

GOD'S NORTHERN POWERHOUSE

**PROVIDING
A WARM WELCOME**

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Historic England





It's how we USE the buildings
that really counts...







**HARDHAM ST
BOTOLPH**

HOW DO WE HEAT OUR CHURCH?

HOW DO WE HEAL OUR CHURCH?



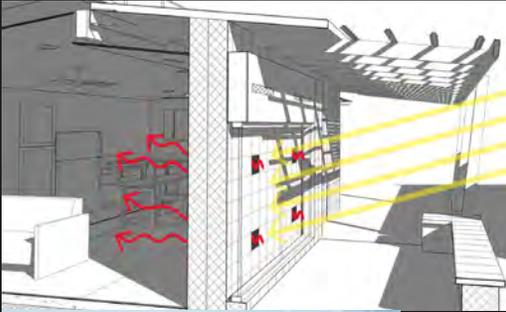
~~HOW DO WE HEAL OUR CHURCH?~~

**HOW DO WE GET THE
CONDITIONS WE NEED
TO MAKE BEST USE OF
OUR CHURCH?**

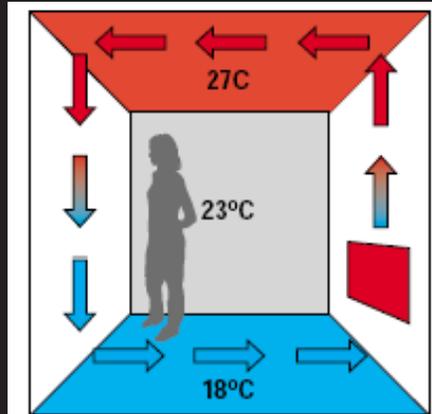
STEP 1:

WORK OUT WHAT YOU'RE TRYING TO ACHIEVE





DISCOMFORT



Air passes over the radiator and causes circulation currents with cold draughts



WHAT MAKES BUILDING USERS UNCOMFORTABLE?



WHY DO I FEEL COLD?

DRAUGHTS

RADIANT HEAT LOSS

DAMP

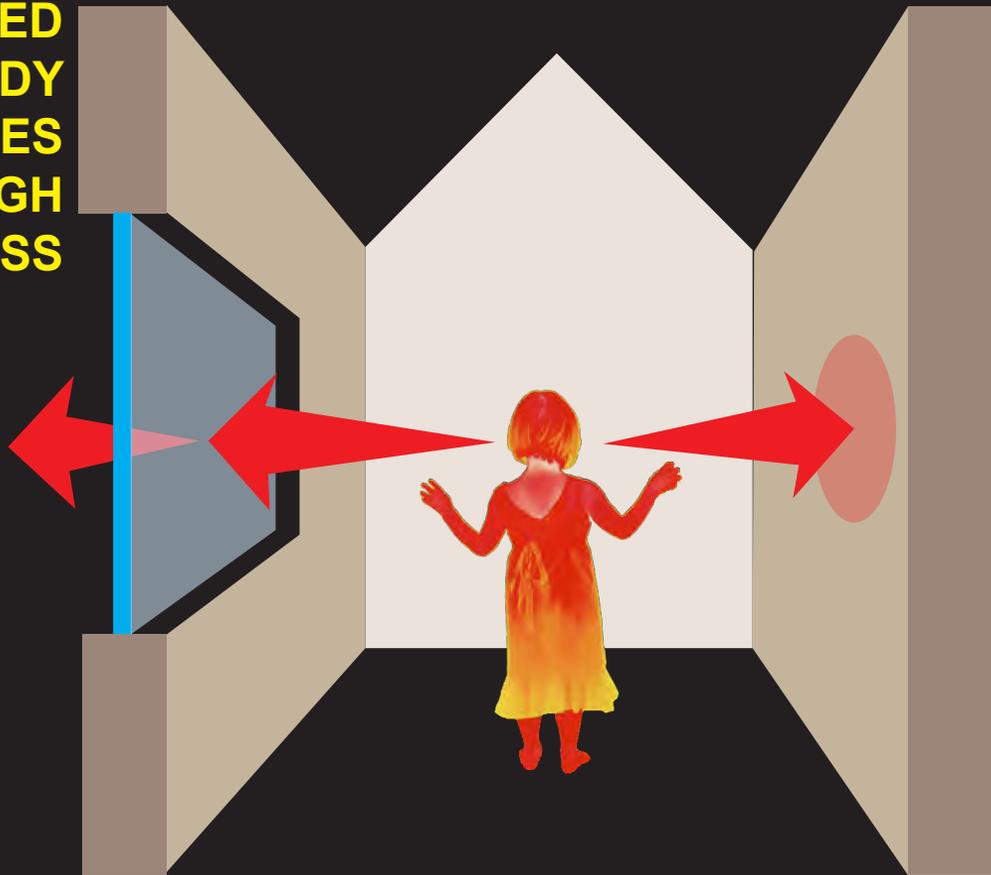
COLD FEET

LACK OF CONTROL

EXAGGERATED TEMPERATURE DIFFERENCES



**HEAT
RADIATED
FROM BODY
PASSES
THROUGH
GLASS**



**HEAT
RADIATED
FROM
BODY IS
ABSORBED
BY WALL**









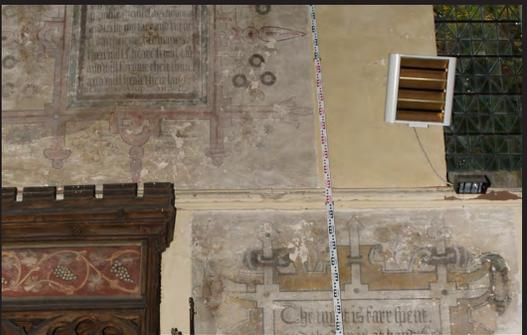
ENGLISH HERITAGE







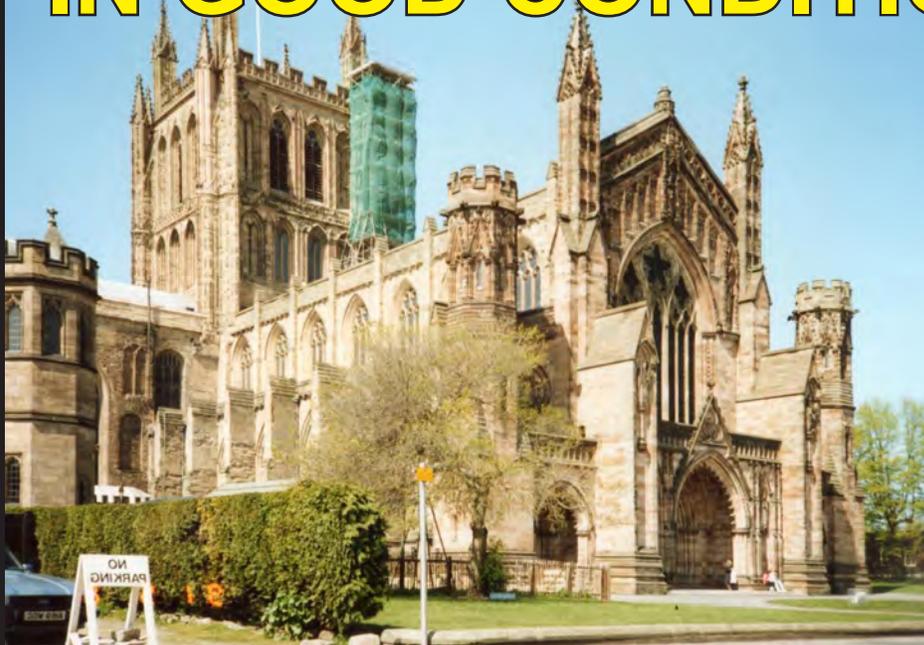


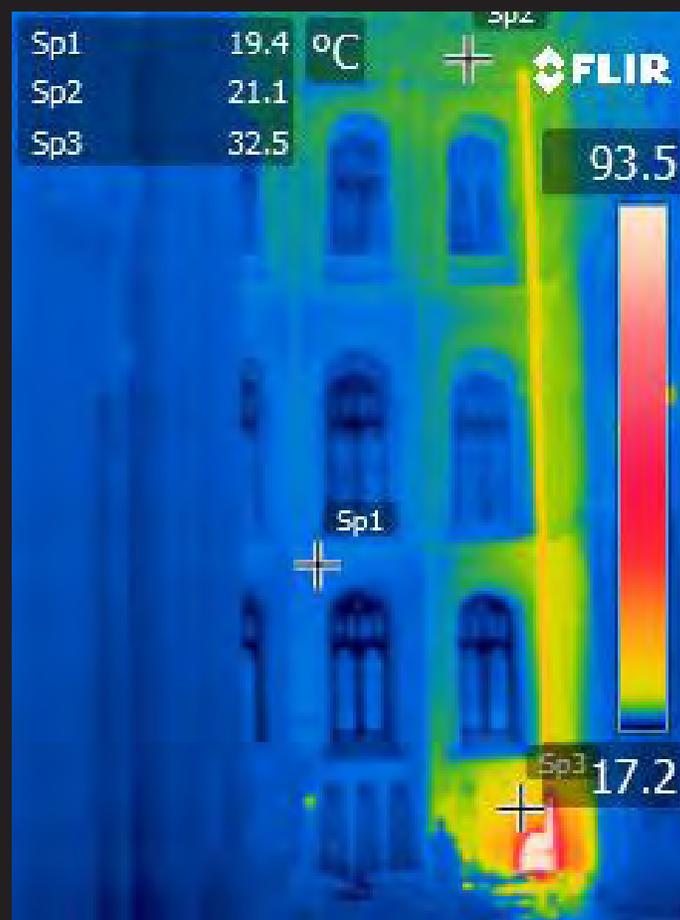
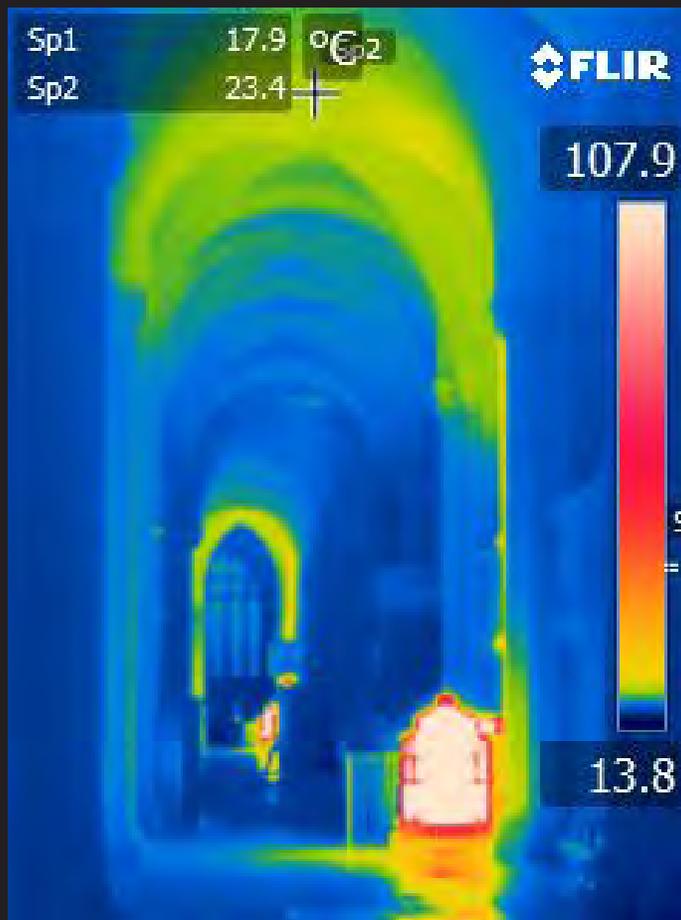






STEP 2: KEEP THE FABRIC IN GOOD CONDITION







STEP 3:
HEAT THE PEOPLE,
NOT THE FABRIC





FABRIC



SERVICES

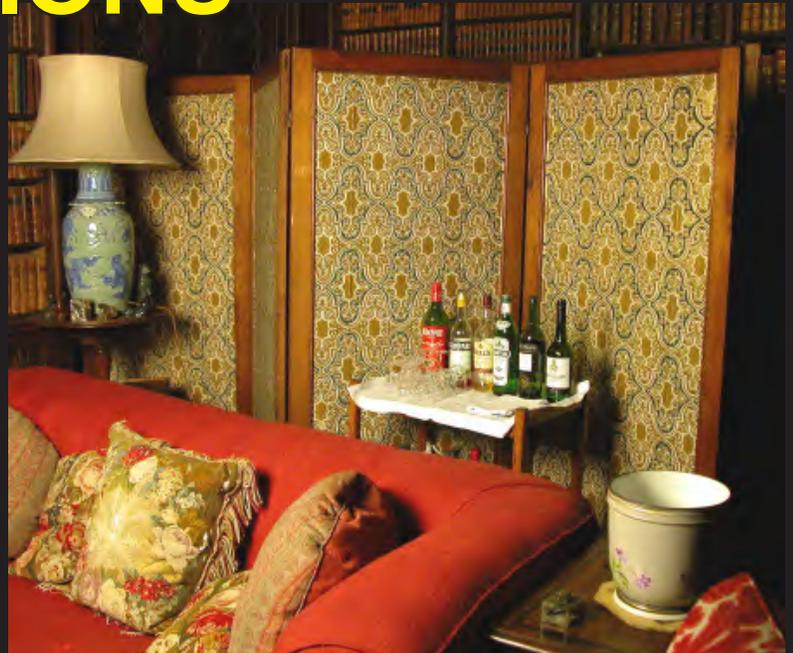


PEOPLE





STEP 4: LOOK FOR FLEXIBLE, LOCAL SOLUTIONS







- 1. WORK OUT WHAT YOU'RE TRYING TO ACHIEVE**
- 2. KEEP THE FABRIC IN GOOD CONDITION**
- 3. HEAT THE PEOPLE, NOT THE FABRIC**
- 4. LOOK FOR FLEXIBLE, LOCAL SOLUTIONS**

ASK QUESTIONS





FABRIC

SERVICES

PEOPLE



**TRIAGE
POSSIBLE
SOLUTIONS**



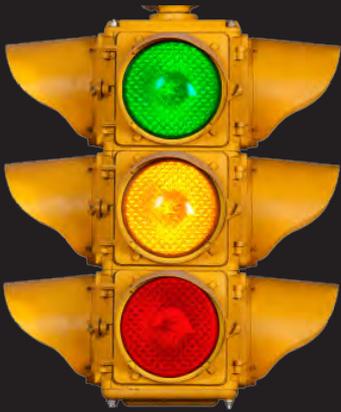
**LOW RISK AND LOW
ENERGY COST**



**SOME RISK AND/OR
SOME ENERGY COST**



**HIGH RISK AND/OR
HIGH ENERGY COST**



Repairing/ enhancing existing features

Controlling air infiltration

Reducing radiant heat losses

Improving building services

Improving lighting + appliances

TRIAGE CHECKLISTS FOR IMPROVING THERMAL PERFORMANCE

WINDOWS

Add curtains + blinds

Refurbish or replace shutters

Add new shutters

Add secondary glazing

Add awnings

Replace glass

Replace windows

WALLS

Repair

Rendering

Plastering

Adding panelling

Insulation

SUSPENDED FLOORS

Add rugs + carpets

Draught-seal

Add insulation

PITCHED ROOFS

Ceiling-level insulation

Rafter-level insulation

LOW-PITCHED/FLAT ROOFS

Ceiling-level insulation

Insulation below ceiling

Insulating at joist level

Insulating above deck

Insulating above weatherproofing



Mr. Woodhouse: Must the church be so drafty, Mr. Elton? It is difficult to surrender one's soul when one is worried about one's throat.