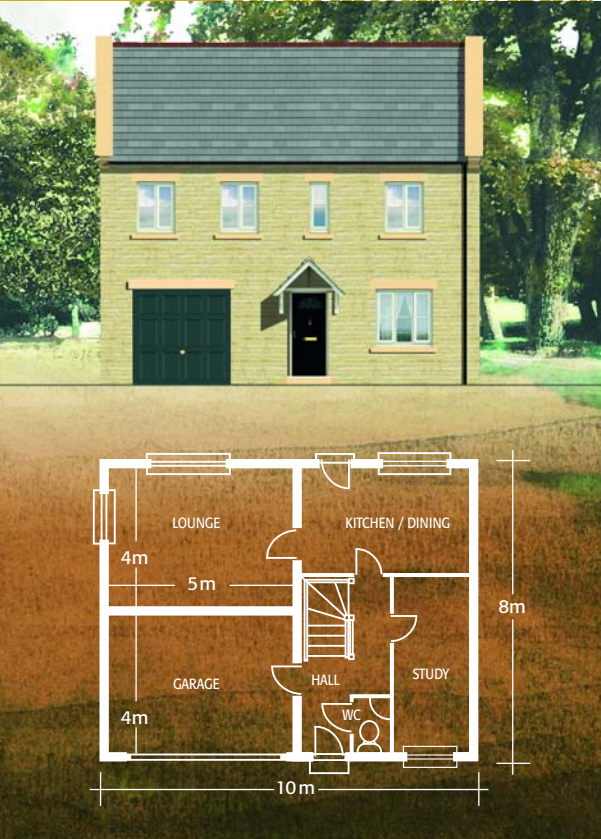


BUILDING A SUSTAINABLE FUTURE

**FIBOLITE**[®]

ULTRA LIGHTWEIGHT AGGREGATE BLOCKS

Shown here is a SAP 2005 calculation for a typical **3 bedroom detached house** with integral garage, which demonstrates compliance with the new Part L requirements. By incorporating **FIBOLITE** and **STRANLITE** blocks into the calculations, compliance is straightforward and Plasmor concrete blocks also provide extra benefits - excellent sound insulation, fire resistance, durability and a cost effective choice for all types of construction.

FACTORS EMPLOYED IN ACHIEVING TYPICAL COMPLIANCE

- **2 Doors** 3.78m² **U = 2.40**
- **Warm Living Area** **= 12.5m²**
- **Total Opening** **= 20.8%**
of floor area
- **6 x Low Energy Lights**
minimum required
- **Air Pressure** set to **10Pa/m²**
- **Windows** UPVC or Wood,
Low E Glass /16mm
Air Gap to achieve **U = 1.80**
- **Glazing** **= 27.59m²**
5 x 1.5m² x 1.2m²
5 x 1.2m² x 1.2m²
2 x 1.77m² x 1.2m²
3 x 0.9m² x 0.63m²
1 x 0.9m² x 1.35m²
1 x 0.5m² x 2.1m²

EXTERNAL WALL - MAIN

102mm Facing Brick
50mm Partial Fill Board **k = 0.023**
50mm Clear Cavity **r = 0.644** minimum
100mm **Plasmor Fibolite Block 3.6N/mm²**
12.5mm Plasterboard on dabs

Integral Garage Wall

100mm **Plasmor Fibolite Block 3.6N/mm²**
50mm Partial Fill Board **k = 0.023**
50mm Clear Cavity **r = 0.644** minimum
100mm **Plasmor Fibolite Block 3.6N/mm²**
12.5mm Plasterboard on dabs
The external wall of the garage is Insulated

GROUND FLOOR - MAIN

Block and Beam 100mm **Stranlite JB1 Flooring Block**
75mm Board **k = 0.022**
50mm Screed

Floor Above Garage

19mm Chipboard
12.5mm Plasterboard
200mm Roll between joists **k = 0.040**

CEILING

150mm Insulation **k = 0.043** over
100mm Insulation **k = 0.043** between
12.5mm Plasterboard

ROOF

150mm Roll over **k = 0.040**
100mm Roll Between **k = 0.040**
12.5mm Plasterboard

HEATING

90.1% Efficient Gas
Combi Boiler

Controls

Thermostatic Radiator
Valves - Room Stat
and Programmer

Secondary Heating

Modern Gas Fire
64% Efficient

**TYPICAL RESULT****TER 22.17****DER 22.11**

Where DER < TER and
General Requirements
Compliant

= PASS**FOR 25% IMPROVEMENT** see over

FIBOLITE®

ULTRA LIGHTWEIGHT AGGREGATE BLOCKS

OPTIONS TO IMPROVE YOUR PASS AND REDUCE YOUR CARBON FOOTPRINT

- Use a Ground Source Heat Pump (Ground to Water) incorporating underfloor heating in the 50mm screed with a time and temperature zone control

TYPICAL RESULT

TER = 22.17

DER = 16.62

Where DER < TER and General Requirements Compliant

= PASS

26.8% IMPROVEMENT

Other options available to reduce the footprint

- Use Argon Filled Glazing $u = 1.70$
- 91.1% Efficient Boiler with Full Zone Control
- Change Boiler to accommodate the use of 8.5m² Solar Panels to heat water
- Modern Condensing Gas fire
- Set Air Pressure to 7.5Pa/m²
- Increase Floor Insulation
- Increase Loft Insulation to 300mm $k = 0.040$
- Change one door to a glazed unit as per windows

The list shows examples of how 'improvements' can be easily made to a dwelling. This data sheet cannot be used to show compliance with SAP and must be calculated on an independent basis by an authorised assessor.

TYPICAL RESULT

TER = 22.17

DER = 16.56

Where DER < TER and General Requirements Compliant

= PASS

25% IMPROVEMENT



SAP ENERGY RATING SERVICE

Using government approved computer software, our fully trained technical support staff can work with you to produce SAP rating certificates for your projects - contact our technical/sales offices to discuss our service and charges.

This level of improvement will achieve Code For Sustainable Homes Level 3 compliance