



Britspace Modular Building Systems Ltd

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Building System Agrément Certificate No 95/S023

Second issue*

Designated by Government
 to issue
 European Technical
 Approvals

BRITSPACE MODULAR BUILDING SYSTEM

Système pour constructions
 Bausystem

Product



Ronald MacDonald House, York Hill Children's Hospital, Glasgow

TGI's Restaurant, Coventry

• THIS CERTIFICATE RELATES TO THE BRITSPACE MODULAR BUILDING SYSTEM.

• The system is a steel frame for use as single-, two- and three-storey residential accommodation, dwellings, shops, restaurants, commercial buildings and offices.


• The steel frame has a design life of 60 years. The design life of the external envelope and internal finishes should be between 25 and 60 years depending on the materials, construction and degree of maintenance.

• This assessment does not cover staircases, windows, doorsets, fittings, adequacy of the plumbing, drainage, ventilation and electrical

continued

Regulations

1 The Building Regulations 1991 (as amended 1994) (England and Wales)

 The Secretary of State has agreed with the British Board of Agrément the aspects of performance to be used by the BBA in assessing the compliance of building systems with the Building Regulations. In the opinion of the BBA, buildings constructed using the Britspace Modular Building System, if used in accordance with the provisions of this Certificate, will meet the relevant requirements.

Requirement: A1	Loading
Comment:	The buildings will have adequate strength and stability. See sections 7.1 to 7.6 of this Certificate.
Requirement: B1	Means of escape
Requirement: B2	Internal fire spread (linings)
Requirement: B3	Internal fire spread (structure)
Requirement: B4	External fire spread
Requirement: B5	Access and facilities for the fire service
Comment:	The buildings will meet the relevant requirements within the limitations set out in this Certificate. See sections 8.1, 8.3 to 8.5 and 8.7 of this Certificate.
Requirement: C4	Resistance to weather and ground moisture
Comment:	The buildings are acceptable.
Requirement: E1	Airborne sound (walls)
Comment:	The buildings can meet the requirement. See section 12.1 of this Certificate.

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continued

services supplied with the buildings.

- The Britspace Modular Building System can be used to construct buildings with a variety of individual treatments and plan forms.

- Users, or the Certificate holder, when specifying plan form, internal sub-division, siting of the building, access for the disabled, access for fire services, and means of escape in case of fire shall ensure compliance with the relevant Building Regulations' requirements.

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Requirement:	L1	Conservation of fuel and power
Comment:		The buildings are acceptable. See sections 9.2 and 9.3 of this Certificate.
Requirement:	Regulation 7	Materials and workmanship
Comment:		The buildings are acceptable. See sections 16.1 and 16.7 of this Certificate.

2 The Building Standards (Scotland) Regulations 1990 (as amended)



In the opinion of the BBA, the buildings described in this Certificate are capable of satisfying the Building Standards (Scotland) Regulations 1990 (as amended) with regard to the following matters, subject to the qualifications contained in this Certificate.

Regulation:	10	Fitness of materials
Standards:	B2.1 and B2.2	Selection and use of materials and components
Comment:		The buildings are acceptable.
Regulation:	11	Structure
Standard:	C2.1	Construction
Comment:		The buildings will have adequate strength and stability. See sections 7.1 to 7.6 of this Certificate.
Regulation:	12	Structural fire precautions
Standard:	Part D2	Structural fire precautions
Comment:		The buildings will meet the relevant standards within the limitations set out in this Certificate. See sections 8.2 to 8.4 and 8.6 of this Certificate.
Regulation:	13	Means of escape from fire, facilities for fire-fighting and means of warning of fire in dwellings
Standard:	E2	Means of escape from fire
Comment:		See section 8.7 of this Certificate.
Regulations:	16 and 17	Preparation of sites and resistance to moisture
Standard:	G2	Preparation of a site and resistance to moisture from the ground
Standard:	G3.1	Resistance to precipitation
Comment:		The buildings are acceptable.
Regulation:	19	Resistance to transmission of sound
Standard:	H2.1	Airborne sound
Comment:		The buildings can satisfy this Standard. See section 12.1 of this Certificate.
Regulation:	22	Conservation of fuel and power
Standard:	J2.2	Performance standards
Comment:		The buildings are acceptable. See section 9.2 of this Certificate.

3 The Building Regulations (Northern Ireland) 1994 (as amended 1995)



In the opinion of the BBA, the buildings described in this Certificate are capable of satisfying the Building Regulations (Northern Ireland) 1994 (as amended 1995) with regard to the following matters, subject to the qualifications contained in this Certificate.

Regulation:	B2	Fitness of materials and workmanship
Comment:		The buildings are acceptable. See sections 16.1 and 16.7 of this Certificate.
Regulation:	C2	Preparation of site and resistance to dangerous and harmful substances
Regulation:	C4	Subsoil drainage
Regulation:	C5	Resistance to ground moisture and weather
Comment:		The buildings are acceptable.
Regulation:	D1	Loading
Regulation:	D2	Stability
Comment:		The buildings will have adequate strength and stability. See sections 7.1 to 7.6 of this Certificate.
Regulation:	E2	Means of escape
Regulation:	E4	Internal fire spread — Linings
Regulation:	E6	Internal fire spread — Structure
Regulation:	E8	External fire spread
Regulation:	E10	Facilities and access for the Fire Brigade
Comment:		The buildings will meet the relevant regulations within the limitations set out in this Certificate. See sections 8.1, 8.3 to 8.5 and 8.7 of this Certificate.
Regulation:	F2	Conservation of fuel and power
Comment:		The buildings are acceptable. See section 9.2 of this Certificate.
Regulation:	G2	Separating walls and separating floors
Comment:		The buildings can satisfy this Regulation. See section 12.1 of this Certificate.

4 Description

General

4.1 The Britspace Modular Building System comprises structural steel bays (or modules) with a range of roof, floor and wall specifications. The bays are used to construct single-, two- or three-storey buildings incorporating internal walls as required.

4.2 The bays are typically up to 12 m long by 4 m wide by 3 m high, although other dimensions can be designed and manufactured as required (see section 7 of this Certificate).

4.3 As part of the assessment leading to the issue of this Certificate, a range of specifications and supporting data has been analysed and retained by the BBA. This section gives only general details of some of these data (see Figure 1). Other material specifications or structural designs in accordance with relevant British Standards, Codes of Practice or current Agrément Certificates are available to customer requirement.

Structural frame

4.4 Each bay comprises hot-rolled galvanized structural steel hollow-section columns at each corner and at 4 metre intervals. Side and end beams are manufactured from cold-formed galvanized steel. Floor and roof/ceiling joists and wall studs are also manufactured from cold-formed galvanized steel. Floor and roof joists span each bay from side to side and are bolted to the side beams. Wall studs are bolted to side and end beams at floor and ceiling.

Floors

4.5 Floors comprise 28 mm thick moisture-resistant cement-bonded particleboard, Type T2 to BS 5669 : Part 4 : 1989, fixed to the floor joists by self-drilling self-tapping coated screws. Thermal insulation is provided by an aluminium foil-faced polythene bubble sheet (Alreflex 2L-2) draped over the steel floor joists.

Intermediate ceilings/floors (for two or three storeys)

4.6 The ceiling comprises two layers of 12.5 mm Gyproc Fireline Plasterboard fixed to steel roof joists infilled with 100 mm rock wool and with a resilient foam strip on the upper face of the joist. A floor assembly as described in section 4.5 is laid over.

External walls

4.7 External walls are of composite construction having an internal skin of plasterboard or plasterboard on cement-bonded particleboard fixed to steel studs through a Visqueen 0.25 mm thick vapour control layer. Outer components include a breather membrane, rigid foil faced urethane with residual cavity and brickwork, or WBP plywood on a breather membrane with rigid foil faced urethane secured with treated battens and Cape board or Resoplan cladding panels. Eurobrick brick-slip

cladding is also available which is fixed to a WBP plywood substrate.

External roof/ceiling

4.8 A tiled or slated pitched roof on prefabricated timber roof trusses on timber wall plates is fixed to the bay walls. The ceiling comprises two layers of 12.5 mm Gyproc Fireline plasterboard fixed to steel roof joists with a 12 mm WBP plywood upper deck supporting a vapour control layer and mineral wool insulation quilt.

4.9 Flat roof constructions incorporating vapour control layer, rigid urethane foam insulation and three-layer built-up felt to BS 8217 : 1994 on WBP plywood deck are also available.

Internal walls

4.10 Standard internal walls comprise plasterboard on steel studs. An additional layer of plywood may also be included beneath the plasterboard where fixing support is required. Where additional sound insulation is required, modified internal walls can be incorporated.

4.11 Separating walls comprise two layers of plasterboard (12 mm on 19 mm) on 8 mm cement bonded particleboard all fixed to 100 mm steel studs with 100 mm rock wool insulation in between. This construction is repeated for the wall of the adjacent room to give the overall wall construction.

Protection of steelwork against corrosion

4.12 The side/end beams, internal wall studs, floor and roof joists are produced from galvanized steel sheet to EN 10147 : 1992 with a G 275 coating. Higher specifications up to G 600 are provided for sections that may become exposed to condensation.

4.13 The hot-rolled structural steel columns are shot-blasted and hot-dip galvanized to BS 729 : 1971 (1986).

Finishes

4.14 Internal plasterboard surfaces are capable of receiving a range of conventionally applied finishes. The floor is protected by tiles or vinyl sheet as required. In applications where water will be present, eg kitchens or toilets, a suitable resilient floor covering with welded joints and cove skirting is used.

5 Manufacture

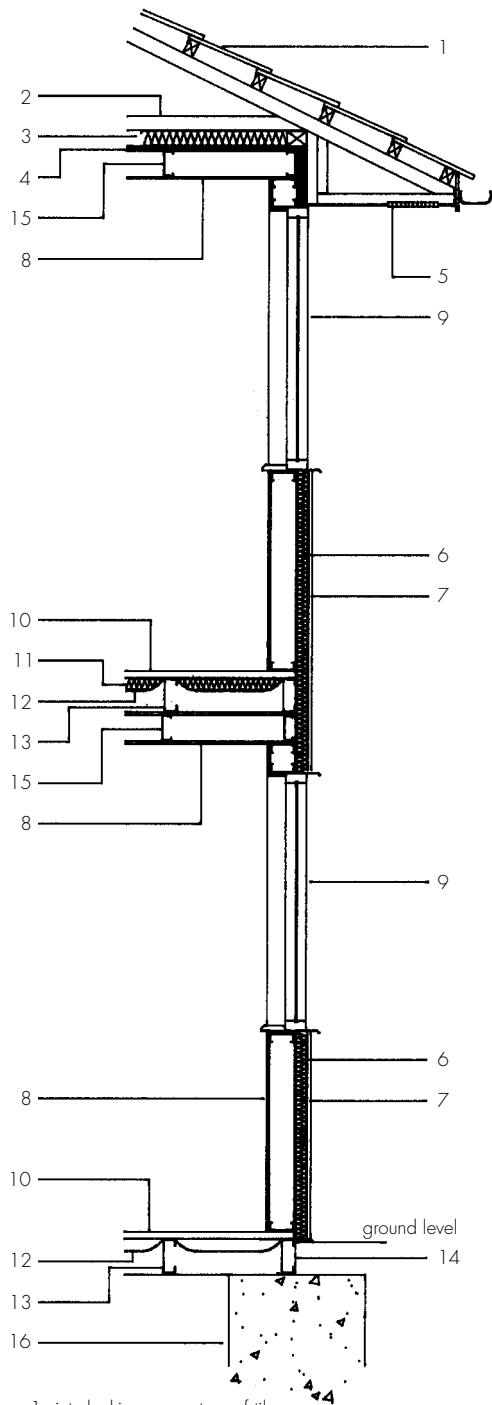
5.1 System components are bought in to agreed specifications or in accordance with British Standards or Agrément Certificates.

5.2 Steel frame components of the system are designed and constructed to relevant British Standards and using conventional metalworking techniques.

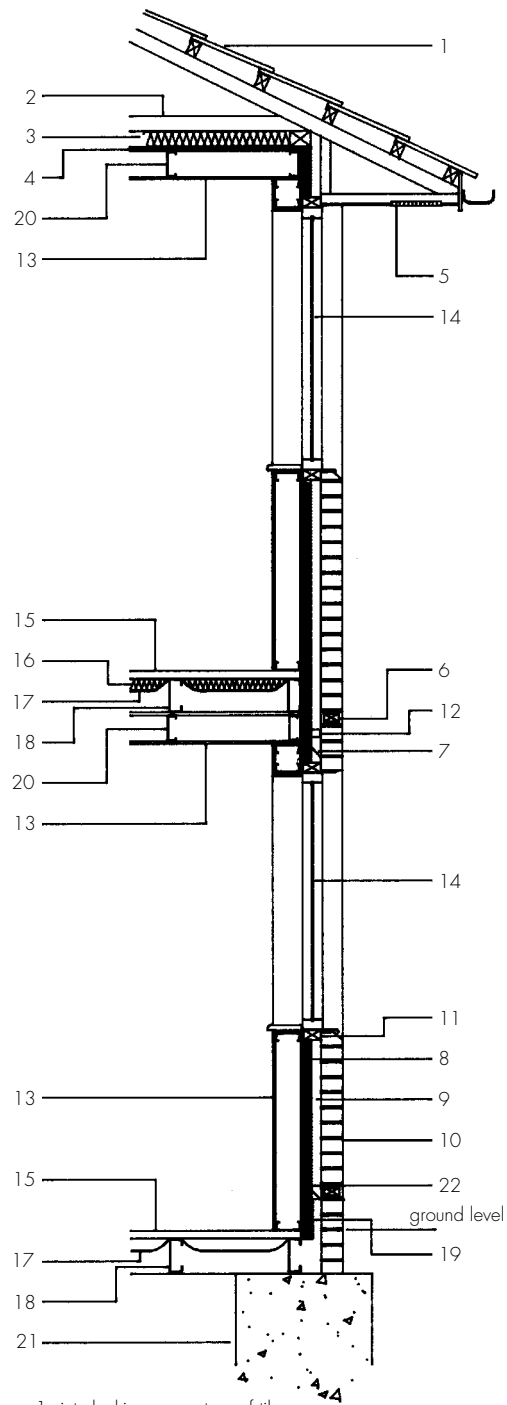
5.3 Quality checks are made during the construction process and on the finished bays.

5.4 Bays are completed as far as possible in the factory, including all fittings, services and finishes.

Figure 1 Typical sections



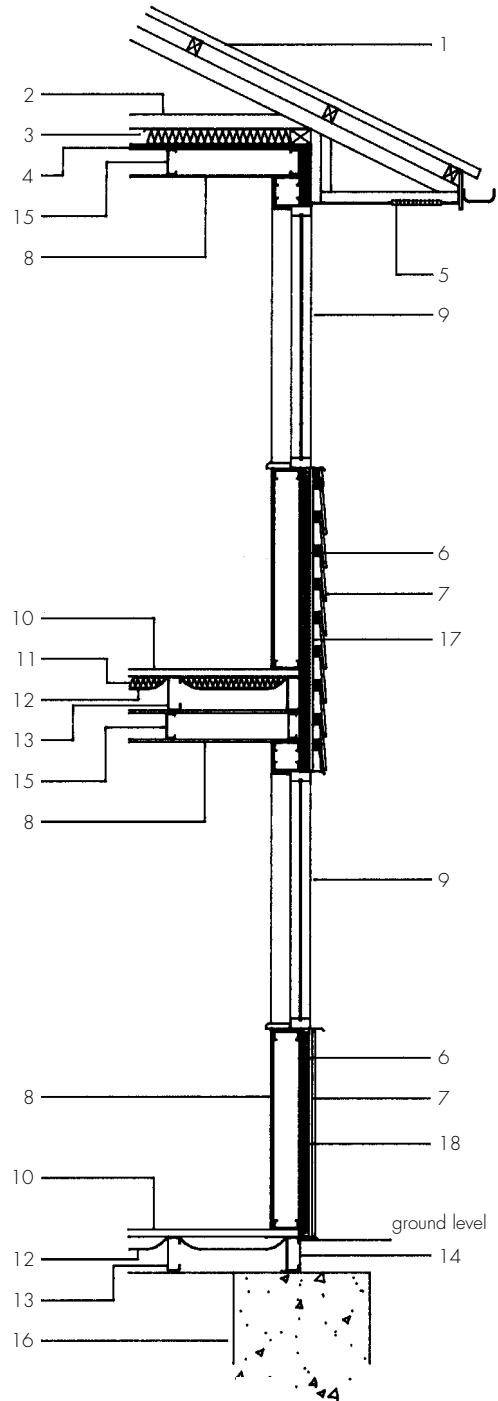
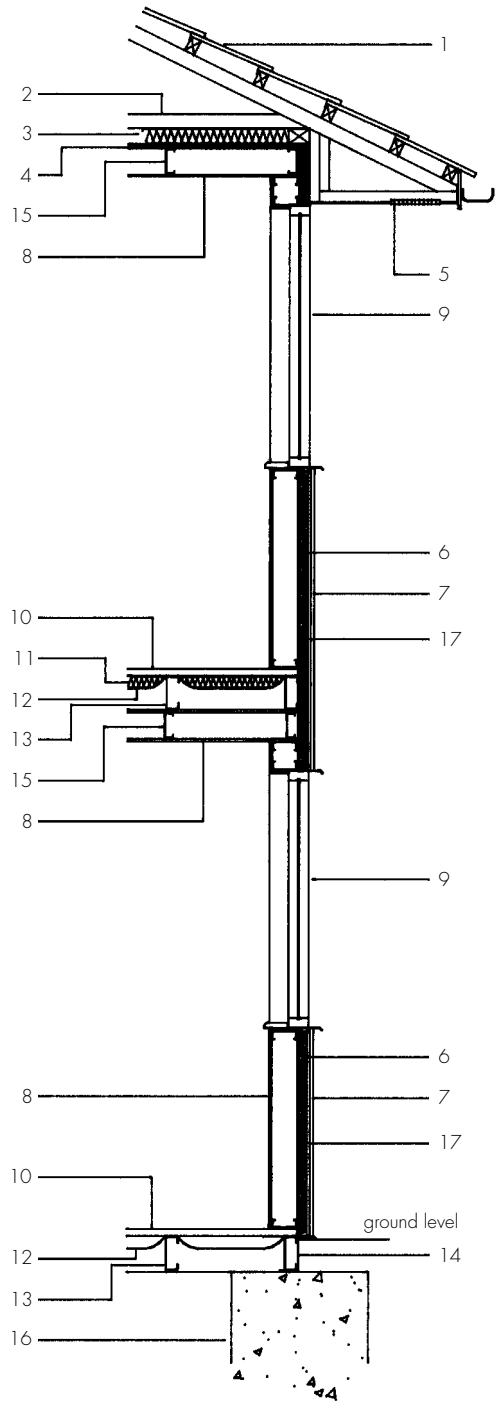
- 1 interlocking concrete roof tiles
- 2 timber roof trusses
- 3 mineral fibre insulation
- 4 temporary weatherproofing membrane on plywood deck
- 5 soffit with continuous ventilation gap
- 6 thermal insulation
- 7 brick slip cladding
- 8 plasterboard dry lining
- 9 high performance double-glazed units
- 10 cement particleboard
- 11 mineral fibre infill
- 12 Alreflex 2L2 thermal insulation
- 13 floor joists
- 14 dpm
- 15 ceiling joists
- 16 foundations to suit site conditions



- 1 interlocking concrete roof tiles
- 2 timber roof trusses
- 3 mineral fibre insulation
- 4 temporary weatherproofing membrane on plywood deck
- 5 soffit with continuous ventilation gap
- 6 microvents as required
- 7 lintel with integral cavity tray
- 8 thermal insulation
- 9 cavity
- 10 brick cladding
- 11 cavity closer
- 12 horizontal cavity barrier
- 13 plasterboard dry lining
- 14 high performance double-glazed units
- 15 cement particleboard
- 16 mineral fibre infill
- 17 Alreflex 2L2 thermal insulation
- 18 floor joists
- 19 dpm to lap with dpc
- 20 ceiling joists
- 21 foundations to suit site conditions
- 22 cavity tray

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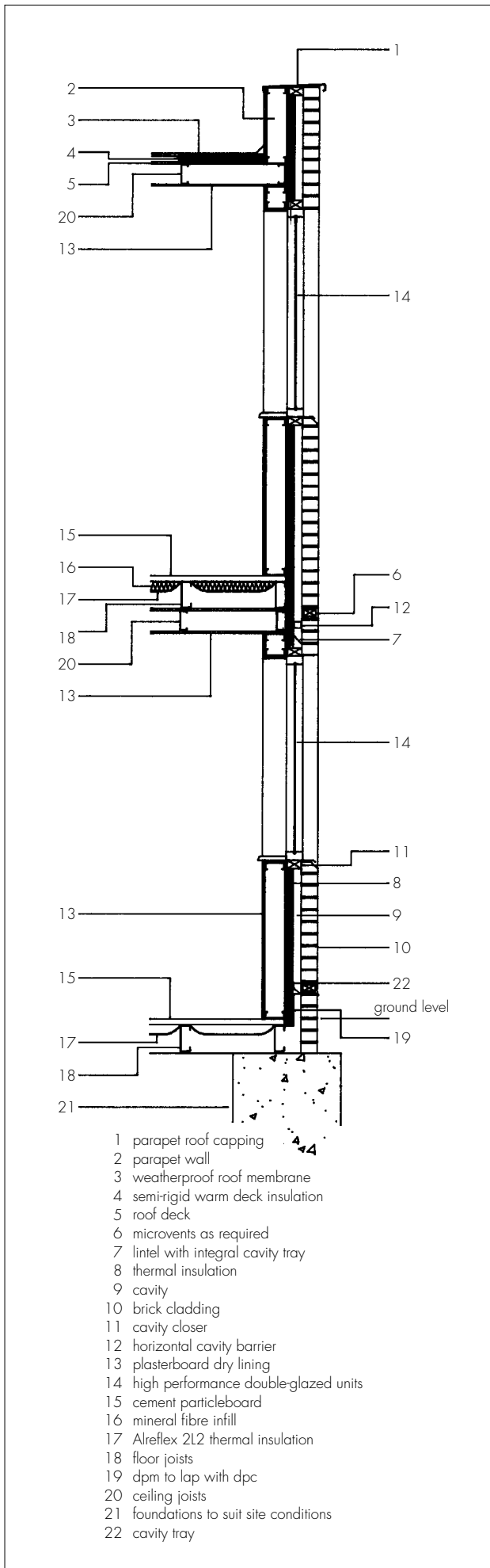
Figure 1 Typical sections — continued



- 1 interlocking concrete roof tiles
- 2 timber roof trusses
- 3 mineral fibre insulation
- 4 temporary weatherproofing membrane on plywood deck
- 5 soffit with continuous ventilation gap
- 6 thermal insulation
- 7 flat board cladding
- 8 plasterboard dry lining
- 9 high performance double-glazed units
- 10 cement particleboard
- 11 mineral fibre infill
- 12 Alreflex 2L2 thermal insulation
- 13 floor joists
- 14 dpm
- 15 ceiling joists
- 16 foundations to suit site conditions
- 17 ventilation gap

- 1 profile sheet roofing
- 2 timber roof trusses
- 3 mineral fibre insulation
- 4 temporary weatherproofing membrane on plywood deck
- 5 soffit with continuous ventilation gap
- 6 thermal insulation
- 7 tile/slate cladding
- 8 plasterboard dry lining
- 9 high performance double-glazed units
- 10 cement particleboard
- 11 mineral fibre infill
- 12 Alreflex 2L2 thermal insulation
- 13 floor joists
- 14 dpm
- 15 ceiling joists
- 16 foundations to suit site conditions
- 17 ventilation gap
- 18 brick slip cladding

Figure 1 Typical sections — continued



5.5 The bays are assembled into the planned configuration and services connected and tested before being disassembled and made weatherproof and ready for transport to site.

6 Delivery and site handling

6.1 The bays are transported to site on a flat-bed lorry or trailer long enough to fully support the bay.

6.2 As the bays are normally off-loaded and lifted by crane into position by Britspace personnel onto pre-prepared foundations, site storage is not required.

Design Data

7 Strength and stability



7.1 With certain exceptions, described in this section, the design of Britspace buildings is carried out only by appropriately qualified and experienced engineers and in accordance with the following:

BS 648 : 1964
 BS 5628 : Part 2 : 1991
 BS 5628 : Part 3 : 1985
 BS 5950 : Part 1 : 1990
 BS 5950 : Part 4 : 1982
 BS 5950 : Part 5 : 1987
 BS 6399 : Part 1 : 1984
 BS 6399 : Part 3 : 1988
 BS 6399 : Part 2 : 1995*
 CP 3 : Chapter V : Part 2 : 1972*

*Whichever is current at the time of design.

7.2 Where required, structural testing has been used to verify the relevant aspects of the design outside the scope of the codes.

7.3 It is also the responsibility of the consulting engineer to carry out:

stability analysis of the structure including the necessary measures to brace it
 preparation of schedule for reaction loads to aid the nominated geotechnical contractor to design the necessary foundations;
 allowing for building services weights in the design calculations.

7.4 The roof is designed to support imposed uniformly distributed loads and concentrated loads in accordance with BS 6399 : Part 3 : 1988, and dead loads including the self-weight and any necessary plant.

7.5 The floor is designed to support a uniformly distributed imposed load of 4 kNm^{-2} or a concentrated load of 4.5 kN , in accordance with BS 6399 : Part 1 : 1984 and is therefore acceptable in, for example, restaurants and hotels.

7.6 Foundations must be designed in accordance with BS 8004 : 1986.

8 Behaviour in relation to fire



8.1 Buildings subject to the Building Regulations for England and Wales or the Building Regulations for Northern Ireland must not be erected within one metre of a boundary. Due regard must be taken of all 'unprotected areas'.



8.2 Buildings subject to the Building Standards for Scotland must be sited in accordance with the provisions of Technical Standard D2.6 for compliance with these Regulations. Due regard must be taken of all 'unprotected areas'.



8.3 It can be shown by tests and assessment that the buildings will meet or satisfy Building Regulations requirements for fire rating as given in Table 1.

8.4 The various exposed surfaces of the buildings assessed as having a Class O* rating are:

brick leaf or brick-slip external wall surfaces
plasterboard internal wall and ceiling surfaces
Cape board cladding panels
Resoplan cladding panels.

*As defined in the Building Regulations 1991 (England and Wales), Approved Document B, Appendix A; the Building Regulations (Northern Ireland) 1994 Technical Booklet E and the Appendix to Part D of the Technical Standards for compliance with the Building Standards (Scotland) Regulations 1990.

Table 1 Fire rating

Component	Duration
External walls	one hour (from inside)
Combined ceiling and floor assembly	one hour (from underside)
Separating wall	one hour
Steel column casing	one hour



8.5 The pitched roof specification described in section 4.8 of this Certificate is designated SAA in accordance with the Building Regulations for England and Wales, Approved Document B, Appendix A, and the Building Regulations for Northern Ireland, Technical Booklet E. The designation of the flat roof specification will depend on the finish.



8.6 The designation of the roof in Scotland must be determined in accordance with Standard D2.5 and the Appendix to Part D of the Technical Standards for compliance with the Building Standards.



8.7 Adequate provision must be made for escape in case of fire.

8.8 The regulations dealing with *Fire Spread* (England and Wales) and *Structural Fire Precautions* in Scotland and in Northern Ireland contain limits to the size of compartments in buildings according to the use and, in some cases,

height. The BBA and the Certificate holder have agreed a list of these limits as they apply to the Britspace Modular Building System.

8.9 Where it is necessary for fittings, services or ducts to penetrate part of the fire-resisting construction, the detailing must ensure that the relevant fire resistance is not impaired, particularly in relation to the integrity requirements.

8.10 The behaviour in relation to fire of any intermediate walls or cavity barriers between modules in either the roof and floor voids (other than where these occur at the perimeter of a module), or windows and doors, or internal stairwells, have not been assessed and are therefore outside the scope of this Certificate.

9 Thermal insulation

9.1 The building elements are designed to achieve, or improve on, the following U values ($Wm^{-2}K^{-1}$):

ground floor 0.45
external wall 0.45
roof 0.25, 0.35 or 0.45
windows 2.8⁽¹⁾

(1) Excludes display, shop and similar glazing.



9.2 The requirements for limiting the heat loss through the building fabric are satisfied where the U values of the building elements do not exceed the maximum values in the relevant Elemental Approach as given in the National Building Regulations:

England and Wales

Approved Document L

Scotland

Technical standards Part J

Northern Ireland

Technical Booklet F.



9.3 For constructions subject to the Building Regulations for England and Wales, the effect of thermal bridging should be taken into account in any U value calculations. In addition, the level of insulation around openings in external walls should limit the risk of local condensation problems and excessive additional heat loss. Solutions are described in Approved Document L, Appendix D.

10 Condensation

10.1 The buildings are suitable for use where the internal relative humidity is not expected to exceed 70% for any significant length of time, as condensation may occur (see also section 11.1 of this Certificate).

10.2 If the floor is penetrated by services, eg soil pipes, the joints between the services and the floor deck and floor insulation must be adequately sealed to prevent the ingress of water and water vapour.

10.3 Adequate underfloor ventilation is provided to ensure that any condensation on the steelwork or insulation is effectively dispersed (see section 11.2).


11 Ventilation

11.1 The design of the windows should allow adequate ventilation and is an important factor in reducing the incidence of surface condensation. The windows should be designed so that the amount of openable window ventilation is a minimum of 5% of the floor area or provision of mechanical ventilation considered. Mechanical ventilation is specified in accordance with the Building Regulations and CIBSE Guide B as appropriate.

11.2 The void beneath the ground floor must have at least 600 mm² of open area per metre run of external wall.

11.3 Cold roof spaces must include provision for ventilation in accordance with BS 5250 : 1989(1995).

12 Sound insulation



12.1 The resistance to airborne sound transmission of wall or floor/ceiling assemblies will depend on the mass, stiffness, use of absorbing infill and flanking elements. However, tests in accordance with BS 2750 : Part 4 : 1980 show that the requirements for dwellings are achievable.

12.2 Impact sound transmission will depend on the resilience of the floor coverings used in the buildings.

13 Weathertightness and damp-proofing

13.1 The steel supporting columns raise the building clear of the ground, giving it an inherent resistance to rising damp in the walls. Columns rest on greased galvanized steel plates.

13.2 The ground beneath the building should, as a minimum, be effectively cleared of turf and other vegetable matter at least to a depth sufficient to prevent later growth.

13.3 In preparing the site, adequate drainage must be provided or other precautions taken to prevent water flowing beneath the building or ponding against the perimeter steelwork. Flower beds should not be positioned so that loose soil can become banked against the building perimeter.

13.4 The roof and external wall surfaces will provide adequate weather resistance. The final weathertightness of the building is dependent upon efficient positioning and sealing of all joints.

13.5 The buildings are provided with suitable rainwater gutters and downpipes.

13.6 The performance of windows and doors is not covered by this Certificate; however, the perimeter joints between windows and doors and the wall panels have been assessed and are

adequate to ensure that water penetration will not occur at these positions.

14 Services

Electrical and plumbing services are outside the scope of this Certificate; however, in designing and installing these services, precautions must be taken to avoid the possible risk of long-term damage to the structure or the services by, for example, the ingress of water, water vapour or condensate from cold water service pipes.


15 Maintenance

15.1 External cladding panels may require occasional maintenance in accordance with the relevant Agrément Certificate.

15.2 In the event of impact or other damage to an external wall, repairs must be effected in accordance with the relevant standard, or approval.

15.3 Decorative fascias or trims can be replaced readily if necessary.

16 Durability



16.1 The main structural framework is assessed as capable of achieving a design life of 60 years. Other elements can achieve a design life of between 25 and 60 years depending on the materials, construction and degree of maintenance. These materials should be selected at the design stage with due regard to the practicability of their maintenance and/or replacement during the envisaged design life of the building. Reference may be made to BS 7543 : 1992, or relevant Agrément Certificate in this respect.

16.2 Particular care is required in arrangement for dpcs, integrity of vapour checks and weathertightness of the building envelope.

16.3 Foot traffic over flat roofs should be restricted to the purpose of maintenance and suitable precautions must be taken to obviate the risk of damaging the waterproofing layer.

16.4 The galvanizing will be effective for the building's envisaged life.

16.5 The ceiling and wall lining will remain effective for this period. Care must be taken to ensure that any decoration maintains the Class 0 surface spread of flame designation of the lining.

16.6 Resilient floor coverings may require replacement during the building's envisaged life, depending on the use. Should it be necessary to replace or repair the covering, all joints must be welded. Any replacement covering must be to an equivalent specification as the original.

16.7 The sealants used in the construction of the bays in the factory and to seal between bays on site are concealed and are not subject to excessive movement. They should not normally require replacement during the building's envisaged life.

Installation

17 General

17.1 Buildings must be sited with due regard to any boundary (see sections 8.1 and 8.2 of this Certificate).

17.2 Siting of the building on the prepared foundations is carried out by Britspace personnel. The arrangements for siting have been assessed and found to be satisfactory.

18 Preparation

Suitable foundations and services are usually provided by subcontractor to the Certificate holder's specification.

19 Procedure

19.1 The modules are placed by crane onto the prepared foundations using purpose-designed lifting points incorporated in the steel frame. Access to the site is required for the crane and this requirement will be agreed with the client.

19.2 Temporary weatherproofing at joints between bays and the open ends of incomplete buildings is provided by the Certificate holder to suit the construction sequence.

19.3 Where specified, the building modules must be bolted to the foundations.

19.4 Bays of the same length can be multi-stacked. The bays are bolted together.

19.5 The completion of external and internal linings is carried out on site. Service connections are made and internal sub-divisions and finishes completed at joints between bays.

20 Supervision

For the benefit of clients who may wish to carry out their own checks during siting the following, in addition to normal building checks, can be made:

- (a) Before each ground-floor bay is positioned:
 - location of dpc's
 - positioning of sealing strip between adjacent bays
 - foundation plates/bolts placement.
- (b) During positioning of ground-floor bays:
 - no damage is caused to the steelwork protective systems.
- (c) After each ground-floor bay is positioned:
 - fixings between bays.
- (d) Before each first and second floor bay is positioned:
 - positions of sealing strip between adjacent bay.

(e) After each first- and second-floor bay is positioned:

fixings between bay.

(f) Completion of weatherproofing at junction between bays.

(g) Satisfactory extension of finishings over joints between bays.

(h) Satisfactory provision of underfloor ventilation to ground floors.

Technical Investigations

The following is a summary of the technical investigations carried out on the Britspace Modular Building System.

21 Tests

Tests and data were analysed to determine:

- acoustic performance
- performance in fire
- structural adequacy of floor specification.

22 Other investigations

22.1 An examination was made of existing data to assess:

- structural strength and stability
- behaviour in fire
- resistance to sound transmission
- thermal and hygrothermal performance
- weathertightness
- durability
- maintenance requirements.

22.2 Calculations were undertaken and examined in conjunction with the results of the tests referred to in sections 21 and 22, to establish the structural strength and stability.

22.3 Calculations were made and computer simulations carried out to determine the effectiveness of the insulation arrangements and the risk of condensation.

22.4 The siting procedures were witnessed.

Additional Information

The management systems of Britspace Modular Building Systems Ltd have been assessed and registered as meeting the requirements of BS EN ISO 9001 by Premier Assessments Ltd (Certificate No 209).

Bibliography

- BS 648 : 1964 *Schedule of weights of building materials*
- BS 729 : 1971(1986) *Specification for hot dip galvanized coatings on iron and steel articles*
- BS 5250 : 1989(1995) *Code of practice for control of condensation in buildings*
- BS 5268 *Structural use of timber*
Part 2 : 1991 *Code of practice for permissible stress design, materials and workmanship*
Part 3 : 1985 *Code of practice for trussed rafter roofs*
- BS 5669 *Particleboard*
Part 4 : 1989 *Specification for cement bonded particleboard*
- BS 5950 *Structural use of steelwork in building*
Part 1 : 1990 *Code of practice for design in simple and continuous construction: hot rolled sections*
Part 4 : *Code of practice for design of composite slabs with profiled steel sheeting*
Part 5 : 1987 *Code of practice for design of cold formed sections*
- BS 6399 *Loading for buildings*
Part 1 : 1984 *Code of practice for dead and imposed loads*
Part 2 : 1995 *Code of practice for wind loads*
Part 3 : 1988 *Code of practice for imposed roof loads*
- BS 8004 : 1986 *Code of practice for foundations*
- BS 7543 : 1992 *Durability of buildings and building elements, products and components*
- BS 8217 : 1994 *Code of practice for built-up felt roofing*
- BS EN 10147 : 1992 *Specification for continuously hot-dip zinc coated structural steel sheet and strip. Technical delivery conditions*
- CP 3 *Code of basic data for the design of buildings*
Chapter V *Loading*
Part 2 : 1972 *Wind loads*
- BS EN ISO 9001 : 1987 *Quality Systems — Method for quality assurance in design/development, production, installation and servicing*

Conditions of Certification

23 Conditions

23.1 Where reference is made in this Certificate to any Act of Parliament, Regulation made thereunder, Statutory Instrument, Code of Practice, British Standard, manufacturer's instruction or similar publication, it shall be construed as reference to such publication in the form in which it is in force at the date of this Certificate.

23.2 The quality of materials and the method of manufacture have been examined and found satisfactory by the BBA and must be maintained to this standard during the period of validity of this Certificate. This Certificate will remain valid for an unlimited period provided:

- (a) the specification of the product is unchanged; and
- (b) the manufacturer continues to have the product checked by the BBA.

23.3 This Certificate will apply only to the product that is installed, used and maintained as set out in this Certificate.

23.4 In granting this Certificate, the BBA makes no representation as to:

- (a) the presence or absence of patent or similar rights subsisting in the product; and
- (b) the legal right of Britspace Modular Building Systems Ltd to market, install or maintain the product; and
- (c) the nature of individual installations of the product, including methods and workmanship.

23.5 It should be noted that any recommendations relating to the safe use of this product which are contained or referred to in this Certificate are the minimum standards required to be met when the product is used. They do not purport in any way to restate the requirements of the Health & Safety at Work etc Act 1974, or of any other statutory or Common Law duties of care, or of any duty of care which exist at the date of this Certificate or in the future; nor is conformity with such recommendations to be taken as satisfying the requirements of the 1974 Act or of any present or future statutory or Common Law duties of care. In granting this Certificate, the BBA does not accept responsibility to any person or body for any loss or damage, including personal injury, arising as a direct or indirect result of the use of this product.



In the opinion of the British Board of Agrément, the Britspace Modular Building System is fit for its intended use provided it is installed, used and maintained as set out in this Certificate. Certificate No 95/S023 is accordingly awarded to Britspace Modular Building Systems Ltd.

On behalf of the British Board of Agrément

Date of Second issue: 17th September 1997

Director

**Original Certificate was issued 9th February 1996. This version issued to include reference to the revised Building Regulations and associated text and to extend use of system to include dwellings.*

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