

Our Ref: DA-61 rev A

Mr. Nick Smith

ECE Architecture,
64-68 Brighton Road,
Worthing,
West Sussex BN11 2EN

Therm Energy Limited

45 Graham Road,
Worthing
BN11 1TL

T. 01903 884357

E.colin@thermenergy.co.uk

Sent by Email: NSmith@ecearchitecture.com

Copy by Email: THodgkiss@ecearchitecture.com

mgray@ecearchitecture.com

25th February 2025

Dear Mr. Smith,

**Re: Conversion, 2 Flats, Old Farm Close, Haywards Heath
Thermal Calculations - Part L1(a) of the Building Regulations**

Further to your instruction and receipt of your Drawings, please find enclosed revised SAP Thermal Calculations reference DA-61-01A and DA-61-02A, together with the Predictive Energy Assessments. This revision includes revised internal floor areas.

We have assessed the Conversion for compliance against Part L1(a) ('Material Change of Use') of the Building Regulations. Generally, the main requirement of Part L1(a) is for the exposed elements, including openings, to meet minimum thermal standards, and for the heating systems to meet minimum requirements for efficiency and heating controls. Attached is a Construction Specification which details insulation levels to meet Part L1(a) thermal standards unless otherwise agreed with Building Control.

EPC Ratings

Generally, the attached Construction Specification predicts an EPC rating of C. One way of improving the EPC rating to B, is to install solar photovoltaic (PV) panels. If installed to the south facing elevation, the amount of solar PV required is shown in the Table below. If installed to other elevations, a greater amount of panel will be required. As a guide, there is 6.0-6.5m² of solar panel per kWp. The PV panels must be wired into each Flat, if the benefit is to be reflected in the EPCs.

	Solar PV Panels to achieve a B Rating (kWp)
Ground floor Flat	1.4
First floor Flat	1.5

EPC upon completion

The SAP Calculations include the whole building thermal performance, and we use this data to produce the Energy Performance Certificates (EPCs) at completion. To produce the EPCs we will require at completion the following.

- a) Registered property addresses
- b) Confirmation of the insulation installed (we will send you an As-Built Construction Specification to check and sign)
- c) Confirmation of the make and model of the heating system
- d) If installed, make/size of hot water cylinder.
- e) Confirmation of the U-values of new windows and doors (from the window supplier).

Should you have any queries, or would like to discuss anything, please do not hesitate to contact me.

Yours sincerely

A handwritten signature in blue ink, appearing to read "C. Marshall", with a long horizontal flourish underneath.

Colin Marshall
(SAP Assessor)

Construction Specification for Part L (Material Change of Use) Compliance			
Project:	Date:	Our reference:	Version :
Conversion, 2 Flats, Old Farm Close, Haywards Heath	25th February 2025	DA-61	Rev A
1. Construction and insulation			
Element			U-Value (W/m ² K)
<u>a) Ground floor</u> Existing floor. 75mm screed on 75mm insulation (expanded polystyrene sheets assumed) on a 150mm concrete slab. Comment: Meets Approved Document L1(a) Threshold U-value. No additional insulation required.			0.29
<u>b) External cavity wall</u> Facing brick, 100mm mineral wool cavity fill, 100mm dense block, 15mm plasterboard on dabs. Comment: Meets Approved Document L1(a) Threshold U-value. No additional insulation is not required.			0.36
<u>c) Wall - Stair to Ground floor Flat</u> The stair well is assumed to be heated. Solid 215mm wall.			0.00
<u>d) Roof - Horizontal ceiling</u> Existing mineral wool insulation, 200mm thick. To help improve the EPC rating, it is recommended that the roof insulation is increased to 300mm deep i.e. an additional 100mm layer is installed.			0.14
<u>e) Windows – existing windows replaced.</u> New UPVC windows, double glazed, low-e glass			1.4
<u>f) New external doors</u> New UPVC half-glazed doors.			1.4
2. Heating and Ventilation			
<u>a) Main Heating System</u> New mains gas combi boiler, minimum 90% efficiency.			
<u>b) Water Heating</u> From the main heating.			
<u>c) Heating Controls</u> Programmer, room thermostat, TRVs to radiators.			

<u>d) Ventilation</u> System 1 - Background ventilators & intermittent extract fans, or passive stack ventilation (system 1 or 2 in Approved Document F (2021 edition)).	
3. Other energy related issues	
<u>a) Lighting (internal)</u> Lights to have a minimum luminous efficacy of 75 lumens per circuit-watt.	
<u>b) Electricity Tariff</u> Standard Tariff.	
<u>c) Solar photovoltaic (PV) panels</u> PV panels are only required to help improve the EPC rating of the dwellings. The PV panels must be wired into each Flat, if the benefit is to be reflected in the EPCs.	
4. As- Built SAP and EPC – 2 Flats, Old Farm Close, Haywards Heath This section is to be completed when the final SAP and EPC are required upon completion of the dwelling(s).	
(1) Has there been any changes to the specification above (list changes above, or state '' no changes'')	
Signed : Name :.	Date ; Job Title / Role :