

Heat Loss Calculations

Total Home Environment

Beattie Passive - Orbit

Based on dwg / file ref(s).

CA Arch - 536.07F

Job Number:

11640

Envelope Performance Criteria

U-values:	Ext Walls:	0.11 W/m2 oC	Roof:	0.11 W/m2 oC	Party Floor:		MVHR %:	90%	MVHR Sup Air T:	19 oC
	Party Walls:		Windows:	0.90 W/m2 oC	Party Ceiling:		Prem Input:		HP Sup Air T:	19 oC
	Ground Floor:	0.11 W/m2 oC	Doors:	0.90 W/m2 oC	Air Tightness:	0.60 ACH	Duct Heater:		Duct Heat Sup Air T:	19 oC
	Roof construction:	Warm	External temperature:							

Heatloss Calculation - BS5449:pt 1

(assuming static conditions)

Location	Design temp (°C)	Air changes (per hour)	Flow rate (m³/h)	Heat Losses (watts)				Total	Extra Heat	Extra Heat	Extra Heat	Recommended Heating (-10)	
				Fabric	Ventilation*	Air Tightness	Thermal Bridge		MVHR	MVHR & HP	MVHR + HP + Duct Heater		
Kitchen/Dinning	21	0.3	8.1	116	59	6	39	220	170	170	170	257	
Living	21	0.3	11.1	135	80	8	49	273	204	204	204	311	
WC	21	0.3	3.0	39	22	4	21	85	67	67	67	100	
Hall	21	0.3	8.7	69	63	5	25	163	109	109	109	172	
Master Bed	21	0.3	11.1	130	80	9	35	255	186	186	186	294	
Bed 2	21	0.3	5.5	70	40	5	31	145	111	111	111	168	
Bed 3	21	0.3	5.5	88	40	6	43	178	143	143	143	214	
Bath	21	0.3	2.2	28	16	2	16	62	48	48	48	73	
Landing	21	0.3	6.6	50	48	5	16	118	78	78	78	123	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
0	21	0.5	0.0	0	0	0	0	0	0	0	0	0	
Total				62	725	448	50	274	1,498	1,115	1,115	1,115	1,711
				(48.4%)	(29.9%)	(3.3%)	(18.3%)	(100.0%)	(74.4%)	(74.4%)	(74.4%)	(114.2%)	

Note(s): * BS5449 allowances for uncontrolled ventilation loss are based on minimum standards of air tightness (B Reg min requirement for air permeability is 10 m³/h.m²). Furthermore, an additional allowance is not taken for incidental opening of windows and doors by the occupants. These figures can therefore be very pessimistic, possibly being in excess of 100% above current best practice.