



Heat Loss Report

For the property at :

ABBAY GARDENS - PLOT 5
LADY LANE
BLUNDSDON
SWINDON
WILTSHIRE
SN25 2DW

Dated
17 July 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 5
 LADY LANE
 BLUNDSDON
 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	1297	3170	34	38
UTILITY	G02	21	219	537	7	29
DINING ROOM	G03	21	466	1140	22	21
W/C	G04	21	114	276	3	41
HALL & STAIRS	G05	21	307	752	18	17
STUDY	G06	21	190	463	10	18
LOUNGE	G07	21	770	1884	31	25
BEDROOM 02	F01	21	367	907	21	18
EN-SUITE TO BEDROOM 02	F02	22	183	427	6	30
BATHROOM	F03	22	317	740	10	32
FIRST FLOOR LANDING & STAIRS	F04	21	131	327	11	11
BEDROOM 04	F05	21	265	651	14	18
BEDROOM 03	F06	21	207	511	14	15
EN-SUITE TO BEDROOM 03	F07	22	201	465	5	38
BEDROOM 05	F08	21	164	424	11	15
BEDROOM 01	F09	21	446	1167	23	19
EN-SUITE TO BEDROOM 01	F10	22	307	753	9	35

		251 m²
		14,594 kWh
Total Heat Load	5,951 W	
	24 W/m²	

Total power heat losses 5.95 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	-	-	-	2065	2475	3052	3930
UTILITY	-	-	-	349	418	515	664
DINING ROOM	-	-	-	742	889	1096	1412
W/C	-	-	-	182	218	268	345
HALL & STAIRS	-	-	-	489	586	722	930
STUDY	-	-	-	303	363	447	576
LOUNGE	-	-	-	1226	1469	1812	2333
BEDROOM 02	-	-	-	584	700	864	1112
EN-SUITE TO BEDROOM 02	-	-	-	291	349	431	555
BATHROOM	-	-	-	505	605	746	961
FIRST FLOOR LANDING & STAIRS	-	-	-	209	250	308	397
BEDROOM 04	-	-	-	422	506	624	803
BEDROOM 03	-	-	-	330	395	487	627
EN-SUITE TO BEDROOM 03	-	-	-	320	384	473	609
BEDROOM 05	-	-	-	261	313	386	497
BEDROOM 01	-	-	-	710	851	1049	1352
EN-SUITE TO BEDROOM 01	-	-	-	489	586	722	930