



Heat Loss Report

For the property at :

ABBAY GARDENS - PLOT 4
LADY LANE
BLUNDSDON
SWINDON
WILTSHIRE
SN25 2DW

Dated
12 May 2023

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1. Introduction

This report details the heat loss for a proposed dwelling in SN25 2DW; Better Planet recommends that the client confirms all the assumptions listed below as Better Planet accepts no liability for the accuracy of this information.

2. Basic Principles

Location: ABBEY GARDENS - PLOT 4
 LADY LANE
 BLUNSDON
 SWINDON
 WILTSHIRE
 SN25 2DW

Design Temperatures: -2.8 °C External temperature

Internal Temperature: Variable (see table)

Exposed Location: NO

Intermittently Heated: NO

Thermal Bridges: Insulated

Ground Floor: Suspended Ground Floor NOT in contact with the soil.

Comments / Assumptions

- New Build Detached House
- Building Regulations 2021 Edition dated 15 June 2022 Notional Values for New Build Used throughout
- All Rooms Heated to 21°C. All Bathrooms/En-Suites heated to 22°C
- No central MVHR system
- 5 Bathrooms/En-Suites and 2 W/C's
- Assume all ceilings are flat. Assume Suspended Block & Beam Floor
- Fireplace in Large Living Room

3. Construction Specification

U-Value Wm ² K	Area Details / Notes
EXTERNAL WALL	
0.18	EXTERNAL WALLS (100MM CELOTEX OR EQUIVALENT) AS PER CURRENT BUILDING REGULATIONS 2021 EDITION NEW BUILD
INTERNAL WALL	
0.35	ASSUME INSULATED
FLOOR	
0.13	GROUND FLOOR SUSPENDED BLOCK & BEAM (120MM CELOTEX OR EQUIVALENT) AS PER CURRENT BUILDING REGULATIONS 2021 EDITION NEW BUILD
0.33	INTERNAL FLOORS EXPOSED UNDERSIDE - - ASSUME INSULATED
ROOF	
0.11	ROOF INSULATION LOFT OR INSULATION AT RAFTERS (200MM CELOTEX OR EQUIVALENT) AS PER CURRENT BUILDING REGULATIONS 2021 EDITION NEW BUILD
0.32	INTERMEDIATE CEILING - - ASSUME INSULATED
WINDOWS & DOORS	
1.20	DOUBLE GLAZED WINDOWS AS PER BUILDING REGULATIONS 2021 EDITION NEW BUILD
1.00	EXTERNAL DOORS (SEMI GLAZED OR UNGLAZED) AS PER BUILDING REGULATIONS 2021 EDITION NEW BUILD

4. Heat Losses

Room By Room Analysis					Outside Design Temperature	-2.8 °C
Room name	Room Ref	Room Temp [°C]	Peak heat load [W]	Energy Heat Losses [kWh]	Room area [m ²]	Spec. peak heat load [W/m ²]
LARGE LIVING ROOM	G01	21	814	1995	36	23
SMALLER ROOM OFF LIVING ROOM	G02	21	201	495	12	17
DINING ROOM	G03	21	540	1322	25	22
HALL & STAIRS	G04	21	486	1193	25	20
W/C OFF HALL & STAIRS	G05	21	96	234	2	44
KITCHEN / BREAKFAST	G06	21	1392	3405	39	36
LOBBY OFF KITCHEN	G07	21	39	94	3	11
W/C OFF KITCHEN	G08	21	121	296	3	42
UTILITY	G09	21	116	283	4	27
LIVING ROOM OFF UTILITY/W/C	G10	21	474	1158	15	31
LARGE FRONT BEDROOM 01	F01	21	429	1067	23	18
EN-SUITE TO BEDROOM 01	F02	22	508	1191	13	40
REAR BEDROOM 02	F03	21	270	676	15	19
EN-SUITE TO BEDROOM 02	F04	22	157	371	4	38
EN-SUITE TO BEDROOM 03	F05	22	192	449	5	37
LARGE REAR BEDROOM 03	F06	21	428	1068	25	17
REAR BEDROOM 04	F07	21	379	946	21	18
EN-SUITE TO BEDROOM 04	F08	22	147	341	5	29
EN-SUITE TO BEDROOM 05	F09	22	311	729	8	38
FRONT BEDROOM 05	F10	21	557	1380	26	22
FIRST FLOOR LANDING & STAIRS	F11	21	275	697	23	12

		332 m²
		19,390 kWh
Total Heat Load	7,932 W	
	24 W/m²	

Total power heat losses 7.93 kW

- Design room temperatures comply with BS EN12831-1:2017
- For calculations of ventilation and fabric heat losses the internal volume of the room is calculated
- Dimensions of the building based on drawings provided by client
- Does not allow for intermittent heating
- Area of rooms includes unheated rooms
- W/m² only uses heated rooms for its calculation

5. Heat Emitter Analysis

Room name	Existing Emitters			Emitter Outputs*			
	Type Of Emitter	Design Flow Temp [°C]	Star rating	60°C Flow	55°C Flow	50°C Flow	45°C Flow
				★ [W]	★★ [W]	★★★ [W]	★★★★ [W]
*Outputs show Additional Outputs Required if Existing Radiators are Recorded OR Total Outputs Required if no existing Radiators are Recorded or Modern Underfloor Heating is being installed							
LARGE LIVING ROOM	-	-	-	1296	1553	1915	2467
SMALLER ROOM OFF LIVING ROOM	-	-	-	320	384	473	609
DINING ROOM	-	-	-	860	1031	1271	1636
HALL & STAIRS	-	-	-	774	927	1144	1473
W/C OFF HALL & STAIRS	-	-	-	153	183	226	291
KITCHEN / BREAKFAST	-	-	-	2217	2656	3275	4218
LOBBY OFF KITCHEN	-	-	-	62	74	92	118
W/C OFF KITCHEN	-	-	-	193	231	285	367
UTILITY	-	-	-	185	221	273	352
LIVING ROOM OFF UTILITY/W/C	-	-	-	755	905	1115	1436
LARGE FRONT BEDROOM 01	-	-	-	683	819	1009	1300
EN-SUITE TO BEDROOM 01	-	-	-	809	969	1195	1539
REAR BEDROOM 02	-	-	-	430	515	635	818
EN-SUITE TO BEDROOM 02	-	-	-	250	300	369	476
EN-SUITE TO BEDROOM 03	-	-	-	306	366	452	582
LARGE REAR BEDROOM 03	-	-	-	682	817	1007	1297
REAR BEDROOM 04	-	-	-	604	723	892	1148
EN-SUITE TO BEDROOM 04	-	-	-	234	281	346	445
EN-SUITE TO BEDROOM 05	-	-	-	495	594	732	942
FRONT BEDROOM 05	-	-	-	887	1063	1311	1688
FIRST FLOOR LANDING & STAIRS	-	-	-	438	525	647	833