

17 JUN 2016

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Energy Statement

Proposed Senior Citizen One Bed Bungalow at the
rear of 41B, Milton Road, fronting Jubilee Road, Waterhouseville

This Report is to be read in conjunction with
drawings numbered 2305/10 and 11.

1. Orientation

a) The proposed bungalow has a ridge orientation
predominately northwest-southeast resulting in all
major windows not facing directly south (thus reducing
excessive solar gain).

Thereagain the only openings on the southern
elevation are Kitchen door and Shower Room
window.

2. Massing

a) The dwelling has been designed to afford
a high ratio of floor area to external walling
Perimeter length in metres 29.4 0.62

Floor area in square metres 47.4

and which is very favourable - Building Control
Approved Document L1 Tables A13 & A15 refer

Note: for this exercise the Conservatory
has been disregarded in any calculation.

3. Openings in External Walls

a) The area of windows and doors to external
walling is 25% which is very favourable when
compared with the Approved Document
requirements.

Note: Conservatory not included in calculations

4. Built-in Insulation

- a) Generally shall be provided as scheduled below to achieve insulating values at least that which are required under Building Regulations, namely:
- b) In situ concrete ground bearing slab with 75 rigid slab insulation of Kingspan Kooltherm K3 - K value = 0.021-0.024 affording a minimum "U" value = $0.22 \text{ W/m}^2\text{K}$.
- c) External Walls - 50 Kingspan Thermowall TW50 rigid slab insulation providing a minimum "U" value = $0.28 \text{ W/m}^2\text{K}$.
- d) Pitched roof being a "cold roof" - 100 glasswool insulation between ceiling joists and with 170 over joists, insulation Rockwool Roll (K value = 0.044) minimum "U" value = $0.16 \text{ W/m}^2\text{K}$.
- e) Thermal continuation to be maintained to all external corners to avoid "cold-bridging".

5. Specifically

- a) Any roof access trap, proprietary or otherwise shall be insulated and have draught proofing strip around the perimeter.
- b) All pipework in roof void whether under insulation or not to have proprietary pipe insulation with all meetings of sections taped.
- c) Windows and external doors shall be double glazed affording a "U" value = $1.6 \text{ W/m}^2\text{K}$ or better.

Double glazing to be a minimum 20 thick with 12 gap between panes (low- E = 0.05 air filled)

All windows & external doors to have draught proofing, and thermal breaks at reveals.

c) Central heating will be a 'wet' system incorporating a balanced flue gas-fired condensing boiler having an efficiency to achieve a "SEDBUK" rating in accordance with the Approved Document of 88% or better. Boiler to be complete with timer & thermostat.

Radiators to be fitted with thermostatic valves and any room thermostats to be provided in locations to provide zoning within the dwelling.

d) The electrical installation shall incorporate fixed lighting being energy efficient taking only lamps having a luminous efficacy greater than 40 lumens per circuit.

External lighting shall be on timers and be operated by Passive Infra Red (PIR) controls.

energy / 42, Milton road / 2305 / gik