ABODE

home of renewable heat

CIBSE Room by Room Heat Loss Analysis & Conclusion

THE FELL PARTNERSHIP LTD

NUDURA® INTEGRATED BUILDING TECHNOLOGY

Building Value

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Background

The Fell Partnership want to be able to better help their customers to install the most suitable renewable heating and hot water solutions in their buildings.

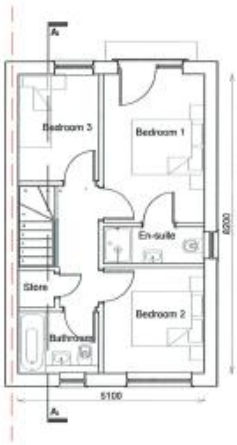
Too often, customers are not benefiting from the true thermal performance of the Nudura ICF system. This means that customers are adding unnecessary extra cost to their construction budget by installing heating systems that are too powerful for the building.

Abode Heat have completed a Chartered Institute of Building Services Engineers (CIBSE) room by room heat loss calculation to BS EN 12831 on The Fell Partnership's Demo House on Dartmoor to demonstrate this issue.

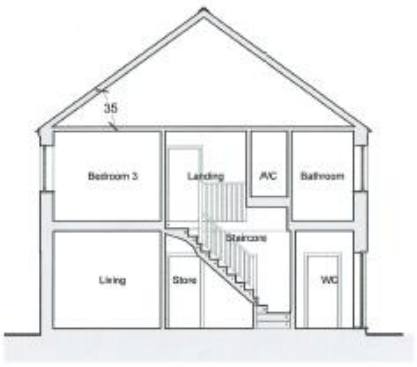
Demo House

Total Floor Area: 80m2

GROUND FLOOR PLAN



FIRST FLOOR PLAN



TYPICAL SECTION A-A

Conclusion

Nudura ICF buildings consume significantly less energy. This means:

1. Reduced capacity and cost of heating system
2. Greater long term savings on heating bills
3. More options available to meet the heating and hot water loads

U-Value	*Peak Heat Loss*		*Annual Heat Load*	
Nudura ICF	2.56 kW	31% reduction	3688 kWh	38% saving
Building Regulations	3.74 kW		6039 kWh	

Room by Room Heat Loss

Room Names	Type of Emitter	Current Emitter watts (70°C)	Current Rad Oversize %	Flow Temperature °C	W/m²	Room Heat Loss watts
Kitchen	Underfloor Heating	0	-	35	56.26	1181.53
Living Room	Underfloor Heating	0	-	35	34.46	560.04
Toilet 1	Underfloor Heating	0	-	35	73.33	124.66
Bedroom 1	Standard Radiators	0	-	35	40.68	471.84
En Suite	Standard Radiators	0	-	35	74.1	214.88
Bedroom 2	Standard Radiators	0	-	35	41.26	334.23
Bedroom 3	Standard Radiators	0	-	35	43.74	295.26
Bathroom 1	Standard Radiators	0	-	35	77.6	302.63
Landing	Standard Radiators	0	-	35	34.28	257.12