

HIGH TECHNOLOGY GLAZING

High Technology Glazing Ltd. • Unit 4C • Woodlands Farm • The Vale • Chesham • Bucks • HP5 3NJ
Tel: 0800 840 0565

Ms Anna Summers

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10/8/16

Dear Ms. Summers,

Re: Amended SAPP Calculations and recommendations for your new conservatory to open directly from the house

I have completed my work and produced two calculations.

1) The SAPP Calculations for a 'Lean Too' Design conservatory attached to the back of your lounge with a projection outwards of 3 metres and a width of 7 metres . The total area of the conservatory is 21 M2. I have used a lean too design as this appears to be consistent with your sketch, although this is not very clear on the email. You will have the option of either a glass or polycarbonate roof; the latter will be the least expensive option.

The SAPP emission calculations that I have undertaken show that if the conservatory walls Floor and windows are built according to the specification for a home extension then the structure will satisfy the Building control requirements to open up the conservatory into the house. However it is best to ensure that there is a good margin of safety therefore I recommend you increase the loft insulation to a minimum of 200mm. You should be able to get a grant for this work which would normally be undertaken free of charge by the energy suppliers. If you have to pay then the cost is likely to be around £300.

This measure alone will be more than adequate to reduce the emissions to enable you to add the conservatory to your living area, and it will significantly reduce your energy bill at a relatively low capital cost. Full details / specifications are shown in my SAPP calculations.

2) I have also undertaken detailed calculations to provide you with an Energy usage survey containing details and costs and the effect of various Energy reduction measures. This analysis shows the effectiveness of each of the measures in the right hand column headed; Value - watts saved for each pound £ spent. The lower figure is the best value for money.

You can see that the most effective use of your money is to fit a new energy-efficient boiler, timer and thermostat control but I understand that this may be too expensive for you to install at present. The least expensive measures that give good value for money are :a) increase the loft insulation, b) draught-stripping and installing an internal high insulation panel to the back and front doors, c) Increasing the insulation on the hot water tank etc. Full details of all the measures is shown in the attached.

I will forward the detailed SAPP calculations, and specifications for the conservatory, which you will be required for Building control consent, as soon as you are kind enough to settle the invoice which is attached.

Please call me if you have any questions on 07801179883 and in due course let me know the name and telephone no: of the person in your local Building Control Department.

Thank you for this opportunity to be of service.

Kind regards

David Anderson

Anna Summers SAPP calculations

U value Data from CIBS (Chartered institute of Building Services engineers Guide Part 3 Thermal Properties of Building structures)

A) SAPP requirements

Area	M2	Z U value Watts/M2 °C	Y Total heat loss watts/°C (Z x Y)
For Proposed Conservatory			
Triangular section above windows	1.8	0.3	0.5
dwarf wall	8	0.3	2.4
floor	21	0.22	4.6
side glazing	18	1.6	28.8
roof glazing	23	0.17	<u>3.9</u>
Total SAPP heat loss for whole conservatory		(A)	40.3 watts/ °C

B) Actual Forcast Heat loss Proposed conservatory

Triangular section above windows	1.8	0.24	0.432	100mm cellotex
dwarf wall	8	0.3	2.4	as specified by Building regs
floor	21	0.22	4.62	as specified by Building rega
side glazing	18	1.8	32.4	To take into account glazing and frames
roof glazing	23	1.8	<u>41.4</u>	Low E Argon filled units U -value of the units 1.1
			81.25	
less current				
house glazed door	3.6	2.8	-10.1	
House wall	14.6	2.2	<u>-32.1</u>	
Total net current heat loss whole conservatory		(B)	39.1 watts/ °C	

C) Additional insulation work to be performed	U value before	U value after	saving	total saving watts/°C	Additional	
Loft insulation including above extension	58	0.6	0.24	0.36	20.88	Additional 130mm of Fibre glass

Total saving from additional works **(C)** 20.88 watts/ °C

Total net heat loss for whole conservatory after additional measures **B - C** 18.172 watts/°C

SAPP allowable heat loss for the whole conservatory **A** 40.3 watts/°C