

SAP Calculations compliance summary

Project: 16 Springfield Road, Mangotsfield, Emersons Green, Bristol, BS16 9BN

Client: Ian Cox @ Cox Architectural Consultancy Ltd.

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Construction and insulation specification

Element	U-value (W/m ² K)	Specification
Ground floor	0.14	60mm screed, 130mm "Celotex" PIR rigid insulation ($\lambda \leq 0.022$ W/mK), concrete floor slab
External wall	0.18	Rendered blockworks ($\lambda \leq 1.59$ W/mK) outer leaf, 80mm "Celotex" PIR rigid insulation ($\lambda \leq 0.022$ W/mK) partially filled cavity, 100mm "Celcon Solar" blockworks ($\lambda \leq 0.11$ W/mK) inner leaf, plasterboard on dabs finish
Joisted roof	0.14	Total 300mm mineral wool loft insulation ($\lambda \leq 0.044$ W/mK) fitted between and above ceiling joists, plasterboard ceiling to below
Glazing	1.40	Double glazed window / glazed door units
Door	1.40	Composite personnel door

- Accredited Construction Details (ACDs) to be followed on all relevant junctions.
- A design air permeability rate of 8.00 m³/m²hr has been set. This relates to an air leakage test being carried out on this dwelling upon its completion.

Heating and hot water specification

Space heating system	Fuel: Mains gas Type: Combination boiler (SEDBUK efficiency $\geq 89.5\%$)
Heating emitters	Radiators throughout
Heating controls (minimum)	<ul style="list-style-type: none"> • Programmer • Room / appliance thermostat • Thermostatic radiator valves (TRVs)
Secondary heating system	None
Domestic hot water	From main system: Combination boiler

Other specification

- Ventilation via 3 intermittent extract fans, extracts from each of the kitchen and wet rooms.
- 100% of the lighting is to be low energy.
- A solar photovoltaic (PV) panel array of 0.50 kWp minimum output has been specified on the South-East facing roof (as indicated on the side elevation). Certain alternative improvements may be required should the solar panels be omitted, please let us know if this is the case.

Post construction stage

Upon completion of the dwelling(s), as-built SAP calculations and an EPC will be required for each dwelling. Energytest will require the following information in order to process this:

- Registered postal address (a labelled site plan may be required).
- Air test certificate (please contact us if you require a quotation).
- Heating specification e.g. exact boiler make and model.
- Details of heating emitters and controls.
- Cylinder make, model and capacity in litres (if installed).
- Confirmation of ventilation system (i.e. intermittent extracts, MVHR etc).
- Details of any renewable technology installed e.g. Solar PV.
- A statement of confirmation that the design stage construction and insulation specification has been adhered to including a description of any alterations.