for the conveyance of surface water from a roof if such drain is intercepted by a suitable trap, having a seal not less than 50 mm in depth, from any drain or sewer used for the conveyance of water contaminated by soil water, waste water, or trade effluent.

Trenches for drains and private sewers

N14.—(1) Where any drain or private sewer is constructed adjacent to a loadbearing part of a building, such precautions shall be taken as may be necessary to ensure that the trench in which the drain or private sewer is laid in no way impairs the stability of the building.

(2) Except where the nature of the ground makes it unnecessary, where any drain or private sewer is adjacent to a wall and the bottom of the trench is lower than the foundation of the wall, the trench shall be filled in with concrete to a level which is not lower than the bottom of the foundation of the wall by more than the distance from that foundation to the near side of the trench less 150 mm:

Provided that, where the trench is within 1 m of the foundation of the wall, the trench shall be filled in with concrete to the level of the underside of the foundation.

(3) The concrete filling required by the foregoing paragraph shall have such expansion joints as are necessary to ensure that no continuous length of filling exceeds 9 m.

Drains or private sewers passing through or under walls or under buildings

N15. Where any drain or private sewer passes through a wall (including the wall of an inspection chamber or cesspool) or under a wall or any other part of a building, such precautions shall be taken as may be necessary to prevent damage to, or loss of watertightness in, the drain or private sewer by differential movement.

Junctions

N16.—(1) Any connection between—

(*a*) a branch drain and any other drain; or

(*b*) a drain and a private sewer or public sewer; or

(*c*) a private sewer and a public sewer,

shall be so made that the tributary drain or sewer discharges its contents into the other drain or sewer obliquely in the direction of flow in that other drain or sewer.

(2) Any connection between a drain and a public sewer, or between a private sewer and a public sewer, shall be so made that the connection will remain watertight and otherwise satisfactory under all working conditions.

Cesspools, septic tanks and similar structures

N17.—(1) Any cesspool (including a settlement tank, septic tank or other tank for the reception or disposal of foul matter from any building) shall be—

(*a*) so constructed as to be impervious to both liquid from the inside and subsoil water from the outside; and

(*b*) so sited—

(i) as not to render liable to pollution any spring, stream, well, adit, or other source of water which is used, or is likely to be used, for drinking, domestic or kitchen or scullery purposes; and

(ii) that there is ready means of access for cleansing it and removing its contents without carrying them through any building in which any person resides or is employed in any manufacture, trade or business or to which the public has access; and

(iii) as not to be in such proximity to any building in which any person resides or is employed in any manufacture, trade or business or to which the public has access, as to be liable to become a source of nuisance or a danger to health.

(2) Any cesspool, not being a settlement tank or a septic tank, shall be—

(*a*) of suitable depth to enable it to be emptied completely; and

(*b*) properly covered so as to be impervious to surface water and rainwater; and

(*c*) fitted with a suitable manhole cover for the purposes of inspection (including inspection of the inlet), emptying and cleansing; and

(*d*) adequately ventilated; and

(*e*) without any outlet for overflow or discharge other than the outlet provided for emptying or cleansing; and

(*f*) of a capacity, measured below the level of the inlet, of not less than 18 m^3.

(3) Any settlement tank or septic tank shall be—

(*a*) of suitable depth; and

(*b*) of adequate size, having in no case a capacity of less than $2 \cdot 7\ m^3$; and

(*c*) covered or fenced in; and

(*d*) if covered, adequately ventilated and constructed with means of access for the purposes of inspection (including inspection of the inlet and outlet), emptying and cleansing.

PART P

Sanitary Conveniences

*Watercloset*s

P1.—(1) This regulation shall apply to any watercloset fitting installed for use in connection with a building.

(2) The receptacle shall have a smooth and readily cleansed non-absorbent surface and shall be so constructed and fitted as to discharge through an effective trap of suitable dimensions and thence, without storage, to a soil pipe or a drain.

(3) The flushing apparatus shall be capable of securing the effective cleansing of the receptacle.

(4) No part of the receptacle shall be directly connected with any pipe other than a soil pipe, flush pipe, trap vent pipe or drain.

Urinals

P2.—(1) This regulation shall apply to any urinal or urinal fitting constructed or installed for use in connection with a building.

(2) The urinal shall have one or more slabs, stalls, troughs, bowls or other suitable receptacles, which—

(*a*) have a smooth and readily cleansed non-absorbent surface; and

(*b*) have an outlet fitted with an effective grating and trap; and

(*c*) are so constructed as to facilitate cleansing.

(3) No urinal or urinal fitting shall be constructed or installed unless it is furnished with a flushing apparatus which is capable of securing the effective cleansing of the receptacle.

(4) No part of the receptacle shall be directly connected to any pipe other than a soil pipe, flush pipe, trap vent pipe or drain.

Sanitary accommodation

P3.—(1) In this regulation, "sanitary accommodation" means a room or space constructed for use in connection with a building and which contains watercloset fittings or urinal fittings, whether or not it also contains other sanitary or lavatory fittings:

Provided that if any such room or space contains a cubicle or cubicles so constructed as to allow free circulation of air throughout the room or space, then this regulation shall be treated as applying to the room or space as a whole and not to the cubicle or cubicles separately.

(2) No sanitary accommodation shall open directly into—

(*a*) a habitable room, unless the room is used solely for sleeping or dressing purposes; or

(*b*) a room used for kitchen or scullery purposes; or

(*c*) a room in which any person is habitually employed in any manufacture, trade or business.

(3) Any sanitary accommodation which includes a watercloset fitting and which can be entered directly from a room used for sleeping or dressing purposes, shall be so constructed that it can also be entered without passing through any such room, but this paragraph shall not apply if—

(*a*) (in the case of a dwelling) there is other such sanitary accommodation within the dwelling which can be entered without passing through any such room; or

(*b*) (in the case of a private dwelling-house) there is other such sanitary accommodation outside such house which is used exclusively with such house; or

(*c*) (in any other case) there is within the building other such sanitary accommodation which is available for common use.

(4) Sanitary accommodation shall have either—

(*a*) a window, skylight or other similar means of ventilation which opens directly into the external air and of which the area capable of being opened is not less than one-twentieth of the floor area; or

(*b*) mechanical means of ventilation which effects not less than three changes of air per hour and discharges directly into the external air.

Earthclosets

P4.—(1) This regulation shall apply to any earthcloset constructed for use in connection with a building.

(2)(*a*) Any earthcloset which is not a chemical closet shall be so constructed that it can be entered only from—

(i) the external air; or

(ii) a room or space which can itself only be entered directly from the external air.

(*b*) No earthcloset (whether it is a chemical closet or not) shall open directly into—

(i) a habitable room; or

(ii) a room used for kitchen or scullery purposes; or

(iii) a room in which any person is habitually employed in any manufacture, trade or business.

(3)(*a*) Any earthcloset which can be entered directly from the external air shall have a sufficient opening for ventilation directly to the external air, situated as near to the ceiling as practicable.

(*b*) Any earthcloset which cannot be entered from the external air shall have a window, skylight or other similar means of ventilation which opens directly into the external air and of which the area capable of being opened is not less than one twentieth of the floor area.

(4) Any earthcloset shall be so situated as not to render liable to pollution any spring, stream, well, adit, or other source of water which is used, or is likely to be used, for drinking, domestic or kitchen or scullery purposes.

(5) The floor of the earthcloset shall be of non-absorbent material and, if the earthcloset can be entered directly from the external air, shall in every part, including the part beneath the seat, be not less than 75 mm above the surface of the adjoining ground and have a fall or inclination towards the entrance door of not less than 1 in 25.

(6) The receptacle shall be of non-absorbent material so constructed and placed that its contents shall not escape by leakage or otherwise, or be exposed to rainfall or to the drainage of any waste water or liquid refuse.

(7) The receptacle and other fittings of the earthcloset shall be so constructed and arranged that the use, maintenance and clearance of the earthcloset shall not be prejudicial to health or a nuisance.

(8) No part of the receptacle, or of the interior of the earthcloset, shall have outlet to a drain.

PART Q

Ashpits, Wells, Tanks and Cisterns

Ashpits used in connection with buildings

Q1.—(1) This regulation shall apply to any ashpit constructed for use in connection with a building.

(2) Such ashpit shall be—

(*a*) sited at a distance of not less than 3 m from any building in which any person resides or is employed in any manufacture, trade or business, or to which the public has access; and

(*b*) situated in such a way as not to render liable to pollution any spring, stream, well, adit, or other source of water which is used, or is likely to be used, for drinking, domestic or kitchen or scullery purposes; and

(*c*) constructed in such a way as to be fully enclosed and weatherproof and also proof, so far as possible, against insects and rodents; and

(*d*) fitted with a door in such a position as not to allow the escape of the contents; and

(*e*) adequately ventilated; and

(*f*) (if it serves a building consisting of one dwelling only) of a capacity of not more than $0 \cdot 5\ m^3$.

(3) There shall be ready means of access for cleansing the ashpit and, if practicable, for removing its contents without carrying them through any building in which any person resides or is employed in any manufacture, trade or business, or to which the public has access.

(4) The floor of the ashpit shall be not less than 75 mm above the surface of the adjoining ground, and shall be made of flagstones, concrete or other suitable material.

(5) The walls of the ashpit shall be constructed of—

(*a*) hard smooth brickwork, not less than 100 mm thick, in cement mortar; or

(*b*) common brickwork, not less than 200 mm thick, rendered on the inside with cement and sand in suitable proportions; or

(*c*) other suitable and impervious materials of sufficient thickness.

(6) No part of the interior of the ashpit shall have outlet to a drain.

Wells supplying water for human consumption

Q2.—(1) This regulation shall apply to any well constructed for use in connection with a building and intended to supply water for human consumption.

(2) The ground adjoining such well shaft shall, for a distance of not less than 1·2 m in every direction, be covered with impervious paving (in this regulation referred to as "the paving") constructed so as to slope away from the well.

(3) Such well shall be so situated as not to be liable to pollution from any source, and the sides of the well shall be rendered impervious for such a depth as to prevent contamination through the adjoining ground.

(4) If such well is a dug well, it shall be so constructed as to be readily accessible for cleansing and the top of the well shall be surrounded by a curb extending not less than 150 mm above the level of the paving and so constructed as to prevent the entry of surface water.

(5) If such well is a bored well, its lining tube shall project not less than 150 mm above the level of the paving and such projection shall be surrounded with concrete not less than 150 mm thick, or with other adequate means of protection, for its full height.

(6) Any such well from which water is drawn by a bucket shall have—

(*a*) a hinged cover which will effectively close the well when not in use; and

(*b*) a stand for the bucket not less than 150 mm above the level of the paving.

(7) Any such well from which water is drawn by a pump shall have a cover so fitted as to prevent the entry of surface water or other matter.

Tanks and cisterns used for storage of rainwater for human consumption

Q3.—(1) This regulation shall apply to any tank or cistern constructed or fitted for use in connection with a building and intended to be used for the storage of rainwater for human consumption.

(2) Such tank or cistern shall be adequately ventilated and so covered as to prevent pollution, and, where there is a fixed cover, the tank or cistern shall have a manhole fitted with a cover of sufficient size to allow the tank or cistern to be cleansed.

(3) Such tank or cistern shall have an overflow pipe and the overflow pipe and any ventilator shall be so arranged as to prevent pollution.

(4) Where such tank or cistern is either wholly or partly below the level of the adjoining ground—

(*a*) its walls, floor and roof shall be constructed of bricks, concrete or other suitable material in such a manner as to be impervious; and

(*b*) all pipes connected to it shall be of durable material, and the joint between any pipe and the tank or cistern shall be watertight.

(5) Any draw-off tap or the end of any suction pipe fitted to such tank or cistern shall be fitted not less than 75 mm above the bottom of the tank or cistern.

SCHEDULE 1

PARTIALLY EXEMPTED BUILDINGS

Regulation A5(2)(*a*)

PART A—BUILDINGS

Class	Buildings partially exempted from the provisions of these regulations (1)	Provisions with which compliance is required		
		As to notices (2)	As to materials (3)	As to buildings (4)
1.	A single storey building (not being a building within Class 5 or a building used for any trade or business) which— (i) is used by day only for private occupation or used exclusively for recreational or storage purposes (such as a summer-house, poultry-house, aviary, greenhouse, conservatory, orchard-house, boat-house, coal-shed, garden tool shed, potting-shed or cycle shed); and (ii) is wholly detached from any other building; and (iii) has a floor area not exceeding 30 m^2	Regulations A10 and A11 (if proposal includes work to which any regulation listed in column (4) applies)	Regulation B1 (in so far as it relates to work to which any regulation listed in column (4) applies)	Part E and regulation K3(3) (unless the building— (i) has a capacity not exceeding 30 m^3; and (ii) is not less than 2 m from any building which is within the same boundaries and is either of purpose group I other than a building described in regulation E20 or is of purpose group II or III) Part L
2.	A building which is used only in connection with and during the construction, alteration, extension or repair of any building or other work	Regulations A10 and A11 (if proposal includes work to which any regulation listed in column (4) applies)	Regulation B1 (in so far as it relates to work to which any regulation listed in column (4) applies)	Parts C and D (unless the building is a single storey building) Part L
3.	A building being— any monument for the time being subject to Parts I, II or III of the Historic Monuments Act (Northern Ireland) 1971(j)	Regulations A10 and A11 (if proposal includes work to which Part L applies)	Regulation B1 (in so far as it relates to work to which Part L applies)	Part L

(j) 1971 c. 17 (N.I.)

SCHEDULE 1 (*continued*)

PARTIALLY EXEMPTED BUILDINGS (*continued*)

PART A—BUILDINGS (*continued*)

Class	Buildings partially exempted from the provisions of these regulations (1)	Provisions with which compliance is required		
		As to notices (2)	As to materials (3)	As to buildings (4)
4.	A building which— (i) is used, for a limited period only, in connection with the sale or letting of buildings or building plots in the course of the development of an estate; and (ii) is erected on or in close proximity to the estate; and (iii) is wholly detached from any other building	Regulations A10 and A11	Regulation B1 (in so far as it relates to work to which any regulation listed in column (4) applies)	Parts C and D (unless the building is a single storey building) Part L
5.	A single storey building which— (i) is used as a garage; and (ii) is wholly detached from any other building; and (iii) has a floor area not exceeding 30 m^2	Regulations A10 and A11	Part B	Part E (subject, where applicable, to regulations E18 or E19 and E20) Regulation K3(3) Part L
6.	A single storey building (not being a building within Class 7 or a building used for the purposes of agriculture) which— (i) is used exclusively for the storage of materials or products, or for the accommodation of plant or machinery; and	Regulations A10 and A11	Part B	Parts C and D (unless the building has a capacity not exceeding 100 m^3) Part E (except regulation E15) Regulation K3(3)

	(ii) is a building wherein the only persons habitually employed are engaged solely in the general care, supervision, regulation, maintenance, storage or removal of the materials, products, plant, or machinery in the building; and (iii) is wholly detached from any other building			Part L
7.	A building which— (i) is used exclusively for the accommodation of plant or machinery designed for any of the processes specified against Minimum List Headings 262, 271, 272, 276, 277, 278, 279.2 and 279.4 of the Standard Industrial Classification (3rd Edition, 1968) issued by the Central Statistical Office (whether or not such plant or machinery forms any part of the structure); and (ii) forms part of and is within the curtilage of a works; and (iii) is a building wherein the only persons habitually employed are engaged solely in the general care, supervision, regulation or maintenance of such plant or machinery; and (iv) is wholly detached from any other building	Regulations A10 and A11	Part B	Parts C and D (unless the building is a single storey building having a capacity not exceeding 100 m^3) Regulations E5 and E6 (unless the building is so situated that each side may, in accordance with regulation E7, consist entirely of an unprotected area) Regulations E7 and E17 Regulation K3(3) Part L

SCHEDULE 1 (*continued*)

PARTIALLY EXEMPTED BUILDINGS (*continued*)

PART B—WORKS AND FITTINGS

Buildings partially exempted from the provisions of these regulations (1)	Provisions with which compliance is required		
	As to notices (2)	As to materials (3)	As to works and fittings (4)
Classes 1, 2 and 4	Regulations A10 and A11	Regulation B1 (in so far as it relates to matters governed by the provisions listed in column (4))	Part M Part N (except in relation to surface water drainage) Parts P and Q
Classes 3, 5, 6 and 7	Regulations A10 and A11	Regulation B1 (in so far as it relates to matters governed by the provisions listed in column (4))	Parts M, N, P and Q

SCHEDULE 2

GIVING OF NOTICES AND DEPOSIT OF PLANS Regulation A10

General

Rule A. The following provisions shall be observed in relation to the giving of any notices and the deposit of any plans, sections, specifications and particulars referred to in the other rules of this schedule:

1. Notices and other particulars shall be in writing.

2. Drawings shall be executed or reproduced in a clear and intelligible manner with suitable and durable materials. Plans and sections shall be to a scale of not less than 1:100 or, if the building is so extensive as to render a smaller scale necessary, not less than 1:200; block plans shall be to a scale of not less than 1:1250; and key plans shall be to a scale of not less than 1:2500. The scale shall be indicated on all plans, sections and other drawings and the north point on all block plans and key plans.

3. Every notice, drawing or other document shall be signed by the person required to furnish it to the district council or by his duly authorised agent, and if it is signed by such agent it shall state the name and address of the person on whose behalf it has been furnished.

4. Every such document, together with a duplicate thereof, shall be sent or delivered to the offices of the district council.

Erection of buildings (other than partially exempted buildings)

Rule B. The following are the notices to be given and the plans, specifications and particulars to be deposited by a person intending to erect a building which is neither wholly nor partially exempted within the meaning of regulation A5:

1. Notice of intention to erect a building not wholly or partially exempted from the operation of these regulations.

2. Particulars, so far as necessary to show whether the building complies with all such requirements of these regulations as apply to it, of—

(*a*) the intended use of the building; and

(*b*) the materials of which the building will be constructed; and

(*c*) the mode of drainage; and

(*d*) the means of water supply.

3. A block plan showing—

(*a*) the size and position of the building and its relationship to adjoining buildings; and

(*b*) the width and position of every street adjoining the premises; and

(*c*) the boundaries of the premises and the size and position of every other building and of every garden, yard and other open space within such boundaries.

4. A key plan showing the position of the site when it is not sufficiently identifiable from the block plan.

SCHEDULE 2—*continued*

5. A plan of every floor and roof of the building and a section of every storey of the building, upon which shall be shown (where not already shown on the particulars and plans required by Items 2 to 4), so far as necessary to enable the local authority to determine whether the building complies with these regulations—

(*a*) the levels of the site of the building, of the lowest floor of the building and of any street adjoining the premises, in relation to one another and above some known datum; and

(*b*) the position of the damp-proof courses and any other barriers to moisture; and

(*c*) the position, form and dimensions of the foundations, walls, windows, floors, roofs, chimneys and several parts of the building; and

(*d*) the intended use of every room in the building; and

(*e*) the provision made in the structure for protection against fire; and

(*f*) the provision made in the building or part for means of escape in case of fire and for securing that such means can be safely and effectively used at all material times; and

(*g*) the provision made in the structure for insulation against the transmission of heat and sound.

Erection of partially exempted buildings

Rule C. The following are the notices to be given and the plans, sections, specifications and particulars to be deposited by a person intending to erect a partially exempted building within the meaning of regulation A5 if compliance with the provisions of regulation A10 is required by Part A of Schedule 1:

1. Notice of intention to erect a building partially exempted from the operation of these regulations.

2. Particulars, so far as necessary to show whether the building falls within the relevant class of exemption in Schedule 1 and complies with all such requirements of these regulations as apply to it, of—

(*a*) the intended use of the building; and

(*b*) the materials of which it will be constructed; and

(*c*) the mode of drainage.

3. A block plan showing the size and position of the building and its relationship to adjoining buildings and indicating its distance from the boundaries of the premises.

4. A key plan showing the position of the site when it is not sufficiently identifiable from the block plan.

5 Plans and sections of the building showing the particulars required by Item 5(*a*) to (*e*) of Rule B, so far as may be necessary to enable a district council to determine whether the building complies with these regulations.

Alterations and extensions

Rule D. The following are the notices to be given and the plans, sections, specifications and particulars to be deposited by a person intending to make any alteration of or extension to a building:

SCHEDULE 2—*continued*

1. Notice of intention to alter or extend a building.

2. In the case of alterations not involving any extension of a building—
   (*a*) the plans and sections required by Item 5 of either Rule B or Rule C (whichever is appropriate) of the alterations and of the building so far as affected by the alterations, so far as necessary to establish whether the proposals comply with these regulations; and
   (*b*) a key plan showing the position of the site when it is not sufficiently identifiable from such plans.

3. In the case of an extension of a building—
   (*a*) the plans, sections, specifications and particulars referred to in Items 2, 3, 4 and 5 of either Rule B or Rule C (whichever is appropriate) in relation to the extension as if the extension were the building therein referred to; and
   (*b*) the plans and sections as required by Item 5 of Rule B or Rule C (whichever is appropriate) of the building so far as affected by the extension,

so far as necessary to enable the district council to determine whether the proposals comply with the requirements of these regulations.

Additional requirements

Rule E. Where an authorised officer of the district council considers it to be necessary for the purposes of examining any proposals submitted in accordance with Rule B, C, D or G, he may require the deposit of any of the following drawings and particulars in addition to plans, sections, specifications and particulars required by such rule:

1. A specification of any particular material or materials proposed to be used.

2. The proportions of the materials in any concrete or mortar or the specified minimum strength of the concrete or mortar.

3. Calculations of loading and strength:

Provided that where the dimensions of a structural member accord with the provisions of regulations D7, D12(*b*), D13(*b*), D14 or D15 as the case may be, calculations of strength to demonstrate the adequacy of those dimensions shall not be required.

4. Drawings showing details of particular construction.

5. Calculations relating to the permitted limit of unprotected areas in any side of the building in accordance with regulation E7.

6. In the case of a building, or part of a building, which falls (in accordance with regulation E2) within purpose group IV or V, particulars affecting the number and width of exits and escape routes.

7. Drawings showing the dimensions of space adjoining the windows of habitable rooms.

SCHEDULE 2—*continued*

Works and fittings

Rule F. The following are the notices to be given and the plans, sections, specifications and written particulars to be deposited by a person intending to execute any works or install any fittings to which regulation A8 relates:

1. Notice of intention to execute works or install fittings in connection with a building.

2. Particulars of the works or fittings so far as necessary to establish whether they comply with all such requirements of these regulations as apply to them.

3. Where it is proposed to execute works of drainage or to construct or install a watercloset fitting, urinal fitting, earthcloset, cesspool (including a settlement tank, septic tank or other tank for the reception or disposal of foul matter from buildings) or well, a block plan. Such plan shall, if the execution of works or installation of fittings is in connection with an operation to which Rule B, C or D relates, be the block plan required by such Rule and the block plan shall in any case show, so far as necessary to establish whether the proposals comply with all such requirements of these regulations as apply to them—

(*a*) the position of the works or fittings; and

(*b*) the lines of drainage; the size, depth and inclination of every drain and the means of access to be provided for the inspection and cleansing of the drains; and

(*c*) the position and level of the outfall of the drains; and

(*d*) where the drainage is intended to be connected to a sewer, the position of the sewer.

4. Where it is proposed to construct or install a watercloset fitting, urinal fitting, earthcloset, cesspool (including a settlement tank, septic tank or other tank for the reception or disposal of foul matter from buildings), well, water tank or cistern for the storage of rainwater for human consumption, plans and sections of the works or fittings, so far as necessary to show that they comply with all such requirements of these regulations as apply to them.

5. A key plan showing the position of the site when it is not sufficiently identifiable from the block plan.

Material changes of use

Rule G. The following are the notices to be given and the plans, specifications and particulars to be deposited by a person intending to make any material change of use to which these regulations are applied by regulation A9, in addition to anything required by Rule D in a case to which that rule relates:

1. Notice of intention to make, and a description of, any change in the purposes for which the building or part of the building is used.

2. A block plan showing the size and position of the building and its relationship to adjoining buildings.

3. A key plan showing the position of the site when it is not sufficiently identifiable from the block plan.

SCHEDULE 3

Table to Regulation B3

TIMBER BOARDING

In this schedule—

(i) standard names in accordance with BS 881 & 589: 1974 are used; and

(ii) "vacuum impregnation" means a treatment in which the timber is placed in a closed container subjected to a vacuum and then flooded with preservative before the vacuum is released.

TABLE 1

SPECIES OF TIMBER FOR USE IN NATURAL STATE

Hardwoods (1)			Softwoods (2)
Afrormosia	Idigbo	Meranti, dark red	Cedar, western red
Afzelia	Iroko	Meranti, light red	Sequoia
Agba	Kapur	Niangon	
Dahoma	Kempas	Oak, European	
Danta	Keruing, Indonesian	Opepe	
Gedu nohor	Keruing, Malayan	Sapele	
Guarea	Keruing, Sabah	Teak	
Gurjun, Andaman	Keruing, Sarawak	Utile	
Gurjun, Burma	Mahogany, African		
Gurjun, Indian	Makoré		

TABLE 2

SPECIES OF TIMBER FOR USE AFTER BEING SUBJECTED TO A PRESERVATIVE TREATMENT PRESCRIBED IN TABLE 3

Hardwoods (1)	Softwoods (2)	
Abura	Fir, Douglas	Redwood (European) or Scots pine
Elm	Hemlock, western	Spruce, Sitka
	Larch, European	Whitewood or European spruce
	Larch, Japanese	

TABLE 3

PRESERVATIVE TREATMENTS FOR TIMBER

Type of preservative (1)	Method of application (2)
1. Coal tar oil to BS 144 : 1973	In accordance with BS 913 : 1973
2. Coal tar oil to BS 3051 : 1972	(*a*) In accordance with BS 913 : 1973; or (*b*) in the case of Redwood (European) or Scots pine, steeping for not less than one hour
3. Copper/chrome/arsenic composition to BS4072 : 1974	In accordance with BS 4072 : 1974
4. Copper naphthenate Type 1 to BS 5056 : 1974	(*a*) Vacuum impregnation; or (*b*) in the case of Redwood (European) or Scots pine, steeping for not less than one hour
5. Pentachlorophenol : a solution containing not less than 5% in a suitable organic solvent	
6. Tri-butyl-tin-oxide : a solution containing not less than 1·0% in a suitable organic solvent	

Regulation D12(*b*) SCHEDULE 4

RULES FOR DETERMINING THE DIMENSIONS OF CERTAIN TIMBER MEMBERS

Interpretation of Schedule 4

1. In this schedule—

(*a*) *"flat roof" includes a roof the pitch of which is 10° or less to the horizontal;*

"spacing" means the distance between the centres of any two adjacent timber members of the same type, measured in a plane parallel to that plane of the floor, ceiling or roof structure of which each such member forms part;

"span" means the distance between the centres of any two adjacent bearings or other forms of support given to a timber member, measured in a plane parallel to the plane of the floor, ceiling or roof structure of which that member forms part; and

"timber member" means a piece of solid timber of any of the types more particularly specified in the headings to the Tables to this schedule;

(*b*) *"Douglas fir-larch", "hem-fir" and "spruce-pine-fir", refer to timbers of those species which are collectively so designated in Table 1A in CP112: Part 2: 1971;*

(*c*) *species of timber, other than those to which paragraph (b) refers, are identified by standard names in accordance with BS 881 & 589: 1974;*

(*d*) GS, MGS, SS, MSS, M50 *and* M75 *refer to grades of those designations determined in accordance with BS4978: 1973; and*

(*e*) *No. 2 refers to the grade of that designation determined in accordance with the Structural Joists and Planks Section of the Standard Grading Rules for Canadian Lumber dated 1970 and published by the National Lumber Grades Authority.*

Application of Schedule 4

2. The dimensions of a timber member may be determined by reference to a Table to this schedule if—

(*a*) *the imposed load to be sustained by the floor, ceiling or roof of which the member forms part does not exceed the load specified in sub-paragraph (a), (b) or (c) of regulation D2(3) whichever is appropriate;*

(*b*) (*i*) *in the case of a binder, beam, joist, purlin or rafter, the timber is of a species, origin and grade specified in the Table to this rule; or*

(*ii*) *in the case of a floorboard, the board complies in all respects with BS 1297: 1970; and*

(*c*) *the Table to which reference is made is appropriate having regard to the type of member and (except in the case of Table 25) the grade of timber specified in the sub-heading thereto.*

SCHEDULE 4—*continued*

Table to Rule 2: Species, Origin and Grade of Timber to which Tables 1 to 24 relate

Species	*Origin*	*Grade*	
		in relation to which Tables 1 to 12 are appropriate	*in relation to which Tables 13 to 24 are appropriate*
(1)	(2)	(3)	(4)
1. *Fir, Douglas*	*Home-grown or imported*	*GS or MGS*	*SS or MSS*
2. *Hemlock, western*	*Imported*	*GS or MGS*	*SS or MSS*
3. *Larch, European*	*Home-grown*	*GS or MGS*	*SS or MSS*
4. *Larch, Japanese*	*Home-grown*	*GS or MGS*	*SS or MSS*
5. *Pine, American pitch*	*Imported*	*GS or MGS*	*SS or MSS*
6. *Pine, Caribbean pitch*	*Imported*	*GS or MGS*	*SS or MSS*
7. *Pine, Scots*	*Home-grown*	*GS or MGS*	*SS or MSS*
8. *Redwood*	*Imported*	*GS or MGS*	*SS or MSS*
9. *Spruce, Norway*	*Home-grown*	*M75*	—
10. *Spruce, Sitka*	*Home-grown*	*M75*	—
11. *Spruce, western white*	*Imported*	*M50*	—
12. *Whitewood*	*Imported*	*GS or MGS*	*SS or MSS*
13. *Douglas fir-larch*	*Imported from Canada*	*No. 2*	—
14. *Hem-fir*	*Imported from Canada*	*No. 2*	—
15. *Spruce-pine-fir*	*Imported from Canada*	*No. 2*	—

SCHEDULE 4—*continued*

TABLE 1

FLOOR JOISTS

GS, MGS, M50, M75 or No. 2 grade timber

Size of joist (in mm)	*Dead load (in kg/m²) supported by joist, excluding the mass of the joist*								
	Not more than 25			*More than 25 but not more than 50*			*More than 50 but not more than 125*		
	Spacing of joists (in mm)								
	400	*450*	*600*	*400*	*450*	*600*	*400*	*450*	*600*
	Maximum span of joist (in m)								
38 × 75	*1·05*	*0·95*	*0·72*	*0·99*	*0·90*	*0·69*	*0·87*	*0·79*	*0·62*
38 × 100	*1·77*	*1·60*	*1·23*	*1·63*	*1·48*	*1·16*	*1·36*	*1·24*	*1·00*
38 × 125	*2·53*	*2·35*	*1·84*	*2·33*	*2·12*	*1·69*	*1·88*	*1·73*	*1·40*
38 × 150	*3·02*	*2·85*	*2·48*	*2·83*	*2·67*	*2·26*	*2·41*	*2·23*	*1·83*
38 × 175	*3·51*	*3·32*	*2·89*	*3·29*	*3·11*	*2·71*	*2·82*	*2·66*	*2·27*
38 × 200	*4·00*	*3·78*	*3·30*	*3·75*	*3·55*	*3·09*	*3·21*	*3·03*	*2·64*
38 × 225	*4·49*	*4·24*	*3·70*	*4·21*	*3·98*	*3·47*	*3·61*	*3·41*	*2·96*
44 × 75	*1·20*	*1·08*	*0·83*	*1·13*	*1·02*	*0·79*	*0·98*	*0·89*	*0·70*
44 × 100	*2·01*	*1·82*	*1·41*	*1·83*	*1·67*	*1·31*	*1·51*	*1·39*	*1·12*
44 × 125	*2·71*	*2·56*	*2·09*	*2·54*	*2·38*	*1·90*	*2·08*	*1·92*	*1·56*
44 × 150	*3·24*	*3·06*	*2·67*	*3·04*	*2·87*	*2·50*	*2·60*	*2·45*	*2·03*
44 × 175	*3·77*	*3·56*	*3·10*	*3·53*	*3·34*	*2·91*	*3·02*	*2·86*	*2·48*
44 × 200	*4·29*	*4·06*	*3·54*	*4·02*	*3·80*	*3·31*	*3·45*	*3·26*	*2·83*
44 × 225	*4·81*	*4·55*	*3·97*	*4·51*	*4·27*	*3·72*	*3·87*	*3·66*	*3·18*

SCHEDULE 4—*continued*

TABLE 1—*continued*

FLOOR JOISTS

GS, MGS, M50, M75 or No. 2 grade timber

50 × 75	1·35	1·22	0·93	1·26	1·14	0·89	1·08	0·99	0·78
50 × 100	2·22	2·03	1·58	2·03	1·85	1·46	1·66	1·53	1·23
50 × 125	2·84	2·72	2·33	2·70	2·55	2·10	2·27	2·09	1·71
50 × 150	3·40	3·26	2·84	3·23	3·05	2·66	2·76	2·61	2·21
50 × 175	3·95	3·78	3·30	3·75	3·55	3·09	3·22	3·04	2·64
50 × 200	4·51	4·31	3·76	4·27	4·04	3·52	3·67	3·46	3·01
50 × 225	5·06	4·83	4·22	4·79	4·53	3·95	4·11	3·89	3·39
63 × 150	3·66	3·52	3·17	3·50	3·38	2·97	3·09	2·92	2·54
63 × 175	4·25	4·10	3·68	4·07	3·93	3·45	3·59	3·40	2·96
63 × 200	4·84	4·67	4·20	4·64	4·48	3·93	4·09	3·87	3·37
63 × 225	5·43	5·24	4·70	5·21	5·02	4·41	4·59	4·34	3·78
75 × 200	5·10	4·93	4·51	4·90	4·72	4·27	4·43	4·20	3·67
75 × 225	5·72	5·52	5·06	5·49	5·30	4·79	4·97	4·71	4·11

SCHEDULE 4—*continued*

TABLE 2

CEILING JOISTS

GS, MGS, M50, M75 or No. 2 grade timber

Size of joist (in mm)	Dead load (in kg/m²) supported by joist, excluding the mass of the joist					
	Not more than 25			More than 25 but not more than 50		
	Spacing of joists (in mm)					
	400	450	600	400	450	600
	Maximum span of joist (in m)					
38 × 75	1·88	1·80	1·57	1·71	1·61	1·40
38 × 100	2·50	2·39	2·08	2·27	2·14	1·86
38 × 125	3·11	2·97	2·59	2·82	2·67	2·32
38 × 150	3·72	3·55	3·10	3·37	3·19	2·78
38 × 175	4·32	4·12	3·60	3·92	3·71	3·23
38 × 200	4·92	4·69	4·10	4·46	4·22	3·68
38 × 225	5·51	5·25	4·60	4·99	4·73	4·13
44 × 75	1·97	1·90	1·68	1·83	1·73	1·51
44 × 100	2·61	2·52	2·23	2·43	2·30	2·00
44 × 125	3·25	3·14	2·78	3·03	2·86	2·49
44 × 150	3·89	3·75	3·32	3·62	3·42	2·98
44 × 175	4·52	4·36	3·86	4·20	3·97	3·47
44 × 200	5·14	4·96	4·39	4·77	4·52	3·95
44 × 225	5·76	5·56	4·92	5·34	5·06	4·43
50 × 75	2·05	1·98	1·79	1·91	1·84	1·60
50 × 100	2·72	2·62	2·38	2·53	2·44	2·13
50 × 125	3·39	3·26	2·95	3·15	3·04	2·65
50 × 150	4·04	3·90	3·53	3·77	3·63	3·17
50 × 175	4·70	4·53	4·10	4·38	4·22	3·68
50 × 200	5·34	5·16	4·66	4·99	4·79	4·19
50 × 225	5·98	5·78	5·22	5·59	5·37	4·70

SCHEDULE 4—*continued*

TABLE 3

BINDERS OR BEAMS SUPPORTING JOISTS TO WHICH TABLE 2 RELATES

GS, MGS, M50, M75 or No. 2 grade timber

Size of binder or beam (in mm)	*Dead load (in kg/m²) supported by joist as calculated for the purposes of Table 2*									
	Not more than 25					*More than 25 but not more than 50*				
	Spacing of binders or beams (in m)									
	1·20	*1·50*	*1·80*	*2·10*	*2·40*	*1·20*	*1·50*	*1·80*	*2·10*	*2·40*
	Maximum span of binder or beam (in m)									
38 × 75	*1·08*	*0·96*	*0·88*	*0·82*	*0·76*	*0·97*	*0·87*	*0·79*	*0·73*	*0·69*
38 × 100	*1·43*	*1·28*	*1·17*	*1·09*	*1·02*	*1·29*	*1·16*	*1·06*	*0·98*	*0·91*
38 × 125	*1·79*	*1·60*	*1·46*	*1·36*	*1·27*	*1·61*	*1·44*	*1·32*	*1·22*	*1·14*
38 × 150	*2·14*	*1·92*	*1·75*	*1·63*	*1·52*	*1·93*	*1·73*	*1·58*	*1·46*	*1·37*
38 × 175	*2·49*	*2·24*	*2·04*	*1·90*	*1·77*	*2·25*	*2·01*	*1·84*	*1·71*	*1·60*
38 × 200	*2·85*	*2·55*	*2·33*	*2·16*	*2·03*	*2·57*	*2·30*	*2·10*	*1·95*	*1·82*
38 × 225	*3·20*	*2·87*	*2·62*	*2·43*	*2·28*	*2·88*	*2·58*	*2·36*	*2·19*	*2·05*
44 × 75	*1·16*	*1·04*	*0·95*	*0·88*	*0·82*	*1·04*	*0·93*	*0·85*	*0·79*	*0·74*
44 × 100	*1·54*	*1·38*	*1·26*	*1·17*	*1·09*	*1·39*	*1·24*	*1·13*	*1·05*	*0·98*
44 × 125	*1·92*	*1·72*	*1·57*	*1·46*	*1·37*	*1·73*	*1·55*	*1·42*	*1·31*	*1·23*
44 × 150	*2·30*	*2·06*	*1·89*	*1·75*	*1·64*	*2·07*	*1·86*	*1·70*	*1·57*	*1·47*
44 × 175	*2·68*	*2·40*	*2·20*	*2·04*	*1·91*	*2·41*	*2·16*	*1·98*	*1·83*	*1·72*
44 × 200	*3·05*	*2·74*	*2·51*	*2·33*	*2·18*	*2·76*	*2·47*	*2·26*	*2·09*	*1·96*
44 × 225	*3·43*	*3·08*	*2·82*	*2·61*	*2·45*	*3·09*	*2·78*	*2·54*	*2·35*	*2·20*

SCHEDULE 4—*continued*

TABLE 3—*continued*

BINDERS OR BEAMS SUPPORTING JOISTS TO WHICH TABLE 2 RELATES

GS, MGS, M50, M75 or No. 2 grade timber

Size of binder or beam (in mm)	*Dead load (in kg/m²) supported by joist as calculated for the purposes of Table 2*									
	Not more than 25					*More than 25 but not more than 50*				
	Spacing of binders or beams (in m)									
	1·20	*1·50*	*1·80*	*2·10*	*2·40*	*1·20*	*1·50*	*1·80*	*2·10*	*2·40*
	Maximum span of binder or beam (in m)									
50 × 75	*1·23*	*1·10*	*1·01*	*0·93*	*0·87*	*1·11*	*0·99*	*0·91*	*0·84*	*0·79*
50 × 100	*1·64*	*1·47*	*1·34*	*1·24*	*1·16*	*1·48*	*1·32*	*1·21*	*1·12*	*1·05*
50 × 125	*2·04*	*1·83*	*1·68*	*1·55*	*1·45*	*1·84*	*1·65*	*1·51*	*1·40*	*1·31*
50 × 150	*2·45*	*2·20*	*2·01*	*1·86*	*1·74*	*2·21*	*1·98*	*1·81*	*1·68*	*1·57*
50 × 175	*2·85*	*2·56*	*2.34*	*2.17*	*2·03*	*2·57*	*2·30*	*2·11*	*1·95*	*1·83*
50 × 200	*3·25*	*2·92*	*2·67*	*2·48*	*2·32*	*2·93*	*2·63*	*2·41*	*2·23*	*2·09*
50 × 225	*3·65*	*3·28*	*3·00*	*2.78*	*2.61*	*3·29*	*2·95*	*2·70*	*2·51*	*2·35*
63 × 150	*2·74*	*2·46*	*2·25*	*2·09*	*1·95*	*2·47*	*2·22*	*2·03*	*1·88*	*1·76*
63 × 175	*3·19*	*2·86*	*2·62*	*2·43*	*2·28*	*2·88*	*2·58*	*2·36*	*2·19*	*2·05*
63 × 200	*3·63*	*3·26*	*2·99*	*2·77*	*2·60*	*3·28*	*2·94*	*2·69*	*2·50*	*2·34*
63 × 225	*4·07*	*3·66*	*3·35*	*3·11*	*2·92*	*3·68*	*3·30*	*3·03*	*2·81*	*2·63*
75 × 200	*3·94*	*3·55*	*3·25*	*3·02*	*2·83*	*3·56*	*3·20*	*2·93*	*2·72*	*2·55*
75 × 225	*4·42*	*3·98*	*3·65*	*3·39*	*3·17*	*4·00*	*3·59*	*3·29*	*3·06*	*2·86*

SCHEDULE 4—*continued*

TABLE 4

JOISTS FOR FLAT ROOFS WITH ACCESS ONLY FOR THE PURPOSES OF MAINTENANCE OR REPAIR

GS, MGS, M50, M75 or No. 2 grade timber

Size of joist (in mm)	*Dead load (in kg/m²) supported by joist, excluding the mass of the joist*								
	Not more than 25			*More than 25 but not more than 75*			*More than 75 but not more than 100*		
	Spacing of joists (in mm)								
	400	*450*	*600*	*400*	*450*	*600*	*400*	*450*	*600*
	Maximum span of joist (in m)								
38 × 75	*1·88*	*1·81*	*1·65*	*1·64*	*1·58*	*1·44*	*1·56*	*1·50*	*1·37*
38 × 100	*2·50*	*2·40*	*2·19*	*2·19*	*2·11*	*1·92*	*2·08*	*2·00*	*1·82*
38 × 125	*3·11*	*2·99*	*2·73*	*2·73*	*2·63*	*2·39*	*2·59*	*2·50*	*2·27*
38 × 150	*3·72*	*3·58*	*3·27*	*3·26*	*3·14*	*2·87*	*3·11*	*2·99*	*2·72*
38 × 175	*4·32*	*4·16*	*3·81*	*3·80*	*3·66*	*3·34*	*3·62*	*3·48*	*3·17*
38 × 200	*4·92*	*4·74*	*4·34*	*4·33*	*4·17*	*3·81*	*4·12*	*3·97*	*3·62*
38 × 225	*5·51*	*5·32*	*4·87*	*4·86*	*4·68*	*4·28*	*4·63*	*4·46*	*4·07*
44 × 75	*1·97*	*1·90*	*1·73*	*1·72*	*1·66*	*1·51*	*1·64*	*1·58*	*1·44*
44 × 100	*2·61*	*2·52*	*2·30*	*2·29*	*2·21*	*2·01*	*2·18*	*2·10*	*1·91*
44 × 125	*3·25*	*3·14*	*2·86*	*2·86*	*2·75*	*2·51*	*2·72*	*2·62*	*2·38*
44 × 150	*3·89*	*3·75*	*3·43*	*3·42*	*3·29*	*3·00*	*3·25*	*3·13*	*2·86*
44 × 175	*4·52*	*4·36*	*3·98*	*3·98*	*3·83*	*3·50*	*3·79*	*3·65*	*3·33*
44 × 200	*5·14*	*4·96*	*4·54*	*4·53*	*4·37*	*3·99*	*4·32*	*4·16*	*3·80*
44 × 225	*5·76*	*5·56*	*5·10*	*5·09*	*4·90*	*4·48*	*4·85*	*4·67*	*4·26*
50 × 75	*2·05*	*1·98*	*1·80*	*1·80*	*1·73*	*1·58*	*1·71*	*1·64*	*1·50*
50 × 100	*2·72*	*2·62*	*2·39*	*2·39*	*2·30*	*2·10*	*2·27*	*2·19*	*1·99*
50 × 125	*3·39*	*3·26*	*2·98*	*2·98*	*2·87*	*2·61*	*2·83*	*2·73*	*2·49*
50 × 150	*4·04*	*3·90*	*3·57*	*3·56*	*3·43*	*3·13*	*3·39*	*3·26*	*2·98*
50 × 175	*4·70*	*4·53*	*4·15*	*4·14*	*3·99*	*3·64*	*3·94*	*3·80*	*3·47*
50 × 200	*5·34*	*5·16*	*4·72*	*4·72*	*4·55*	*4·16*	*4·49*	*4·33*	*3·95*
50 × 225	*5·98*	*5·78*	*5·30*	*5·29*	*5·10*	*4·67*	*5·04*	*4·86*	*4·44*

SCHEDULE 4—*continued*

TABLE 5

JOISTS FOR FLAT ROOFS WITH ACCESS NOT LIMITED TO THE PURPOSES OF MAINTENANCE OR REPAIR

GS, MGS, M50, M75 or No. 2 grade timber

Size of joist (in mm)	Dead load (in kg/m²) supported by joist, excluding the mass of the joist								
	Not more than 25			More than 25 but not more than 75			More than 75 but not more than 100		
	Spacing of joists (in mm)								
	400	450	600	400	450	600	400	450	600
	Maximum span of joist (in m)								
38 × 75	1·29	1·16	0·89	1·14	1·03	0·81	1·09	0·99	0·78
38 × 100	1·96	1·86	1·51	1·79	1·65	1·31	1·70	1·55	1·24
38 × 125	2·60	2·50	2·22	2·38	2·27	1·87	2·28	2·16	1·75
38 × 150	3·11	3.00	2·73	2·87	2·76	2·45	2·77	2·67	2·28
38 × 175	3·63	3·49	3·18	3·34	3·22	2·85	3·23	3·11	2·71
38 × 200	4·14	3·98	3·63	3·81	3·67	3·26	3·68	3·55	3·09
38 × 225	4·64	4·47	4·08	4·28	4·12	3·66	4·14	3·98	3·47
44 × 75	1·40	1·33	1·02	1·29	1·17	0·92	1·22	1·11	0·88
44 × 100	2·10	1·99	1·72	1·91	1·81	1·48	1·83	1·73	1·39
44 × 125	2·73	2·63	2·38	2·51	2·41	2·09	2·42	2·31	1·95
44 × 150	3·26	3·14	2·87	3·01	2·90	2·63	2·91	2·80	2·50
44 × 175	3·80	3·66	3·34	3·50	3·37	3·06	3·38	3·26	2·91
44 × 200	4·33	4·17	3·81	4·00	3·85	3·50	3·86	3·72	3·32
44 × 225	4·86	4·68	4·28	4·49	4·32	3·93	4·34	4·18	3·73
50 × 75	1·49	1·41	1·15	1·38	1·30	1·02	1·34	1·23	0·98
50 × 100	2·22	2·11	1·85	2·01	1·91	1·63	1·94	1·84	1·54
50 × 125	2·84	2·74	2·49	2·62	2·52	2·26	2·53	2·43	2·14
50 × 150	3·40	3·27	2·99	3·13	3·02	2·75	3·03	2·92	2·66
50 × 175	3·95	3·81	3·48	3·65	3·51	3·20	3·53	3·40	3·09
50 × 200	4·51	4·34	3·97	4·16	4·01	3·66	4·02	3·87	3·53
50 × 225	5·06	4·88	4·45	4·67	4·50	4·11	4·52	4·35	3·96
63 × 150	3·66	3·52	3·22	3·37	3·25	2·96	3·26	3·14	2·86
63 × 175	4·25	4·10	3·74	3·93	3·78	3·45	3·79	3·66	3·33
63 × 200	4·84	4·67	4·27	4·47	4·31	3·94	4·33	4·17	3·80
63 × 225	5·43	5·24	4·79	5·02	4·84	4·42	4·86	4·68	4·27
75 × 200	5·10	4·93	4·51	4·72	4·55	4·16	4·57	4·40	4·02
75 × 225	5·72	5·52	5·06	5·30	5·11	4·67	5·12	4·94	4·52

SCHEDULE 4—*continued*

TABLE 6

PURLINS SUPPORTING SHEETING OR DECKING FOR ROOFS HAVING A PITCH OF 10° OR MORE

GS, MGS, M50, M75 or No. 2 grade timber

Size of purlin (in mm)	*Dead load (in kg/m²) supported by purlin, excluding the mass of the purlin*																	
	Not more than 25						*More than 25 but not more than 50*						*More than 50 but not more than 75*					
	Spacing of purlins (in m)																	
	0·90	*1·20*	*1·50*	*1·80*	*2·10*	*2·40*	*0·90*	*1·20*	*1·50*	*1·80*	*2·10*	*2·40*	*0·90*	*1·20*	*1·50*	*1·80*	*2·10*	*2·40*
	Maximum span of purlin (in m)																	
50 × 100	*2·20*	*1·91*	*1·71*	*1·57*	*1·45*	*1·36*	*1·97*	*1·71*	*1·53*	*1·40*	*1·30*	*1·21*	*1·76*	*1·56*	*1·40*	*1·28*	*1·18*	***1·11***
50 × 125	*2·74*	*2·38*	*2·14*	*1·95*	*1·81*	*1·70*	*2·46*	*2·13*	*1·91*	*1·75*	*1·62*	*1·52*	*2·19*	***1·95***	*1·75*	*1·60*	*1·48*	*1·38*
50 × 150	*3·28*	*2·85*	*2·56*	*2·34*	*2·17*	*2·03*	*2·94*	*2·56*	*2·29*	*2·09*	*1·94*	*1·82*	*2·63*	*2·33*	*2·09*	*1·91*	*1·77*	*1·66*
50 × 175	*3·81*	*3·32*	*2·98*	*2·73*	*2·53*	*2·37*	*3·42*	*2·98*	*2·67*	*2·44*	*2·26*	*2·12*	*3·05*	*2·72*	*2·44*	*2·23*	*2·07*	*1·93*
50 × 200	***4·34***	*3·78*	*3·40*	*3·11*	*2·89*	*2·70*	*3·90*	*3·39*	*3·04*	*2·79*	*2·58*	*2·42*	*3·48*	*3·10*	*2·78*	*2·54*	*2·36*	*2·21*
50 × 225	*4·87*	*4·25*	*3·82*	*3·49*	*3·24*	*3·04*	*4·37*	*3·81*	*3·42*	*3·13*	*2·90*	*2·72*	*3·91*	*3·48*	*3·13*	*2·86*	*2·65*	*2·48*
63 × 150	*3·66*	*3·19*	*2·86*	*2·62*	*2·43*	*2·28*	*3·20*	*2·86*	*2·57*	*2·35*	*2·18*	*2·04*	*2·82*	*2·58*	*2·34*	*2·14*	*1·99*	*1·86*
63 × 175	*4·25*	*3·71*	*3·33*	*3·05*	***2·83***	*2·65*	*3·71*	*3·33*	*2·99*	*2·73*	*2·53*	*2·37*	*3·28*	*3·00*	*2·73*	*2·50*	*2·31*	*2·17*
63 × 200	*4·84*	*4·23*	*3·80*	*3·48*	*3·23*	*3·03*	*4·22*	*3·79*	*3·41*	*3·12*	*2·89*	*2·71*	*3·74*	*3·42*	*3·11*	*2·85*	*2·64*	*2·47*
63 × 225	*5·42*	*4·74*	*4·26*	*3·91*	*3·63*	*3·40*	*4·73*	*4·26*	*3·82*	*3·50*	*3·25*	*3·04*	*4·19*	*3·84*	*3·50*	*3·20*	***2·97***	*2·78*

SCHEDULE 4—*continued*

TABLE 7

COMMON OR JACK RAFTERS FOR ROOFS HAVING A PITCH MORE THAN 10° BUT NOT MORE THAN 22½° WITH ACCESS ONLY FOR THE PURPOSES OF MAINTENANCE OR REPAIR

GS, MGS, M50, M75 or No. 2 grade timber

Size of rafter (in mm)	*Dead load (in kg/m²) supported by rafter, excluding the mass of the rafter*								
	Not more than 50			*More than 50 but not more than 75*			*More than 75 but not more than 100*		
	Spacing of rafters (in mm)								
	400	*450*	*600*	*400*	*450*	*600*	*400*	*450*	*600*
	Maximum span of rafter (in m)								
38 × 100	*2·42*	*2·28*	*1·97*	*2·20*	*2·08*	*1·79*	*2·03*	*1·92*	*1·65*
38 × 125	*3·01*	*2·84*	*2·46*	*2·74*	*2·59*	*2·23*	*2·53*	*2·39*	*2·06*
38 × 150	*3·60*	*3·39*	*2·94*	*3·28*	*3·09*	*2·67*	*3·03*	*2·86*	*2·46*
44 × 75	*1·96*	*1·85*	*1·60*	*1·79*	*1·68*	*1·45*	*1·65*	*1·55*	*1·34*
44 × 100	*2·60*	*2·45*	*2·12*	*2·37*	*2·24*	*1·93*	*2·19*	*2·06*	*1·78*
44 × 125	*3·23*	*3·05*	*2·65*	*2·95*	*2·78*	*2·41*	*2·73*	*2·57*	*2·22*
44 × 150	*3·86*	*3·65*	*3·16*	*3·53*	*3·33*	*2·88*	*3·26*	*3·08*	*2·66*
50 × 75	*2·09*	*1·97*	*1·71*	*1·91*	*1·80*	*1·55*	*1·76*	*1·66*	*1·43*
50 × 100	*2·77*	*2·61*	*2·27*	*2·53*	*2·38*	*2·06*	*2·34*	*2·20*	*1·90*
50 × 125	*3·44*	*3·25*	*2·85*	*3·14*	*2·97*	*2·57*	*2·91*	*2·74*	*2·37*
50 × 150	*4·10*	*3·88*	*3·37*	*3·75*	*3·54*	*3·07*	*3·48*	*3·28*	*2·84*

SCHEDULE 4—*continued*

TABLE 8

PURLINS SUPPORTING RAFTERS TO WHICH TABLE 7 RELATES

GS, MGS, M50, M75 or No. 2 grade timber

Size of purlin (in mm)	*Dead load (in kg/m²) supported by rafter as calculated for the purposes of Table 7*																	
	Not more than 50						*More than 50 but not more than 75*						*More than 75 but not more than 100*					
	Spacing of purlins (in m)																	
	1·50	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*	*1·50*	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*	*1·50*	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*
	Maximum span of purlin (in m)																	
50 × 100	*1·35*	*1·23*	*1·14*	*1·07*	*1·01*	*0·95*	*1·23*	*1·13*	*1·04*	*0·98*	*0·92*	*0·87*	*1·14*	*1·04*	*0·97*	*0·91*	*0·85*	*0·81*
50 × 125	*1·68*	*1·54*	*1·42*	*1·33*	*1·26*	*1·19*	*1·54*	*1·41*	*1·30*	*1·22*	*1·15*	*1·09*	*1·43*	*1·30*	*1·21*	*1·13*	*1·07*	*1·01*
50 × 150	*2·01*	*1·84*	*1·71*	*1·60*	*1·51*	*1·43*	*1·85*	*1·69*	*1·56*	*1·46*	*1·38*	*1·31*	*1·71*	*1·56*	*1·45*	*1·36*	*1·28*	*1·21*
50 × 175	*2·35*	*2·15*	*1·99*	*1·86*	*1·76*	*1·67*	*2·15*	*1·97*	*1·82*	*1·70*	*1·61*	*1·53*	*2·00*	*1·82*	*1·69*	*1·58*	*1·49*	*1·42*
50 × 200	*2·68*	*2·45*	*2·27*	*2·13*	*2·01*	*1·90*	*2·46*	*2·24*	*2·08*	*1·95*	*1·84*	*1·74*	*2·28*	*2·08*	*1·93*	*1·81*	*1·70*	*1·62*
50 × 225	*3·01*	*2·75*	*2·55*	*2·39*	*2·26*	*2·14*	*2·76*	*2·52*	*2·34*	*2·19*	*2·07*	*1·96*	*2·56*	*2·34*	*2·17*	*2·03*	*1·92*	*1·82*
63 × 150	*2·26*	*2·06*	*1·91*	*1·79*	*1·69*	*1·60*	*2·07*	*1·89*	*1·75*	*1·64*	*1·55*	*1·47*	*1·92*	*1·75*	*1·63*	*1·52*	*1·43*	*1·36*
63 × 175	*2·63*	*2·40*	*2·23*	*2·09*	*1·97*	*1·87*	*2·41*	*2·20*	*2·04*	*1·91*	*1·80*	*1·71*	*2·24*	*2·04*	*1·89*	*1·77*	*1·67*	*1·59*
63 × 200	*3·00*	*2·74*	*2·54*	*2·38*	*2·25*	*2·13*	*2·75*	*2·52*	*2·33*	*2·18*	*2·06*	*1·95*	*2·55*	*2·33*	*2·16*	*2·03*	*1·91*	*1·81*
63 × 225	*3·37*	*3·08*	*2·86*	*2·68*	*2·53*	*2·40*	*3·09*	*2·83*	*2·62*	*2·45*	*2·32*	*2·20*	*2·87*	*2·62*	*2·43*	*2·28*	*2·15*	*2·04*
75 × 175	*2·86*	*2·62*	*2·43*	*2·27*	*2·15*	*2·04*	*2·62*	*2·40*	*2·23*	*2·08*	*1·97*	*1·87*	*2·44*	*2·23*	*2·06*	*1·93*	*1·82*	*1·73*
75 × 200	*3·27*	*2·99*	*2·77*	*2·60*	*2·45*	*2·33*	*3·00*	*2·74*	*2·54*	*2·38*	*2·24*	*2·13*	*2·78*	*2·54*	*2·36*	*2·21*	*2·08*	*1·98*
75 × 225	*3·67*	*3·36*	*3·11*	*2·92*	*2·75*	*2·62*	*3·36*	*3·08*	*2·85*	*2·67*	*2·52*	*2·40*	*3·12*	*2·86*	*2·65*	*2·48*	*2·34*	*2·22*

SCHEDULE 4—*continued*

TABLE 9

COMMON OR JACK RAFTERS FOR ROOFS HAVING A PITCH MORE THAN 22½° BUT NOT MORE THAN 30° WITH ACCESS ONLY FOR THE PURPOSES OF MAINTENANCE OR REPAIR

GS, MGS, M50, M75 or No. 2 grade timber

Size of rafter (in mm)	*Dead load (in kg/m²) supported by rafter, excluding the mass of the rafter*								
	Not more than 50			*More than 50 but not more than 75*			*More than 75 but not more than 100*		
	Spacing of rafters (in mm)								
	400	*450*	*600*	*400*	*450*	*600*	*400*	*450*	*600*
	Maximum span of rafter (in m)								
38 × 100	*2·68*	*2·53*	*2·19*	*2·44*	*2·30*	*1·99*	*2·25*	*2·12*	*1·84*
38 × 125	*3·33*	*3·15*	*2·73*	*3·04*	*2·87*	*2·48*	*2·80*	*2·65*	*2·29*
38 × 150	*3·98*	*3·76*	*3·27*	*3·63*	*3·43*	*2·97*	*3·35*	*3·16*	*2·74*
44 × 75	*2·17*	*2·05*	*1·78*	*1·97*	*1·86*	*1·61*	*1·82*	*1·72*	*1·49*
44 × 100	*2·88*	*2·72*	*2·36*	*2·62*	*2·47*	*2·14*	*2·42*	*2·28*	*1·98*
44 × 125	*3·58*	*3·38*	*2·94*	*3·26*	*3·08*	*2·67*	*3·01*	*2·84*	*2·47*
44 × 150	*4·27*	*4·04*	*3·51*	*3·89*	*3·68*	*3·20*	*3·60*	*3·40*	*2·95*
50 × 75	*2·31*	*2·18*	*1·89*	*2·10*	*1·98*	*1·72*	*1·94*	*1·83*	*1·59*
50 × 100	*3·06*	*2·89*	*2·51*	*2·79*	*2·63*	*2·29*	*2·58*	*2·43*	*2·11*
50 × 125	*3·80*	*3·59*	*3·13*	*3·47*	*3·28*	*2·85*	*3·21*	*3·03*	*2·63*
50 × 150	*4·53*	*4·29*	*3·74*	*4·14*	*3·91*	*3·40*	*3·83*	*3·62*	*3·14*

SCHEDULE 4—*continued*

TABLE 10

PURLINS SUPPORTING RAFTERS TO WHICH TABLE 9 RELATES

GS, MGS, M50, M75 or No. 2 grade timber

Size of purlin (in mm)	*Dead load (in kg/m²) supported by rafter as calculated for the purposes of Table 9*																	
	Not more than 50						*More than 50 but not more than 75*						*More than 75 but not more than 100*					
	Spacing of purlins (in m)																	
	1·50	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*	*1·50*	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*	*1·50*	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*
	Maximum span of purlin (in m)																	
50 × 100	*1·41*	*1·29*	*1·20*	*1·12*	*1·06*	*1·00*	*1·29*	*1·18*	*1·09*	*1·02*	*0·96*	*0·92*	*1·20*	*1·09*	*1·01*	*0·95*	*0·89*	*0·85*
50 × 125	*1·77*	*1·61*	*1·50*	*1·40*	*1·32*	*1·25*	*1·61*	*1·47*	*1·37*	*1·28*	*1·21*	*1·14*	*1·49*	*1·36*	*1·26*	*1·18*	*1·12*	*1·06*
50 × 150	*2·12*	*1·94*	*1·79*	*1·68*	*1·58*	*1·50*	*1·93*	*1·77*	*1·64*	*1·53*	*1·45*	*1·37*	*1·79*	*1·64*	*1·52*	*1·42*	*1·34*	*1·27*
50 × 175	*2·47*	*2·26*	*2·09*	*1·96*	*1·85*	*1·75*	*2·25*	*2·06*	*1·91*	*1·79*	*1·69*	*1·60*	*2·09*	*1·91*	*1·77*	*1·65*	*1·56*	*1·48*
50 × 200	*2·82*	*2·57*	*2·39*	*2·23*	*2·11*	*2·00*	*2·57*	*2·35*	*2·18*	*2·04*	*1·92*	*1·83*	*2·38*	*2·18*	*2·02*	*1·89*	*1·78*	*1·69*
50 × 225	*3·16*	*2·89*	*2·68*	*2·51*	*2·37*	*2·25*	*2·89*	*2·64*	*2·45*	*2·29*	*2·16*	*2·05*	*2·68*	*2·45*	*2·27*	*2·12*	*2·00*	*06·1*
63 × 150	*2·37*	*2·17*	*2·01*	*1·88*	*1·78*	*1·69*	*2·17*	*1·98*	*1·84*	*1·72*	*1·62*	*1·54*	*2·01*	*1·83*	*1·70*	*1·59*	*1·50*	*1·42*
63 × 175	*2·76*	*2·53*	*2·34*	*2·19*	*2·07*	*1·96*	*2·52*	*2·31*	*2·14*	*2·00*	*1·89*	*1·79*	*2·34*	*2·14*	*1·98*	*1·85*	*1·75*	*1·66*
63 × 200	*3·15*	*2·88*	*2·67*	*2·50*	*2·36*	*2·24*	*2·88*	*2·63*	*2·44*	*2·29*	*2·16*	*2·05*	*2·67*	*2·44*	*2·26*	*2·12*	*2·00*	*1·90*
63 × 225	*3·54*	*3·24*	*3·00*	*2·81*	*2·66*	*2·52*	*3·24*	*2·96*	*2·75*	*2·57*	*2·43*	*2·30*	*3·00*	*2·74*	*2·54*	*2·38*	*2·25*	*2·13*
75 × 175	*3·01*	*2·75*	*2·55*	*2·39*	*2·26*	*2·14*	*2·75*	*2·51*	*2·33*	*2·18*	*2·06*	*1·96*	*2·52*	*2·33*	*2·16*	*2·02*	*1·91*	*1·81*
75 × 200	*3·43*	*3·14*	*2·91*	*2·73*	*2·57*	*2·44*	*3·13*	*2·87*	*2·66*	*2·49*	*2·35*	*2·23*	*2·87*	*2·66*	*2·46*	*2·31*	*2·18*	*2·07*
75 × 225	*3·85*	*3·53*	*3·27*	*3·07*	*2·89*	*2·75*	*3·52*	*3·22*	*2·99*	*2·80*	*2·64*	*2·51*	*3·23*	*2·99*	*2·77*	*2·59*	*2·45*	*2·32*

SCHEDULE 4—*continued*

TABLE 11

COMMON OR JACK RAFTERS FOR ROOFS HAVING A PITCH MORE THAN 30° BUT NOT MORE THAN 42½° WITH ACCESS ONLY FOR THE PURPOSES OF MAINTENANCE OR REPAIR

GS, MGS, M50, M75 or No. 2 grade timber

Size of rafter (in mm)	*Dead load (in kg/m²) supported by rafter, excluding the mass of the rafter*								
	Not more than 50			*More than 50 but not more than 75*			*More than 75 but not more than 100*		
	Spacing of rafters (in mm)								
	400	*450*	*600*	*400*	*450*	*600*	*400*	*450*	*600*
	Maximum span of rafter (in m)								
38 × 100	*2·84*	*2·69*	*2·33*	*2·58*	*2·44*	*2·11*	*2·38*	*2·24*	*1·94*
38 × 125	*3·54*	*3·34*	*2·91*	*3·21*	*3·04*	*2·63*	*2·96*	*2·80*	*2·42*
38 × 150	*4·22*	*3·99*	*3·48*	*3·84*	*3·63*	*3·15*	*3·54*	*3·35*	*2·90*
44 × 75	*2·30*	*2·17*	*1·89*	*2·09*	*1·97*	*1·71*	*1·93*	*1·82*	*1·57*
44 × 100	*3·05*	*2·88*	*2·51*	*2·77*	*2·62*	*2·27*	*2·56*	*2·41*	*2·09*
44 × 125	*3·79*	*3·59*	*3·12*	*3·45*	*3·26*	*2·83*	*3·18*	*3·01*	*2·61*
44 × 150	*4·53*	*4·28*	*3·73*	*4·12*	*3·90*	*3·39*	*3·81*	*3·59*	*3·12*
50 × 75	*2·45*	*2·31*	*2·01*	*2·21*	*2·10*	*1·82*	*2·01*	*1·93*	*1·68*
50 × 100	*3·24*	*3·07*	*2·67*	*2·92*	*2·79*	*2·42*	*2·67*	*2·57*	*2·23*
50 × 125	*4·03*	*3·81*	*3·32*	*3·63*	*3·47*	*3·02*	*3·33*	*3·20*	*2·78*
50 × 150	*4·81*	*4·55*	*3·97*	*4·33*	*4·14*	*3·61*	*3·97*	*3·82*	*3·32*

SCHEDULE 4—*continued*

TABLE 12

PURLINS SUPPORTING RAFTERS TO WHICH TABLE 11 RELATES

GS, MGS, M50, M75 or No. 2 grade timber

Size of purlin (in mm)	*Dead load (in kg/m²) supported by rafter as calculated for the purposes of Table 11*																	
	Not more than 50						*More than 50 but not more than 75*						*More than 75 but not more than 100*					
	Spacing of purlins (in m)																	
	1·50	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*	*1·50*	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*	*1·50*	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*
	Maximum span of purlin (in m)																	
50 × 100	*1·49*	*1·36*	*1·26*	*1·18*	*1·11*	*1·05*	*1·35*	*1·24*	*1·15*	*1·07*	*1·01*	*0·96*	*1·25*	*1·14*	*1·06*	*0·99*	*0·93*	*0·89*
50 × 125	*1·86*	*1·70*	*1·57*	*1·47*	*1·39*	*1·32*	*1·69*	*1·54*	*1·43*	*1·34*	*1·26*	*1·20*	*1·56*	*1·43*	*1·32*	*1·24*	*1·17*	*1·11*
50 × 150	*2·22*	*2·03*	*1·88*	*1·76*	*1·66*	*1·58*	*2·03*	*1·85*	*1·72*	*1·61*	*1·51*	*1·44*	*1·87*	*1·71*	*1·58*	*1·48*	*1·40*	*1·33*
50 × 175	*2·59*	*2·37*	*2·20*	*2·06*	*1·94*	*1·84*	*2·36*	*2·16*	*2·00*	*1·87*	*1·77*	*1·68*	*2·18*	*1·99*	*1·85*	*1·73*	*1·63*	*1·55*
50 × 200	*2·96*	*2·71*	*2·51*	*2·35*	*2·22*	*2·10*	*2·70*	*2·46*	*2·28*	*2·14*	*2·02*	*1·91*	*2·49*	*2·28*	*2·11*	*1·97*	*1·86*	*1·77*
50 × 225	*3·32*	*3·04*	*2·82*	*2·64*	*2·49*	*2·36*	*3·03*	*2·77*	*2·57*	*2·40*	*2·27*	*2·15*	*2·80*	*2·56*	*2·37*	*2·22*	*2·09*	*1·99*
63 × 150	*2·49*	*2·28*	*2·11*	*1·98*	*1·87*	*1·77*	*2·27*	*2·08*	*1·92*	*1·80*	*1·70*	*1·61*	*2·09*	*1·92*	*1·78*	*1·66*	*1·57*	*1·49*
63 × 175	*2·90*	*2·65*	*2·46*	*2·30*	*2·17*	*2·06*	*2·64*	*2·42*	*2·24*	*2·10*	*1·98*	*1·88*	*2·43*	*2·23*	*2·07*	*1·94*	*1·83*	*1·74*
63 × 200	*3·31*	*3·03*	*2·81*	*2·63*	*2·48*	*2·36*	*3·02*	*2·76*	*2·56*	*2·40*	*2·26*	*2·15*	*2·77*	*2·55*	*2·36*	*2·21*	*2·09*	*1·98*
63 × 225	*3·72*	*3·40*	*3·16*	*2·96*	*2·79*	*2·65*	*3·39*	*3·10*	*2·88*	*2·69*	*2·54*	*2·41*	*3·12*	*2·87*	*2·66*	*2·49*	*2·35*	*2·23*
75 × 175	*3·15*	*2·89*	*2·68*	*2·51*	*2·37*	*2·25*	*2·80*	*2·63*	*2·44*	*2·29*	*2·16*	*2·05*	*2·57*	*2·42*	*2·26*	*2·11*	*1·99*	*1·89*
75 × 200	*3·59*	*3·30*	*3·06*	*2·87*	*2·71*	*2·57*	*3·20*	*3·01*	*2·79*	*2·61*	*2·46*	*2·34*	*2·93*	*2·77*	*2·58*	*2·41*	*2·28*	*2·16*
75 × 225	*4·03*	*3·71*	*3·44*	*3·22*	*3·04*	*2·89*	*3·59*	*3·38*	*3·13*	*2·93*	*2·77*	*2·63*	*3·30*	*3·11*	*2·90*	*2·71*	*2·56*	*2·43*

SCHEDULE 4—*continued*

TABLE 13

FLOOR JOISTS

SS or MSS grade timber

Size of joist (in mm)	Dead load (in kg/m²) supported by joist, excluding the mass of the joist								
	Not more than 25			More than 25 but not more than 50			More than 50 but not more than 125		
	Spacing of joists (in mm)								
	400	450	600	400	450	600	400	450	600
	Maximum span of joist (in m)								
38 × 75	1·41	1·32	1·01	1·35	1·23	0·96	1·15	1·05	0·84
38 × 100	2·11	2·00	1·71	2·00	1·90	1·57	1·77	1·63	1·32
38 × 125	2·74	2·63	2·39	2·62	2·52	2·25	2·34	2·23	1·83
38 × 150	3·28	3·15	2·87	3·14	3·02	2·75	2·82	2·72	2·35
38 × 175	3·81	3·67	3·35	3·65	3·52	3·20	3·29	3·17	2·76
38 × 200	4·35	4·19	3·82	4·16	4·01	3·66	3·76	3·62	3·16
38 × 225	4·88	4·70	4·29	4·68	4·51	4·11	4·22	4·06	3·54
44 × 75	1·51	1·43	1·16	1·45	1·37	1·09	1·29	1·18	0·94
44 × 100	2·25	2·13	1·87	2·13	2·02	1·77	1·89	1·80	1·47
44 × 125	2·87	2·76	2·52	2·74	2·64	2·40	2·47	2·37	2·02
44 × 150	3·43	3·31	3·01	3·29	3·16	2·88	2·96	2·85	2·55
44 × 175	3·99	3·85	3·51	3·83	3·68	3·36	3·45	3·32	2·97
44 × 200	4·55	4·39	4·00	4·36	4·20	3·83	3·94	3·79	3·39
44 × 225	5·11	4·93	4·50	4·90	4·72	4·31	4·42	4·26	3·81

SCHEDULE 4—*continued*

TABLE 13—*continued*

FLOOR JOISTS

SS or MSS grade timber

Size of joist (in mm)	*Dead load (in kg/m²) supported by joist, excluding the mass of the joist*								
	Not more than 25			*More than 25 but not more than 50*			**More than 50 but not more than 125**		
	Spacing of joists (in mm)								
	400	**450**	*600*	*400*	**450**	*600*	*400*	**450**	*600*
	Maximum span of joist (in m)								
50 × 75	*1·60*	*1·51*	*1·30*	*1·53*	*1·45*	*1·21*	*1·39*	*1·30*	*1·04*
50 × 100	*2·38*	*2·26*	*1·98*	*2·25*	*2·14*	*1·89*	*1·99*	*1·90*	*1·61*
50 × 125	*2·99*	*2·88*	*2·62*	*2·86*	*2·75*	*2·51*	*2·58*	*2·48*	*2·21*
50 × 150	*3·57*	*3·44*	*3·14*	*3·42*	*3·30*	*3·01*	*3·09*	*2·97*	*2·71*
50 × 175	*4·16*	*4·01*	*3·66*	*3·98*	*3·84*	*3·50*	*3·60*	*3·46*	*3·15*
50 × 200	*4·74*	*4·57*	*4·17*	*4·54*	*4·38*	*3·99*	*4·10*	*3·95*	*3·60*
50 × 225	*5·32*	*5·13*	*4·68*	*5·10*	*4·91*	*4·49*	*4·61*	*4·44*	*4·05*
63 × 150	*3·84*	*3·70*	*3·38*	*3·68*	*3·55*	*3·24*	*3·32*	*3·20*	*2·92*
63 × 175	*4·47*	*4·31*	*3·94*	*4·28*	*4·13*	*3·77*	*3·87*	*3·73*	*3·40*
63 × 200	*5·09*	*4·91*	*4·49*	*4·88*	*4·71*	*4·30*	*4·41*	*4·25*	*3·88*
63 × 225	*5·71*	*5·51*	*5·04*	*5·48*	*5·28*	*4·83*	*4·95*	*4·77*	*4·36*
75 × 200	*5·37*	*5·18*	*4·74*	*5·15*	*4·97*	*4·54*	*4·66*	*4·49*	*4·10*
75 × 225	*6·02*	*5·81*	*5·32*	*5·78*	*5·57*	*5·10*	*5·23*	*5·04*	*4·61*

SCHEDULE 4—*continued*

TABLE 14

CEILING JOISTS

SS or MSS grade timber

Size of joist (in mm)	*Dead load (in kg/m²) supported by joist, excluding the mass of the joist*					
	Not more than 25			*More than 25 but not more than 50*		
	Spacing of joists (in mm)					
	400	*450*	*600*	*400*	*450*	*600*
	Maximum span of joist (in m)					
38 × 75	*1·98*	*1·90*	*1·73*	*1·84*	*1·77*	*1·61*
38 × 100	*2·62*	*2·53*	*2·30*	*2·44*	*2·35*	*2·14*
38 × 125	*3·27*	*3·15*	*2·87*	*3·04*	*2·93*	*2·67*
38 × 150	*3·91*	*3·77*	*3·44*	*3·64*	*3·51*	*3·20*
38 × 175	*4·54*	*4·38*	*4·00*	*4·23*	*4·08*	*3·72*
38 × 200	*5·17*	*4·99*	*4·56*	*4·82*	*4·65*	*4·25*
38 × 225	*5·80*	*5·59*	*5·12*	*5·41*	*5·22*	*4·77*
44 × 75	*2·07*	*1·99*	*1·82*	*1·93*	*1·85*	*1·69*
44 × 100	*2·75*	*2·65*	*2·42*	*2·56*	*2·46*	*2·24*
44 × 125	*3·42*	*3·30*	*3·01*	*3·19*	*3·07*	*2·80*
44 × 150	*4·09*	*3·94*	*3·60*	*3·81*	*3·67*	*3·35*
44 × 175	*4·75*	*4·58*	*4·19*	*4·43*	*4·27*	*3·90*
44 × 200	*5·41*	*5·22*	*4·78*	*5·05*	*4·87*	*4·45*
44 × 225	*6·06*	*5·85*	*5·36*	*5·66*	*5·46*	*4·99*
50 × 75	*2·16*	*2·08*	*1·89*	*2·01*	*1·93*	*1·76*
50 × 100	*2·86*	*2·76*	*2·52*	*2·66*	*2·57*	*2·34*
50 × 125	*3·56*	*3·43*	*3·14*	*3·32*	*3·20*	*2·92*
50 × 150	*4·25*	*4·10*	*3·75*	*3·97*	*3·82*	*3·49*
50 × 175	*4·94*	*4·77*	*4·36*	*4·61*	*4·45*	*4·06*
50 × 200	*5·62*	*5·42*	*4·97*	*5·25*	*5·06*	*4·63*
50 × 225	*6·29*	*6·08*	*5·57*	*5·88*	*5·68*	*5·20*

SCHEDULE 4—*continued*

TABLE 15

BINDERS OR BEAMS SUPPORTING JOISTS TO WHICH TABLE 14 RELATES

SS or MSS grade timber

Size of binder or beam (in mm)	*Dead load (in kg/m²) supported by joist as calculated for the purposes of Table 14*									
	Not more than 25					*More than 25 but not more than 50*				
	Spacing of binders or beams (in m)									
	1·20	*1·50*	*1·80*	*2·10*	*2·40*	*1·20*	*1·50*	*1·80*	*2·10*	*2·40*
	Maximum span of binder or beam (in m)									
38 × 75	*1·29*	*1·15*	*1·05*	*0·98*	*0·91*	*1·16*	*1·04*	*0·95*	*0·88*	*0·82*
38 × 100	*1·71*	*1·54*	*1·40*	*1·30*	*1·22*	*1·54*	*1·38*	*1·26*	*1·17*	*1·09*
38 × 125	*2·14*	*1·92*	*1·75*	*1·62*	*1·52*	*1·93*	*1·73*	*1·58*	*1·46*	*1·37*
38 × 150	*2·56*	*2·30*	*2·10*	*1·95*	*1·82*	*2·31*	*2·07*	*1·89*	*1·75*	*1·64*
38 × 175	*2·98*	*2·68*	*2·45*	*2·27*	*2·12*	*2·69*	*2·41*	*2·20*	*2·04*	*1·91*
38 × 200	*3·40*	*3·05*	*2·79*	*2·59*	*2·42*	*3·07*	*2·75*	*2·52*	*2·33*	*2·18*
38 × 225	*3·82*	*3·43*	*3·14*	*2·91*	*2·72*	*3·45*	*3·09*	*2·83*	*2·62*	*2·45*
44 × 75	*1·38*	*1·24*	*1·13*	*1·05*	*0·98*	*1·25*	*1·12*	*1·02*	*0·94*	*0·88*
44 × 100	*1·84*	*1·65*	*1·51*	*1·40*	*1·31*	*1·66*	*1·49*	*1·36*	*1·26*	*1·18*
44 × 125	*2·30*	*2·06*	*1·88*	*1·74*	*1·63*	*2·07*	*1·85*	*1·70*	*1·57*	*1·47*
44 × 150	*2·75*	*2·47*	*2·26*	*2·09*	*1·96*	*2·48*	*2·22*	*2·03*	*1·88*	*1·76*
44 × 175	*3·20*	*2·87*	*2·63*	*2·44*	*2·28*	*2·89*	*2·59*	*2·37*	*2·19*	*2·05*
44 × 200	*3·65*	*3·28*	*3·00*	*2·78*	*2·61*	*3·30*	*2·96*	*2·70*	*2·51*	*2·35*
44 × 225	*4·10*	*3·68*	*3·37*	*3·13*	*2·93*	*3·70*	*3·32*	*3·04*	*2·82*	*2·64*

SCHEDULE 4—*continued*

TABLE 15—*continued*

BINDERS OR BEAMS SUPPORTING JOISTS TO WHICH TABLE 14 RELATES

SS or MSS grade timber

Size of binder or beam (in mm)	*Dead load (in kg/m²) supported by joist as calculated for the purposes of Table 14*									
	Not more than 25					*More than 25 but not more than 50*				
	Spacing of binders or beams (in m)									
	1·20	*1·50*	*1·80*	*2·10*	*2·40*	*1·20*	*1·50*	*1·80*	*2·10*	*2·40*
	Maximum span of binder or beam (in m)									
50 × 75	*1·47*	*1·32*	*1·21*	*1·12*	*1·05*	*1·33*	*1·19*	*1·09*	*1·01*	*0·94*
50 × 100	*1·96*	*1·76*	*1·61*	*1·49*	*1·39*	*1·77*	*1·58*	*1·45*	*1·34*	*1·25*
50 × 125	*2·45*	*2·19*	*2·01*	*1·86*	*1·74*	*2·20*	*1·98*	*1·81*	*1·67*	*1·57*
50 × 150	*2·93*	*2·63*	*2·40*	*2·23*	*2·09*	*2·64*	*2·37*	*2·16*	*2·01*	*1·88*
50 × 175	*3·41*	*3·06*	*2·80*	*2·60*	*2·43*	*3·07*	*2·76*	*2·52*	*2·34*	*2·19*
50 × 200	*3·89*	*3·49*	*3·19*	*2·96*	*2·77*	*3·51*	*3·15*	*2·88*	*2·67*	*2·50*
50 × 225	*4·36*	*3·92*	*3·59*	*3·33*	*3·12*	*3·94*	*3·53*	*3·23*	*3·00*	*2·81*
63 × 150	*3·17*	*2·94*	*2·69*	*2·50*	*2·34*	*2·96*	*2·65*	*2·42*	*2·25*	*2·10*
63 × 175	*3·69*	*3·42*	*3·13*	*2·91*	*2·72*	*3·44*	*3·09*	*2·82*	*2·62*	*2·45*
63 × 200	*4·21*	*3·90*	*3·57*	*3·32*	*3·11*	*3·92*	*3·52*	*3·22*	*2·99*	*2·80*
63 × 225	*4·72*	*4·38*	*4·01*	*3·72*	*3·49*	*4·40*	*3·95*	*3·62*	*3·36*	*3·15*
75 × 200	*4·44*	*4·14*	*3·89*	*3·61*	*3·38*	*4·16*	*3·83*	*3·51*	*3·25*	*3·05*
75 × 225	*4·99*	*4·65*	*4·36*	*4·05*	*3·80*	*4·67*	*4·30*	*3·94*	*3·66*	*3·43*

SCHEDULE 4—*continued*

TABLE 16

JOISTS FOR FLAT ROOFS WITH ACCESS ONLY FOR THE PURPOSES OF MAINTENANCE OR REPAIR

SS or MSS grade timber

Size of joist (in mm)	*Dead load (in kg/m²) supported by joist, excluding the mass of the joist*								
	Not more than 25			*More than 25 but not more than 75*			*More than 75 but not more than 100*		
	Spacing of joists (in mm)								
	400	*450*	*600*	*400*	*450*	*600*	*400*	*450*	*600*
	Maximum span of joist (in m)								
38 × 75	*1·98*	*1·90*	*1·73*	*1·73*	*1·66*	*1·51*	*1·64*	*1·58*	*1·44*
38 × 100	*2·62*	*2·53*	*2·30*	*2·30*	*2·21*	*2·02*	*2·19*	*2·10*	*1·92*
38 × 125	*3·27*	*3·15*	*2·87*	*2·87*	*2·76*	*2·52*	*2·73*	*2·62*	*2·39*
38 × 150	*3·91*	*3·77*	*3·44*	*3·43*	*3·31*	*3·01*	*3·27*	*3·14*	*2·86*
38 × 175	*4·54*	*4·38*	*4·00*	*3·99*	*3·85*	*3·51*	*3·80*	*3·66*	*3·34*
38 × 200	*5·17*	*4·99*	*4·56*	*4·55*	*4·39*	*4·00*	*4·34*	*4·18*	*3·81*
38 × 225	*5·80*	*5·59*	*5·12*	*5·11*	*4·93*	*4·50*	*4·87*	*4·69*	*4·28*
44 × 75	*2·07*	*1·99*	*1·82*	*1·81*	*1·75*	*1·59*	*1·72*	*1·66*	*1·51*
44 × 100	*2·75*	*2·65*	*2·42*	*2·41*	*2·32*	*2·11*	*2·29*	*2·21*	*2·01*
44 × 125	*3·42*	*3·30*	*3·01*	*3·01*	*2·89*	*2·64*	*2·86*	*2·75*	*2·51*
44 × 150	*4·09*	*3·94*	*3·60*	*3·60*	*3·46*	*3·16*	*3·42*	*3·30*	*3·00*
44 × 175	*4·75*	*4·58*	*4·19*	*4·18*	*4·03*	*3·68*	*3·98*	*3·84*	*3·50*
44 × 200	*5·41*	*5·22*	*4·78*	*4·77*	*4·60*	*4·20*	*4·54*	*4·38*	*3·99*
44 × 225	*6·06*	*5·85*	*5·36*	*5·35*	*5·16*	*4·71*	*5·10*	*4·91*	*4·48*
50 × 75	*2·16*	*2·08*	*1·89*	*1·89*	*1·82*	*1·66*	*1·80*	*1·73*	*1·57*
50 × 100	*2·86*	*2·76*	*2·52*	*2·51*	*2·42*	*2·20*	*2·39*	*2·30*	*2·09*
50 × 125	*3·56*	*3·43*	*3·14*	*3·13*	*3·01*	*2·75*	*2·98*	*2·87*	*2·61*
50 × 150	*4·25*	*4·10*	*3·75*	*3·74*	*3·61*	*3·29*	*3·56*	*3·43*	*3·13*
50 × 175	*4·94*	*4·77*	*4·36*	*4·35*	*4·20*	*3·83*	*4·15*	*4·00*	*3·65*
50 × 200	*5·62*	*5·42*	*4·97*	*4·96*	*4·78*	*4·37*	*4·73*	*4·56*	*4·16*
50 × 225	*6·29*	*6·08*	*5·57*	*5·56*	*5·37*	*4·91*	*5·30*	*5·11*	*4·67*

SCHEDULE 4—*continued*

TABLE 17

JOISTS FOR FLAT ROOFS WITH ACCESS NOT LIMITED TO THE PURPOSES OF MAINTENANCE OR REPAIR

SS or MSS grade timber

Size of joist (in mm)	*Dead load (in kg/m²) supported by joist, excluding the mass of the joist*								
	Not more than 25			*More than 25 but not more than 75*			*More than 75 but not more than 100*		
	Spacing of joists (in mm)								
	400	*450*	*600*	*400*	*450*	*600*	*400*	*450*	*600*
	Maximum span of joists (in m)								
38 × 75	*1·41*	*1·33*	*1·16*	*1·31*	*1·24*	*1·09*	*1·27*	*1·20*	*1·05*
38 × 100	*2·11*	*2·00*	*1·75*	*1·91*	*1·82*	*1·60*	*1·84*	*1·75*	*1·55*
38 × 125	*2·74*	*2·63*	*2·39*	*2·52*	*2·42*	*2·15*	*2·43*	*2·32*	*2·06*
38 × 150	*3·28*	*3·15*	*2·87*	*3·02*	*2·90*	*2·64*	*2·91*	*2·80*	*2·55*
38 × 175	*3·81*	*3·67*	*3·35*	*3·51*	*3·38*	*3·08*	*3·39*	*3·27*	*2·98*
38 × 200	*4·35*	*4·19*	*3·82*	*4·01*	*3·86*	*3·52*	*3·87*	*3·73*	*3·40*
38 × 225	*4·88*	*4·70*	*4·29*	*4·50*	*4·34*	*3·95*	*4·35*	*4·19*	*3·82*
44 × 75	*1·51*	*1·43*	*1·24*	*1·39*	*1·32*	*1·16*	*1·35*	*1·28*	*1·13*
44 × 100	*2·25*	*2·13*	*1·87*	*2·03*	*1·94*	*1·71*	*1·96*	*1·86*	*1·65*
44 × 125	*2·87*	*2·76*	*2·52*	*2·64*	*2·54*	*2·28*	*2·55*	*2·45*	*2·19*
44 × 150	*3·43*	*3·31*	*3·01*	*3·16*	*3·04*	*2·77*	*3·06*	*2·94*	*2·68*
44 × 175	*3·99*	*3·85*	*3·51*	*3·68*	*3·55*	*3·23*	*3·56*	*3·43*	*3·12*
44 × 200	*4·55*	*4·39*	*4·00*	*4·20*	*4·05*	*3·69*	*4·06*	*3·91*	*3·56*
44 × 225	*5·11*	*4·93*	*4·50*	*4·72*	*4·54*	*4·14*	*4·56*	*4·39*	*4·00*
50 × 75	*1·60*	*1·51*	*1·32*	*1·48*	*1·40*	*1·23*	*1·43*	*1·36*	*1·20*
50 × 100	*2·38*	*2·26*	*1·98*	*2·15*	*2·04*	*1·81*	*2·06*	*1·96*	*1·74*
50 × 125	*2·99*	*2·88*	*2·62*	*2·75*	*2·65*	*2·41*	*2·66*	*2·56*	*2·31*
50 × 150	*3·57*	*3·44*	*3·14*	*3·30*	*3·17*	*2·89*	*3·18*	*3·07*	*2·79*
50 × 175	*4·16*	*4·01*	*3·66*	*3·84*	*3·69*	*3·37*	*3·71*	*3·57*	*3·25*
50 × 200	*4·74*	*4·57*	*4·17*	*4·37*	*4·21*	*3·84*	*4·23*	*4·07*	*3·71*
50 × 225	*5·32*	*5·13*	*4·68*	*4·91*	*4·73*	*4·32*	*4·75*	*4·57*	*4·17*
63 × 150	*3·84*	*3·70*	*3·38*	*3·55*	*3·42*	*3·12*	*3·43*	*3·30*	*3·01*
63 × 175	*4·47*	*4·31*	*3·94*	*4·13*	*3·98*	*3·63*	*3·99*	*3·84*	*3·51*
63 × 200	*5·09*	*4·91*	*4·49*	*4·70*	*4·53*	*4·14*	*4·55*	*4·38*	*4·00*
63 × 225	*5·71*	*5·51*	*5·04*	*5·28*	*5·09*	*4·65*	*5·11*	*4·92*	*4·49*
75 × 200	*5·37*	*5·18*	*4·74*	*4·97*	*4·79*	*4·37*	*4·80*	*4·63*	*4·23*
75 × 225	*6·02*	*5·81*	*5·32*	*5·57*	*5·37*	*4·91*	*5·39*	*5·20*	*4·75*

SCHEDULE 4—*continued*

TABLE 18

PURLINS SUPPORTING SHEETING OR DECKING FOR ROOFS HAVING A PITCH OF 10° OR MORE

SS or MSS grade timber

Size of purlin (in mm)	*Dead load (in kg/m²) supported by purlin, excluding the mass of the purlin*																	
	Not more than 25						*More than 25 but not more than 50*						*More than 50 but not more than 75*					
	Spacing of purlins (in m)																	
	0·90	*1·20*	*1·50*	*1·80*	*2·10*	*2·40*	*0·90*	*1·20*	*1·50*	*1·80*	*2·10*	*2·40*	*0·90*	*1·20*	*1·50*	*1·80*	*2·10*	*2·40*
	Maximum span of purlin (in m)																	
50 × 100	*2·57*	*2·29*	*2·05*	*1·87*	*1·74*	*1·62*	*2·07*	*1·89*	*1·76*	*1·66*	*1·55*	*1·45*	*1·82*	*1·66*	*1·54*	*1·45*	*1·38*	*1·32*
50 × 125	*3·19*	*2·85*	*2·56*	*2·34*	*2·17*	*2·03*	*2·58*	*2·36*	*2·20*	*2·07*	*1·94*	*1·81*	*2·27*	*2·07*	*1·93*	*1·82*	*1·73*	*1·65*
50 × 150	*3·79*	*3·41*	*3·06*	*2·80*	*2·60*	*2·43*	*3·08*	*2·82*	*2·63*	*2·48*	*2·32*	*2·17*	*2·72*	*2·48*	*2·31*	*2·18*	*2·07*	*1·98*
50 × 175	*4·39*	*3·97*	*3·56*	*3·26*	*3·02*	*2·83*	*3·58*	*3·28*	*3·06*	*2·98*	*2·71*	*2·53*	*3·16*	*2·89*	*2·69*	*2·53*	*2·41*	*2·31*
50 × 200	*4·98*	*4·53*	*4·07*	*3·72*	*3·45*	*3·23*	*4·08*	*3·74*	*3·49*	*3·29*	*3·09*	*2·89*	*3·60*	*3·29*	*3·07*	*2·89*	*2·75*	*2·64*
50 × 225	*5·57*	*5·08*	*4·57*	*4·18*	*3·88*	*3·63*	*4·57*	*4·19*	*3·91*	*3·70*	*3·47*	*3·25*	*4·04*	*3·70*	*3·44*	*3·25*	*3·09*	*2·96*
63 × 150	*4·05*	*3·73*	*3·43*	*3·14*	*2·91*	*2·72*	*3·31*	*3·03*	*2·83*	*2·67*	*2·54*	*2·43*	*2·92*	*2·67*	*2·49*	*2·34*	*2·23*	*2·14*
63 × 175	*4·68*	*4·32*	*3·99*	*3·65*	*3·39*	*3·17*	*3·84*	*3·52*	*3·29*	*3·11*	*2·96*	*2·83*	*3·40*	*3·11*	*2·89*	*2·73*	*2·60*	*2·49*
63 × 200	*5·30*	*4·91*	*4·55*	*4·16*	*3·86*	*3·62*	*4·37*	*4·01*	*3·75*	*3·54*	*3·37*	*3·23*	*3·87*	*3·54*	*3·30*	*3·11*	*2·96*	*2·84*
63 × 225	*5·91*	*5·48*	*5·10*	*4·67*	*4·34*	*4·07*	*4·89*	*4·49*	*4·20*	*3·97*	*3·79*	*3·63*	*4·34*	*3·97*	*3·70*	*3·50*	*3·33*	*3·19*

SCHEDULE 4—*continued*

TABLE 19

COMMON OR JACK RAFTERS FOR ROOFS HAVING A PITCH MORE THAN 10° BUT NOT MORE THAN 22½° WITH ACCESS ONLY FOR THE PURPOSES OF MAINTENANCE OR REPAIR

SS or MSS grade timber

Size of rafter (in mm)	*Dead load (in kg/m²) supported by rafter, excluding the mass of the rafter*								
	Not more than 50			*More than 50 but not more than 75*			*More than 75 but not more than 100*		
	Spacing of rafters (in mm)								
	400	*450*	*600*	*400*	*450*	*600*	*400*	*450*	*600*
	Maximum span of rafter (in m)								
38 × 100	*2·88*	*2·72*	*2·36*	*2·63*	*2·48*	*2·15*	*2·44*	*2·30*	*1·98*
38 × 125	*3·59*	*3·39*	*2·94*	*3·28*	*3·09*	*2·68*	*3·03*	*2·86*	*2·47*
38 × 150	*4·29*	*4·05*	*3·52*	*3·92*	*3·70*	*3·21*	*3·63*	*3·42*	*2·96*
44 × 75	*2·33*	*2·20*	*1·91*	*2·13*	*2·01*	*1·74*	*1·95*	*1·86*	*1·61*
44 × 100	*3·10*	*2·92*	*2·54*	*2·83*	*2·67*	*2·31*	*2·59*	*2·47*	*2·14*
44 × 125	*3·85*	*3·64*	*3·16*	*3·52*	*3·32*	*2·88*	*3·22*	*3·08*	*2·66*
44 × 150	*4·60*	*4·35*	*3·78*	*4·20*	*3·97*	*3·45*	*3·85*	*3·68*	*3·19*
50 × 75	*2·48*	*2·34*	*2·04*	*2·22*	*2·14*	*1·86*	*2·03*	*1·95*	*1·72*
50 × 100	*3·29*	*3·11*	*2·70*	*2·95*	*2·84*	*2·47*	*2·69*	*2·59*	*2·28*
50 × 125	*4·09*	*3·87*	*3·37*	*3·66*	*3·53*	*3·07*	*3·35*	*3·23*	*2·84*
50 × 150	*4·88*	*4·62*	*4·02*	*4·37*	*4·21*	*3·68*	*4·00*	*3·86*	*3·40*

SCHEDULE 4—*continued*

TABLE 20

PURLINS SUPPORTING RAFTERS TO WHICH TABLE 19 RELATES

SS or MSS grade timber

Size of purlin (in mm)	*Dead load (in kg/m²) supported by rafter as calculated for the purposes of Table 19*																	
	Not more than 50						*More than 50 but not more than 75*						***More than 75 but not more than 100***					
	Spacing of purlins (in m)																	
	1·50	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*	*1·50*	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*	*1·50*	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*
	Maximum span of purlin (in m)																	
50 × 100	*1·58*	*1·47*	*1·36*	*1·28*	*1·20*	*1·14*	*1·40*	*1·32*	*1·25*	*1·17*	*1·06*	*0·96*	*1·28*	*1·21*	*1·15*	*1·03*	*0·91*	*0·82*
50 × 125	*1·97*	*1·84*	*1·70*	*1·59*	*1·50*	*1·43*	*1·75*	*1·65*	*1·56*	*1·46*	*1·33*	*1·20*	*1·60*	*1·51*	*1·43*	*1·28*	*1·14*	*1·03*
50 × 150	*2·36*	*2·20*	*2·04*	*1·91*	*1·80*	*1·71*	*2·09*	*1·97*	*1·87*	*1·75*	*1·59*	*1·43*	*1·92*	*1·81*	*1·72*	*1·54*	*1·37*	*1·23*
50 × 175	*2·75*	*2·57*	*2·38*	*2·23*	*2·10*	*1·99*	*2·44*	*2·30*	*2·18*	*2·04*	*1·85*	*1·67*	*2·24*	*2·11*	*2·00*	*1·79*	*1·60*	*1·44*
50 × 200	*3·14*	*2·93*	*2·72*	*2·54*	*2·40*	*2·28*	*2·79*	*2·63*	*2·49*	*2·33*	*2·12*	*1·91*	*2·55*	*2·40*	*2·29*	*2·05*	*1·82*	*1·64*
50 × 225	*3·52*	*3·29*	*3·05*	*2·86*	*2·70*	*2·56*	*3·13*	*2·95*	*2·80*	*2·62*	*2·38*	*2·14*	*2·87*	*2·70*	*2·57*	*2·30*	*2·05*	*1·84*
63 × 150	*2·54*	*2·40*	*2·28*	*2·14*	*2·02*	*1·92*	*2·26*	*2·13*	*2·02*	*1·94*	*1·85*	*1·76*	*2·07*	*1·95*	*1·85*	*1·77*	*1·71*	*1·55*
63 × 175	*2·96*	*2·79*	*2·66*	*2·50*	*2·36*	*2·24*	*2·63*	*2·48*	*2·36*	*2·26*	*2·16*	*2·05*	*2·41*	*2·27*	*2·16*	*2·07*	*1·99*	*1·81*
63 × 200	*3·38*	*3·19*	*3·03*	*2·85*	*2·69*	*2·55*	*3·00*	*2·83*	*2·69*	*2·58*	*2·46*	*2·34*	*2·75*	*2·59*	*2·47*	*2·36*	*2·27*	*2·06*
63 × 225	*3·79*	*3·58*	*3·41*	*3·20*	*3·02*	*2·87*	*3·37*	*3·18*	*3·03*	*2·90*	*2·77*	*2·63*	*3·09*	*2·91*	*2·77*	*2·65*	*2·55*	*2·32*
75 × 175	*3·13*	*2·95*	*2·81*	*2·69*	*2·57*	*2·44*	*2·78*	*2·62*	*2·50*	*2·39*	*2·30*	*2·22*	*2·55*	*2·40*	*2·29*	*2·19*	*2·11*	*2·03*
75 × 200	*3·56*	*3·37*	*3·21*	*3·07*	*2·93*	*2·78*	*3·17*	*2·99*	*2·85*	*2·73*	*2·63*	*2·54*	*2·91*	*2·74*	*2·61*	*2·50*	*2·40*	*2·32*
75 × 225	*4·00*	*3·78*	*3·60*	*3·45*	*3·29*	*3·13*	*3·56*	*3·36*	*3·20*	*3·07*	*2·95*	*2·85*	*3·27*	*3·08*	*2·93*	*2·81*	*2·70*	*2·61*

SCHEDULE 4—*continued*

TABLE 21

COMMON OR JACK RAFTERS FOR ROOFS HAVING A PITCH MORE THAN 22½° BUT NOT MORE THAN 30° WITH ACCESS ONLY FOR THE PURPOSES OF MAINTENANCE OR REPAIR

SS or MSS grade timber

Size of rafter (in mm)	*Dead load (in kg/m²) supported by rafter, excluding the mass of the rafter*								
	Not more than 50			*More than 50 but not more than 75*			*More than 75 but not more than 100*		
	Spacing of rafters (in mm)								
	400	*450*	*600*	*400*	*450*	*600*	*400*	*450*	*600*
	Maximum span of rafter (in m)								
38 × 100	*3·13*	*3·02*	*2·62*	*2·76*	*2·66*	*2·38*	*2·52*	*2·43*	*2·20*
38 × 125	*3·89*	*3·75*	*3·27*	*3·44*	*3·31*	*2·97*	*3·14*	*3·03*	*2·74*
38 × 150	*4·64*	*4·48*	*3·91*	*4·11*	*3·96*	*3·56*	*3·76*	*3·62*	*3·28*
44 × 75	*2·48*	*2·39*	*2·12*	*2·18*	*2·10*	*1·92*	*1·99*	*1·92*	*1·75*
44 × 100	*3·28*	*3·16*	*2·82*	*2·89*	*2·79*	*2·55*	*2·64*	*2·55*	*2·32*
44 × 125	*4·06*	*3·92*	*3·51*	*3·60*	*3·47*	*3·17*	*3·29*	*3·17*	*2·89*
44 × 150	*4·84*	*4·68*	*4·19*	*4·29*	*4·14*	*3·79*	*3·93*	*3·79*	*3·46*
50 × 75	*2·58*	*2·48*	*2·26*	*2·27*	*2·19*	*2·00*	*2·07*	*2·00*	*1·82*
50 × 100	*3·40*	*3·29*	*3·00*	*3·01*	*2·90*	*2·65*	*2·75*	*2·65*	*2·42*
50 × 125	*4·22*	*4·07*	*3·73*	*3·74*	*3·61*	*3·30*	*3·42*	*3·30*	*3·01*
50 × 150	*5·02*	*4·85*	*4·46*	*4·46*	*4·31*	*3·94*	*4·09*	*3·94*	*3·60*

SCHEDULE 4—*continued*

TABLE 22

PURLINS SUPPORTING RAFTERS TO WHICH TABLE 21 RELATES

SS or MSS grade timber

Size of purlin (in mm)	*Dead load (in kg/m²) supported by rafter as calculated for the purposes of Table 21*																	
	Not more than 50						*More than 50 but not more than 75*						*More than 75 but not more than 100*					
	Spacing of purlins (in m)																	
	1·50	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*	*1·50*	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*	*1·50*	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*
	Maximum span of purlin (in m)																	
50 × 100	*1·61*	*1·52*	*1·43*	*1·34*	*1·26*	*1·20*	*1·43*	*1·35*	*1·28*	*1·22*	*1·15*	*1·05*	*1·31*	*1·23*	*1·17*	*1·12*	*1·00*	*0·90*
50 × 125	*2·01*	*1·90*	*1·79*	*1·67*	*1·58*	*1·50*	*1·79*	*1·68*	*1·60*	*1·53*	*1·44*	*1·31*	*1·63*	*1·54*	*1·46*	*1·40*	*1·25*	*1·12*
50 × 150	*2·41*	*2·27*	*2·15*	*2·01*	*1·89*	*1·80*	*2·14*	*2·02*	*1·92*	*1·83*	*1·73*	*1·57*	*1·96*	*1·85*	*1·75*	*1·68*	*1·50*	*1·35*
50 × 175	*2·81*	*2·65*	*2·50*	*2·34*	*2·21*	*2·10*	*2·49*	*2·35*	*2·23*	*2·14*	*2·02*	*1·83*	*2·28*	*2·15*	*2·04*	*1·96*	*1·74*	*1·57*
50 × 200	*3·20*	*3·02*	*2·86*	*2·67*	*2·52*	*2·39*	*2·85*	*2·68*	*2·55*	*2·44*	*2·30*	*2·09*	*2·61*	*2·46*	*2·34*	*2·24*	*1·99*	*1·79*
50 × 225	*3·60*	*3·40*	*3·21*	*3·00*	*2·84*	*2·69*	*3·20*	*3·01*	*2·87*	*2·74*	*2·59*	*2·35*	*2·93*	*2·76*	*2·63*	*2·51*	*2·24*	*2·02*
63 × 150	*2·60*	*2·45*	*2·33*	*2·23*	*2·12*	*2·02*	*2·31*	*2·17*	*2·07*	*1·98*	*1·90*	*1·84*	*2·11*	*1·99*	*1·89*	*1·81*	*1·74*	*1·68*
63 × 175	*3·02*	*2·85*	*2·72*	*2·60*	*2·48*	*2·35*	*2·69*	*2·53*	*2·41*	*2·31*	*2·22*	*2·14*	*2·46*	*2·32*	*2·21*	*2·11*	*2·03*	*1·96*
63 × 200	*3·45*	*3·25*	*3·10*	*2·97*	*2·83*	*2·68*	*3·07*	*2·89*	*2·75*	*2·63*	*2·53*	*2·45*	*2·81*	*2·65*	*2·52*	*2·41*	*2·32*	*2·24*
63 × 225	*3·87*	*3·65*	*3·48*	*3·33*	*3·18*	*3·02*	*3·44*	*3·25*	*3·09*	*2·96*	*2·85*	*2·75*	*3·16*	*2·98*	*2·83*	*2·71*	*2·61*	*2·52*
75 × 175	*3·19*	*3·02*	*2·87*	*2·75*	*2·65*	*2·56*	*2·84*	*2·68*	*2·55*	*2·44*	*2·35*	*2·27*	*2·60*	*2·46*	*2·34*	*2·24*	*2·15*	*2·08*
75 × 200	*3·64*	*3·44*	*3·28*	*3·14*	*3·02*	*2·92*	*3·24*	*3·06*	*2·91*	*2·79*	*2·68*	*2·59*	*2·97*	*2·80*	*2·67*	*2·55*	*2·46*	*2·37*
75 × 225	*4·09*	*3·86*	*3·68*	*3·53*	*3·40*	*3·28*	*3·64*	*3·43*	*3·27*	*3·13*	*3·01*	*2·91*	*3·34*	*3·15*	*3·00*	*2·87*	*2·76*	*2·67*

SCHEDULE 4—*continued*

TABLE 23

COMMON OR JACK RAFTERS FOR ROOFS HAVING A PITCH MORE THAN 30° BUT NOT MORE THAN 42½° WITH ACCESS ONLY FOR THE PURPOSES OF MAINTENANCE OR REPAIR

SS or MSS grade timber

Size of rafter (in mm)	*Dead load (in kg/m²) supported by rafter, excluding the mass of the rafter*								
	Not more than 50			*More than 50 but not more than 75*			*More than 75 but not more than 100*		
	Spacing of rafters (in mm)								
	400	*450*	*600*	*400*	*450*	*600*	*400*	*450*	*600*
	Maximum span of rafter (in m)								
38 × 100	*3·20*	*3·09*	*2·78*	*2·82*	*2·72*	*2·48*	*2·58*	*2·48*	*2.26*
38 × 125	*3·97*	*3·84*	*3·47*	*3·51*	*3·39*	*3·09*	*3·21*	*3·09*	***2·82***
38 × 150	*4·74*	*4·58*	*4·15*	*4·20*	*4·05*	*3·70*	*3·84*	*3·70*	*3·38*
44 × 75	*2·53*	*2·44*	*2·23*	*2·23*	*2·15*	*1·96*	*2·03*	*1·96*	*1·78*
44 × 100	*3·35*	*3·23*	*2·96*	*2·96*	*2·85*	*2·60*	*2·70*	*2·60*	*2·37*
44 × 125	*4·15*	*4·01*	*3·67*	*3·67*	*3·54*	*3·24*	*3·36*	*3·24*	*2·96*
44 × 150	*4·94*	*4·78*	*4·39*	*4·39*	*4·23*	*3·87*	*4·02*	*3·87*	*3·54*
50 × 75	*2·63*	*2·54*	*2·32*	*2·32*	*2·24*	*2·04*	*2·12*	*2·04*	*1·86*
50 × 100	*3·48*	*3·36*	*3·08*	*3·08*	*2·97*	*2·71*	*2·81*	*2·71*	*2·47*
50 × 125	*4·31*	*4·16*	*3·82*	*3·82*	*3·69*	*3·37*	*3·50*	*3·37*	*3·08*
50 × 150	*5·13*	*4·96*	*4·56*	*4·56*	*4·40*	*4·03*	*4·18*	*4·03*	*3·68*

SCHEDULE 4—*continued*

TABLE 24

PURLINS SUPPORTING RAFTERS TO WHICH TABLE 23 RELATES

SS or MSS grade timber

Size of purlin (in mm)	*Dead load (in kg/m²) supported by rafter as calculated for the purposes of Table 23*																	
	Not more than 50						*More than 50 but not more than 75*						*More than 75 but not more than 100*					
	Spacing of purlins (in m)																	
	1·50	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*	*1·50*	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*	*1·50*	*1·80*	*2·10*	*2·40*	*2·70*	*3·00*
	Maximum span of purlin (in m)																	
50 × 100	*1·65*	*1·55*	*1·48*	*1·41*	*1·33*	*1·26*	*1·46*	*1·38*	*1·31*	*1·25*	*1·20*	*1·15*	*1·34*	*1·26*	*1·20*	*1·14*	*1·09*	*0·98*
50 × 125	*2·06*	*1·94*	*1·84*	*1·76*	*1·66*	*1·58*	*1·82*	*1·72*	*1·63*	*1·56*	*1·50*	*1·43*	*1·67*	*1·57*	*1·49*	*1·43*	*1·37*	*1·23*
50 × 150	*2·46*	*2·32*	*2·21*	*2·11*	*1·99*	*1·89*	*2·19*	*2·06*	*1·96*	*1·87*	*1·80*	*1·72*	*2·00*	*1·89*	*1·79*	*1·72*	*1·64*	*1·47*
50 × 175	*2·87*	*2·71*	*2·57*	*2·46*	*2·32*	*2·20*	*2·55*	*2·40*	*2·28*	*2·19*	*2·10*	*2·00*	*2·33*	*2·20*	*2·09*	*2·00*	*1·91*	*1·72*
50 × 200	*3·27*	*3·09*	*2·94*	*2·81*	*2·65*	*2·52*	*2·91*	*2·74*	*2·61*	*2·50*	*2·40*	*2·29*	*2·66*	*2·51*	*2·39*	*2·28*	*2·18*	*1·96*
50 × 225	*3·68*	*3·47*	*3·30*	*3·16*	*2·98*	*2·83*	*3·27*	*3·08*	*2·93*	*2·81*	*2·70*	*2·57*	*2·99*	*2·82*	*2·68*	*2·57*	*2·45*	*2·20*
63 × 150	*2·65*	*2·50*	*2·38*	*2·28*	*2·20*	*2·12*	*2·36*	*2·22*	*2·11*	*2·02*	*1·95*	*1·88*	*2·16*	*2·03*	*1·93*	*1·85*	*1·78*	*1·72*
63 × 175	*3·09*	*2·92*	*2·77*	*2·66*	*2·56*	*2·47*	*2·74*	*2·59*	*2·46*	*2·36*	*2·27*	*2·19*	*2·52*	*2·37*	*2·25*	*2·16*	*2·08*	*2·01*
63 × 200	*3·52*	*3·33*	*3·17*	*3·03*	*2·92*	*2·82*	*3·13*	*2·95*	*2·81*	*2·69*	*2·59*	*2·50*	*2·87*	*2·71*	*2·57*	*2·46*	*2·37*	*2·29*
63 × 225	*3·95*	*3·73*	*3·56*	*3·41*	*3·28*	*3·17*	*3·52*	*3·32*	*3·16*	*3·02*	*2·91*	*2·81*	*3·23*	*3·04*	*2·89*	*2·77*	*2·67*	*2·57*
75 × 175	*3·26*	*3·08*	*2·93*	*2·81*	*2·71*	*2·62*	*2·90*	*2·74*	*2·60*	*2·49*	*2·40*	*2·32*	*2·66*	*2·51*	*2·39*	*2·28*	*2·20*	*2·12*
75 × 200	*3·72*	*3·51*	*3·35*	*3·21*	*3·09*	*2·99*	*3·31*	*3·12*	*2·97*	*2·85*	*2·74*	*2·65*	*3·04*	*2·86*	*2·72*	*2·61*	*2·51*	*2·42*
75 × 225	*4·17*	*3·94*	*3·76*	*3·60*	*3·47*	*3·35*	*3·72*	*3·51*	*3·34*	*3·20*	*3·08*	*2·98*	*3·41*	*3·22*	*3·06*	*2·93*	*2·83*	*2·73*

SCHEDULE 4—*continued*

TABLE 25

SOFTWOOD FLOOR BOARDS (TONGUED AND GROOVED)

Finished thickness of board (in mm)	*Maximum span of board (in mm)*
16	*505*
19	*600*
21	*635*
28	*790*

Regulations D13(*b*) and D14

SCHEDULE 5

RULES FOR SATISFYING REQUIREMENTS AS TO STRUCTURAL STABILITY OF CERTAIN WALLS

Part I: Application, interpretation and rule for measurement

1. Application of Schedule 5

(*1*) *Subject to the conditions specified in paragraph* (2) *in respect of the building and in paragraph* (3) *in respect of the wall, the provisions of this schedule shall apply to—*

(*a*) *any external wall, compartment wall or internal loadbearing wall which forms part of the ground storey or an upper storey of a residential building having not more than three storeys;*

(*b*) *any separating wall which is common to two such buildings; and*

(*c*) *any separating wall or internal loadbearing wall of a small building or annex described in rule 14,*

being, in each case, a wall of a type more particularly described in Part III of this schedule.

(2) *The conditions in respect of the building to which reference is made in paragraph* (*1*) *are—*

(*a*) *that the design wind speed* (*Vs*) *for the building, derived in accordance with regulations D2*(2)(*c*) *from the basic wind speed* (*V*) *multiplied by factors S1, S2 and S3, does not exceed 44 m/sec if, for the purposes of determining factor S2—*

(*i*) *Class B building size is assumed; and*

(*ii*) *allowance is made for the height above ground of the building if it is situated on or near a cliff or escarpment;*

(*b*) *that the imposed load on any floor, ceiling or roof of the building, determined in accordance with the provisions of regulation D2, does not exceed—*

(*i*) *2·0 kN/m² distributed or 1·8 kN concentrated on any floor above the ground storey; or*

(*ii*) *0·25 kN/m² distributed and 0·9 kN concentrated, or alternatively 720 N/m² distributed, on any ceiling; or*

(*iii*) *0·75 kN/m² distributed or 0·9 kN concentrated on any roof;*

(*c*) *that the building is so designed that—*

(*i*) *no part of any wall or roof thereof is higher than 15 m above the level of the lowest finished surface of the ground adjoining the building; and*

(*ii*) *at the level of the finished surface of the ground adjoining the building and at any higher level, the width of the building and the width of any wing thereof which projects more than twice its own width from the remainder of the building are at least one half of the height of the building and one half of the height of the wing respectively, measured in either case from that level to the highest part of any wall or roof thereof;*

(*d*) *that the building is either—*

(*i*) *wholly bounded, or bounded on all but one of its sides, by walls each of which complies with rule 11, 12, 13 or 14 or with rules 4*(*1*)(*a*), (*b*) *and* (*c*) *and 4*(*3*); *or*

(*ii*) *comprises sub-divisions each of which is so bounded; and*

(*e*) *that the area of each storey within the building or, if the building is sub-divided as described, each part of a storey within a sub-division, does not exceed—*

SCHEDULE 5—*continued*

(i) *70 m² if the building, or sub-division, is wholly bounded by such walls; or*

(ii) *30 m² if the building, or sub-division, is bounded by such walls on all but one of its sides.*

(3) The conditions in respect of the wall to which reference is made in paragraph (1) are—

(a) that the wall is constructed of bricks or blocks properly bonded and solidly put together with mortar or, in the case only of a wall of a type to which rule 11 is relevant, of stone, flints, clunches of bricks or other burnt or vitrified material laid otherwise than in horizontal beds or courses and solidly put together with mortar;

(b) (subject to rule 14(1)(d)) that each end of the wall is bonded or otherwise securely tied to a buttressing wall, pier or chimney;

(c) that the wall does not exceed 12 m in height or length;

(d) that the wall in each storey of its height extends the full height of that storey;

(e) that the wall does not support floor members having a span exceeding 6 m measured between the centres of their bearings or other forms of support given to the members;

(f) that, if the level of the finished surface of the ground or the surface of the oversite concrete at one side of the wall differs from that at the other side of the wall, the thickness of the wall (being a solid wall or a cavity wall having the cavity filled with fine concrete up to the higher of those levels) or the sum of the thicknesses of the leaves of the wall (being any other cavity wall) is not less than one quarter of that difference, the thickness being measured in either case at the higher level;

(g) that the wall (except when transmitting wind load) does not sustain or transmit any lateral thrust other than that due to the circumstances described in sub-paragraph (f); and

(h) that the wall does not transmit a combined dead load and imposed load exceeding 70 kN/m at its base.

2. Interpretation of Schedule 5

(1) In this schedule unless the context otherwise requires—

"base" in relation to a wall means the underside of that part of the wall which immediately rests upon the footings or foundations or other structure by which the wall is carried;

"buttressing wall" includes a return wall;

"compartment wall" has the meaning assigned by regulation E1(1);

"floor lateral support" has the meaning assigned by paragraph (3);

"pier" includes a buttress;

"required thickness" means the thickness required by these rules;

"roof lateral support" has the meaning assigned by paragraph (3);

"separating wall" has the meaning assigned by regulation E1(1) and includes a wall which is common to adjoining houses;

"supported wall" means a wall to which support is afforded by a buttressing wall, pier or chimney or by floor lateral support or roof lateral support as the case may be;

"wall" shall be construed in accordance with rule 4(2); and

"width" in relation to a building or wing of a building means at any level the least horizontal dimension of the building or wing which can be shown at that level on an elevation of its wall structure from any direction.

SCHEDULE 5—*continued*

(2) *Notwithstanding the provisions of regulation A2(9)(b)(iv), if a wall or other assembly is to be constructed of bricks or blocks which do not comply with a British Standard but have modular dimensions derived from BS 4011: 1966 and a size limit prescribed in this schedule applies to a dimension of that wall or assembly which would be determined by one of the dimensions of a brick or block, that dimension may deviate from the prescribed size limit by an amount not exceeding the deviation from work size permitted by a British Standard which relates to bricks or blocks, as the case may be, of the same material.*

(3) *For the purposes of this schedule, "floor lateral support" and "roof lateral support" mean support afforded to a wall so as to restrict movement of that wall in either direction at right angles to its length by a floor or roof, as the case may be, which—*

(a) *is adequate as a frame or diaphragm to transfer the lateral forces to walls, buttressing walls, piers or chimneys which comply with the relevant rules of this schedule; and*

(b) *holds or restrains the supported wall by connections which are specified in the Table to this rule or by other means which are capable of transmitting the lateral forces.*

SCHEDULE 5—*continued*

Table to Rule 2

(Specification of connections)

Description of floor (1)	*Description of roof* (2)	*Specification of connections between floor or roof and supported wall* (3)	*Circumstances to which reference is made in column (3)* (4)
1. Concrete floor	*1. Concrete roof*	*1. Irrespective of the direction of span of the floor or roof, a bearing onto the supported wall of not less than 90 mm—* *(a) throughout the length of the wall; or* *(b) if the circumstances described in column (4) are relevant, throughout the length of each portion of the wall which is situated on either side of the opening*	*The circumstances to which reference is made in column (3) are as follows—* *(a) part of the supported wall is adjacent to an opening in a floor or roof for a stairway or other purpose;* *(b) the opening extends for a distance not exceeding 3 m measured parallel to the wall; and* *(c) there is no other interruption of the lateral support*
2. Concrete or timber floor	*2. Concrete or timber roof*	*2. Mild steel anchors which have a minimum cross-section of 30 mm × 5 mm and are provided so as to anchor the floor or roof to the supported wall—* *(a) at intervals of not more than 2 m; or* *(b) if the circumstances described in column (4) are relevant, at such intervals on either side of the opening as will result in the provision of as many anchors as would be provided if there were no opening*	

SCHEDULE 5—*continued*

Table to Rule 2

(Specification of connections)

3. Floor which— *(a) forms part of a house having not more than two storeys; and* *(b) has timber members spanning so as to penetrate into the supported wall at intervals of not more than 1·2 m*	*3. Roof which—* *(a) has a pitch of 15° or more;* *(b) is tiled or slated;* *(c) is of a type known by local experience to be resistant to damage by wind gusts; and* *(d) has main timber members spanning onto the supported wall at intervals of not more than 1·2 m*	*3. Bearing by each timber member of not less than 90 mm (if bearing is directly on the supported wall) or 75 mm (if bearing is on a timber wall-plate)—* *(a) throughout the length of the wall; or* *(b) if the circumstances described in column (4) are relevant, throughout the length of each portion of the wall which is situated on either side of the opening*	
4. Concrete or timber floor	*4. Concrete or timber roof*	*4. Continuous contact or intermittent contact (that is to say, contact at intervals of not more than 2 m) between each side of the supported wall and a floor or roof, such contact being provided on each side—* *(a) either* *(i) throughout the length of the wall; or* *(ii) if the circumstances described in column (4) are relevant, throughout the length of each portion of the wall which is situated on either side of the opening; and* *(b) at or about the same level and (if intermittent contact is provided on both sides of the wall) at or about the same positions on plan.*	

SCHEDULE 5—*continued*

3. Rule for the measurement of the height of a storey and the height and length of a wall.

(1) For the purposes of this schedule, the height of a storey and the height and length of a wall shall be measured in accordance with this rule.

(2) The height of the ground storey of a building shall be measured from the base of the wall and the height of an upper storey shall be measured from the level of the underside of the floor of that storey in each case to whichever of the following levels is appropriate—

(a) the level of the underside of the floor next above it; or

(b) if there is no such floor and the storey does not comprise a gable, the level of the roof lateral support; or

(c) if there is no such floor and the storey comprises a gable—

(i) the level midway between the base of the gable and the top of the roof lateral support along the line of the roof slope; or

(ii) if, in addition to roof lateral support along the line of the roof slope, there is lateral support at or about the level of the ceiling, the level of that lateral support.

(3) The height of a wall shall be measured—

(a) in the case of a wall not comprising a gable, from its base to the highest point excluding any parapet which does not exceed 1·2 m in height; or

(b) in the case of a compartment wall or separating wall comprising a gable, from its base to the base of the gable; or

(c) in the case of any other wall comprising a gable, from its base to a level midway between the base of the gable and the top thereof.

(4) The length of a wall shall be measured from the centre of the buttressing wall, pier or chimney at one end of the wall to the centre of the buttressing wall, pier or chimney at the other end of the wall.

Part II: Design and construction of walls to which Schedule 5 applies

4. Provision of buttressing walls, piers and chimneys.

(1) Subject to Rule 14(1)(d) any wall to which this schedule applies shall be bonded or otherwise securely tied at each end to a buttressing wall, pier or chimney which—

(a) is so designed and constructed as to afford lateral support to that wall from the base to the top of that wall;

(b) is constructed of materials having not less resistance to crushing than that required for the materials of which the supported wall is constructed and is solidly put together with mortar; and

(c) notwithstanding paragraphs (4) and (5), is of such a size as will ensure the stability of the supported wall.

(2) If buttressing walls, piers or chimneys are bonded or otherwise securely tied to any wall to which this schedule applies intermediately between those provided at the ends of that wall in accordance with paragraph (1)—

(a) that wall may be regarded as being divided thereby into distinct lengths;

(b) any such distinct length shall for the purposes of this schedule be deemed to be a wall; and

(c) any reference in this schedule to a wall to which this schedule applies shall be construed as a reference to any such distinct length.

SCHEDULE 5—*continued*

(3) *Any such buttressing wall shall—*

(*a*) *be bonded or otherwise securely tied at one end to the supported wall and at the other end to a buttressing wall, pier or chimney;*

(*b*) *be so designed and constructed that—*

(*i*) *any opening or recess (other than an opening or recess not exceeding 0·6 m² in area) is not nearer to the point of junction with the supported wall than 550 mm; and*

(*ii*) *the number, size and position of any openings or recesses in the wall are not such as to impair the lateral support afforded to the supported wall;*

(*c*) *measure in length not less than one sixth of the height of the supported wall; and*

(*d*) *if it is not a wall to which rule 11, 12, 13 or 14 applies, measure in thickness not less than the greater of the following dimensions—*

(*i*) *one half of the thickness prescribed for a wall of the same height and length by rule 11 less 5 mm; or*

(*ii*) *75 mm if it forms part of a house and the supported wall does not as a whole exceed 6 m in height and 10 m in length; or*

(*iii*) *90 mm in any other case.*

(4) *Any such pier may project on one or both sides of the supported wall and shall—*

(*a*) *extend from the base of that wall to the roof lateral support or, if there is no such support, to the top of that wall; and*

(*b*) *have at any level (except in the case of a pier to which rule 14(1)(d) refers)—*

(*i*) *a dimension, measured at right angles to the length of that wall and so as to include the thickness of that wall at that level, of not less than 3 times the required thickness of that wall; and*

(*ii*) *a width of not less than 190 mm.*

(5) *Any such chimney shall have—*

(*a*) *a horizontal sectional area (excluding any fireplace opening or flue) of not less than the area required by paragraph (4) for a pier; and*

(*b*) *an overall thickness of not less than twice the required thickness of the supported wall.*

5. Loading

Any load carried by a wall to which this schedule applies shall be properly distributed.

6. Openings and recesses

(1) *Adequate means of supporting the superstructure shall be provided over every opening and recess in any wall to which this schedule applies.*

(2) *The number, size and position of openings or recesses in any such wall shall not be such as to impair the stability of the wall or any adjoining wall or any part thereof.*

(3) *Without prejudice to the requirements of paragraph (2), in any wall to which this schedule applies—*

(*a*) *at each side of every opening or recess there shall be provided a length of wall not less in extent (measured parallel to the length of the wall) than one sixth of the width of the opening or recess;*

SCHEDULE 5—*continued*

(*b*) *any part of the wall between two openings or recesses shall be not less in length than one sixth of the combined width of both openings or recesses; and*

(*c*) *the aggregate width of all openings and recesses formed at any one level shall not exceed two-thirds of the length of the wall at that level.*

7. Chases

(1) The number, size or position of chases in any wall to which this schedule applies shall not be such as to impair the stability of the wall or any part of the wall.

(2) Without prejudice to the requirements of paragraph (1)—

(*a*) *no vertical chase shall be formed in any such wall to a greater depth than one-third of the thickness of the wall or, if the wall is a cavity wall, of that leaf of the wall in which the chase is formed; and*

(*b*) *no horizontal chase shall be formed in any such wall to a greater depth than one-sixth of the thickness of the wall or, if the wall is a cavity wall, of that leaf of the wall in which the chase is formed.*

8. Overhanging

The extent to which any part of a wall to which this schedule applies overhangs a part below it shall not be such as to impair the stability of the wall or any part of the wall.

9. Bricks and blocks

(1) Bricks or blocks used in any wall to which this schedule applies (other than a wall constructed of materials to which reference is made in rule 11(3)(b)) shall—

(*a*) *be composed of—*

(*i*) *burnt clay, siliceous sand and lime, crushed siliceous rock and lime, or concrete (including aerated concrete or concrete made with lightweight aggregate); or*

(*ii*) *square-dressed natural stone laid on natural bed;*

(*b*) *have an aggregate volume of solid material not less than 50% of the total volume of the brick or block calculated from its overall dimensions; and*

(*c*) *have a resistance to crushing (expressed in newtons per square millimetre of gross horizontal area) of not less than 5 N/mm² being bricks, or 2·8 N/mm², being blocks, if—*

(*i*) *the bricks or blocks are used for the construction of a wall of a residential building having one or two storeys or for the construction of any part of a wall, except the outer leaf of an external cavity wall, which is situated in the uppermost two storeys of a residential building having three storeys; and*

(*ii*) *the height of each storey in which the wall or part is situated (less, in the case of a ground storey, the vertical distance between the base of the wall and the upper surface of the ground floor) does not exceed 2·7m; or*

(*d*) *have a resistance to crushing of not less than 7N/mm² in any other circumstances.*

(2) For the purposes of this rule, aerated concrete and concrete made with lightweight aggregate shall be deemed to be solid material.

SCHEDULE 5—*continued*

10. Mortar

Mortar used in any wall to which this schedule applies shall be—

(*a*) *cement-lime mortar composed of Portland cement (either ordinary, rapid-hardening or blast furnace), calcium lime (either non-hydraulic or semi-hydraulic) and fine aggregate in the proportion (measured by volume of the materials when dry) of one part of cement, one part of lime and not more than six parts of fine aggregate; or*

(*b*) *any other type of mortar of equivalent or greater strength if appropriate.*

Part III: Thickness of walls to which Schedule 5 applies

11. Thickness of certain external walls, compartment walls and separating walls

(*1*) *Subject to paragraph (2), this rule shall apply to any external wall, compartment wall or separating wall which—*

(*a*) *is constructed as a solid wall of materials to which paragraph (3) refers; and*

(*b*) *is provided, irrespective of its length, with roof lateral support by every roof which forms a junction with it and, if its length exceeds 3 m, with floor lateral support by every floor which forms a junction with it.*

(*2*) *This rule shall not apply to—*

(*a*) *any parapet to such a wall; or*

(*b*) *any part of an external wall which is constructed as a bay for, or as a gable over, a bay window and is situated above the level of the cill of the lowest window opening in that bay.*

(*3*) *The thickness of any such wall—*

(*a*) *if constructed of bricks or blocks, shall (subject to rule 14) be—*

(*i*) *not less than the thickness specified in column (3) of the Table to this rule according to its height and length; and*

(*ii*) *in any storey, not less than one sixteenth part of the height of that storey; or*

(*b*) *if constructed of stone, flints, clunches of bricks or other burnt or vitrified material, shall be not less than one and one-third times the thickness required by this paragraph for a wall constructed of bricks or blocks; and*

(*c*) *irrespective of the materials of which it is constructed, shall in any part be not less than the thickness of any other part of the wall which that part supports.*

SCHEDULE 5—*continued*

Table to Rule 11

(Minimum thickness of certain external walls, compartment walls and separating walls)

Height of wall (1)	*Length of wall* (2)	*Minimum thickness of wall* (3)
Not exceeding 3·5 m	*Not exceeding 12 m*	*190 mm for the whole of its height*
Exceeding 3·5 m but not exceeding 9 m	*Not exceeding 9 m*	*190 mm for the whole of its height*
	Exceeding 9 m but not exceeding 12 m	*290 mm from the base for the height of one storey, and 190 mm for the rest of its height*
Exceeding 9 m but not exceeding 12 m	*Not exceeding 9 m*	*290 mm from the base for the height of one storey, and 190 mm for the rest of its height.*
	Exceeding 9 m but not exceeding 12 m	*290 mm from the base for the height of two storeys, and 190 mm for the rest of its height*

SCHEDULE 5—*continued*

12. Thickness of certain cavity walls.

(1) This rule shall apply to any external wall, compartment wall or separating wall which is constructed as a cavity wall of two leaves, each leaf being constructed of bricks or blocks, and complies with the following conditions—

(a) the wall is provided, irrespective of its length, with roof lateral support by every roof which forms a junction with it and, if its length exceeds 3 m, with floor lateral support by every floor which forms a junction with it;

(b) the leaves are each not less than 90 mm in thickness at any level and are securely tied together by ties complying with BS 1243 : 1972 or other not less suitable ties, the ties being placed at distances apart not exceeding 900 mm measured horizontally and 450 mm measured vertically; and, in addition, there is provided as near as practicable to any opening a tie to every 300 mm of height if the leaves are not connected by a bonded jamb;

(c) the width of the cavity at any level is neither less than 50 mm nor more than—

(i) 100 mm if vertical-twist type ties are used and are placed at distances apart not exceeding 750 mm measured horizontally and 450 mm measured vertically; or

(ii) 75 mm in any other case; and

(d) if the height of courses does not permit the spacing of cavity ties in accordance with sub-paragraph (b) or (c), the spacing is varied but the number of ties per unit area is maintained.

(2) The sum of the thickness of the two leaves of any such wall and 10 mm shall not be less than the thickness which would be required by rule 11 for a solid wall of the same height and length.

13. Thickness of certain internal loadbearing walls.

(1) This rule shall apply to any internal loadbearing wall (not being a compartment wall or separating wall) which—

(a) is constructed as a solid wall of bricks or blocks; and

(b) has floor or roof lateral support at the top of each storey.

(2) The thickness of any such wall shall comply with the following provisions—

(a) if the wall is situated otherwise than as described in sub-paragraph (b), the sum of the thickness of that wall and 5 mm shall not be less than half the thickness which would be required by rule 11 for an external wall, compartment wall or separating wall of the same height and length; or

(b) if the wall is situated in the lowest storey of a building having three storeys and carries load from the floors of both upper storeys, the thickness of that wall shall not be less than the thickness required by sub-paragraph (a) or 140 mm whichever is the greater.

14. Thickness of external walls of certain small buildings and annexes.

(1) This rule shall apply to any external wall which—

(a) forms part of—

(i) a building having one storey other than a residential building if the width of that building (measured in the direction of the span of the roof) does not exceed 9 m and the height of its walls does not exceed 3 m; or

SCHEDULE 5—*continued*

(*ii*) *an annexe (which expression includes a porch, verandah, loggia, conservatory, greenhouse, garage, tool shed, fuel store, watercloset, lavatory, wash-house or outbuilding) if such annexe does not exceed 3 m in height and forms part of or is attached to a residential building, whether or not it opens directly into that building;*

(*b*) *is constructed as a solid wall of bricks or blocks;*

(*c*) *is not subjected to any load other than wind load and the distributed load of the roof of the building or annexe of which it forms part; and*

(*d*) *(unless it is a wall of less than 2·5 m in height and length) is bonded at each end and intermediately to buttressing walls or piers which—*

(*i*) *are so placed that the wall is divided into distinct lengths each of which does not exceed 3 m; and*

(*ii*) *are of such size as will ensure the stability of the supported wall and in the case of piers, are each not less than 190 mm × 190 mm in horizontal section including the thickness of the wall.*

(2) *Notwithstanding rule 11(3)(a), the thickness of any such external wall shall not be less than 90 mm.*

15. Thickness of parapets.

The thickness of any parapet to a wall to which this schedule applies shall not be less than the greater of the following dimensions—

(*a*) *one quarter of its height; and*

(*b*) *if the parapet is of solid construction, the thickness of the wall on which it is carried or 190 mm whichever is the less; or*

(*c*) *if the parapet is of cavity construction, the thickness of the wall on which it is carried or the least thickness required by rule 12 whichever is the less.*

SCHEDULE 6

Regulation E1(5)

NOTIONAL PERIODS OF FIRE RESISTANCE

In this Table :

(a) *"Class 1 aggregate" means foamed slag, pumice, blastfurnace slag, pelleted fly ash, crushed brick and burnt clay products (including expanded clay), well-burnt clinker and crushed limestone.*
"Class 2 aggregate" means flint gravel, granite, and all crushed natural stones other than limestone.

(b) *Any reference to plaster means:*
(i) in the case of an external wall 1 m or more from the relevant boundary, plaster applied on the internal face only;
(ii) in the case of any other wall, plaster applied on both faces;
(iii) if to plaster of a given thickness on the external face of a wall, except in the case of a reference to vermiculite-gypsum or perlite-gypsum plaster, rendering on the external face of the same thickness;
(iv) if to vermiculite-gypsum plaster, vermiculite-gypsum plaster of a mix within the range of 1½ to 2:1 by volume.

(c) *In the case of a cavity wall, the load is assumed to be on inner leaf only except for fire resistance period of four hours.*

PART I: WALLS

A. Masonry construction

Construction and materials	*Minimum thickness excluding plaster (in mm) for period of fire resistance of*									
	Loadbearing					*Non-loadbearing*				
	4 hours	*2 hours*	*1½ hours*	*1 hour*	*½ hour*	*4 hours*	*2 hours*	*1½ hours*	*1 hour*	*½ hour*
1. Reinforced concrete, minimum concrete cover to main reinforcement of 25 mm:										
(a) *unplastered*	*180*	*100*	*100*	*75*	*75*					
(b) *12·5 mm cement-sand plaster*	*180*	*100*	*100*	*75*	*75*					
(c) *12·5 mm gypsum-sand plaster*	*180*	*100*	*100*	*75*	*75*					
(d) *12·5 mm vermiculite-gypsum plaster*	*125*	*75*	*75*	*63*	*63*					
2. No-fines concrete of Class 2 aggregate:										
(a) *12·5 mm cement-sand plaster*						*150*				
(b) *12·5 mm gypsum-sand plaster*						*150*				
(c) *12·5 mm vermiculite-gypsum plaster*						*150*				

SCHEDULE 6—*continued*

PART I: WALLS—*continued*

A. Masonry construction—continued

Construction and materials	Minimum thickness excluding plaster (in mm) for period of fire resistance of									
	Loadbearing					Non-loadbearing				
	4 hours	2 hours	1½ hours	1 hour	½ hour	4 hours	2 hours	1½ hours	1 hour	½ hour
3. Bricks of clay, concrete or sand-lime:										
(a) *unplastered*	200	100	100	100	100	170	100	100	75	75
(b) *12·5 mm cement-sand plaster*	200	100	100	100	100	170	100	100	75	75
(c) *12·5 mm gypsum-sand plaster*	200	100	100	100	100	170	100	100	75	75
(d) *12·5 mm vermiculite-gypsum or perlite-gypsum* plaster*	100	100	100	100	100	100	100	100	75	75
4. Concrete blocks of Class 1 aggregate:										
(a) *unplastered*	150	100	100	100	100	150	75	75	75	50
(b) *12·5 mm cement-sand plaster*	150	100	100	100	100	100	75	75	75	50
(c) *12·5 mm gypsum-sand plaster*	150	100	100	100	100	100	75	75	75	50
(d) *12·5 mm vermiculite-gypsum plaster*	100	100	100	100	100	75	75	62	50	50
5. Concrete blocks of Class 2 aggregate:										
(a) *unplastered*		100	100	100	100	150	100	100	75	50
(b) *12·5 mm cement-sand plaster*		100	100	100	100	150	100	100	75	50
(c) *12·5 mm gypsum-sand plaster*		100	100	100	100	150	100	100	75	50
(d) *12·5 mm vermiculite-gypsum plaster*	100	100	100	100	100	100	75	75	75	50
6. Autoclaved aerated concrete blocks density 475—1200 kg/m³	180	100	100	100	100	100	62	62	50	50
7. Hollow concrete blocks, one cell in wall thickness, of Class 1 aggregate:										
(a) *unplastered*		100	100	100	100	150	100	100	100	75
(b) *12·5 mm cement-sand plaster*		100	100	100	100	150	100	75	75	75
(c) *12·5 mm gypsum-sand plaster*		100	100	100	100	150	100	75	75	75
(d) *12·5 mm vermiculite-gypsum plaster*		100	100	100	100	100	75	75	62	62

**Perlite-gypsum plaster to clay bricks only.*

SCHEDULE 6—*continued*

PART I: WALLS—*continued*

A. Masonry construction—continued

8. Hollow concrete blocks, one cell in wall thickness, of Class 2 aggregate:										
(a) *unplastered*						150	150	125	125	125
(b) *12·5 mm cement-sand plaster*						150	150	125	125	100
(c) *12·5 mm gypsum-sand plaster*						150	150	125	125	100
(d) *12·5 mm vermiculite-gypsum plaster*						125	100	100	100	75
9. Cellular clay blocks not less than 50% solid:										
(a) *12·5 mm cement-sand plaster*									100	75
(b) *12·5 mm gypsum-sand plaster*									100	75
(c) *12·5 mm vermiculite-gypsum plaster*						200	100	100	100	62
10. Cavity wall with outer leaf of bricks or blocks of clay, composition, concrete or sand-lime, not less than 100 mm thick and:										
(a) *inner leaf of bricks or blocks of clay, composition, concrete or sand-lime*	100	100	100	100	100	75	75	75	75	75
(b) *inner leaf of solid or hollow concrete bricks or blocks of Class I aggregate*	100	100	100	100	100	75	75	75	75	75
11. Cavity wall with outer leaf of cellular clay blocks as 9 above and inner leaf of autoclaved aerated concrete blocks, density 475—1200 kg/m³	150	100	100	100	100	75	75	75	75	75

SCHEDULE 6—*continued*

PART I: WALLS—*continued*

B. Framed and composite construction (non-loadbearing)

Construction and materials	*Period of fire resistance in hours*
1. *Steel frame with external cladding of 16 mm rendering on metal lathing and internal lining of autoclaved aerated concrete blocks, density 480–1120 kg/m³ of thickness of—*	
50 mm	2
62 mm	3
75 mm	4
2. *Steel frame with external cladding of 100 mm concrete blocks and internal lining of 16 mm gypsum plaster on metal lathing*	4
3. *Steel frame with external cladding of bricks of clay, concrete or sand-lime 100 mm thick and internal lining of asbestos insulating board of thickness of 9 mm*	3
4. *Steel frame with external cladding of 16 mm rendering on metal lathing and internal lining of—*	
9 mm asbestos insulating board	½
16 mm gypsum plaster on metal lathing	1
5. *Steel or timber frame with facings on each side of—*	
(a) *metal lathing with cement-sand or gypsum plaster of thickness of—*	
19 mm	1
12·5 mm	½
(b) *metal lathing with vermiculite-gypsum or perlite-gypsum plaster of thickness of—*	
25 mm	2
19 mm	1½
12·5 mm	1
(c) *9·5 mm plasterboard with gypsum plaster of thickness of 5 mm*	½
(d) *9·5 mm plasterboard with vermiculite-gypsum plaster of thickness of—*	
25 mm	2
16 mm	1½
10 mm	1
5 mm	½
(e) *12·5 mm plasterboard—*	
unplastered	½
with gypsum plaster of thickness of 12·5 mm	1

SCHEDULE 6—*continued*

PART I: WALLS—*continued*

B. Framed and composite construction (non-loadbearing)—continued

Construction and materials	*Period of fire resistance in hours*
(f) *12·5 mm plasterboard with vermiculite-gypsum plaster of thickness of—*	
25 mm	*2*
16 mm	*1½*
10 mm	*1*
(g) *19 mm plasterboard (or two layers of 9·5 mm fixed to break joint) without finish*	*1*
(h) *19 mm plasterboard (or two layers of 9·5 mm) with vermiculite-gypsum plaster of thickness of—*	
16 mm	*2*
10 mm	*1½*
(i) *12·5 mm fibre insulating board with gypsum plaster of thickness of 12·5 mm*	*½*
(j) *asbestos insulating board not less than 9 mm thick with 9 mm fillets to face of studs*	*½*
(k) *asbestos insulating board not less than 12 mm thick*	*½*
(l) *25 mm wood wool slabs with gypsum plaster of thickness of 12·5 mm*	*1*
6. Compressed straw slabs in timber frames finished on both faces with gypsum plaster of thickness of 5 mm	*1*
7. Plasterboard 9·5 mm cellular core partition—	
(a) *unplastered*	*½*
(b) *12·5 mm gypsum plaster*	*½*
(c) *22 mm vermiculite-gypsum plaster*	*2*
8. Plasterboard 12·5 mm cellular core partition—	
(a) *unplastered*	*½*
(b) *12·5 mm gypsum plaster*	*1*
(c) *16 mm vermiculite-gypsum plaster*	*2*
9. Plasterboard 19 mm finished on both faces with 16 mm gypsum plaster	*1*
10. Plasterboard 12·5 mm bonded with neat gypsum plaster to each side of 19 mm plasterboard	*1½*
11. Three layers of 19 mm plasterboard bonded with neat gypsum plaster	*2*
12. Wood wool slab with 12·5 mm render or plaster of thickness of—	
75 mm	*2*
50 mm	*1*
13. Compressed straw slabs, with 75 mm by 12·5 mm wood cover strips to joints, of thickness of 50 mm	*½*

SCHEDULE 6—*continued*

PART I: WALLS—*continued*

C. External walls more than 1 m from the relevant boundary (non-loadbearing)

Construction and materials	*Period of fire resistance in hours*
1. Steel frame with external cladding of non-combustible sheets and internal lining of—	
(a) *9 mm asbestos insulating board*	*4*
(b) *12·5 mm cement-sand or gypsum plaster on metal lathing*	*4*
(c) *sprayed asbestos of thickness of 12·5 mm*	*4*
(d) *two layers of 9·5 mm plasterboard*	½
(e) *9·5 mm plasterboard finished with gypsum plaster of thickness of 12·5 mm*	½
(f) *12·5 mm plasterboard finished with 5 mm gypsum plaster*	½
(g) *50 mm compressed straw slabs*	½
(h) *50 mm compressed straw slabs finished with 5 mm gypsum plaster*	*1*
**2. Timber frame with external cladding of 10 mm cement-sand or cement-lime rendering and internal lining of—*	
(a) *9 mm asbestos insulating board*	*1*
(b) *16 mm gypsum plaster on metal lathing*	*1*
(c) *9·5 mm plasterboard finished with 12·5 mm gypsum plaster*	*1*
(d) *12·5 mm plasterboard finished with 5 mm gypsum plaster*	*1*
(e) *50 mm compressed straw slabs*	*1*
(f) *aerated concrete blocks—*	
50 mm	*3*
62 mm	*4*
75 mm	*4*
100 mm	*4*
3. Timber frame with external cladding of 100 mm clay, concrete or sand-lime bricks or blocks, finished internally with—	
(a) *asbestos insulating board*	*4*
(b) *16 mm gypsum plaster on metal lathing*	*4*
**4. Timber frame with external cladding of weather boarding or 9·5 mm plywood and internal lining of—*	
(a) *9 mm asbestos insulating board*	½
(b) *16 mm gypsum plaster on metal lathing*	½
(c) *9·5 mm plasterboard finished with 12·5 mm gypsum plaster*	½
(d) *12·5 mm plasterboard finished with 5 mm gypsum plaster*	½
(e) *50 mm compressed straw slabs*	½

**The presence of a combustible vapour barrier within the thickness of these constructions will not affect these periods of fire resistance.*

SCHEDULE 6—*continued*

PART I: WALLS—*continued*

C. External walls more than 1 m from the relevant boundary (non-loadbearing)—continued

Construction and materials	*Period of fire resistance in hours*
(f) *75 mm wood wool slabs faced each side with asbestos-cement*	*2*
(g) *aerated concrete blocks—*	
50 mm	*3*
62 mm	*4*
75 mm	*4*
100 mm	*4*

SCHEDULE 6—*continued*

PART II: REINFORCED CONCRETE COLUMNS

Construction and materials	Minimum dimension of concrete column* without finish (in mm) for a fire resistance of—				
	4 hours	2 hours	1½ hours	1 hour	½ hour
1. (a) without plaster	450	300	250	200	150
(b) with 12·5 mm cement-sand or gypsum-sand plaster on mesh reinforcement fixed around column	300	225	150	150	150
(c) finished with 12·5 mm encasement of vermiculite-gypsum plaster	275	200	150	120	120
(d) with 2·5 mm hard drawn steel wire fabric, of maximum pitch 150 mm in each direction, placed in concrete cover to main reinforcement	300	225	200	150	150
(e) with limestone or light-weight aggregate as coarse aggregate	300	225	200	200	150
2. Built into †any separating wall, compartment wall or external wall‡—					
(a) without plaster	180	100	100	75	75
(b) finished with 12·5 mm of vermiculite-gypsum plaster	125	75	75	63	63

*The minimum dimension of a circular column is the diameter.
†No part of column projecting beyond either face of wall.
‡Having not less fire resistance than that of the column and extending to the full height of, and not less than 600 mm on each side of, the column.

PART III: REINFORCED CONCRETE BEAMS

Construction and materials	Minimum concrete cover without finish to main reinforcement (in mm) for a fire resistance of—				
	4 hours	2 hours	1½ hours	1 hour	½ hour
(a) without plaster	63	45	35	25	12·5
(b) finished with 12·5 mm vermiculite-gypsum plaster	25	12·5	12·5	12·5	12·5
(c) with 12·5 mm cement-sand or gypsum-sand plaster on mesh reinforcement fixed around beam	50	30	20	12·5	12·5

SCHEDULE 6—*continued*

PART IV: PRESTRESSED CONCRETE BEAMS WITH POST-TENSIONED STEEL

Cover reinforcement	*Additional protection*	*Minimum concrete cover to tendons (in mm) for a fire resistance of—*			
		4 hours	*2 hours*	*1½ hours*	*1 hour*
None	*(a) none ... ...*				*38*
	(b) vermiculite concrete slabs (permanent shuttering) 12·5 mm thick		*38*	*25*	*25*
	(c) plaster 12·5 mm thick on mesh reinforcement fixed around beam		*50*	*38*	*25*
	(d) vermiculite-gypsum plaster 12·5 mm thick or sprayed asbestos 10 mm thick ...		*38*	*25*	*25*
Light mesh reinforcement (having a minimum concrete cover of 25 mm) to retain the concrete in position around the tendons	*(a) none ... ...*	*100*	*63*	*63*	
	(b) plaster 12·5 mm thick on mesh reinforcement ...	*90*			
	(c) vermiculite concrete slabs (permanent shuttering) 12·5 mm thick	*75*			
	(d) vermiculite concrete slabs (permanent shuttering) 25 mm thick	*50*			
	(e) vermiculite-gypsum plaster 12·5 mm thick	*75*			
	(f) vermiculite-gypsum plaster 22 mm thick	*50*			
	(g) sprayed asbestos 10 mm thick	*75*			
	(h) sprayed asbestos 19 mm thick	*50*			

SCHEDULE 6—*continued*

PART V: STRUCTURAL STEEL

A. Encased steel stanchions (Mass per metre not less than 45 kg)

Construction and materials	*Minimum thickness (in mm) of protection for a fire resistance of—*				
	4 hours	*2 hours*	*1½ hours*	*1 hour*	*½ hour*
(A.) Solid Protection (unplastered)*					
1. Concrete not leaner than 1:2:4 mix with natural aggregates—					
(a) concrete not assumed to be loadbearing, reinforced†	*50*	*25*	*25*	*25*	*25*
(b) concrete assumed to be loadbearing, reinforced in accordance with BS 449: Part 2: 1969.ϕ	*75*	*50*	*50*	*50*	*50*
2. Solid bricks of clay, composition or sand-lime	*75*	*50*	*50*	*50*	*50*
3. Solid blocks of foamed slag or pumice concrete reinforced† in every horizontal joint	*62*	*50*	*50*	*50*	*50*
4. Sprayed asbestos of density 140-240 kg/m³	*44*	*19*	*15*	*10*	*10*
5. Sprayed vermiculite-cement		*38*	*32*	*19*	*12·5*
(B.) Hollow Protection‡					
1. Solid bricks of clay, composition or sand-lime reinforced in every horizontal joint, unplastered	*115*	*50*	*50*	*50*	*50*
2. Solid blocks of foamed slag or pumice concrete reinforced§ in every horizontal joint, unplastered	*75*	*50*	*50*	*50*	*50*
3. Metal lathing with gypsum or cement-lime plaster of thickness of		*38§*	*25*	*19*	*12·5*
4. (a) Metal lathing with vermiculite-gypsum or perlite-gypsum plaster of thickness of	*50§*	*19*	*16*	*12·5*	*12·5*
(b) Metal lathing spaced 25 mm from flanges with vermiculite-gypsum or perlite-gypsum plaster of thickness of	*44*	*19*	*12·5*	*12·5*	*12·5*
5. Gypsum plasterboard with 1·6 mm wire binding at 100 mm pitch—					
(a) 9·5 mm plasterboard with gypsum plaster of thickness of				*12·5*	*12·5*
(b) 19 mm plasterboard with gypsum plaster of thickness of		*12·5*	*10*	*7*	*7*

**Solid protection means a casing which is bedded close to the steel without intervening cavities and with all joints in that casing made full and solid.*

†Reinforcement shall consist of steel binding wire not less than 2·3 mm in thickness, or a steel mesh weighing not less than 0·48 kg/m². In concrete protection, the spacing of that reinforcement shall not exceed 150 mm in any direction.

‡Hollow protection means that there is a void between the protective material and the steel. All hollow protection to columns shall be effectively sealed at each floor level.

§Light mesh reinforcement required 12·5 mm to 19 mm below surface unless special corner beads are used.

ϕAs read with Supplement No. 1 (PD 3343) to BS 449: Part 1: 1970 and Addendum No. 1 (April 1975) to BS 449: Part 2: 1969.

SCHEDULE 6—*continued*

PART V: STRUCTURAL STEEL—*continued*

A. Encased steel stanchions (Mass per metre not less than 45 kg)—continued

Construction and materials	*Minimum thickness (in mm) of protection for a fire resistance of—*				
	4 hours	*2 hours*	*1½ hours*	*1 hour*	*½ hour*
6. Gypsum plasterboard with 1·6 mm wire binding at 100 mm pitch—					
(a) 9·5 mm plasterboard with vermiculite-gypsum plaster of thickness of ..		*16*	*12·5*	*10*	*7*
(b) 19 mm plasterboard with vermiculite-gypsum plaster of thickness of ..	*32§*	*10*	*10*	*7*	*7*
7. Metal lathing with sprayed asbestos of thickness of	*44*	*19*	*15*	*10*	*10*
8. Vermiculite-cement slabs of 4:1 mix reinforced with wire mesh and finished with plaster skim. Slabs of thickness of ..	*63*	*25*	*25*	*25*	*25*
9. Asbestos insulating boards of density 510-880 kg/m³ (screwed to 25 mm thick asbestos battens for ½ hour and 1 hour periods)		*25*	*19*	*12*	*9*

SCHEDULE 6—*continued*

PART V: STRUCTURAL STEEL—*continued*

B. Encased steel beams (Mass per metre not less than 30 kg)

Construction and materials	*Minimum thickness (in mm) of protection for a fire resistance of—*				
	4 hours	*2 hours*	*1½ hours*	*1 hour*	*½ hour*
(A.) Solid Protection† (unplastered)					
1. Concrete not leaner than 1:2:4 mix with natural aggregates—					
(a) concrete not assumed to be loadbearing, reinforced‡	*63*	*25*	*25*	*25*	*25*
(b) concrete assumed to be loadbearing, reinforced in accordance with BS 449: Part 2: 1969ø	*75*	*50*	*50*	*50*	*50*
2. Sprayed asbestos of density 140-240 kg/m³	*44*	*19*	*15*	*10*	*10*
3. Sprayed vermiculite-cement		*38*	*32*	*19*	*12·5*
*(B.) Hollow Protection**					
1. Metal lathing—					
(a) with cement-lime plaster of thickness of		*38*	*25*	*19*	*12·5*
(b) with gypsum plaster of thickness of		*22*	*19*	*16*	*12·5*
(c) with vermiculite-gypsum or perlite-gypsum plaster of thickness of	*32*	*12·5*	*12·5*	*12·5*	*12·5*

**Hollow protection means that there is a void between the protective material and the steel. All hollow protection to columns shall be effectively sealed at each floor level.*

†Solid protection means a casing which is bedded close to the steel without intervening cavities and with all joints in that casing made full and solid.

‡Reinforcement shall consist of steel binding wire not less than 2·3 mm in thickness, or a steel mesh weighing not less than 0·48 kg/m². In concrete protection, the spacing of that reinforcement shall not exceed 150 mm in any direction.

øAs read with Supplement No. 1 (PD 3343) to BS 449: Part 1: 1970 and Addendum No. 1 (April 1975) to BS 449: Part 2: 1969

SCHEDULE 6—*continued*

PART V: STRUCTURAL STEEL—*continued*

B. Encased steel beams (Mass per metre not less than 30 kg)—continued

Construction and materials	*Minimum thickness (in mm) of protection for a fire resistance of—*				
	4 hours	*2 hours*	*1½ hours*	*1 hour*	*½ hour*
(B.) Hollow Protection—continued*					
2. *Gypsum plasterboard with 1·6 mm wire binding at 100 mm pitch—*					
(a) 9·5 mm plasterboard with gypsum plaster of thickness of				12·5	12·5
(b) 19 mm plasterboard with gypsum plaster of thickness of		12·5	10	7	7
3. *Plasterboard with 1·6 mm wire binding at 100 mm pitch—*					
(a) 9·5 mm plasterboard nailed to wooden cradles finished with gypsum plaster of thickness of					12·5
(b) 9·5 mm plasterboard with vermiculite-gypsum plaster of thickness of		16	12·5	10	7
(c) 19 mm plasterboard with vermiculite-gypsum plaster of thickness of	32†	10	10	7	7
(d) 19 mm plasterboard with gypsum plaster of thickness of		12·5			
4. *Metal lathing with sprayed asbestos of density 140-240 kg/m³ and of thickness of*	44	19	15	10	10
5. *Asbestos insulating boards of density 510-880 kg/m³ (screwed to 25 mm thick asbestos battens for ½ hour and 1 hour periods)*		25	19	12	9
6. *Vermiculite-cement slabs of 4:1 mix reinforced with wire mesh and finished with plaster skim. Slabs of thickness of*	63	25	25	25	25
7. *Gypsum-sand plaster 12·5 mm thick applied to heavy duty (Type B as designated in BS 1105: 1972) wood wool slabs of thickness of*		50	38	38	38

**Hollow protection means that there is a void between the protective material and the steel. All hollow protection to columns shall be effectively sealed at each floor level.*

†Light mesh reinforcement required 12·5 to 19 mm below surface unless special corner beads are used.

SCHEDULE 6—*continued*

PART VI: STRUCTURAL ALUMINIUM

Encased aluminium alloy stanchions and beams (Mass per metre not less than 16 kg)

Construction and materials	Minimum thickness (in mm) of protection for a fire resistance of—				
	4 hours	2 hours	1½ hours	1 hour	½ hour
(A.) Solid Protection*					
1. Sprayed asbestos of density 140-240 kg/m³		48	32	19	10
2. Sprayed vermiculite-cement				44	19
(B.) Hollow Protection†					
1. Metal lathing with vermiculite-gypsum or perlite-gypsum plaster of thickness of ..		32	22	16	12·5
2. Metal lathing finished with neat gypsum plaster of thickness of				19	12·5
3. Gypsum plasterboard 19 mm thick with 1·6 mm wire binding at 100 mm pitch finished with gypsum-vermiculite plaster of thickness of		22	16	10	10
4. Asbestos insulating board of density 510-880 kg/m³ (screwed to 25 mm thick asbestos battens for the ½ hour period) ..			34	21	9

**Solid protection means a casing which is bedded close to the alloy without intervening cavities and with all joints in that casing made full and solid.*

†Hollow protection means that there is a void between the protected material and the alloy. All hollow protection to columns shall be effectively sealed at each floor level.

SCHEDULE 6—*continued*

PART VII: TIMBER FLOORS

Construction and materials	*Minimum thickness (in mm) for fire resistance of—*		
	1 hour	*½ hour*	*modified‡ ½ hour*
(A) Plain edge boarding on timber joists not less than 38 mm wide with ceiling of—			
(i) timber lath and plaster—			
thickness of plaster			*16*
(ii) timber lath and plaster with plaster of minimum thickness of 16 mm covered on underside with plasterboard of thickness		*12·5*	
(iii) metal lathing and plaster—			
thickness of plaster (a) gypsum		*16*	
(b) vermiculite		*12·5*	
(iv) one layer of plasterboard of thickness			*12·5*
(v) one layer of plasterboard of minimum thickness of 9·5 mm finished with gypsum plaster of thickness			*12·5*
(vi) one layer of plasterboard of minimum thickness of 12·5 mm finished with gypsum plaster of thickness		*12·5*	
(vii) two layers of plasterboard of total thickness		*25*	*19*
(viii) two layers of plasterboard each of minimum thickness of 9·5 mm finished with gypsum plaster of thickness		*5*	
(ix) one layer of fibre insulating board of minimum thickness of 12·5 mm finished with gypsum plaster of thickness			*12·5*
(x) one layer of asbestos insulating board of minimum thickness		*12*	
(xi) wood wool slab 25 mm thick finished with gypsum plaster of thickness		*5*	
(B) Tongued and grooved boarding of not less than 16 mm (finished) thickness on timber joists not less than 38 mm wide with ceiling of—*			
(i) timber lath and plaster—			
thickness of plaster			*16*
(ii) timber lath and plaster with plaster of minimum thickness of 16 mm covered on underside with plasterboard of thickness		*9·5*	
(iii) metal lathing and plaster—			
thickness of plaster (a) gypsum	*22*	*16*	
(b) vermiculite	*12·5*	*12·5*	

**Or an equivalent thickness of wood chipboard.*

‡The term "modified ½ hour" refers to the requirements specified in item 7 in the Table to regulation E1.

SCHEDULE 6—*continued*

PART VII: TIMBER FLOORS—*continued*

Construction and materials	Minimum thickness (in mm) for fire resistance of—		
	1 hour	½ hour	modified‡ ½ hour
(iv) one layer of plasterboard of thickness			9·5
(v) one layer of plasterboard of minimum thickness of 9·5 mm finished with—			
(a) gypsum plaster of thickness		12·5	
(b) vermiculite-gypsum plaster of thickness	12·5		
(vi) one layer of plasterboard of minimum thickness of 12·5 mm finished with gypsum plaster of thickness		5	
(vii) two layers of plasterboard of total thickness		22	
(viii) one layer of fibre insulating board of minimum thickness of 12·5 mm finished with gypsum plaster of thickness			5
(ix) one layer of asbestos insulating board of minimum thickness		9	
(x) one layer of asbestos insulating board of minimum thickness of 12 mm finished on top with glass fibre or mineral wool of thickness	25		
(xi) wood wool slab 25 mm thick finished with—			
(a) gypsum plaster of thickness		5	
(b) vermiculite-gypsum plaster of thickness	10		
(C) Tongued and grooved boarding of not less than 21 mm (finished) thickness* on timber joists not less than 175 mm deep by 50 mm wide with ceiling of—			
(i) timber lath and plaster— thickness of plaster		16	
(ii) metal lathing and plaster— thickness of plaster		16	
(iii) metal lathing and sprayed asbestos† to thickness of	19	12·5	
(iv) one layer of plasterboard of thickness			9·5
(v) one layer of plasterboard of minimum thickness of 9·5 mm finished with—			
(a) gypsum plaster of thickness		12·5	
(b) vermiculite-gypsum plaster of thickness	12·5		

*Or an equivalent thickness of wood chipboard.

†Sprayed asbestos in accordance with BS 3590: 1970.

‡The term "modified ½ hour" refers to the requirements specified in item 7 in the Table to regulation E1.

SCHEDULE 6—*continued*

PART VII: TIMBER FLOORS—*continued*

Construction and materials	*Minimum thickness (in mm) for fire resistance of—*		
	1 hour	*½ hour*	*modified‡ ½ hour*
(vi) one layer of plasterboard of minimum thickness of 12·5 mm finished with gypsum plaster of thickness		*5*	
(vii) two layers of plasterboard of total thickness		*19*	
(viii) one layer of fibre insulating board of thickness			*12·5*
(ix) one layer of fibre insulating board of minimum thickness of 12·5 mm finished with gypsum plaster of thickness		*12·5*	
(x) one layer of asbestos insulating board of thickness		*6*	
(xi) wood wool slab 25 mm thick finished with—			
(a) gypsum plaster of thickness ..		*5*	
(b) vermiculite-gypsum plaster of thickness	*10*		

‡*The term "modified ½ hour" refers to the requirements specified in item 7 in the Table to regulation E1.*

SCHEDULE 6—*continued*

PART VIII: CONCRETE FLOORS

Construction and materials	*Minimum thickness of solid substance including screed (in mm)*	*Ceiling finish for a fire resistance of—*				
		4 hours	*2 hours*	*1½ hours*	*1 hour*	*½ hour*
Solid flat slab or filler joist floor. Units of channel or T section	90	25 mm V or 25 mm A	10 mm V or 12·5 mm A	10 mm V or 12·5 mm A	7 mm V or 7 mm A	nil
	100	19 mm V or 19 mm A	7 mm V	7 mm V	nil	nil
	125	10 mm V or 12·5 mm A	nil	nil	nil	nil
	150	nil	nil	nil	nil	nil
Solid flat slab or filler joist floor with 25 mm wood wool slab ceiling base	90			12·5 mm G	nil	nil
	100		nil	nil	nil	nil
	125	12·5 mm G	nil	nil	nil	nil
	150	nil	nil	nil	nil	nil
Units of inverted U section with minimum thickness at crown	63					nil
	75				nil	nil
	100		nil	nil	nil	nil
	150	nil	nil	nil	nil	nil
Hollow block construction or units of box or I section	63					nil
	75				nil	nil
	90		nil	nil	nil	nil
	125	nil	nil	nil	nil	nil
Cellular steel with concrete topping	63	12·5 mm V suspended on metal lathing or 12·5 mm A (direct)	12·5 mm G suspended on metal lathing	12·5 mm G suspended on metal lathing	12·5 mm G suspended on metal lathing	nil

"V"—vermiculite-gypsum plaster. "A"—Sprayed asbestos in accordance with BS 3590: 1970. "G"—gypsum plaster.

Note: Where a column relating to ceiling finish contains no entry opposite a specification, the notional period of fire resistance specified in that column is not applicable.

Regulation E7

SCHEDULE 7

Calculation of Permitted Limits of Unprotected Areas

Part I. General rules applicable to this Schedule

1. The permitted limit of unprotected areas in any side of a building or compartment shall be calculated by reference to the requirements of Part II, III or IV (whichever is applicable under regulation E7).

2. For the purposes of this schedule, the expression "unprotected area" has the meaning ascribed to it by regulation E1, but in calculating the size of unprotected areas or the permitted limit of unprotected areas, the following provisions shall apply—

(*a*) where any part of an external wall is an unprotected area, only because it has combustible material attached to it as cladding, the area of that unprotected area shall be deemed to be half the area of such cladding;

(*b*) no account shall be taken of any of the following—

(i) an unprotected area which does not exceed 0·1 m^2 and which is not less than 1·5 m from any other unprotected area in the same side of the building or compartment (unless that other falls within (iii) below);

(ii) one or more unprotected areas having an area (or if more than one an aggregate area) not exceeding 1 m^2 and not less than 4 m from any other unprotected area in the same side of the building or compartment (except any such area as is specified in (i) above);

(iii) an unprotected area in any part of an external wall which forms part of a protected shaft;

(iv) an unprotected area in the side of a building not divided into compartments, if the area is not less than 28 m above any ground adjoining that side of the building.

Part II. Rules for calculation by reference to an enclosing rectangle

3. The conditions of this Part of this schedule shall be satisfied if a building or compartment is so situated that no point on the relevant boundary is either between the relevant plane of reference and the side of the building or compartment or at a distance from the relevant plane of reference which is less than the distance specified in the Tables to this Part of this schedule, according to the purpose group of the building or compartment, the dimensions of the enclosing rectangle and the unprotected percentage.

4. For the purposes of this Part of this schedule—

"plane of reference" means any vertical plane which touches the side or some part of the side of a building or compartment, but which (however far extended) does not pass within the structure of such building or compartment (and for this purpose, any balcony, coping or similar projection shall be deemed not to be part either of that side or of the structure); and the relevant plane of reference shall in each case be taken as that most favourable in that respect to the person erecting the building;

"enclosing rectangle" means the smallest rectangle on the relevant plane of reference which would—

(*a*) enclose all the outer edges of any unprotected areas of the building or, if the building is divided into compartments, of the compartment (other than any part of an unprotected area which is at an angle of more than 80° to the plane of reference), the outer edges being for this purpose projected on the plane of reference by lines perpendicular to such plane; and

(*b*) have two horizontal sides; and

(*c*) have height and width falling within those listed in the Tables to this Part of this schedule;

"unprotected percentage" means the percentage of the area of the enclosing rectangle which is equal to the aggregate of the unprotected areas taken into account in calculating the enclosing rectangle and as projected on it.

TABLES TO PART II OF SCHEDULE 7

TABLE 1—BUILDINGS OR COMPARTMENTS OF PURPOSE GROUPS I (SMALL RESIDENTIAL), II (INSTITUTIONAL), III (OTHER RESIDENTIAL), IV (OFFICE) AND VII (ASSEMBLY)

Width of enclosing rectangle in metres	Distance in metres from relevant boundary for unprotected percentage not exceeding								
	20	30	40	50	60	70	80	90	100
Enclosing rectangle 3 m high									
3	1·0	1·0	1·0	1·5	1·5	1·5	2·0	2·0	2·0
6	1·0	1·0	1·5	2·0	2·0	2·0	2·5	2·5	3·0
9	1·0	1·0	1·5	2·0	2·5	2·5	3·0	3·0	3·5
12	1·0	1·5	2·0	2·0	2·5	3·0	3·0	3·5	3·5
15	1·0	1·5	2·0	2·5	2·5	3·0	3·5	3·5	4·0
18	1·0	1·5	2·0	2·5	2·5	3·0	3·5	4·0	4·0
21	1·0	1·5	2·0	2·5	3·0	3·0	3·5	4·0	4·5
24	1·0	1·5	2·0	2·5	3·0	3·5	3·5	4·0	4·5
27	1·0	1·5	2·0	2·5	3·0	3·5	4·0	4·0	4·5
30	1·0	1·5	2·0	2·5	3·0	3·5	4·0	4·0	4·5
40	1·0	1·5	2·0	2·5	3·0	3·5	4·0	4·0	5·0
No limit	1·0	1·5	2·0	2·5	3·0	3·5	4·0	4·0	5·0
Enclosing rectangle 6 m high									
3	1·0	1·0	1·5	2·0	2·0	2·0	2·5	2·5	3·0
6	1·0	1·5	2·0	2·5	3·0	3·0	3·5	4·0	4·0
9	1·0	2·0	2·5	3·0	3·5	4·0	4·5	4·5	5·0
12	1·5	2·5	3·0	3·5	4·0	4·5	5·0	5·0	5·5
15	1·5	2·5	3·0	4·0	4·5	5·0	5·5	5·5	6·0
18	1·5	2·5	3·5	4·0	4·5	5·0	5·5	6·0	6·5
21	1·5	2·5	3·5	4·0	5·0	5·5	6·0	6·5	7·0
24	1·5	2·5	3·5	4·5	5·0	5·5	6·0	7·0	7·0
27	1·5	2·5	3·5	4·5	5·0	6·0	6·5	7·0	7·5
30	1·5	2·5	3·5	4·5	5·0	6·0	6·5	7·0	8·0
40	1·5	2·5	3·5	4·5	5·5	6·5	7·0	8·0	8·5
50	1·5	2·5	3·5	4·5	5·5	6·5	7·5	8·0	9·0
60	1·5	2·5	3·5	5·0	5·5	6·5	7·5	8·5	9·5
80	1·5	2·5	3·5	5·0	6·0	7·0	7·5	8·5	9·5
100	1·5	2·5	3·5	5·0	6·0	7·0	8·0	8·5	10·0
No limit	1·5	2·5	3·5	5·0	6·0	7·0	8·0	8·5	10·0

SCHEDULE 7—PART II—*continued*
TABLE 1—*continued*

Width of enclosing rectangle in metres	Distance in metres from relevant boundary for unprotected percentage not exceeding								
	20	30	40	50	60	70	80	90	100
Enclosing rectangle 9 m high									
3	1·0	1·0	1·5	2·0	2·5	2·5	3·0	3·0	3·5
6	1·0	2·0	2·5	3·0	3·5	4·0	4·5	4·5	5·0
9	1·5	2·5	3·5	4·0	4·5	5·0	5·5	5·5	6·0
12	1·5	3·0	3·5	4·5	5·0	5·5	6·0	6·5	7·0
15	2·0	3·0	4·0	5·0	5·5	6·0	6·5	7·0	7·5
18	2·0	3·5	4·5	5·0	6·0	6·5	7·0	8·0	8·5
21	2·0	3·5	4·5	5·5	6·5	7·0	7·5	8·5	9·0
24	2·0	3·5	5·0	5·5	6·5	7·5	8·0	9·0	9·5
27	2·0	3·5	5·0	6·0	7·0	7·5	8·5	9·5	10·0
30	2·0	3·5	5·0	6·0	7·0	8·0	9·0	9·5	10·5
40	2·0	3·5	5·5	6·5	7·5	8·5	9·5	10·5	11·5
50	2·0	4·0	5·5	6·5	8·0	9·0	10·0	11·5	12·5
60	2·0	4·0	5·5	7·0	8·0	9·5	11·0	11·5	13·0
80	2·0	4·0	5·5	7·0	8·5	10·0	11·5	12·5	13·5
100	2·0	4·0	5·5	7·0	8·5	10·0	11·5	12·5	14·5
120	2·0	4·0	5·5	7·0	8·5	10·0	11·5	12·5	14·5
No limit	2·0	4·0	5·5	7·0	8·5	10·5	12·0	12·5	15·0
Enclosing rectangle 12 m high									
3	1·0	1·5	2·0	2·0	2·5	3·0	3·0	3·5	3·5
6	1·5	2·5	3·0	3·5	4·0	4·5	5·0	5·0	5·5
9	1·5	3·0	3·5	4·5	5·0	5·5	6·0	6·5	7·0
12	1·5	3·5	4·5	5·0	6·0	6·5	7·0	7·5	8·0
15	2·0	3·5	5·0	5·5	6·5	7·0	8·0	8·5	9·0
18	2·5	4·0	5·0	6·0	7·0	7·5	8·5	9·0	10·0
21	2·5	4·0	5·5	6·5	7·5	8·5	9·0	10·0	10·5
24	2·5	4·5	6·0	7·0	8·0	8·5	9·5	10·5	11·5
27	2·5	4·5	6·0	7·0	8·0	9·0	10·5	11·0	12·0
30	2·5	4·5	6·5	7·5	8·5	9·5	10·5	11·5	12·5
40	2·5	5·0	6·5	8·0	9·5	10·5	12·0	13·0	14·0
50	2·5	5·0	7·0	8·5	10·0	11·0	13·0	14·0	15·0
60	2·5	5·0	7·0	9·0	10·5	12·0	13·5	14·5	16·0
80	2·5	5·0	7·0	9·0	11·0	13·0	14·5	16·0	17·0
100	2·5	5·0	7·5	9·5	11·5	13·5	15·0	16·5	18·0
120	2·5	5·0	7·5	9·5	11·5	13·5	15·0	17·0	18·5
No limit	2·5	5·0	7·5	9·5	12·0	14·0	15·5	17·0	19·0

SCHEDULE 7—PART II—*continued*

TABLE 1—*continued*

Width of enclosing rectangle in metres	Distance in metres from relevant boundary for unprotected percentage not exceeding								
	20	30	40	50	60	70	80	90	100
Enclosing rectangle 15 m high									
3	1·0	1·5	2·0	2·5	2·5	3·0	3·5	3·5	4·0
6	1·5	2·5	3·0	4·0	4·5	5·0	5·5	5·5	6·0
9	2·0	3·0	4·0	5·0	5·5	6·0	6·5	7·0	7·5
12	2·0	3·5	5·0	5·5	6·5	7·0	8·0	8·5	9·0
15	2·0	4·0	5·5	6·5	7·0	8·0	9·0	9·5	10·0
18	2·5	4·5	6·0	7·0	8·0	8·5	9·5	10·5	11·0
21	2·5	5·0	6·5	7·5	8·5	9·5	10·5	11·0	12·0
24	3·0	5·0	6·5	8·0	9·0	10·0	11·0	12·0	13·0
27	3·0	5·5	7·0	8·5	9·5	10·5	11·5	12·5	13·5
30	3·0	5·5	7·5	8·5	10·0	11·0	12·0	13·5	14·0
40	3·0	6·0	8·0	9·5	11·0	12·5	13·5	15·0	16·0
50	3·5	6·0	8·5	10·0	12·0	13·5	15·0	16·5	17·5
60	3·5	6·5	8·5	10·5	12·5	14·0	15·5	17·0	18·0
80	3·5	6·5	9·0	11·0	13·5	15·0	17·0	18·5	20·0
100	3·5	6·5	9·0	11·5	14·0	16·0	18·0	19·5	21·5
120	3·5	6·5	9·0	11·5	14·0	16·5	18·5	20·5	22·5
No limit	3·5	6·5	9·0	12·0	14·5	17·0	19·0	21·0	23·0
Enclosing rectangle 18 m high									
3	1·0	1·5	2·0	2·5	2·5	3·0	3·5	4·0	4·0
6	1·5	2·5	3·5	4·0	4·5	5·0	5·5	6·0	6·5
9	2·0	3·5	4·5	5·0	6·0	6·5	7·0	8·0	8·5
12	2·5	4·0	5·0	6·0	7·0	7·5	8·5	9·0	10·0
15	2·5	4·5	6·0	7·0	8·0	8·5	9·5	10·5	11·0
18	2·5	5·0	6·5	7·5	8·5	9·5	11·0	11·5	13·0
21	3·0	5·5	7·0	8·0	9·5	10·5	11·5	12·5	13·0
24	3·0	5·5	7·5	8·5	10·0	11·0	12·0	13·0	14·0
27	3·5	6·0	8·0	9·0	10·5	11·5	12·5	13·5	14·5
30	3·5	6·5	8·0	9·5	11·0	12·0	13·5	14·5	15·5
40	4·0	7·0	9·0	11·0	12·0	13·5	15·0	16·5	17·5
50	4·0	7·0	9·5	11·5	13·0	15·0	16·5	18·0	19·0
60	4·0	7·5	10·0	12·0	14·0	16·0	17·5	19·5	20·5
80	4·0	7·5	10·0	13·0	15·0	17·0	19·0	21·0	22·5
100	4·0	7·5	10·0	13·5	16·0	18·0	20·5	22·5	24·0
120	4·0	7·5	10·0	14·0	16·5	19·0	21·0	23·5	25·5
No limit	4·0	8·0	10·0	14·0	17·0	19·5	22·0	24·0	26·5

SCHEDULE 7—PART II—*continued*

TABLE 1—*continued*

Width of enclosing rectangle in metres	Distance in metres from relevant boundary for unprotected percentage not exceeding								
	20	30	40	50	60	70	80	90	100
Enclosing rectangle 21 m high									
3	1·0	1·5	2·0	2·5	3·0	3·0	3·5	4·0	4·5
6	1·5	2·5	3·5	4·0	5·0	5·5	6·0	6·5	7·0
9	2·0	3·5	4·5	5·5	6·5	7·0	7·5	8·5	9·0
12	2·5	4·0	5·5	6·5	7·5	8·5	9·0	10·0	10·5
15	2·5	5·0	6·5	7·5	8·5	9·5	10·5	11·0	12·0
18	3·0	5·5	7·0	8·0	9·5	10·5	11·5	12·5	13·0
21	3·0	6·0	7·5	9·0	10·0	11·0	12·5	13·5	14·0
24	3·5	6·0	8·0	9·5	10·5	12·0	13·0	14·0	15·0
27	3·5	6·5	8·5	10·0	11·5	13·0	14·0	15·0	16·0
30	4·0	7·0	9·0	10·5	12·0	13·0	14·5	16·0	16·5
40	4·5	7·5	10·0	12·0	13·5	15·0	16·5	18·0	19·0
50	4·5	8·0	11·0	13·0	14·5	16·5	18·0	20·0	21·0
60	4·5	8·5	11·5	13·5	15·5	17·5	19·5	21·0	22·5
80	4·5	8·5	12·0	14·5	17·0	19·0	21·0	23·5	25·0
100	4·5	9·0	12·0	15·5	18·0	20·5	22·5	25·0	27·0
120	4·5	9·0	12·0	16·0	18·5	21·5	23·5	26·5	28·5
No limit	4·5	9·0	12·0	16·0	19·0	22·0	25·0	26·5	29·5
Enclosing rectangle 24 m high									
3	1·0	1·5	2·0	2·5	3·0	3·5	3·5	4·0	4·5
6	1·5	2·5	3·5	4·5	5·0	5·5	6·0	7·0	7·0
9	2·0	3·5	5·0	5·5	6·5	7·5	8·0	9·0	9·5
12	2·5	4·5	6·0	7·0	8·0	8·5	9·5	10·5	11·5
15	3·0	5·0	6·5	8·0	9·0	10·0	11·0	12·0	13·0
18	3·0	5·5	7·5	8·5	10·0	11·0	12·0	13·0	14·0
21	3·5	6·0	8·0	9·5	10·5	12·0	13·0	14·0	15·0
24	3·5	6·5	8·5	10·0	11·5	12·5	14·0	15·0	16·0
27	4·0	7·0	9·0	11·0	12·5	13·5	15·0	16·0	17·0
30	4·0	7·5	9·5	11·5	13·0	14·0	15·5	17·0	18·0
40	4·5	8·5	11·0	13·0	14·5	16·0	18·0	19·0	20·5
50	5·0	9·0	12·0	14·0	16·0	17·5	19·5	21·0	22·5
60	5·0	9·5	12·5	15·0	17·0	19·0	21·0	23·0	24·5
80	5·0	10·0	13·5	16·5	18·5	21·0	23·5	25·5	27·5
100	5·0	10·0	13·5	17·0	20·0	22·5	25·0	27·5	29·5
120	5·5	10·0	13·5	17·5	20·5	23·5	26·5	29·0	31·0
No limit	5·5	10·0	13·5	18·0	21·0	24·0	27·5	30·0	32·5

SCHEDULE 7—PART II—*continued*

TABLE 1—*continued*

Width of enclosing rectangle in metres	Distance in metres from relevant boundary for unprotected percentage not exceeding								
	20	30	40	50	60	70	80	90	100
	Enclosing rectangle 27 m high								
3	1·0	1·5	2·0	2·5	3·0	3·5	4·0	4·0	4·5
6	1·5	2·5	3·5	4·5	5·0	6·0	6·5	7·0	7·5
9	2·0	3·5	5·0	6·0	7·0	7·5	8·5	9·5	10·0
12	2·5	4·5	6·0	7·0	8·0	9·0	10·5	11·0	12·0
15	3·0	5·5	7·0	8·5	9·5	10·5	11·5	12·5	13·5
18	3·5	6·0	8·0	9·0	10·5	11·5	12·5	13·5	14·5
21	3·5	6·5	8·5	10·0	11·5	13·0	14·0	15·0	16·0
24	3·5	7·0	9·0	11·0	12·5	13·5	15·0	16·0	17·0
27	4·0	7·5	10·0	11·5	13·0	14·0	16·0	17·0	18·0
30	4·0	8·0	10·0	12·0	13·5	15·0	17·0	18·0	19·0
40	5·0	9·0	11·5	14·0	15·5	17·5	19·0	20·5	22·0
50	5·5	9·5	12·5	15·0	17·0	19·0	21·0	22·5	24·0
60	5·5	10·5	13·5	16·0	18·5	20·5	22·5	24·5	26·5
80	6·0	11·0	14·5	17·5	20·5	22·5	25·0	27·5	29·5
100	6·0	11·0	15·5	19·0	21·5	24·5	27·0	30·0	32·0
120	6·0	11·5	15·5	19·5	22·5	26·0	28·5	32·0	34·0
No Limit	6·0	11·5	15·5	20·0	23·5	27·0	29·5	33·0	35·0

SCHEDULE 7—PART II—*continued*

TABLE 2—BUILDINGS OR COMPARTMENTS OF PURPOSE GROUPS V (SHOP), VI (FACTORY) AND VIII (STORAGE AND GENERAL)

Width of enclosing rectangle in metres	Distance in metres from relevant boundary for unprotected percentage not exceeding								
	20	30	40	50	60	70	80	90	100
Enclosing rectangle 3 m high									
3	1·0	1·5	2·0	2·0	2·5	2·5	2·5	3·0	3·0
6	1·5	2·0	2·5	3·0	3·0	3·5	3·5	4·0	4·0
9	1·5	2·5	3·0	3·5	4·0	4·0	4·5	5·0	5·0
12	2·0	2·5	3·0	3·5	4·0	4·5	5·0	5·5	5·5
15	2·0	2·5	3·5	4·0	4·5	5·0	5·5	6·0	6·0
18	2·0	2·5	3·5	4·0	5·0	5·0	6·0	6·5	6·5
21	2·0	3·0	3·5	4·5	5·0	5·5	6·0	6·5	7·0
24	2·0	3·0	3·5	4·5	5·0	5·5	6·0	7·0	7·5
27	2·0	3·0	4·0	4·5	5·5	6·0	6·5	7·0	7·5
30	2·0	3·0	4·0	4·5	5·5	6·0	6·5	7·5	8·0
40	2·0	3·0	4·0	5·0	5·5	6·5	7·0	8·0	8·5
50	2·0	3·0	4·0	5·0	6·0	6·5	7·5	8·0	9·0
60	2·0	3·0	4·0	5·0	6·0	7·0	7·5	8·5	9·5
80	2·0	3·0	4·0	5·0	6·0	7·0	8·0	9·0	9·5
No Limit	2·0	3 0	4·0	5·0	6·0	7·0	8·0	9·0	10·0
Enclosing rectangle 6 m high									
3	1·5	2·0	2·5	3·0	3·0	3·5	3·5	4·0	4·0
6	2·0	3·0	3·5	4·0	4·5	5·0	5·5	5·5	6·0
9	2·5	3·5	4·5	5·0	5·5	6·0	6·5	7·0	7·0
12	3·0	4·0	5·0	5·5	6·5	7·0	7·5	8·0	8·5
15	3·0	4·5	5·5	6·0	7·0	7·5	8·0	9·0	9·0
18	3·5	4·5	5·5	6·5	7·5	8·0	9·0	9·5	10·0
21	3·5	5·0	6·0	7·0	8·0	9·0	9·5	10·0	10·5
24	3·5	5·0	6·0	7·0	8·5	9·5	10·0	10·5	11·0
27	3·5	5·0	6·5	7·5	8·5	9·5	10·5	11·0	12·0
30	3·5	5·0	6·5	8·0	9·0	10·0	11·0	12·0	12·5
40	3·5	5·5	7·0	8·5	10·0	11·0	12·0	13·0	14 0
50	3·5	5·5	7·5	9·0	10·5	11·5	13·0	14·0	15·0
60	3·5	5·5	7·5	9·5	11·0	12·0	13·5	15·0	16·0
80	3·5	6·0	7·5	9·5	11·5	13·0	14·5	16·0	17·5
100	3·5	6·0	8·0	10·0	12·0	13·5	15·0	16·5	18·0
120	3·5	6·0	8·0	10·0	12·0	14·0	15·5	17·0	19·0
No Limit	3·5	6·0	8·0	10·0	12·0	14·0	16·0	18·0	19 0

SCHEDULE 7—PART II—*continued*

TABLE 2—*continued*

Width of enclosing rectangle in metres	Distance in metres from relevant boundary for unprotected percentage not exceeding								
	20	30	40	50	60	70	80	90	100
Enclosing rectangle 9 m high									
3	1·5	2·5	3·0	3·5	4·0	4·0	4·5	5·0	5·0
6	2·5	3·5	4·5	5·0	5·5	6·0	6·5	7·0	7·0
9	3·5	4·5	5·5	6·0	6·5	7·5	8·0	8·5	9·0
12	3·5	5·0	6·0	7·0	7·5	8·5	9·0	9·5	10·5
15	4·0	5·5	6·5	7·5	8·5	9·5	10·0	11·0	11·5
18	4·5	6·0	7·0	8·5	9·5	10 0	11·0	12·0	12·5
21	4·5	6·5	7·5	9·0	10·0	11·0	12·0	13·0	13·5
24	5·0	6·5	8·0	9·5	11·0	12·0	13·0	13·5	14·5
27	5·0	7·0	8·5	10·0	11·5	12·5	13 5	14·5	15·0
30	5·0	7·0	9·0	10·5	12·0	13·0	14·0	15·0	16·0
40	5·5	7·5	9·5	11·5	13·0	14·5	15·5	17·0	17·5
50	5·5	8·0	10·0	12·5	14·0	15·5	17·0	18·5	19·5
60	5·5	8·0	11·0	13·0	15·0	16·5	18·0	19·5	21·0
80	5·5	8·5	11·5	13·5	16·0	17·5	19·5	21·5	23·0
100	5·5	8·5	11·5	14·5	16·5	18·5	21·0	22·5	24·5
120	5·5	8·5	11·5	14·5	17·0	19·5	21·5	23·5	26·0
No limit	5·5	8·5	11·5	15·0	17·5	20·0	22·5	24·5	27·0
Enclosing rectangle 12 m high									
3	2·0	2·5	3·0	3·5	4·0	4·5	5·0	5·5	5·5
6	3·0	4·0	5·0	5·5	6·5	7·0	7·5	8·0	8·5
9	3·5	5·0	6·0	7·0	7·5	8·5	9·0	9·5	10·5
12	4·5	6·0	7·0	8·0	9·0	9·5	11·0	11·5	12·0
15	5·0	6·5	8·0	9·0	10·0	11·0	12·0	13·0	13·5
18	5·0	7·0	8·5	10·0	11·0	12·0	13·0	14·0	14·5
21	5·5	7·5	9·0	10·5	12·0	13·0	14·0	15·0	16·0
24	6·0	8·0	9·5	11·5	12·5	14·0	15·0	16·0	16·5
27	6·0	8·0	10·5	12·0	13·5	14·5	16·0	17·0	17·5
30	6·5	8·5	10·5	12·5	14·0	15·0	16·5	17·5	18·5
40	6·5	9·5	12·0	14·0	15·5	17·5	18·5	20·0	21·0
50	7·0	10 0	13·0	15·0	17·0	19·0	20·5	23·0	23·0
60	7·0	10·5	13·5	16·0	18·0	20·0	21·5	23·5	25·0
80	7·0	11·0	14·5	17·0	19·5	21·5	23·5	26 0	27·5
100	7·5	11·5	15·0	18·0	21·0	23·0	25·5	28·0	30·0
120	7·5	11·5	15·0	18·5	22·0	24·0	27·0	29·5	31·5
No limit	7·5	12·0	15·5	19·0	22·5	25·0	28·0	30·5	34·0

SCHEDULE 7—PART II—*continued*

TABLE 2—*continued*

Width of enclosing rectangle in metres	Distance in metres from relevant boundary for unprotected percentage not exceeding								
	20	30	40	50	60	70	80	90	100
Enclosing rectangle 15 m high									
3	2·0	2·5	3·5	4·0	4·5	5·0	5·5	6·0	6·0
6	3·0	4·5	5·5	6·0	7·0	7·5	8·0	9·0	9·0
9	4·0	5·5	6·5	7·5	8·5	9·5	10·0	11·0	11·5
12	5·0	6·5	8·0	9·0	10·0	11·0	12·0	13·0	13·5
15	5·5	7·0	9·0	10·0	11·5	12·5	13·5	14·5	15·0
18	6·0	8·0	9·5	11·0	12·5	13·5	14·5	15·5	16·5
21	6·5	8·5	10·5	12·0	13·5	14·5	16 0	16·5	17·5
24	6·5	9·0	11·0	13·0	14·5	15·5	17·0	18·0	19·0
27	7·0	9·5	11·5	13·5	15·0	16·5	18·0	19·0	20·0
30	7·5	10·0	12·0	14·0	16·0	17·0	18·5	20·0	21·0
40	8·0	11·0	13·5	16·0	18·0	19·5	21·0	22·5	23·5
50	8·5	12·0	15·0	17·5	19·5	21·5	23·0	25·0	26·0
60	8·5	12·5	15·5	18·0	21·0	23·5	25·0	27·0	28·0
80	9·0	13·5	17·0	20·0	23·0	25·5	28·0	30·0	31·5
100	9·0	14·0	18·0	21·5	24·5	27·5	30·0	32·5	34·5
120	9·0	14·0	18·5	22·5	25·5	28·5	31·5	34·5	37·0
No limit	9·0	14·5	19·0	23·0	27·0	30·0	34·0	36·0	39·0
Enclosing rectangle 18 m high									
3	2·0	2·5	3·5	4·0	5·0	5·0	6·0	6·5	6·5
6	3·5	4·5	5·5	6·5	7·5	8·0	9·0	9·5	10·0
9	4·5	6·0	7·0	8·5	9·5	10·0	11·0	12·0	12·5
12	5·0	7·0	8·5	10·0	11·0	12·0	13·0	14·0	14·5
15	6·0	8·0	9·5	11·0	12·5	13·5	14·5	15·5	16·5
18	6·5	8·5	11·0	12·0	13·5	14·5	16·0	17·0	18·0
21	7·0	9·5	11·5	13·0	14·5	16·0	17·0	18·0	19·5
24	7·5	10·0	12·0	14·0	15·5	16·5	18·5	19·5	20·5
27	8·0	10·5	12·5	14·5	16·5	17·5	19·5	20·5	21·5
30	8·0	11·0	13·5	15·5	17·0	18·5	20·5	21·5	22·5
40	9·0	12·0	15·0	17·5	19·5	21·5	23·5	25·0	26·0
50	9·5	13·0	16·5	19·0	21·5	23·5	26·0	27·5	29·0
60	10·0	14·0	17·5	20·5	23·0	26·0	27·5	29·5	31·0
80	10·0	15·0	19·0	22·5	26·0	28·5	31·0	33·5	35·0
100	10·0	16·0	20·5	24·0	28·0	31·0	33·5	36·0	38·5
120	10·0	16·5	21·0	25·5	29·5	32·5	35·5	39·0	41·5
No limit	10·0	17·0	22·0	26·5	30·5	34·0	37·0	41·0	43·5

SCHEDULE 7—PART II—*continued*

TABLE 2—*continued*

Width of enclosing rectangle in metres	Distance in metres from relevant boundary for unprotected percentage not exceeding								
	20	30	40	50	60	70	80	90	100
Enclosing rectangle 21 m high									
3	2·0	3·0	3·5	4·5	5·0	5·5	6·0	6·5	7·0
6	3·5	5·0	6·0	7·0	8·0	9·0	9·5	10·0	10·5
9	4·5	6·5	7·5	9·0	10·0	11·0	12·0	13·0	13·5
12	5·5	7·5	9·0	10·5	12·0	13·0	14·0	15·0	16·0
15	6·5	8·5	10·5	12·0	13·5	14·5	16·0	16·5	17·5
18	7·0	9·5	11·5	13·0	14·5	16·0	17·0	18·0	19·5
21	7·5	10·0	12·5	14·0	15·5	17·0	18·5	20·0	21·0
24	8·0	10·5	13·0	15·0	16·5	18·0	20·0	21·0	22·0
27	8·5	11·5	14·0	16·0	18·0	19·0	21·0	22·5	23·5
30	9·0	12·0	14·5	16·5	18·5	20·5	22·0	23·5	25·0
40	10·0	13·5	16·5	19·0	21·5	23·0	25·5	27·0	28·5
50	11·0	14·5	18·0	21·0	23·5	25·5	28·0	30·0	31·5
60	11·5	15·5	19·5	22·5	25·5	28·0	30·5	32·5	33·5
80	12·0	17·0	21·0	25·0	28·5	31·5	34·0	36·5	38·5
100	12·0	18·0	22·5	27·0	31·0	34·5	37·0	40·0	42·0
120	12·0	18·5	23·5	28·5	32·5	36·5	39·5	43·0	45·5
No limit	12·0	19·0	25·0	29·5	34·5	38·0	41·5	45·5	48·0
Enclosing rectangle 24 m high									
3	2·0	3·0	3·5	4·5	5·0	5·5	6·0	7·0	7·5
6	3·5	5·0	6·0	7·0	8·5	9·5	10·0	10·5	11·0
9	5·0	6·5	8·0	9·5	11·0	12·0	13·0	13·5	14·5
12	6·0	8·0	9·5	11·5	12·5	14·0	15·0	16·0	16·5
15	6·5	9·0	11·0	13·0	14·5	15·5	17·0	18·0	19·0
18	7·5	10·0	12·0	14·0	15·5	16·5	18·5	19·5	20·5
21	8·0	10·5	13·0	15·0	16·5	18·0	20·0	21·0	22·0
24	8·5	11·5	14·0	16·0	18·0	19·5	21·0	22·5	24·0
27	9·0	12·5	15·0	17·0	19·0	20·5	22·5	24·0	25·5
30	9·5	13·0	15·5	18·0	20·0	21·5	23·5	25·0	26·5
40	11·0	14·5	18·0	20·5	23·0	25·0	27·5	29·0	30·5
50	12·0	16·0	19·5	22·5	25·5	27·5	30·0	32·0	33·5
60	12·5	17·0	21·0	24·5	27·5	30·0	32·5	35·0	36·5
80	13·5	18·5	23·5	27·5	31·0	34·5	37·0	39·5	41·5
100	13·5	20·0	25·0	29·5	33·5	37·0	40·0	43·0	45·5
120	13·5	20·5	26·5	31·0	36·0	39·5	43·0	46·5	49·0
No limit	13·5	21·0	27·5	32·5	37·5	42·0	45·5	49·5	52·0

SCHEDULE 7—PART II—*continued*

TABLE 2—*continued*

Width of enclosing rectangle in metres	Distance in metres from relevant boundary for unprotected percentage not exceeding								
	20	30	40	50	60	70	80	90	100
	Enclosing rectangle 27 m high								
3	2·0	3·0	4·0	4·5	5·5	6·0	6·5	7·0	7·5
6	3·5	5·0	6·5	7·5	8·5	9·5	10·5	11·0	12·0
9	5·0	7·0	8·5	10·0	11·5	12·5	13·5	14·5	15·0
12	6·0	8·0	10·5	12·0	13·5	14·5	16·0	17·0	17·5
15	7·0	9·5	11·5	13·5	15·0	16·5	18·0	19·0	20·0
18	8·0	10·5	12·5	14·5	16·5	17·5	19·5	20·5	21·5
21	8·5	11·5	14·0	16·0	18·0	19·0	21·0	22·5	23·5
24	9·0	12·5	15·0	17·0	19·0	20·5	22·5	24·0	25·5
27	10·0	13·0	16·0	18·0	20·0	22·0	24·0	25·5	27·0
30	10·0	13·5	17·0	19·0	21·0	23·0	25·0	26·5	28·0
40	11·5	15·5	19·0	22·0	24·5	26·5	29·0	30·5	32·5
50	12·5	17·0	21·0	24·0	27·0	29·5	32·0	34·5	36·0
60	13·5	18·5	22·5	26·5	29·5	32·0	35·0	37·0	39·0
80	14·5	20·5	25·0	29·5	33·0	36·5	39·5	42·0	44·0
100	15·5	21·5	27·0	32·0	36·5	40·5	43·0	46·5	48·5
120	15·5	22·5	28·5	34·0	39·0	43·0	46·5	50·5	53·0
No limit	15·5	23·5	29·5	35·0	40·5	44·5	48·5	52·0	55·5

SCHEDULE 7—*continued*

Part III. Rules for calculation by reference to aggregate notional area

5. The conditions of this Part of this schedule shall be satisfied if a building is so constructed that the aggregate notional area of the unprotected areas in the side of a building or compartment does not exceed—

(*a*) 210 m^2 (if the building or compartment is of purpose group I, II, III, IV or VII); or

(*b*) 90 m^2 (if the building or compartment is of purpose group V, VI or VIII),

such calculation being made by reference to any one of a series of vertical data, measured at intervals of not more than 3 m from one another along the relevant boundary.

6. For the purposes of this part of this schedule—

"aggregate notional area" means the aggregate of the areas of any unprotected areas in the side of a building or compartment, each such area being multiplied by the Factor specified in the Table to this Part of this schedule according to the distance of such unprotected areas from the vertical datum;

"vertical datum" means a vertical line of unlimited height at any point on the relevant boundary;

"the datum line" means the line joining a vertical datum to the nearest point of the side of the building or compartment.

7. For the purposes of this Part of this schedule, no account shall be taken of any unprotected area in the side of a building or compartment which is—

(*a*) screened from the vertical datum by any part of an external wall which is not an unprotected area; or

(*b*) outside a horizontal arc having its centre at a point through which the vertical datum passes and having a radius measuring 50 m and extending 90° on either side of the datum line; or

(*c*) facing away from the vertical datum, or making an angle not exceeding 10° with a line drawn from it to the vertical datum.

TABLE OF FACTORS

Distance of unprotected area from vertical datum in metres		Factor
Not less than	Less than	
1	1·2	80
1·2	1·8	40
1·8	2·7	20
2·7	4·3	10
4·3	6·0	4
6·0	8·5	2
8·5	12·0	1
12·0	18·5	0·5
18·5	27·5	0·25
27·5	50	0·1
50	No limit	0

SCHEDULE 7—*continued*

Part IV. Rules for calculation in respect of certain buildings of purpose group I or III

8. The provisions of this Part of this schedule apply only to any building of purpose group I or III, which has not more than three storeys and of which no side (measured on an elevation) exceeds 24 m in length.

9. The conditions of this Part of this schedule shall be satisfied if the distance between any part of a side of a building and the relevant boundary is not less than the minimum distance specified in the Table to this Part of this schedule according to the length of such side and the total area of any unprotected areas to be taken into account.

TABLE TO PART IV

(Permitted unprotected areas in certain residential buildings)

Minimum distance (in metres) between side of building and boundary (1)	Length of side (in metres) not exceeding (2)	Total area of unprotected areas (in square metres) not exceeding (3)
1	24	5·6
2·5	24	15
5·0	12	up to the whole area of the wall
6	24	up to the whole area of the wall

SCHEDULE 8 Regulation E1(4)

NOTIONAL DESIGNATIONS OF ROOF COVERINGS

PART I: PITCHED ROOFS COVERED WITH SLATES OR TILES

Covering material (1)	*Supporting structure* (2)	*Designation* (3)
1. Natural slates *2. Asbestos-cement slates* *3. Clay tiles* *4. Concrete tiles*	*1. Timber rafters with or without underfelt, sarking, boarding, wood wool slabs, compressed straw slabs, plywood, wood or flax chipboard, or fibre insulating board*	*AA*
5. Strip slates of bitumen felt Class 1 or 2	*2. Timber rafters and boarding, plywood, wood wool slabs, compressed straw slabs, wood or flax chipboard, or fibre insulating board*	*CC*
6. Bitumen felt strip slates Type 2E, with underlayer of bitumen felt Type 2B or 2C	*3. Timber rafters and boarding, plywood, wood wool slabs, compressed straw slabs, wood or flax chipboard, or fibre insulating board*	*BB*

Note: Any reference in this Part of the schedule to bitumen felt of a specified class or type is a reference to bitumen felt as so designated in BS 747: Part 2: 1970.

SCHEDULE 8—*continued*

PART II: PITCHED ROOFS COVERED WITH PREFORMED SELF-SUPPORTING SHEETS

Details of covering		*Supporting structure*	*Designation*
Material	*Construction*		
(*1*)	(*2*)	(*3*)	(*4*)
Corrugated sheets of— (*i*) *galvanised steel;* (*ii*) *aluminium;* (*iii*) *composite steel and asbestos;* (*iv*) *asbestos-cement; or* (*v*) *PVC coated steel*	*1. Single skin without underlay or with underlay of—* (*i*) *asbestos insulating board;* (*ii*) *plasterboard;* (*iii*) *fibre insulating board;* (*iv*) *compressed straw slab; or* (*v*) *wood wool slab*	*Structure of timber, steel or concrete*	*AA*
	2. Double skin without interlayer or with interlayer of— (*i*) *resin-bonded glass fibre;* (*ii*) *bitumen-bonded glass fibre;* (*iii*) *mineral wool slab or blanket;* (*iv*) *polystyrene; or* (*v*) *polyurethane*	*Structure of timber, steel or concrete*	*AA*

SCHEDULE 8—*continued*

PART III: PITCHED OR FLAT ROOFS COVERED WITH FULLY SUPPORTED MATERIAL

Covering material (1)	*Supporting structure* (2)	*Designation* (3)
1. Aluminium sheet *2. Copper sheet* *3. Zinc sheet* *4. Lead sheet* *5. Mastic asphalt* *6. Vitreous enamelled steel sheet*	*1. Timber joists and—* *(i) tongued and grooved boarding; or* *(ii) plain edged boarding*	*AA**
	2. Steel or timber joists with deck of— *(i) wood wool slab;* *(ii) compressed straw slab;* *(iii) wood or flax chip-board;* *(iv) fibre insulating board; or* *(v) 9·5 mm plywood*	*AA*
	3. Concrete or clay pot slab (cast in situ or precast); or non-combustible deck of steel, aluminium or asbestos-cement (with or without insulation)	*AA*

**Note: Lead sheet supported by timber joists and plain edged boarding shall be deemed to be of designation BA.*

SCHEDULE 8—*continued*

PART IV: ROOFS COVERED WITH BITUMEN FELT

PART IV(A): FLAT ROOFS COVERED WITH BITUMEN FELT

A flat roof comprising a covering of bitumen felt shall (irrespective of the felt specification) be deemed to be of designation AA if the felt is laid on a deck constructed of any of the materials prescribed in the Table in Part IV(B) and has a surface finish of (a) bitumen bedded stone chippings covering the whole surface to a depth of not less than 12·5 mm, (b) bitumen bedded tiles of non-combustible material, (c) sand and cement screed or (d) macadam.

PART IV(B): PITCHED ROOFS COVERED WITH BITUMEN FELT

Details of felt			*Combustible deck*			*Non-combustible deck*		
Number of layers	*Type of upper layer*	*Type of underlayer(s)*	*Deck of either of the following (having minimum thickness stated)— plywood (6mm); wood or flax chipboard (12·5 mm); T & G boarding (16 mm finished); or PE boarding (19 mm finished)*	*Deck of compressed straw slab*	*Deck of screeded wood wool slab*	*Asbestos-cement or steel single skin or cavity deck (without overlay or with overlay of fibre insulating board)*	*Aluminium single skin or cavity deck (without overlay or with overlay of fibre insulating board)*	*Concrete or clay pot slab (cast in situ or precast)*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Two or three layers built up in accordance with CP 144: Part 3: 1970	*1. Type 1E*	*Type 1B or 1D or type 1C (minimum mass 13 kg/10m²)*	*CC*	*AC*	*AC*	*AC*	*AC*	*AB*

SCHEDULE 8—*continued*

PART IV(B): PITCHED ROOFS COVERED WITH BITUMEN FELT

Details of felt			*Combustible deck*			*Non-combustible deck*		
Number of layers	*Type of upper layer*	*Type of underlayer(s)*	*Deck of either of the following (having minimum thickness stated)— plywood (6 mm); wood or flax chipboard (12·5 mm); T & G boarding (16 mm finished); or PE boarding (19 mm finished)*	*Deck of compressed straw slab*	*Deck of screeded wood wool slab*	*Asbestos-cement or steel single skin or cavity deck (without overlay or with overlay of fibre insulating board)*	*Aluminium single skin or cavity deck (without overlay or with overlay of fibre insulating board)*	*Concrete or clay pot slab (cast in situ or precast)*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	2. *Type 2E*	*Type 1B or 1D or type 1C (minimum mass 13 kg/10m²)*	*BB*	*AB*	*AB*	*AB*	*AB*	*AB*
	3. *Type 2E*	*Type 2B or 2C*	*AB*	*AB*	*AB*	*AB*	*AB*	*AB*
	4. *Type 3E*	*Type 3B or 3G*	*BC*	*AC*	*AB*	*AB*	*AB*	*AB*
2. *Single layer*	*Type 1E*		*CC*	*AC*	*AC*	*AC*	*CC*	*AC*

***Note**: Any reference in this Part of this schedule to bitumen felt of a specified type is a reference to bitumen felt as so designated in BS 747: Part 2: 1970.*

SCHEDULE 9 **Regulation F4**

THERMAL INSULATION

PART I: WALLS

TABLE 1

Description of wall (*1*)	*Type and minimum thickness of insulating material referred to in column (1) of this Table to be determined respectively by reference to column (1) of Table 2 and the column of that Table specified below* (*2*)
1. Any wall—	
(a) of solid or composite construction containing insulating material; or	(2)(*a*)
(b) consisting of a cavity bounded by rigid leaves and filled with insulating material	(2)(*b*)
2. A wall of timber studding faced with breather paper as a background for tile hanging or for sheets of metal, asbestos-cement or plastics siding, lined internally with gypsum plasterboard and having insulating material fixed against one face of the enclosed airspace	(2)(*c*)
3. A two-leaf wall of brickwork, each leaf not less than 100 mm thick, enclosing a cavity not less than 50 mm wide, with—	
(a) insulating material applied directly to either side of the inner leaf; or	(2)(*d*)
(b) insulating material separated from the inside surface of the inner leaf by an enclosed airspace	(2)(*e*)
4. A wall having a cavity not less than 50 mm wide, consisting of an outer leaf of brickwork not less than 100 mm thick and an inner leaf of timber studding lined with gypsum plasterboard, with—	
(a) insulating material applied directly to the cavity face of the lining, or	(2)(*f*)
(b) insulating material separated from the lining by an enclosed airspace	(2)(*g*)
5. A wall having a cavity not less than 50 mm wide, consisting of an outer leaf of brickwork not less than 100 mm thick and an inner leaf of concrete blockwork plastered on the inside surface, the insulating material being the concrete	(2)(*h*)

SCHEDULE 9—*continued*

PART I: WALLS—*continued*

TABLE 1—*continued*

Description of wall (*1*)	*Type and minimum thickness of insulating material referred to in column (1) of this Table to be determined respectively by reference to column (1) of Table 2 and the column of that Table specified below* (2)
6. *A wall of in-situ concrete or of concrete blockwork, rendered externally and plastered internally, the insulating material being the concrete and the wall being either—*	
(*a*) *a wall which is solid and of uniform density; or*	(2)(*j*)
(*b*) *a wall which consists of two leaves of similar material separated by a cavity not less than 50 mm wide*	(2)(*k*)
7. *A solid wall not less than 200 mm thick of foamed slag aggregate concrete or no-fines gravel aggregate concrete (density in either case not exceeding 1800 kg/m³) with—*	
(*a*) *insulating material applied directly to the inside face; or*	(2)(*f*)
(*b*) *insulating material separated from the inside face by an enclosed airspace*	(2)(*g*)

SCHEDULE 9—*continued*
PART I: WALLS—*continued*
TABLE 2

Insulating material (1)	*Minimum thickness (in mm)* (2)									
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(j)	(k)
1. *Lightweight concrete—*										
density not exceeding 1400 kg/m³								240	400	290
„ „ „ 1200 „								180	300	225
„ „ „ 1000 „								140	240	175
„ „ „ 800 „								108	190	140
„ „ „ 600 „								84	150	
2. *Asbestos insulating board*					13					
3. *Compressed straw slab*			45	29	11	49	31			
4. *Wood wool slab (density not exceeding 400 kg/m³)*	61		34	22	8	37	23			
5. *Fibre building board: insulating board or bitumen impregnated insulating board*			22	16	6	25	17			
6. *Mineral or rock wool cavity fill*		37								
7. *Corkboard*	34		18	12	5	20	13			
8. *Mineral fibre quilt or mat*	34		18	12		20				
9. *Urea formaldehyde foamed cavity fill*		30								
10. *Mineral fibre slab*	28		15	10	3	17	10			
11. *Expanded polystyrene insulating board*	28		15	10	3	17	10			
12. *Polyurethane, or phenol formaldehyde, core to laminated board*	19		10	7	2	12	7			

SCHEDULE 9—*continued*

PART II: FLOORS EXPOSED TO THE EXTERNAL AIR

TABLE 3

Description of floor (*1*)	*Type and minimum thickness of insulating material referred to in column (1) of this Table to be determined respectively by reference to column (1) of Table 4 and the column of that Table specified below* (2)
1. *Floor of slabs or hollow beams of dense concrete not less than 150 mm thick, with—*	
(*a*) *insulating material in direct contact with the upper or lower surface of the floor; or*	(2)(*a*)
(*b*) *insulating material separated by an enclosed airspace from the upper or lower surface of the floor*	(2)(*b*)
2. *Floor of slabs or beams of autoclaved aerated concrete not less than 150 mm thick and of density not exceeding 650 kg/m³*	*No additional insulation required*

SCHEDULE 9—*continued*

PART II: FLOORS EXPOSED TO THE EXTERNAL AIR—*continued*

TABLE 4

Insulating material (1)	*Minimum thickness (in mm)* (2)	
	(a)	(b)
1. Compressed straw slab	*58*	*38*
2. Wood wool slab (density not exceeding 400 kg/m³)	*43*	*28*
3. Fibre building board: insulating board or bitumen impregnated insulating board	*31*	*20*
4. Corkboard	*23*	*15*
5. Mineral fibre mat or quilt	*21*	*14*
6. Mineral fibre slab or ceiling board	*18*	*12*
7. Expanded polystyrene insulation board	*18*	*12*
8. Polyurethane, or phenol formaldehyde, core to laminated board	*13*	*9*

SCHEDULE 9—*continued*

PART III: ROOFS

TABLE 5

Description of roof (*1*)	*Type and minimum thickness of insulating material referred to in column (1) of this Table to be determined respectively by reference to column (1) of Table 6 and the column of that Table specified below* (*2*)
1. Any roof containing insulating material	(2)(*a*)
2. Pitched roof of slates or tiles on sarking felt or sarking paper (or a pitched or flat roof of any waterproof material on boarding not less than 16 mm thick) having a ventilated space between the underside of the roof and a separate ceiling to the room below, with— (*a*) *insulating material in direct contact with that ceiling; or* (*b*) *insulating material separated from either surface of the ceiling by an enclosed airspace*	(2)(*b*) (2)(*c*)
3. Pitched or flat roof of asbestos-cement or metal decking with fibre insulating board not less than 12·5 mm thick below the roof finish (or a weatherproof deck of wood wool slabs not less than 50 mm thick), with— (*a*) *insulating material in contact with the roof covering, the top of the decking or the soffit of the decking; or* (*b*) *insulating material separated from the soffit of the decking by an enclosed air space*	(2)(*d*) (2)(*e*)
4. Pitched or flat roof of dense concrete hollow or solid beams or slabs screeded to an average thickness of not less than 40 mm, with— (*a*) *insulating material in contact with the roof covering or the soffit of the concrete members; or* (*b*) *insulating material separated from the soffit of the concrete members by an enclosed airspace*	(2)(*f*) (2)(*g*)
5. Pitched or flat roof of autoclaved aerated concrete slabs of density not exceeding 650 kg/m³ and thickness not less than 100 mm, with insulating material in contact with the roof covering or with the top of the concrete slabs	(2)(*h*)

SCHEDULE 9—*continued*

PART III: ROOFS—*continued*

TABLE 6

Insulating material (1)	*Minimum thickness (in mm)* (*Dimensions in brackets indicate the minimum thickness required when one side of an enclosed airspace is faced with bright reflective foil*) (2)							
	(*a*)	(*b*)	(*c*)	(*d*)	(*e*)	(*f*)	(*g*)	(*h*)
1. *Autoclaved aerated concrete (density not exceeding 500 kg/m³)*	250							
2. *Wood wool slab (density not exceeding 400 kg/m³)*								72
3. *Insulating fibre building board*								45
4. *Cellular glass*						60		
5. *Exfoliated vermiculite loose fill*	70							
6. *Corkboard*		46	38 (31)	35	30 (25)	50	45 (37)	40
7. *Mineral fibre (glass or rock) quilt, mat or pelletted loose fill*	60	46						
8. *Mineral fibre (glass or rock) rigid slab, roof or ceiling board*	50	38	34 (27)	32	25 (20)	43	38 (31)	32
9. *Expanded polystyrene insulating board*	50	38	34 (27)	32	25 (20)	43	38 (31)	
10. *Polyurethane, or phenol formaldehyde, core to laminated board*	35	28	20 (16)	29	15 (12)	25	22 (18)	20

SCHEDULE 9—*continued*

PART IV: RULES RELATING TO THE AVERAGE U VALUE OF PERIMETER WALLING

1. Nothing in this Part of this schedule shall be construed as permitting the U value of any part of a wall to exceed the maximum value prescribed by regulation F3(1).

2. Subject to rule 3, perimeter walling shall be deemed to have a U value not exceeding 1·8 if—

(*a*) *the aggregate area of window openings having single glazing which are situated in walling required to have a U value not exceeding 1·0 (expressed as a percentage of the sum of the area of those openings and the area of that walling) does not exceed the percentage specified in column (2)(b) of Table 7 having regard to the matters set out in columns (1), (2)(a) and (3) of that Table; or*

(*b*) *the average U value of walling required to have a U value not exceeding 1·0 and window openings having single glazing which are situated in that walling does not exceed the value specified in column (2)(b) of Table 8 having regard to the matters set out in columns (1) and (2)(a) of that Table; or*

(*c*) $$\frac{AaUa+AbUb+AcUc}{Aa+Ab+Ac} \leq 1{\cdot}8$$

where—

Aa is the area of walling required by regulation F3(1) to have a U value not exceeding 1·0 and window openings therein;

Ab is the area of walling required by regulation F3(1) to have a U value not exceeding 1·7;

Ac is the area of walling assumed in accordance with regulation F3(4)(a) to have a U value not exceeding 0·5;

Ua is the average U value of walling required to have a U value not exceeding 1·0 and window openings therein and is equal to—

$$\frac{5{\cdot}7A_1+2{\cdot}8A_2+UfAf}{A_1+A_2+Af}$$

where—

A_1 *is the aggregate area of window openings having single glazing;*

A_2 *is the aggregate area of window openings having double glazing;*

Af is the area of walling required to have a U value not exceeding 1·0; and

Uf is the actual U value of walling required to have a U value not exceeding 1·0;

Ub is the actual U value of walling required to have a U value not exceeding 1·7;

Uc is the value 0·5; and

$\leq$ *means "is equal to or less than".*

3. If the actual value of one or more of the matters to which columns (1), (2)(a) and (3) of Table 7 relate or columns (1) and (2)(a) of Table 8 relate is a value intermediate between two adjacent values in the relevant column, the appropriate maximum aggregate area to which column (2)(b) of Table 7 relates or maximum average U value to which column (2)(b) of Table 8 relates, as the case may be, may (at the option of the person intending to erect the building) be obtained by linear interpolation.

SCHEDULE 9—*continued*

PART IV: RULES RELATING TO THE AVERAGE U VALUE OF PERIMETER WALLING—*continued*

4. For the purpose of this Part of this schedule—

(a) the area of walling shall be measured on its inner face;

(b) any reference to the area of walling required by regulation F3(1) to have a U value not exceeding 1·0 or 1·7, as the case may be, shall be construed as a reference to that area including the area of any opening therein which, in accordance with regulation F3(4)(c), is assumed to have a U value equivalent to that of the wall in which it is situated; and

(c) any reference to the area of perimeter walling shall be construed as a reference to that area including all openings therein.

SCHEDULE 9—*continued*

PART IV: RULES RELATING TO THE AVERAGE U VALUE OF PERIMETER WALLING—*continued*

TABLE 7

(Maximum aggregate area of window openings)

Area of walling required to have a U value not exceeding 1·7 (expressed as a percentage of the area of perimeter walling) (1)	*Area of walling assumed to have a U value of 0·5 (expressed as a percentage of the area of perimeter walling)* (2)(*a*)							*U value of walling required to have a U value not exceeding 1·0 (in W/m²°C)* (3)
	0	*10*	*20*	*30*	*40*	*50*	*60*	
	Maximum aggregate area of window openings having single glazing situated in walling required to have a U value not exceeding 1·0 (expressed as a percentage of the sum of the area of those openings and the area of that walling) (2)(*b*)							
0	*20*	*23*	*27*	*32*	*38*	*47*	*60*	*0·80*
	19	*22*	*25*	*30*	*37*	*46*	*60*	*0·90*
	17	*20*	*24*	*29*	*35*	*45*	*59*	*1·00*
10	*21*	*24*	*28*	*34*	*42*	*54*	*74*	*0·80*
	19	*22*	*27*	*33*	*41*	*53*	*73*	*0·90*
	17	*21*	*25*	*31*	*40*	*52*	*73*	*1·00*
20	*21*	*25*	*30*	*37*	*48*	*66*		*0·80*
	19	*23*	*28*	*36*	*47*	*65*		*0·90*
	17	*21*	*27*	*34*	*46*	*64*		*1·00*
30	*21*	*26*	*32*	*42*	*58*	*90*		*0·80*
	20	*24*	*31*	*41*	*57*	*90*		*0·90*
	18	*22*	*29*	*39*	*56*	*89*		*1·00*
40	*22*	*27*	*36*	*49*	*77*			*0·80*
	20	*26*	*34*	*49*	*77*			*0·90*
	18	*24*	*33*	*47*	*77*			*1·00*

SCHEDULE 9—*continued*

PART IV: RULES RELATING TO THE AVERAGE U VALUE OF PERIMETER WALLING—*continued*

TABLE 8

(Maximum average U value of walling and window openings)

Area of walling required to have a U value not exceeding 1·7 (expressed as a percentage of the area of perimeter walling)	*Area of walling assumed to have a U value of 0·5 (expressed as a percentage of the area of perimeter walling)* (2)(*a*)						
	0	*10*	*20*	*30*	*40*	*50*	*60*
(*1*)	*Maximum average U value of walling required to have a U value not exceeding 1·0 and window openings situated therein (in W/m²°C)* (2)(*b*)						
0	*1·80*	*1·94*	*2·12*	*2·35*	*2·66*	*3·10*	*3·75*
10	*1·81*	*1·97*	*2·18*	*2·46*	*2·86*	*3·45*	*4·43*
20	*1·82*	*2·01*	*2·26*	*2·62*	*3·15*	*4·03*	
30	*1·84*	*2·05*	*2·38*	*2·85*	*3·63*	*5·20*	
40	*1·86*	*2·14*	*2·55*	*3·23*	*4·60*		

Regulations G2(2), G4(2) and G5(2)

SCHEDULE 10

SOUND INSULATION

Part I: Walls providing resistance to the transmission of airborne sound

Regulation G2(2)

Specification (1)	*Construction of wall* (2)
1	*A solid wall consisting of—* *(a) bricks or blocks with plaster not less than 12·5 mm thick on at least one face; or* *(b) dense concrete cast in situ or panels of dense concrete having all joints solidly grouted in mortar; or* *(c) lightweight concrete with plaster not less than 12·5 mm thick on both faces of the wall,* *in each case the average mass of the wall (calculated over any portion of the wall measuring 1 metre square and including the mass of any plaster) being not less than 415 kg/m².*
2	*A wall having a cavity not less than 50 mm wide constructed of two leaves each consisting of bricks, blocks or dense concrete with plaster not less than 12·5 mm thick on both faces of the wall, and having any wall ties of the butterfly wire type, the average mass of the wall (calculated over any portion measuring 1 metre square and including the mass of the plaster) being not less than 415 kg/m².*
3	*A wall having a cavity not less than 75 mm wide constructed of two leaves each consisting of lightweight concrete with plaster not less than 12·5 mm thick on both faces of the wall and having any wall ties of the butterfly wire type, the average mass of the wall (calculated over any portion of the wall measuring 1 metre square and including the mass of the plaster) being not less than 250 kg/m².*

SCHEDULE 10—*continued*

Part II: Floors providing resistance to the transmission of airborne and impact sound

Regulations G4(2) and G5(2)

Specification (1)	*Construction of floor* (2)
1	*A floor consisting of—* *(a) a solid concrete slab; or* *(b) a slab of concrete beams and hollow infilling blocks of clay or concrete; or* *(c) a slab of hollow concrete beams,* *in each case having an average mass (calculated over any portion of the floor measuring 1 metre square and including the mass of any screed or ceiling plaster directly bonded to the slab but excluding the mass of any floating floor or suspended ceiling) of not less than 365 kg/m² and having either of the following laid upon it—* *(i) rubber on sponge rubber underlay having a total thickness of not less than 4·5 mm; or* *(ii) cork tiles not less than 8 mm thick.*
2	*A floor consisting of—* *(a) a solid concrete slab; or* *(b) a slab of concrete beams and hollow infilling blocks of clay or concrete; or* *(c) a slab of hollow concrete beams,* *in each case having an average mass (calculated over any portion of the floor measuring 1 metre square and including the mass of any screed or ceiling plaster directly bonded to the slab but excluding the mass of any floating floor or suspended ceiling) of not less than 220 kg/m² and having any of the following laid upon it—* *(i) boarding nailed to battens so laid as to float upon a layer of glass fibre or mineral wool quilt, in either case capable of retaining its resilience under imposed loading; or* *(ii) any covering directly applied to concrete or other cementitious screed, not less than 38 mm thick, so laid as to float upon a layer of glass fibre or mineral wool quilt, in either case capable of retaining its resilience under imposed loading; or* *(iii) rubber on sponge rubber underlay having a total thickness of not less than 4·5 mm or cork tiles not less than 8 mm thick, in either case laid upon a dense airtight sealing layer upon light-weight screed, not less than 50 mm thick, of a density of not more than 1100 kg/m³.*
3	*Boarding nailed to battens laid to float upon a layer of glass fibre or mineral wool quilt, in either case capable of retaining its resilience under imposed loading, the layer being draped over wooden joists, beneath which a ceiling of lath and plaster or of plasterboard, in either case not less than 19 mm thick, has been constructed, with pugging on the ceiling such that the combined mass of the ceiling and pugging is not less than 120 kg/m².*

SCHEDULE 10—*continued*

Part III: Floors providing resistance to the transmission of airborne sound only

Regulation G5(2)

Specification (1)	*Construction of floor* (2)
1	*A floor consisting of a solid concrete slab having an average mass (calculated over any portion of the floor measuring 1 metre square and including the mass of any screed or ceiling plaster directly bonded to the slab but excluding the mass of any floating floor or suspended ceiling) of not less than 365 kg/m² and having any type of floor finish.*

SCHEDULE 11 Regulation A2(7)(*b*)

PUBLICATIONS TO WHICH SPECIFIC REFERENCE IS MADE IN THE BUILDING REGULATIONS (NORTHERN IRELAND) 1977

Table A. British Standards

Publication	Amendment slip		Context
	Serial number	Reference number	
(1)	(2)	(3)	(4)
BS41: 1973	—	—	L8(*a*) L16(*b*)
BS65 & 540: Part 1: 1971	1	AMD1202	L6(1)(*a*)(iii) L16(*a*)
BS144: 1973	1	AMD1427	Schedule 3, Table 3, item 1
BS449: Part 2: 1969	1 2 3 4 5	AMD416 AMD523 AMD661 AMD1135 AMD1787	D9 Schedule 6, Part V, section A(A), item 1(*b*) Schedule 6, Part V, section B(A), item 1(*b*)
Supplement No. 1 (PD3343) to BS449: Part 1: 1970	1	AMD734	
Addendum No. 1 (April 1975) to BS449: Part 2: 1969	1	AMD1765	
BS476: Part 1: 1953	1 2	AMD409 AMD686	E1(5), proviso (i) Table to E1 E15(1)(*f*), proviso
BS476: Part 3: 1958	1	PD3276	E1(4)
BS476: Part 4: 1970	—	—	A2(1)
BS476: Part 6: 1968	1	AMD549	E7(4), proviso E15(1)(*e*)(ii)

SCHEDULE 11—*continued*

Table A. British Standards—continued

Publication	Amendment slip		Context
	Serial number	Reference number	
(1)	(2)	(3)	(4)
BS476: Part 7: 1971	—	—	E15(1)(*f*)
BS476: Part 8: 1972	—	—	E1(5) Table to E1
BS567: 1973	—	—	L16(*e*)(i)
BS690: Part 2: 1971	—	—	Table to B3, item 13
BS690: Part 3: 1973	1	AMD1619	Table to B3, item 13
BS690: Part 4: 1974	—	—	Table to B3, item 13
BS715: 1970	—	—	L16(*c*)
BS747: Part 2: 1970	—	—	Schedule 8, Part I, Note Schedule 8, Part IV(B), Note
BS835: 1973	—	—	L8(*b*) L16(*e*)(i)
BS881 & 589: 1974	—	—	Schedule 3, preamble, (i) Schedule 4, rule 1(*c*)
BS882: Part 2: 1973	1	AMD1780	C4(*a*) D7(*c*)
BS913: 1973	—	—	Schedule 3, Table 3, items 1 and 2

SCHEDULE 11—*continued*

Table A. British Standards—continued

Publication	Amendment slip		Context
	Serial number	Reference number	
(1)	(2)	(3)	(4)
BS1105: 1972	—	—	Schedule 6, Part V, section B(B), item 7
BS1142: Part 2: 1971	—	—	Table to B3, item 7
BS1181: 1971	—	—	L6(1)(*a*)(i) L14(1)(*a*)(iii)
BS1243: 1972	—	—	Schedule 5, rule 12(1)(*b*)
BS1250: Part 1: 1966	—	—	M8(3)(*b*)(ii) M8(4), proviso
BS1297: 1970	—	—	Schedule 4, rule 2(*b*)(ii)
BS2750: 1956	1	PD5065	G6(2)
BS2782: 1970	1 2 3	AMD936 AMD999 AMD1524	E15(1)(*e*), proviso E16(2)(*a*), (3)(*a*) and (3)(*b*) E17(6)
BS2989: 1975	—	—	Table to B3, item 12
BS3051: 1972	—	—	Schedule 3, Table 3, item 2
BS3083: 1959	—	—	Table to B3, item 12
BS3452: 1962	—	—	C5(*d*)
BS3590: 1970	—	—	Schedule 6, Part VII, footnote † Schedule 6, Part VIII, footnote "A"

SCHEDULE 11—*continued*

Table A. British Standards—continued

Publication	Amendment slip		Context
	Serial number	Reference number	
(1)	(2)	(3)	(4)
BS4011: 1966	1	AMD1775	Schedule 5, rule 2(2)
BS4072: 1974	—	—	C5(d) Schedule 3, Table 3, item 3
BS4471: Part 1: 1969	1	AMD750	A2(9)(*b*)(ii)
BS4514: 1969	1 2	AMD712 AMD1288	Table to E12, specification (*b*)
BS4543: 1970	1 2	AMD749 AMD919	L22(2)(*a*) L22(2)(*d*)
BS4876: 1972	—	—	M5(1)
BS4978: 1973	—	—	Schedule 4, rule 1(*d*)
BS5056: 1974	—	—	Schedule 3, Table 3, item 4

SCHEDULE 11—*continued*

Table B. British Standard Codes of Practice

Publication	Amendment slip		Context
	Serial number	Reference number	
(1)	(2)	(3)	(4)
CP3: Chapter IV: Part 1: 1971	1 2	AMD851 AMD1077	EE4
CP3: Chapter IV: Part 2: 1968	—	—	EE4
CP3: Chapter IV: Part 3: 1968	1	PD6407	EE4
CP3: Chapter V: Part 1: 1967	1 2 3	AMD141 AMD587 AMD1024	D2(2)(*a*) D2(2)(*b*) H6(2)(b) H7
CP3: Chapter V: Part 2: 1972	—	—	D2(2)(*c*)
CP101: 1972	1	AMD1754	D6
CP110: Part 1: 1972	1	AMD1553	D5(1)(*a*) D11(1)(*a*) D19(1)(*a*)
CP110: Part 2: 1972	—	—	D5(1)(*a*) D11(1)(*a*)
CP110: Part 3: 1972	—	—	D5(1)(*a*) D11(1)(*a*)
CP111: Part 2: 1970	1	AMD744	D13(*a*)
CP112: Part 2: 1971	1 2	AMD1265 AMD1846	D12(*a*) D12(*b*) Schedule 4, rule 1(*b*)

SCHEDULE 11—*continued*

Table B. British Standard Codes of Practice—continued

Publication	Amendment slip		Context
	Serial number	Reference number	
(1)	(2)	(3)	(4)
CP112: Part 3: 1973	—	—	D12(*c*)
CP114: 1969	1 2	AMD1241 AMD1552	D5(1)(*b*) D11(1)(b) D19(1)(*b*)
CP115: 1969	1 2	AMD1242 AMD1551	D11(1)(*b*) D19(1)(*b*)
CP116: 1969	1 2	AMD1239 AMD1550	D11(1)(*b*) D19(1)(*b*) D19(4)
CP116: Addendum No. 1: 1970	—	—	
CP117: Part 1: 1965	—	—	D16
CP118: 1969	1	AMD1129	D10(1) D10(2)
CP121: Part 1: 1973	1	AMD1751	D13(*b*)
CP144: Part 3: 1970	—	—	Table to B3, item 5 Schedule 8, Part IV B, item 1
CP221: 1960	—	—	Table to B3, item 11
CP402.201: 1952	1 2 3	PD2998 PD4054 PD5724	E4(1), proviso Table to E5, Part 1, footnote y
CP2004: 1972	1	AMDI755	D4

SCHEDULE 11—*continued*

Table C. Other Publications

Publication	Amendment slip		Context
	Serial number	Reference number	
(1)	(2)	(3)	(4)
Standard Grading Rules for Canadian Lumber 1970 published by the National Lumber Grades Authority	—	—	Schedule 4, rule 1(e)
Standard Industrial Classification (Third Edition 1968) issued by the Central Statistical Office	—	—	Schedule 1, Part A, Class 7

Sealed with the Official Seal of the Department of Finance for Northern Ireland on 27th May 1977.

(L.S.)

E. J. A. Boston
Assistant Secretary

EXPLANATORY NOTE

(This note is not part of the regulations, but is intended to indicate their general purport.)

These regulations consolidate with amendments the Building Regulations (Northern Ireland) 1973, and all subsequent amending Regulations. They apply, in whole or in part, and subject to exceptions, to —

(i) the construction of any building and to certain works and fittings in conjunction with any building;

(ii) the structural alteration or extension of any building; and

(iii) any building undergoing a material change of use.

They come into operation on 1st October, 1977, but do not apply in relation to work which has been completed, or for which plans have been deposited with a district council, before that date.

As in the previous regulations, each Part of the regulations is identified by a capital letter instead of the more usual Roman numeral; and the regulations within each part are identified by the appropriate letter and by numbers which run from "1" within each Part.

The regulations provide for the giving of notices to and the deposit of plans and particulars with the district council. They also make provision about the exercise of powers of dispensation or relaxation. The functions of a district council with respect to the passing or rejection of plans, and their powers in relation to work which does not conform with the building regulations, are set out in the Building Regulations (Northern Ireland) Order 1972.

Some of the mandatory requirements of the regulations are complemented by provisions which describe methods or materials which are deemed to satisfy the relevant functional or performance requirements. These provisions (called "deemed-to-satisfy provisions" and printed in italics) make extensive use of British Standards and British Standard Codes of Practice. These are not exclusive — that is to say, they do not preclude use of other methods or materials which will satisfy the functional requirements (regulation A3).

The main changes from the previous regulations are —

(*a*) the delegation to district councils of the power to dispense with or relax the provisions relating to structural fire precautions (Part E) and means of escape in case of fire (Part EE) in certain types of building (regulation A14);

(*b*) the revision of deemed-to-satisfy provisions for structural work of concrete to take account of the limit states design approach embodied in CP 110 (regulations D5, D11 and D19);

(*c*) the revision of deemed-to-satisfy provisions for structural work of timber to take account of stress graded timber (regulation D12 and Schedule 4);

(*d*) the revision of the rules for satisfying requirements as to structural stability of certain walls. The revised rules differ substantially from those which they replace in two respects; they are applicable, in the main, only in relation to walls which form part of residential buildings having not more than three storeys, and they take account of factors affecting the overall stability of a building which have become particularly significant in view of modern construction methods (Schedule 5);

(*e*) the reduction from 6 : 1 to 4½ : 1 in the height to width ratio specified for the construction of the external part of chimneys of bricks, blocks or plain concrete (regulation D15);

(*f*) the revision of the requirements for the provision of thermal insulation in dwellings. The new requirements introduce higher standards of insulation for external walls, floors and roofs and, in addition, specify an insulation standard for perimeter walling, including any window openings (Part F);

(*g*) the revision of the requirements for stairways, ramps, balustrades and vehicle barriers. Certain changes are introduced in the technical requirements; and the application is widened to control the design of stairways and ramps in all classes of buildings and to require the provision of stairways in certain buildings (Part H);

(*h*) the revision of the requirements for soil pipes and waste pipes, to permit such pipes to be placed outside certain buildings (regulation N5).

Other minor amendments have been made, including the bringing up to date as at 30th November 1975 of references to various technical publications which are incorporated with the Building Regulations (Northern Ireland) 1977

The regulations apply throughout Northern Ireland.