18th April 20011

SiBCAS

flexible modular accommodation

Performance Specification for the Provision of

PERMASPACE MODULAR ACCOMMODATION

Structural Design

Dead & Live Loading Are In Accordance With Bs 6399, Wind Loading Are In Accordance With CP3: CH.V: Part 2 (For Permanent Buildings).
Structural Design Is Carried Out To The Relevant British Standards & Codes Of Practice Particularly BS 5268-3:2006 - Structural Use Of Timber.

Floors Loads

Floor Loading In Accordance With BS 6399. Part 1:1996
General Floor Loading Is 5 Kn/M2.

Roof Loads

Roof Loads In Accordance With BS 6399. Part 3:1998
Design Imposed Load Not Less Than 0.75kn/M2

Wind Loads

Wind Loads Calculated In Accordance With BS 6399 Part 2: 1997

Foundations

Sibcas standard foundation arrangements are based on an allowable ground bearing pressure of 100 kN/m^2

U Values

Floor: -	0.19	w/(m^2 K)	
Walls: -	0.34	w/(m^2 K)	(if the wall is a 120 stud then 0.32 w/(m^2 K)
Roof: -	0.24	w/(m^2 K)	
Doors: -	3.00	w/(m^2 K)	
Windows: -	2.992	w/(m^2 K)	

Timbers

All Timbers Used In Construction Are Vacuum Treated With Wood Preservative.

Steel Base Frame Chassis

Two longitudinal chassis members 305mm x 102mm x 25 kg per metre RSJ set at 2m centres with 100mm x 100mm x 12mm x 3m angle end cross members and 80mm x 40mm x 1,988mm box centre cross member. Angle cleats 100mm x100mm x 12mm x 50mm to top of universal beams at 1,200mm centres. All steel elements are welded and treated with presomet underseal.

Floors

145mm x 50mm white wood floor joists at 400mm ctrs , bolted to chassis cleats at 1,200mm ctrs. 150mm Isover Spacesever Roll insulation, laid between joists on steel underpan. 18.5mm C.S.P. plywood floor deck glued and nailed to floor joists.

Windows

Window system is manufactured by Sibcas using standard b.a.c.o. white powder coated aluminium sections all double glazed and fitted with perma trickle vents.
Windows have either a top opening hopper or tilt and turn operation (dependant on building style) both fitted with restriction stays. Cill height is 1140mm above finished floor level.

Exterior Doors

Exterior grade solid core timber door 1981mm x 1100mm x 44mm and fixed in white powder coated aluminium trim complete with mortise lock and door closer. Doors are primed, undercoated with Blue gloss finished. Vision panels can be fitted where appropriate. Finger guards, if required, can be fitted.

Internal Doors

1,981mm x 926 mm internal pre-finished solid core doors fixed in red wood standards, complete with door furniture, or alternatively 1,981mm x 726mm or 826mm doors may be fitted. Oak veneer finish. vision panels can be fitted where required. Door architraves finished in oak stain. Finger guards, if required, can be fitted.

Roof & Fascia

145mm x 32mm white wood dressed all round to form roof panel joists at 400mm centres with 12.5mm C.S.P. plywood glued and nailed to top of joists to form roof deck.
Roof panels supported and fixed to 45mm x 45mm support bearers which in turn are fixed to box beam sides at a 1:40 slope. Built up bituminous roofing applied to roof deck by torch on method. 2 layers of 2 ply felt cross bonded, 1 layer of green mineral cross bonded to form top layer with A.A. fire rating. Waterproofing guaranteed for duration of hire. Box beams are formed with 9.5mm finish birch plywood glued and nailed to double 92mm x 44mm flanges and are designed to suit the various spans as required.
Fascia's are formed with 9.5mm C.S.P. plywood faced with Colorsteel cladding, Ocean Blue - 18C39, glued and nailed to single 95mm x 32mm flanges.

Ceilings

70mm x 28mm white wood dressed all round to form ceiling panel joists at 300mm ctrs 150mm Isover Spacesever Roll insulation, fixed between joists with 12.5mm gyproc duplex plasterboard glued and screwed to underside to provide a class 1 class 0 fire rating & half hour fire resistance, joints ames taped and filled. All surfaces primed, undercoated and matt emulsion painted finish. Floor to ceiling height is 2,360mm.

(Sibcas reserve the right to use15mm Gyprock Plasterboard, With Joints Ames Taped And Filled To Give A Class 1 Class 0 Fire Rating & One hour Fire Integrity)

External Walls

9.5mm C.S.P. plywood glued and nailed to studs to form structural diaphragm at outer walls.
Building paper stapled to plywood forms a moisture barrier.
95mm x 32mm white wood dressed all round to form main vertical wall studs at 600mm ctrs between top and bottom rails.
45mm x 20 mm midrail checked into vertical studs.
100mm Isover Frame Batt 35 insulation fixed between studs.

External wall finish, the top half to be 0.7mm white stucco aluminium weatherlap boarding nailed to the exterior sheathing. The bottom half will be 12.5mm g.r.p. Natural granite chip (steni) panel fastened to the exterior sheathing
Internal wall finish consisting of 12.5mm gyproc duplex metallised polyester film backed plasterboard glued and screwed to studs with joints ames taped and filled to give a Class 1 Class 0 fire rating & half hour fire resistance

(Sibcas reserve the right to use 120mm stud with 100mm Isover Spacesever Roll & Eco-Brite Insulation giving a U-Value of 0.32 w/(m^2 K), and a 15mm Megadeco Plasterboard, With Joints Ames Taped And Filled To Give A Class 1 Class 0 Fire Rating & One hour Fire Integrity and insulation)

Plywood Debris skirt fitted to full perimeter of building, ventilation grills fitted where required.

Internal partitions

70mm x 32mm white wood dressed to form main vertical studs at 400mm ctrs and top and bottom rails. 12.5mm gyproc plasterboard glued and screwed to both sides of studs with joints ames taped and filled to give a Class 1 Class 0 fire rating & half hour fire resistance. If required cavity can be filled with Rockwool for sound attenuation. All surfaces primed, undercoated and matt emulsion painted finish.
Internal facings and skirtings are machined white wood, 90mm x 12.5mm skirting with O.G. Moulding. 70mm x 12.5mm facings with O.G. Mouldings. All facings are oak stained finished. All skirting is primed, undercoated and gloss finished white.

Fittings & Finishes

Sanitaryware

Sanitary fittings - white porcelain.
Copper water pipes to be of diameter required and to comply with water supply bylaws.
Waste systems to be p.v.c. And of diameter required to cope with number of appliances.
All plumbing will comply with current building regulations & meet with BS 6465- part 1: 1994.

Sink & Base Units

Base units constructed in 17.5mm melamine faced chipboard, worktops are 30mm deep formica, Vision Select Laminate range.

Rainwater Goods

Rainwater goods manufactured from UPVC, colour - grey.

Floor finishes

The following are Sibcas standard floor finishes;
-standard 2.5mm full sheet vinyl (Tarkett – Tapiflex tx 243, Saphyr range) glued to plywood with all joints hot welded. Sit on vinyl skirting glued in place.
- non slip 2.0mm full sheet vinyl (Altro - Contrax range) glued to plywood with all joints hot welded. Vinyl skirting with welded seams
- contract carpet (Balta – Gala range) glued to plywood.
Entrance areas will be covered with Barrier Matting (Heckmondwicke Range - colour Grey).

Mechanical Services

Electrical Heating

1kW low surface temperature convection heaters or 2kW convection heaters with integrated thermostats fitted to all rooms, circulation areas. 1kW High level fan heaters fitted to toilets. Heating requirements based on an external air temperature of -4°c, internal air temperature of 22°c.

The Heating system may be, if required consist of a combination of both Heat Pump "Inverter" Wall mounted Air Conditioning Units and convection heating.

Ventilation

Ventilation will be in accordance to the Approved Document Part F, Building Bulletin 101 Design for schools & BS 5925 Part 1. Ventilation will be in the form perma vents & mechanical extract, extract rates dependant on room use. Extracts within toilets will have over-run timer arrangements and will achieve a minimum of 6 l/s per pan, elsewhere extracts will be operated with pull cords.

Piped Services

All exposed pipework shall be insulated and be boxed in with plywood, or similar to prevent contact burn injuries.

Hot water will be provided by a an electric water heater, sized to suit the usage for the particular building type and layout.

All hot water outlets, if required, can be provided with individual TMV3 thermostatic mixing valves.

Electrical Services

All electrics to comply with I.E.E. Regulations BS 7671: 2008 17th Edition.
All electrics residual current device protected.
If required, 3 compartment dado trunking can be supplied where required.

Electrical Lighting

All lighting and controls to comply with Part L of the Approved Documents & DFA2.
All lighting will be surface mounted with removable louvres, fitted with safety wires so that the louvres cannot fall to floor level if worked loose from louvre position.

Lighting levels will meet with BS ISO 8995:2002.

Emergency Lighting

All emergency lighting to comply with;
BS5266 Pt. 1 1999
Fire Precautions Act 1971
Safety Signs Directive (Health & Safety Regulation No. 51341, 1996)
Health & Safety at Work Act 1974
European Standard BSEN 1838 : 1999

All luminaries shall be inclusive of the following:
3 hour duration during mains failure
High temperature nickel cadmium battery.
Non-maintained/maintained as indicated in this specification.
LED charger monitor.

External emergency luminaries shall be positioned within 2 metres of all exit doors to provide further illumination to the escape signage and exit doors and shall be IP65 rated.