

BUILDING A SUSTAINABLE FUTURE



STRANLITE®

LIGHTWEIGHT AGGREGATE BLOCKS

ONE BLOCK ONE HOUSE

Shown here is a SAP 2005 calculation for a typical **3 storey end terrace** or **semi-detached house** which demonstrates compliance with the new Part L 2005 requirements. By incorporating **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

- **1 Door** UPVC or Wood, semi glazed to achieve **U = 2.40**
- **Warm Living Area** = **20m²**
- **Total Opening** = **10.7%** of floor area
- **6 x Low Energy Lights** minimum required
- **Windows** UPVC or Wood, Low E Glass /16mm air gap to achieve **U = 1.80**
- **Glazing** = **14.48m²**
 - 3 x 1.77m² x 1.2m²
 - 2 x 1.2m² x 1.2m²
 - 1 x 1.77m² x 2.1m²
 - 2 x 0.9m² x 2.1m²
 - 1 x 0.9m² x 1.2m²

- **Air Pressure** set to **10Pa/m²**

WALLS - MAIN

102mm Facing Brick
100mm STD Insulation **k = 0.037**
100mm **Plasmor Stranlite Block**
13mm Lightweight Plaster

FLOOR

Ground Block and Beam
100mm **Stranlite JB1 Flooring Block**
80mm Board **k = 0.023**
50mm Screed

ROBUST DETAILS PARTY WALL EWM-2

13mm Plaster - 100mm **Plasmor Stranlite**
75mm Clear Cavity
100mm **Plasmor Stranlite** - 13mm Plaster
Using Approved Document E Wall Ties
'Tie Type A' Butterfly Ties

HEATING

90.1% Efficient Gas Combi Boiler
Controls
Thermostatic Radiator Valves
- Room Stat and Programmer
No Secondary Heating

ROOF

30mm Board battens **k = 0.023** between
70mm Board **k = 0.023** laid under
100mm Cavity Timber Bridged
12.5mm Plasterboard



TYPICAL RESULT

TER 17.68

DER 17.68

Where DER = < TER and General Requirements Compliant

= PASS

FOR 25% IMPROVEMENT see over

Robust Details Wall Type EWM-4 is applicable with this construction type using lightweight plaster. TER & DER will need re-calculating

TECHNICAL HELPLINES: 01977 673221 ■ 01767 314545

OPTIONS TO IMPROVE YOUR PASS BY 25% AND REDUCE YOUR CARBON FOOTPRINT

- Use Bereco style High Performance Glazing Units
- Use High Performance Cavity Insulation **k = 0.032**
- Increase Floor Insulation to 125mm Higher Performance **k = 0.022**
- Increase Insulation in Slope Ceiling
- Use Solar Panels (approximately 6.75m²) to heat water with a larger cylinder
- Use Full Zone Control for Heating
- Use a 91% Efficient Boiler
- Specify a Wood Burning Stove as Secondary Heating

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 = 17.68

DER = 13.28

Where DER < TER and General Requirements Compliant

= PASS

25% IMPROVEMENT

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



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.