

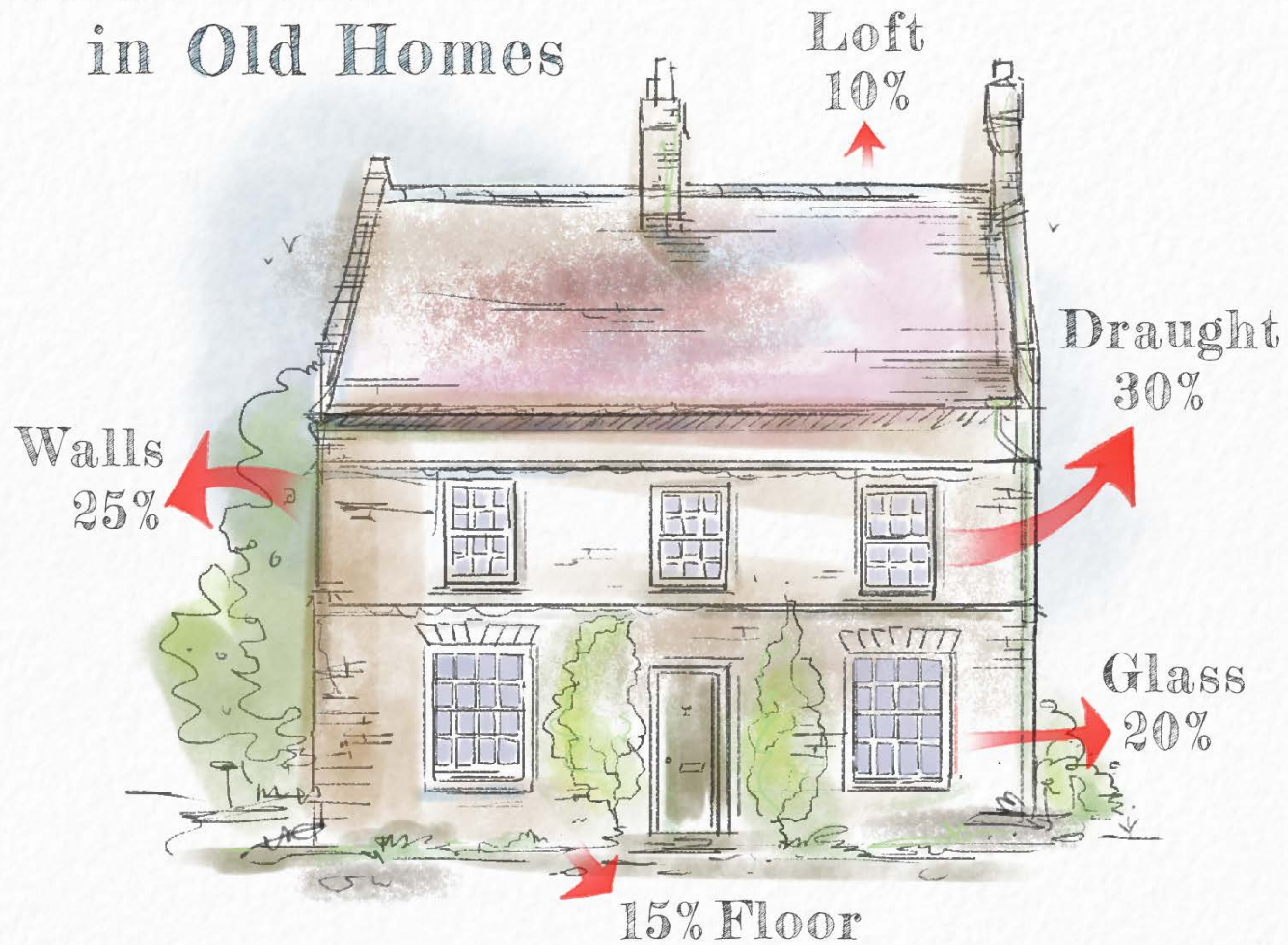
**MITCHELL**  **DICKINSON**  
MAKING PERIOD HOMES WARMER

# Improving Insulation in Practice

1. How Insulation Works
2. Clovelly
3. Loft Insulation
4. Draught Proofing
5. CosyGlazing
6. Room-in-Roof
7. Restoration
8. Heating & Ventilation
9. Costs, EPCs & Warmth
10. Results

# How Insulation Works

# Heat Loss in Old Homes



## Heat Loss in a 2-Storey Detached House

Area	Before	Action	After
Loft	10%	Top up to 300mm	3%
Glass	20%	Secondary Glazing	6%
Draughts	30%	Draught Proofing	9%
Walls	25%	-	25%
Floors	15%	-	15%
Total	100%	All	58%
<b>Heat Saving</b>			<b>42%</b>

## Heat Loss in a 4-Storey Terraced House

Area	Before	Action	After
Loft	7%	Top up to 300mm	2%
Glass	28%	Secondary Glazing	8%
Draughts	41%	Draught Proofing	12%
Walls	14%	-	14%
Floors	10%	-	10%
Total	100%	All	46%
<b>Heat Saving</b>			<b>54%</b>

Clovelly









# Loft Insulation







# Draught Proofing









CosyGlazing - Advanced  
Secondary Glazing













# Restoration











# Room-in-Roof Insulation



EcoTherm

EcoTherm



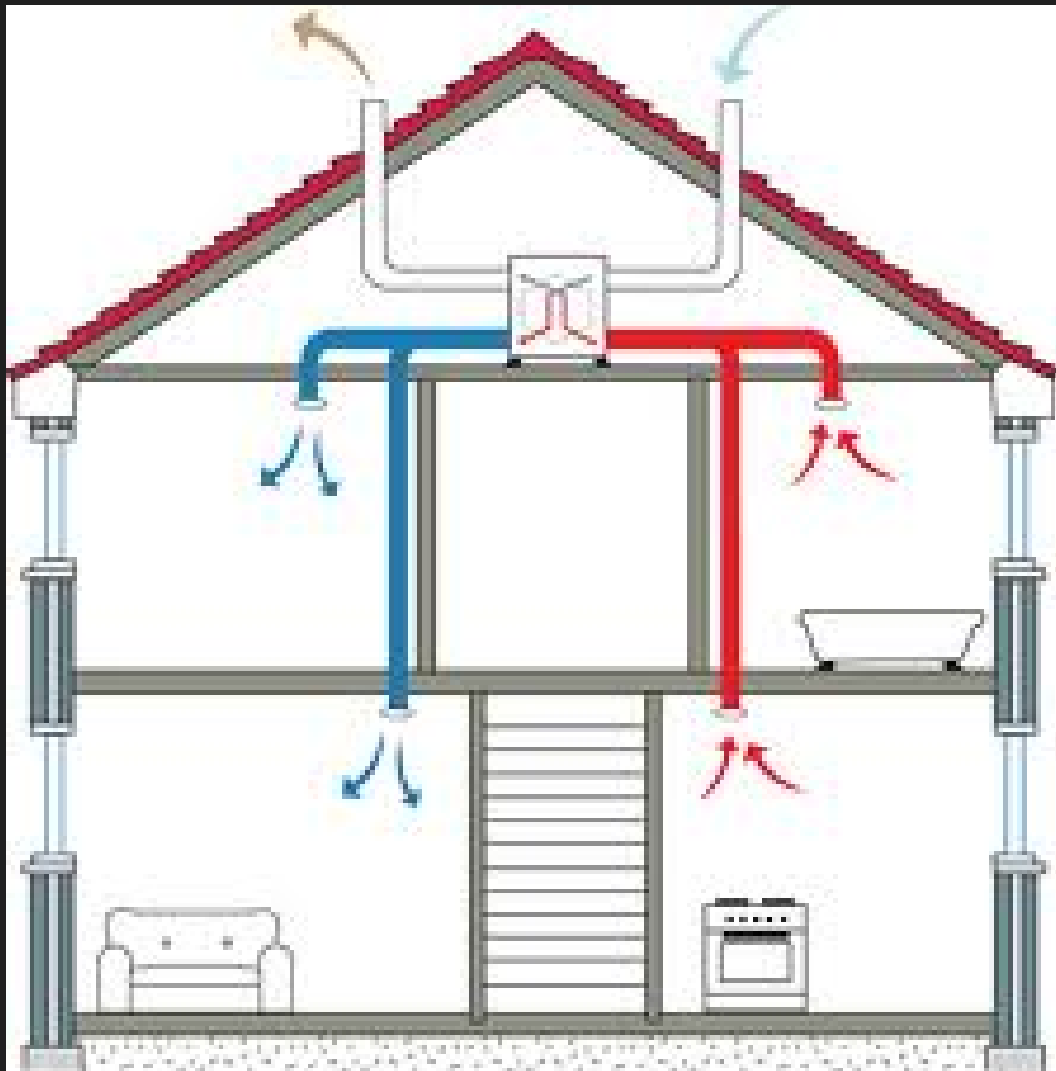






# Heating & Ventilation





# Costs, EPCs & Warmth

### Cost-effectiveness of Measures to Achieve EPC Points

Measure	Average Cost	Average Points	Cost Per Point
High Retention Radiators	£4,729	21	£230
Room In Roof Insulation	£3,601	11	£325
Loft Insulation	£691	1	£691
Draught Proofing	£1,382	1	£1,041
Secondary Glazing	£3,710	4	£1,068
Total	£14,113	38	£371



## Cost-effectiveness of Measures to Achieve Heat Savings

Measure	Average Cost	% Heat Saving	Cost Per % Saving
Draught Proofing	£1,382	20%	£69
Loft Insulation	£691	7%	£99
Room In Roof Insulation	£3,601	20%	£180
Secondary Glazing	£3,710	14%	£265
High Retention Radiators	-	-	-
Total	£9,384	61%	£154

# Key Factors in Upgrading Heritage Properties



- Preserving Architectural Heritage – Sympathetic Design
- Tenants needs and desires
- Technical Considerations and the Biology of the Building
- Correct installation – Craftspeople with Skill & Care

# Results

# Berry House



Install Cost	Area Addressed			Total Heat Saving	Payback Time	Financial Return	30-yr CO2 Saving /
	Lofts	Glass	Draughts				
<b>£11,763</b>	<b>0%</b>	<b>76%</b>	<b>76%</b>	<b>32%</b>	<b>5.9</b>	<b>17%</b>	<b>213</b>

# Cornwallis Crescent



Install Cost	Area Addressed			Total Heat Saving	Payback Time	Financial Return	30-yr CO2 Saving /
	Lofts	Glass	Draughts				
<b>£18,351</b>	<b>100%</b>	<b>60%</b>	<b>60%</b>	<b>25%</b>	<b>9.0</b>	<b>11%</b>	<b>144</b>

# Clovelly Offices



Install Cost	Area Addressed			Total Heat Saving	Payback Time	Financial Return	30-yr CO2 Saving /
	Lofts	Glass	Draughts				
<b>£3,812</b>	<b>50%</b>	<b>100%</b>	<b>50%</b>	<b>30%</b>	<b>3.8</b>	<b>26%</b>	<b>75</b>

# Clovelly High Street



Install Cost	Area Addressed			Total Heat Saving	Payback Time	Financial Return	30-yr CO2 Saving /
	Lofts	Glass	Draughts				
<b>£8,481</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>49%</b>	<b>4.6</b>	<b>22%</b>	<b>279</b>

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