



Heat Loss Report

For the property at :

ABBAY GARDENS - PLOT 1
LADY LANE
BLUNDSDON
SWINDON
WILTSHIRE
SN25 2DW

Dated
17 July 2023

Contents

1	Introduction	2
2	Basic Principles	2
3	Construction Specification	3
4	Heat Losses	4
5	Heat Emitter Analysis	5

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 1
 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
- 4 Bathrooms/En-Suites and 1 W/C
- Assume first floor ceilings sloping/flat. Assume Suspended Block & Beam Floor
- Fireplace in Large Living Room does not increase Heat Loss

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 SOLID OR 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 FLAT/LOFT OR SLOPING (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]
KITCHEN / BREAKFAST	G01	21	1256	3070	34	37
UTILITY	G02	21	161	396	7	25
DINING ROOM	G03	21	378	923	17	23
W/C	G04	21	88	214	3	28
HALL & STAIRS	G05	21	281	688	17	17
LOUNGE	G06	21	751	1837	30	25
BEDROOM 02	F01	21	288	706	14	21
EN-SUITE TO BEDROOM 02	F02	22	122	287	4	32
BATHROOM	F03	22	138	322	5	28
FIRST FLOOR LANDING & STAIRS	F04	21	205	527	16	13
BEDROOM 04	F05	21	267	655	14	19
BEDROOM 03	F06	21	235	609	13	18
EN-SUITE TO BEDROOM 03	F07	22	79	193	3	29
BEDROOM 05	F08	21	129	347	8	17
BEDROOM 01	F09	21	380	997	22	17
EN-SUITE TO BEDROOM 01	F10	22	148	345	5	32

	210 m²
	12,116 kWh
Total Heat Load	4,906 W
	23 W/m²

Total power heat losses 4.91 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							
KITCHEN / BREAKFAST	-	-	-	2000	2397	2955	3806
UTILITY	-	-	-	256	307	379	488
DINING ROOM	-	-	-	602	721	889	1145
W/C	-	-	-	140	168	207	267
HALL & STAIRS	-	-	-	447	536	661	852
LOUNGE	-	-	-	1196	1433	1767	2276
BEDROOM 02	-	-	-	459	550	678	873
EN-SUITE TO BEDROOM 02	-	-	-	194	233	287	370
BATHROOM	-	-	-	220	263	325	418
FIRST FLOOR LANDING & STAIRS	-	-	-	326	391	482	621
BEDROOM 04	-	-	-	425	510	628	809
BEDROOM 03	-	-	-	374	448	553	712
EN-SUITE TO BEDROOM 03	-	-	-	126	151	186	239
BEDROOM 05	-	-	-	205	246	304	391
BEDROOM 01	-	-	-	605	725	894	1152
EN-SUITE TO BEDROOM 01	-	-	-	236	282	348	448