

Thermal Imaging

A Brief Introduction To Surveying A Home

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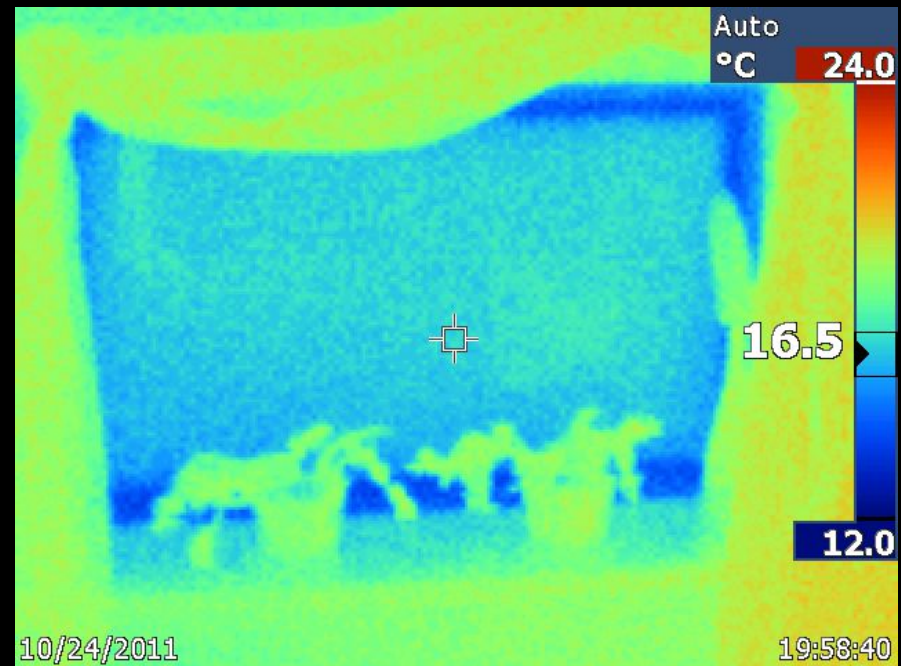
Theory

- Everything radiates infra-red or thermal energy
- The temperature of an object gives you radiation of a specific frequency
- A thermal imaging camera converts these frequencies back into temperatures
- The temperatures are displayed as different false colours on the display

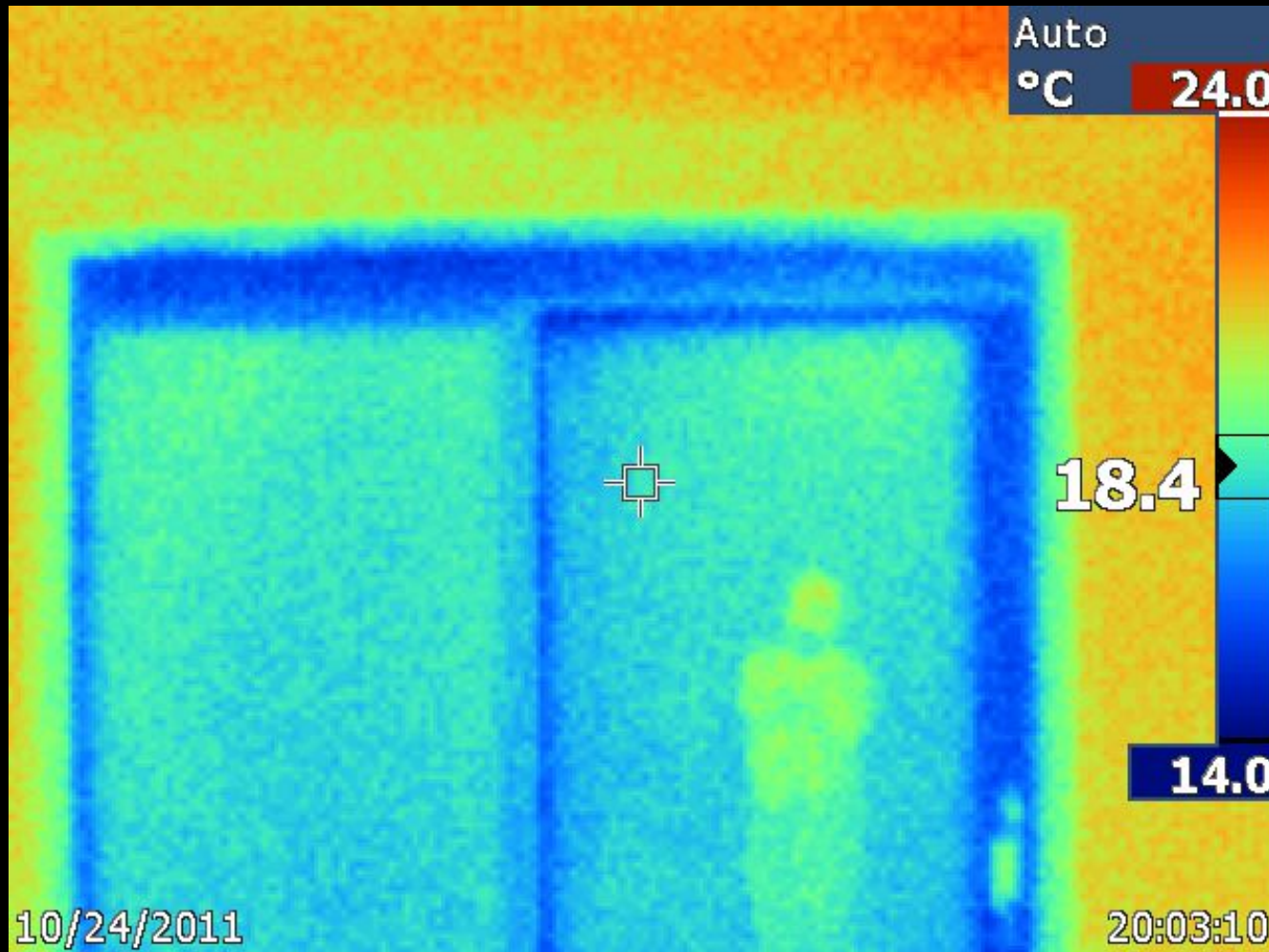


Inside of a House

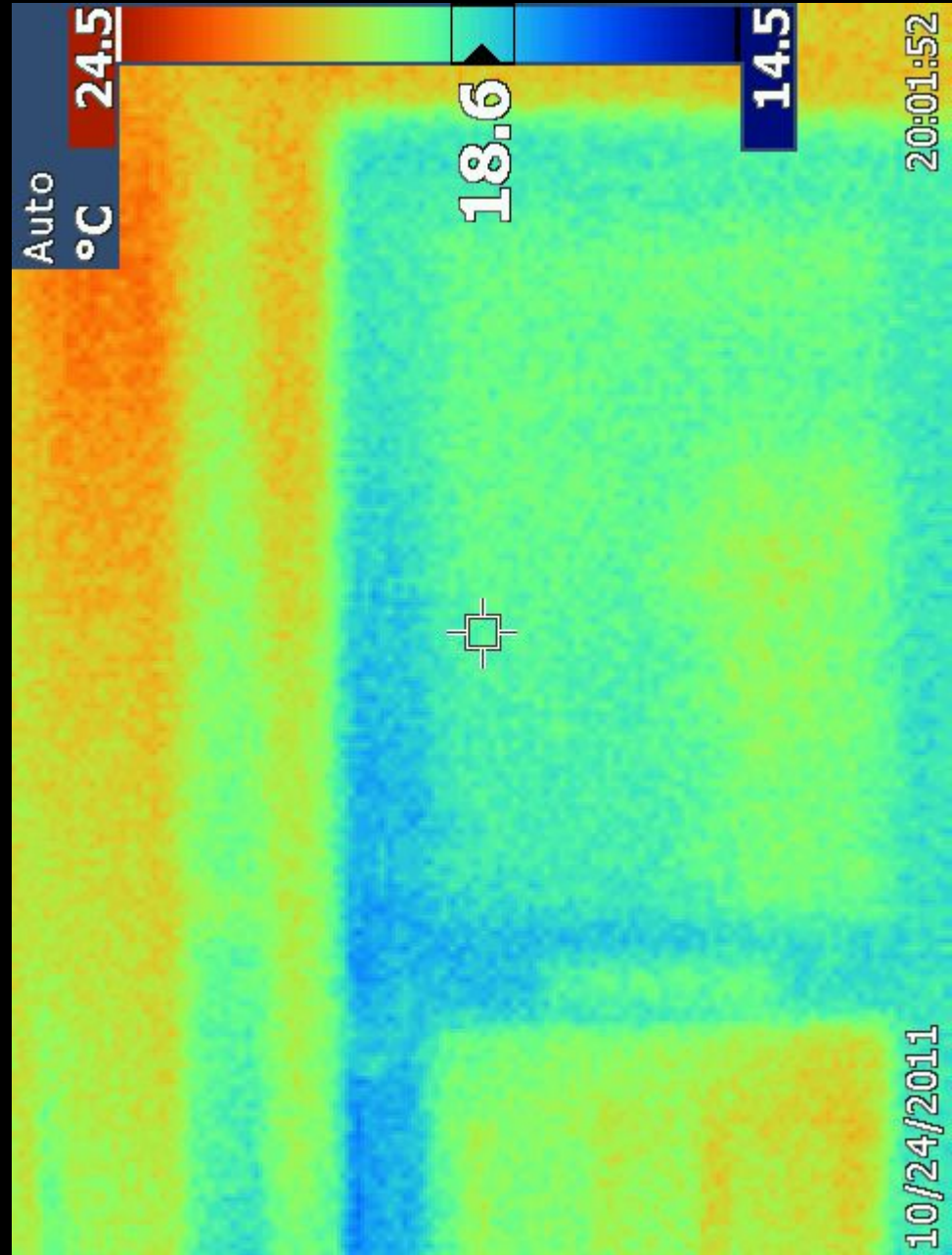
- Walls and windows should show up **warm**
- Cold spots means you have leaking heat



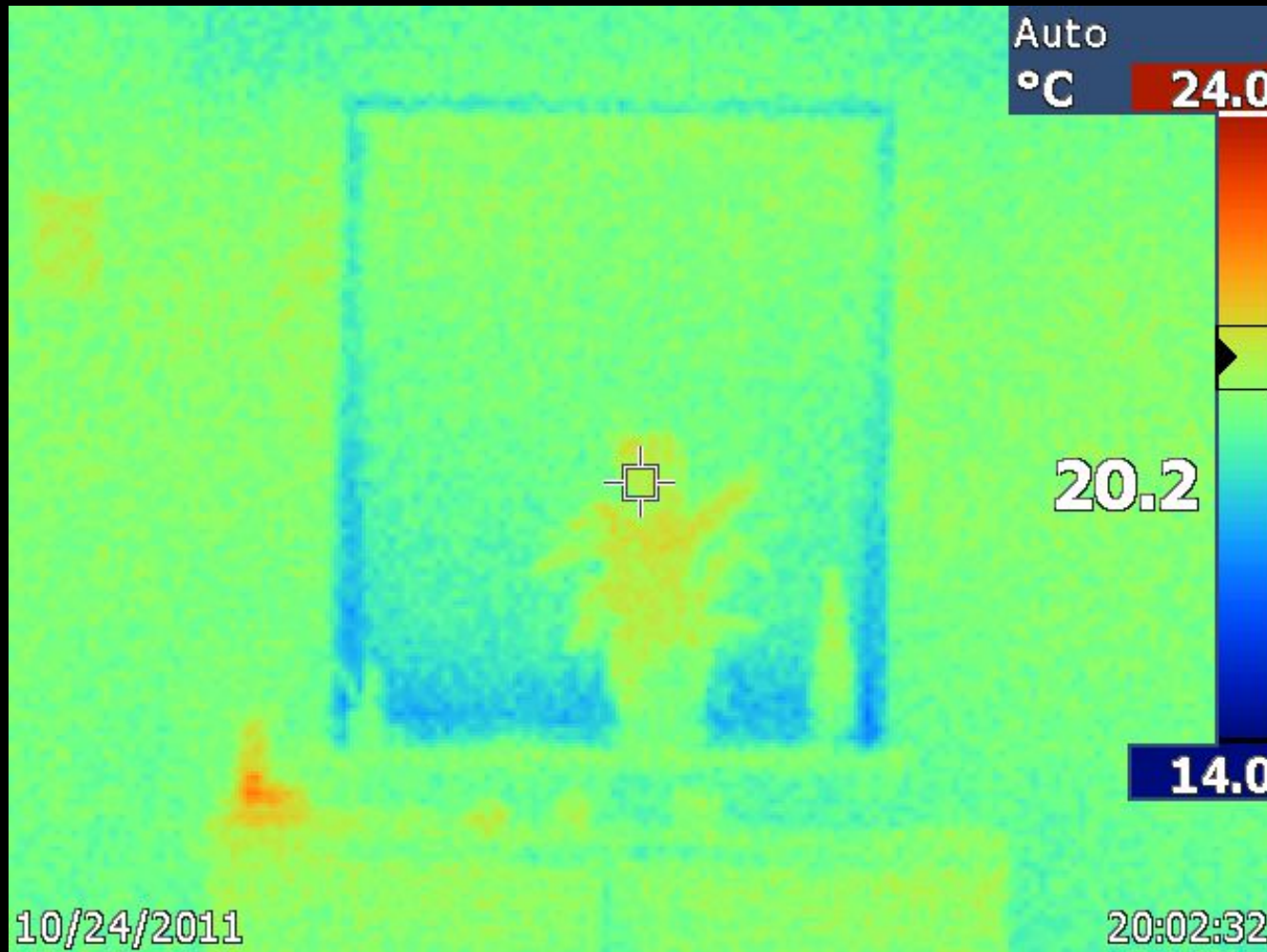
Just a Window



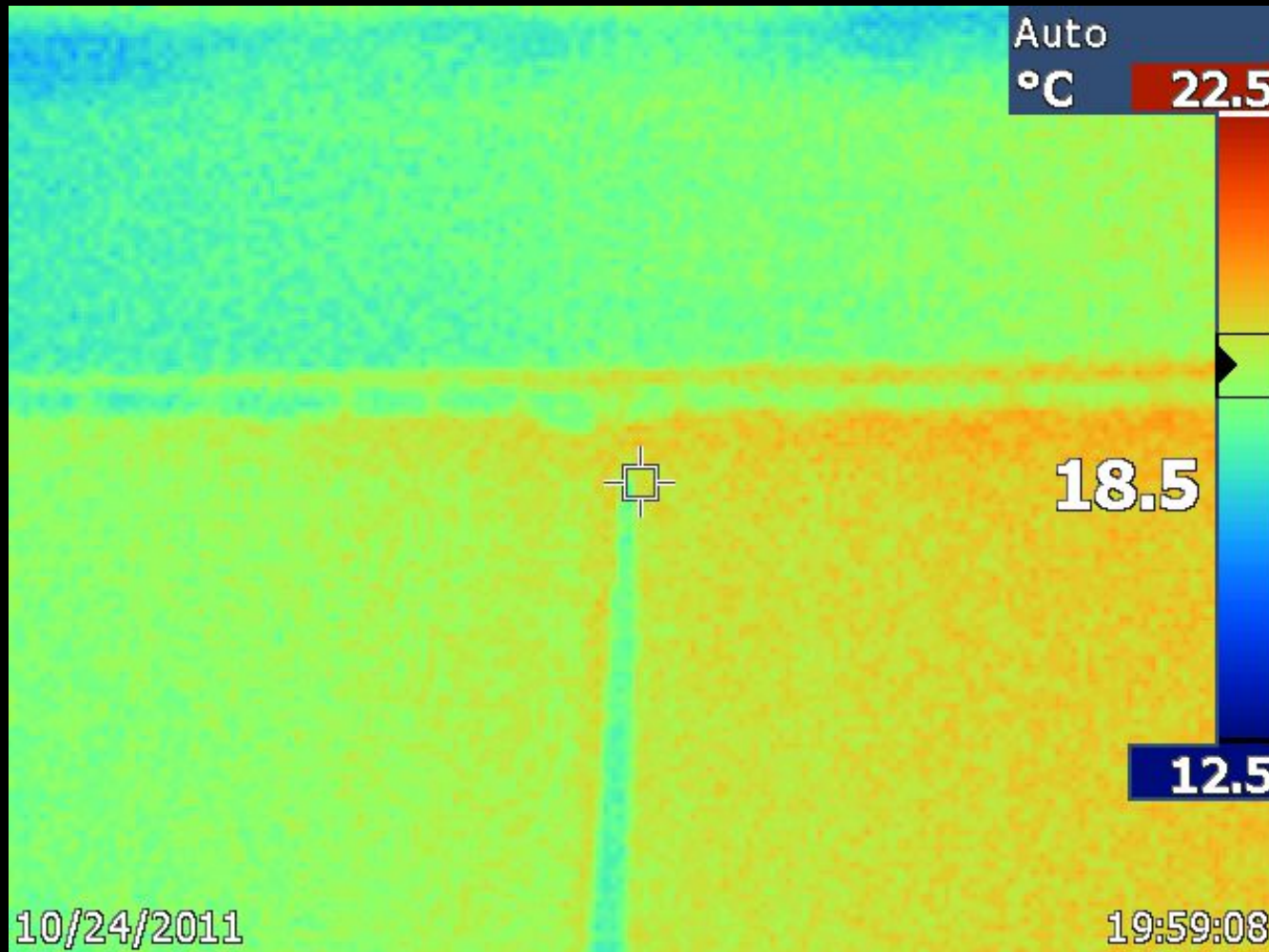
Front Door



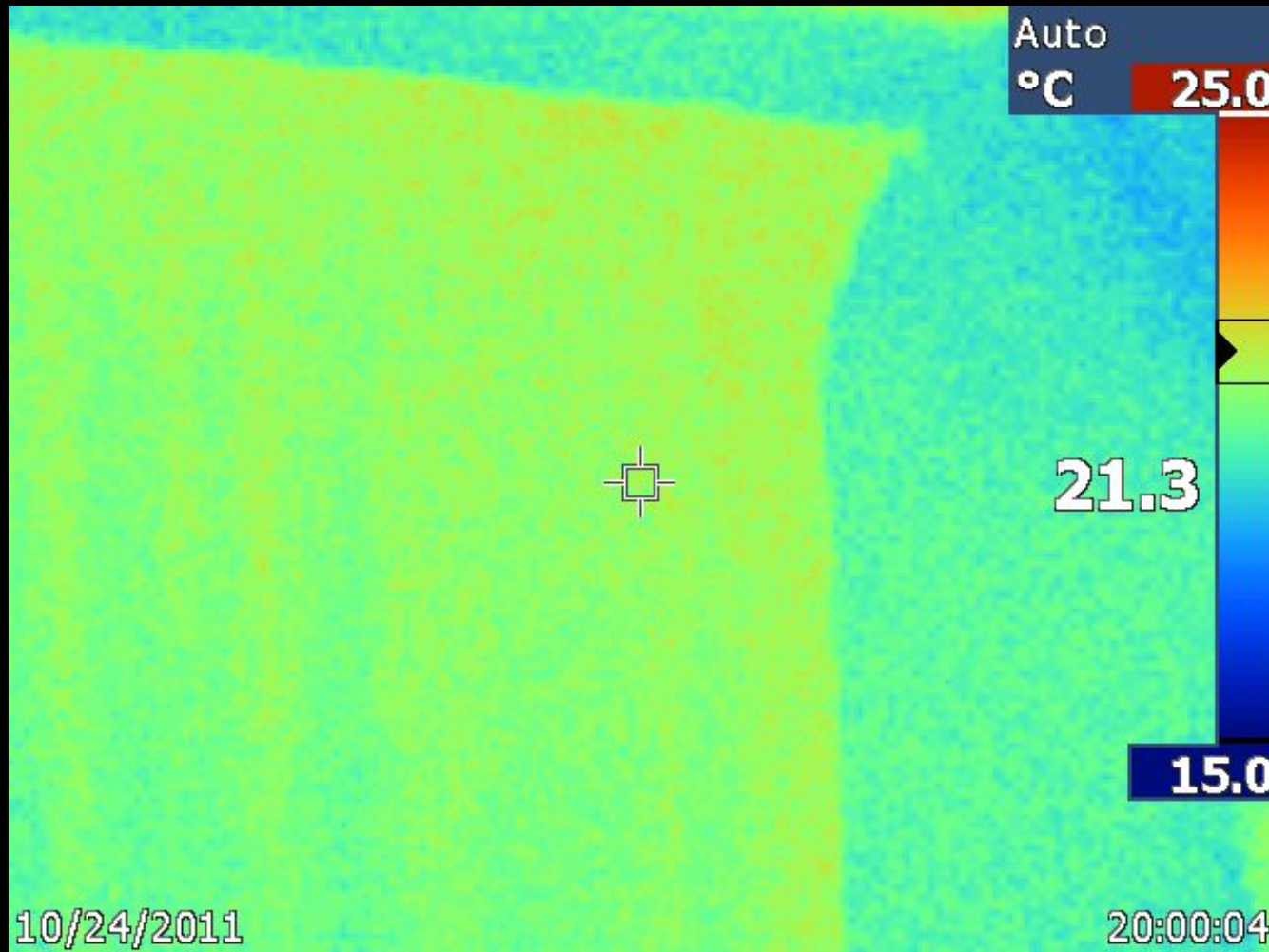
Just a Blind



Gap in Curtains

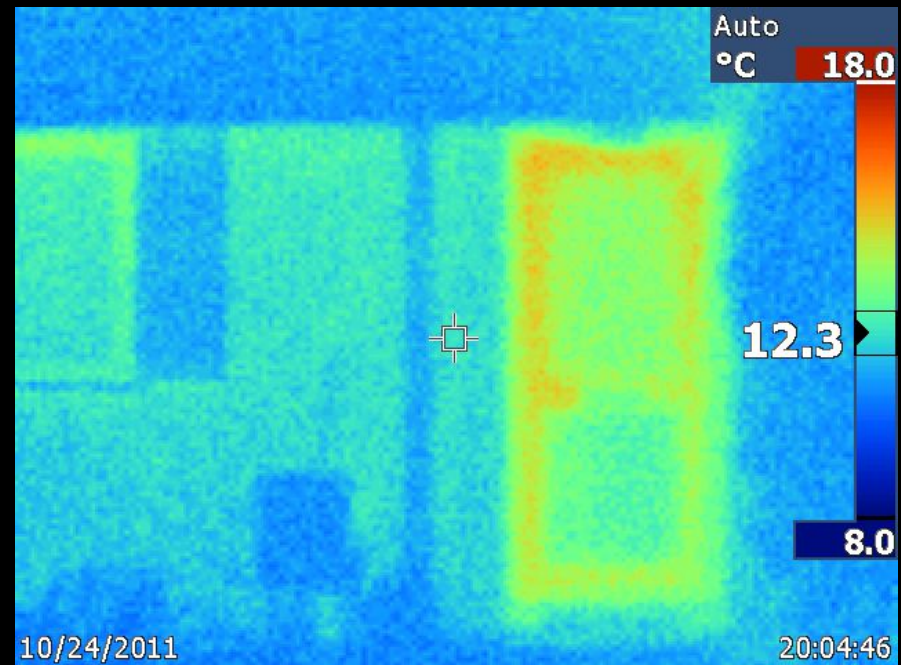


Curtains and Blind

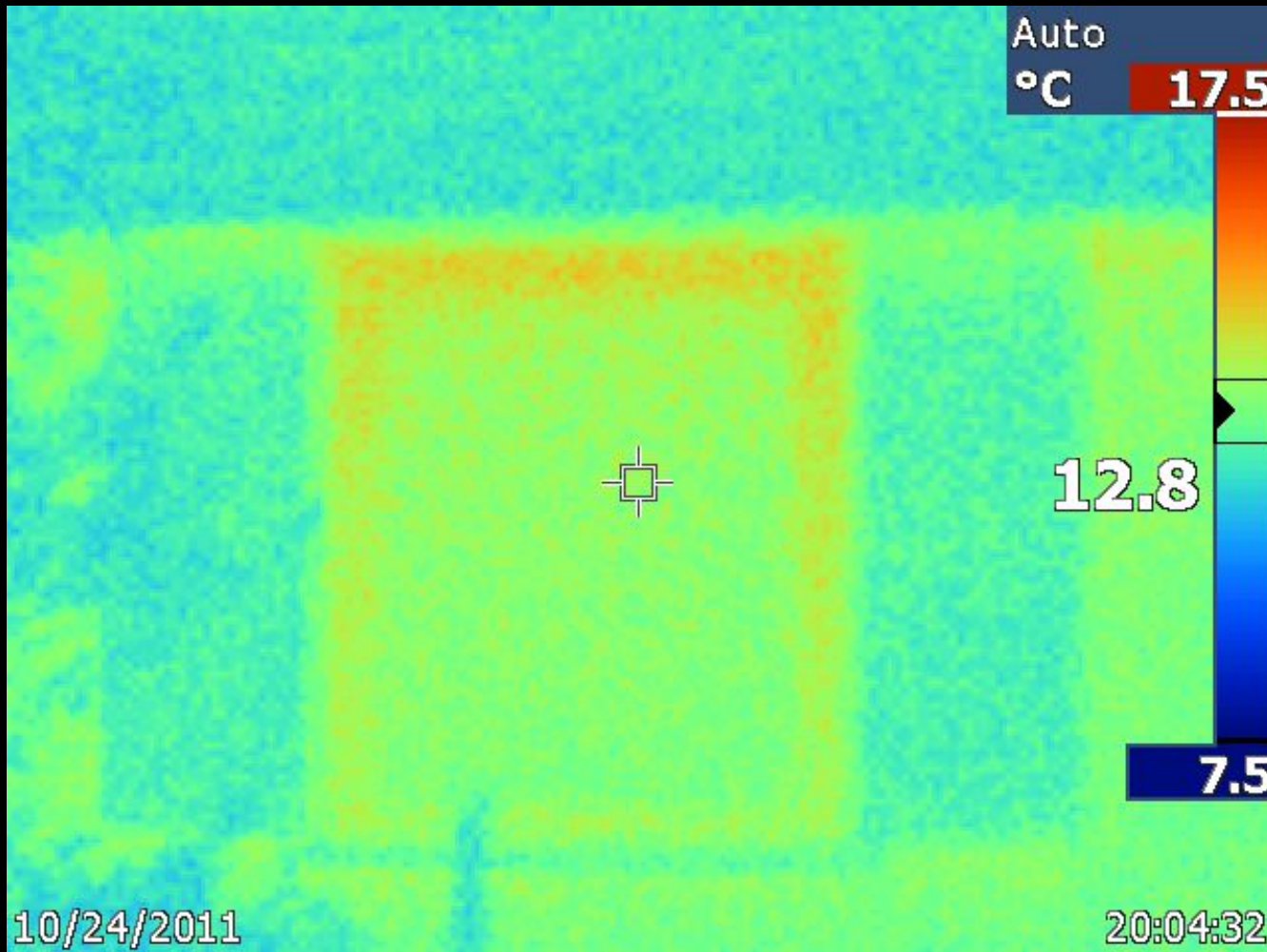


Outside of a House

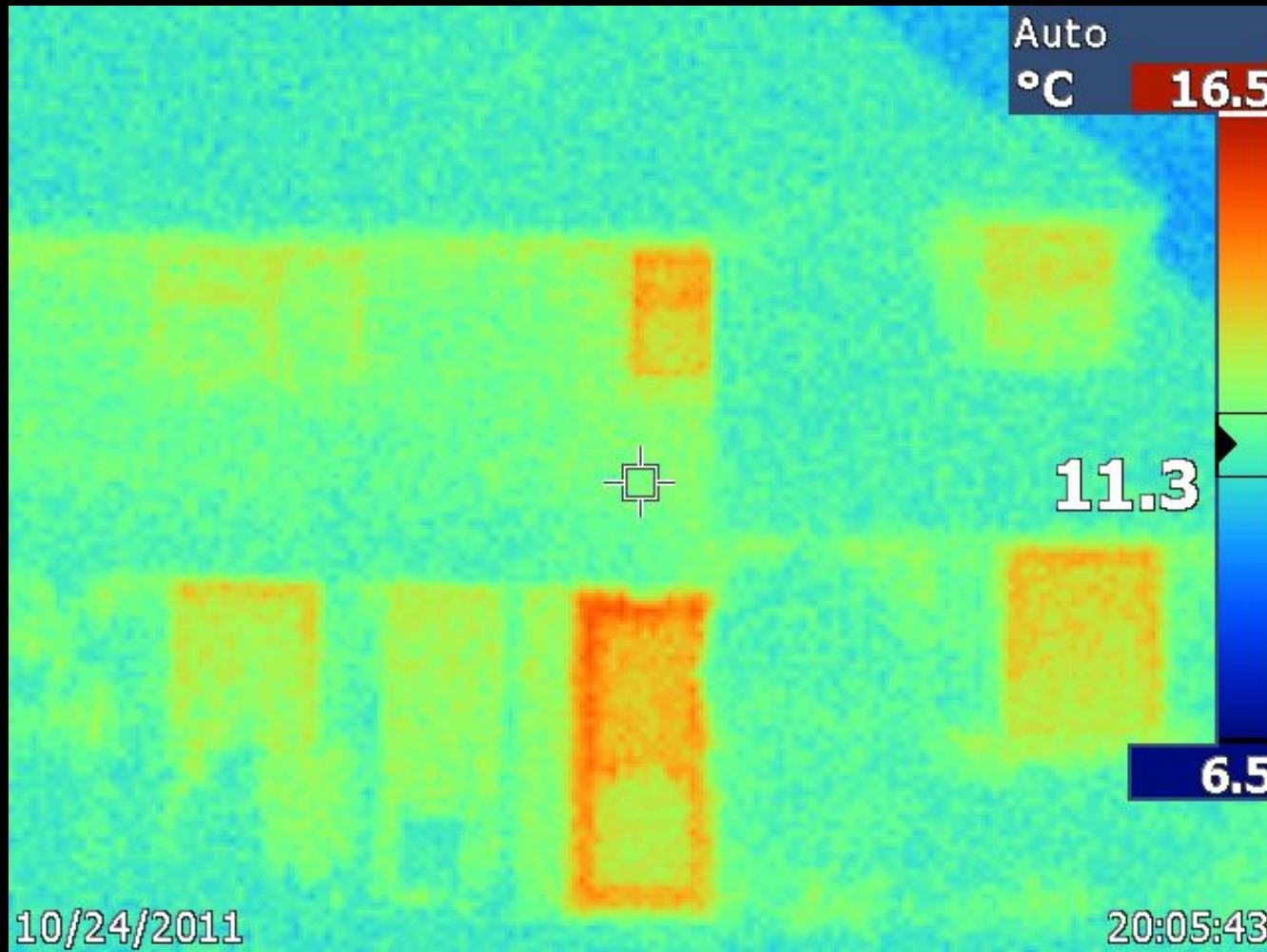
- The house should show up like its surrounding: **cold**
- Hot spots mean you have leaking heat



Window and Blind



Front of House



What use is it?

- Should tell you nothing new,
but often reveals things you didn't know
- Useful to find where you need to target first
- Can help identify gunked up radiators



What We Did

- Held a “Home Energy Evening”
- Asked people to sign up for a survey
- Spent a fortnight surveying homes in the evening



What We Found

**The survey sample was
not a representative
cross section of
Overton households.**

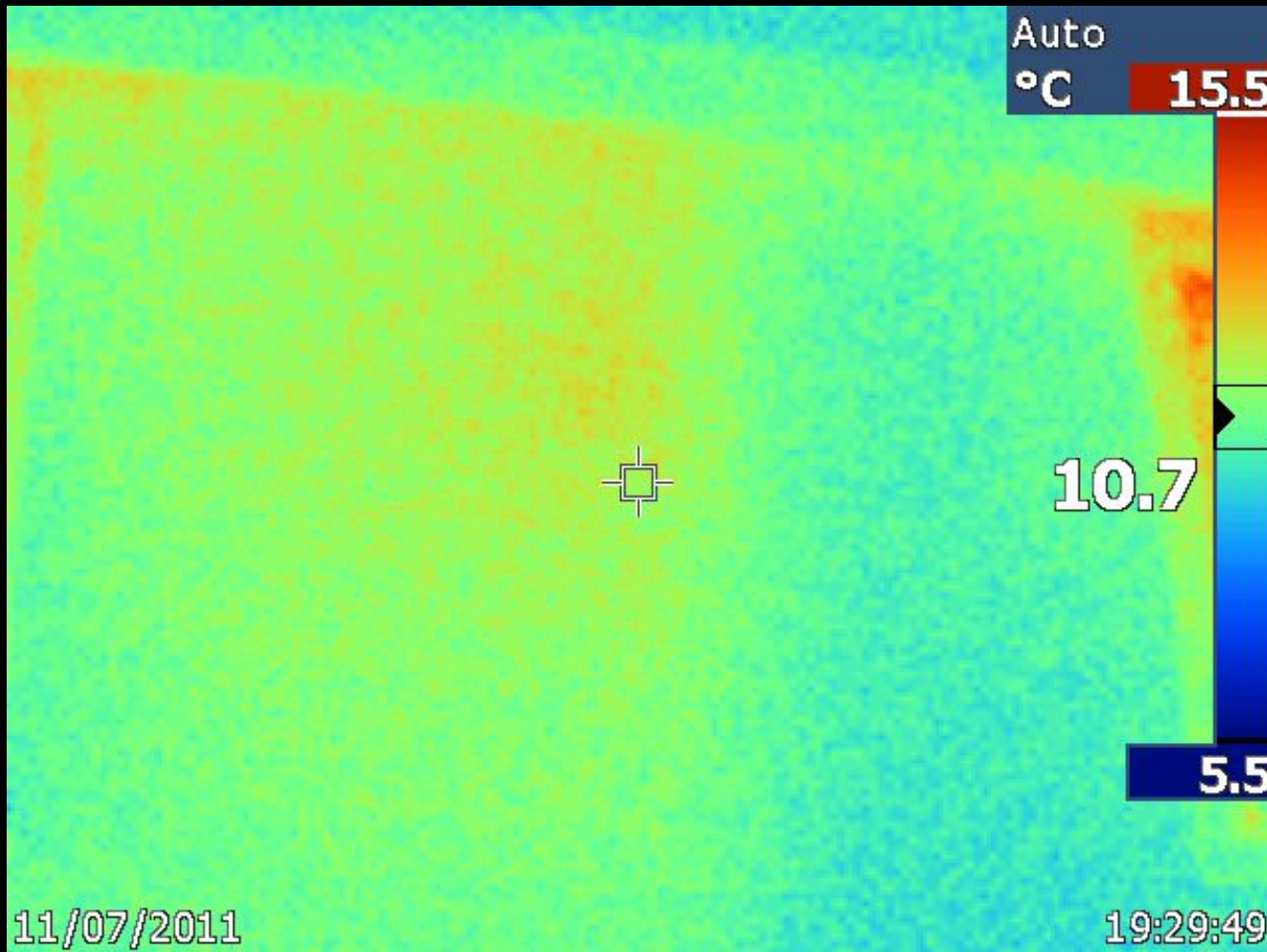


Roof and Wall

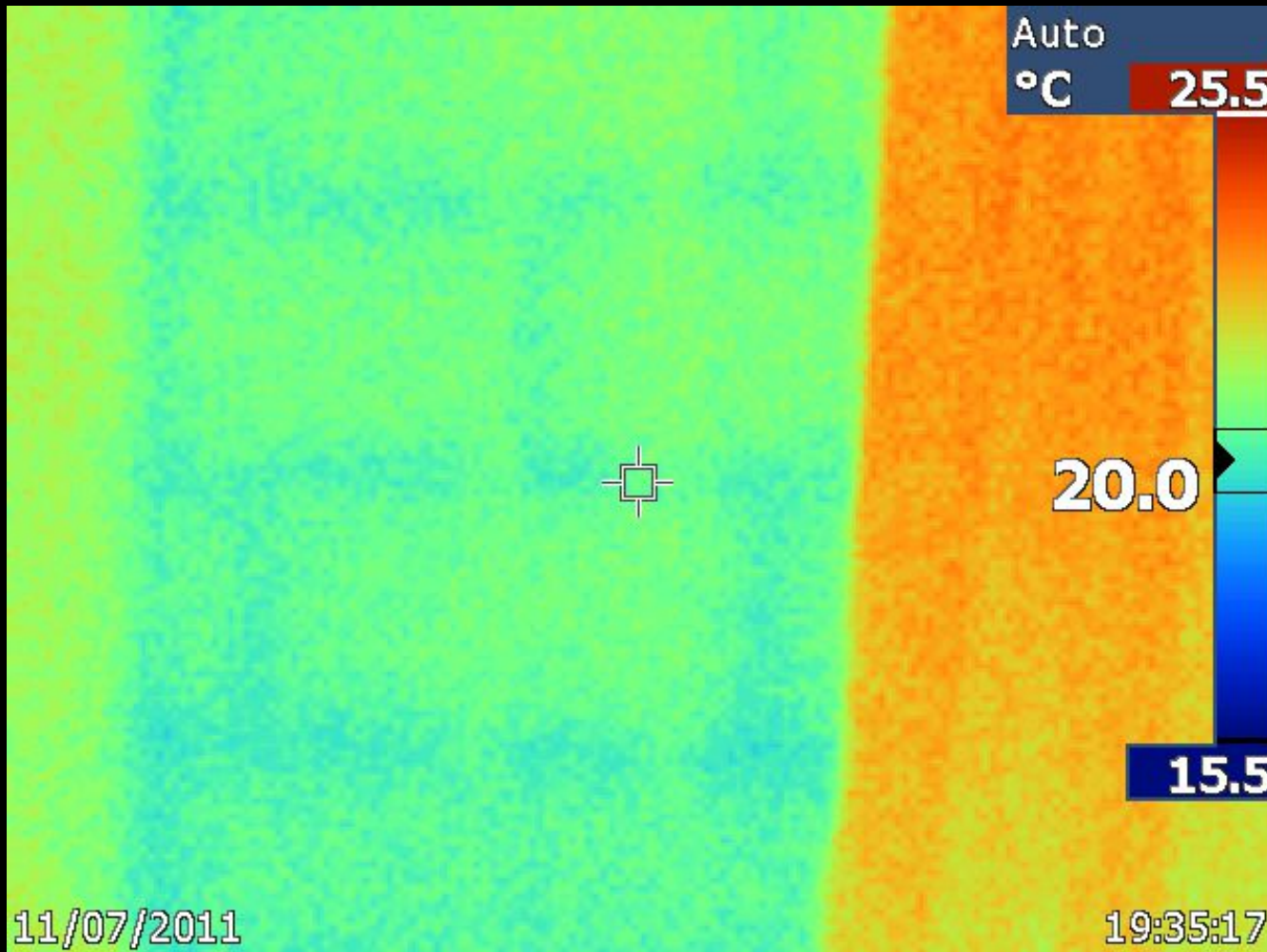
- Every roof was insulated and was visibly cooler on the outside than the walls
- Every top floor ceiling was warmer than the walls
- Filled cavity walls insulate better than unfilled cavity walls
- Cavity walls insulate better than solid walls



Cavity Walls



Interior Block Work



Loft Hatches

- Most loft hatches were uninsulated or partially insulated
- They are usually at the highest point in the house and often at the top of the staircase
- Some loft hatches were very large and very cold

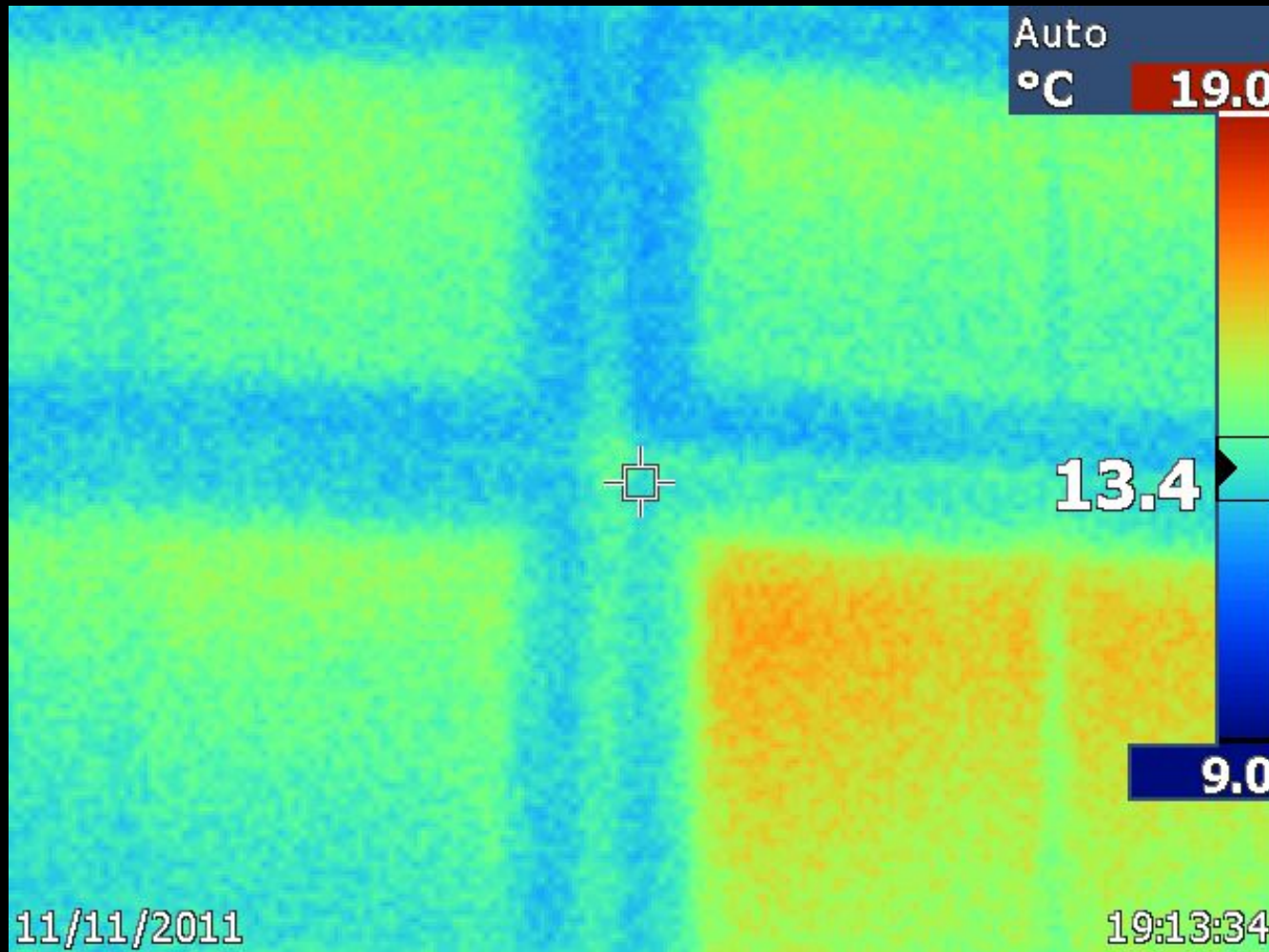


Doors and Windows

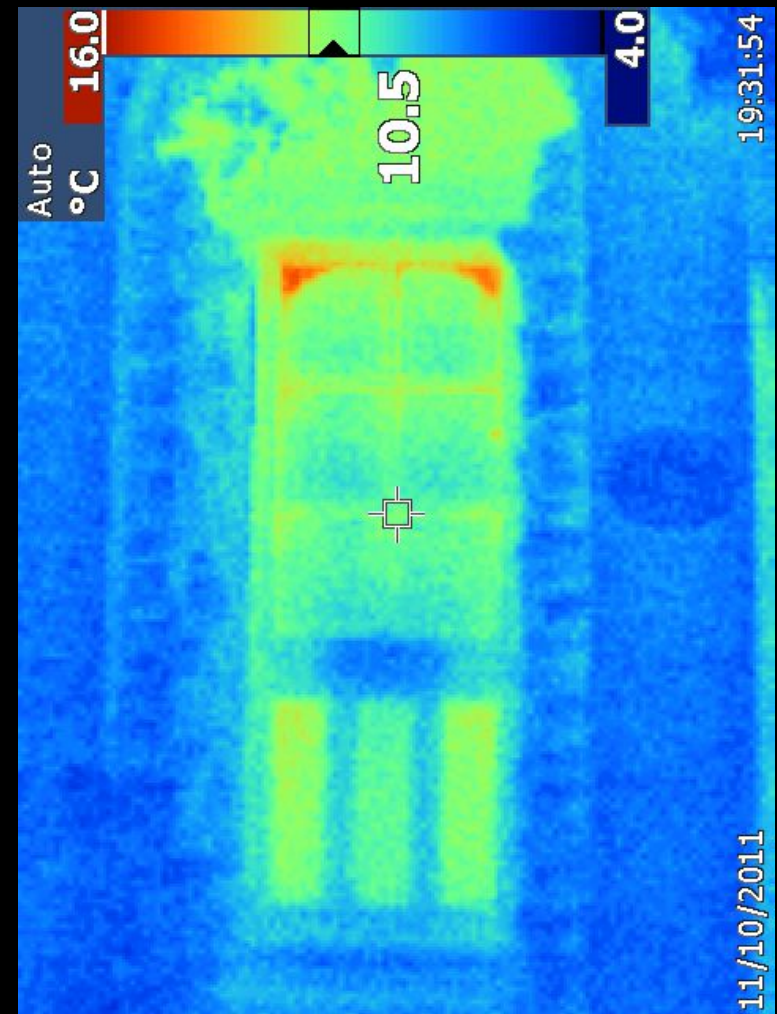
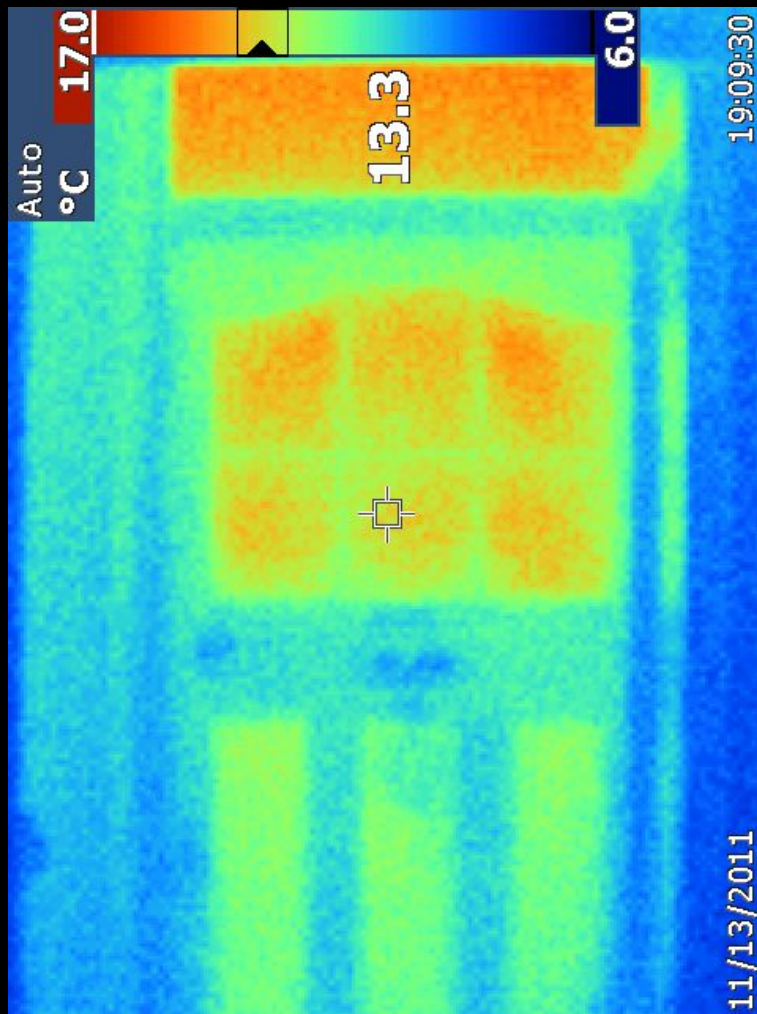
- Leaking doors were common
 - Thin wood because of panelling
 - Poor fit between the frame and door
- Double glazing, even secondary works better than single glazing
- Blinds and curtains make a drastic difference unless you have top of the range double glazing



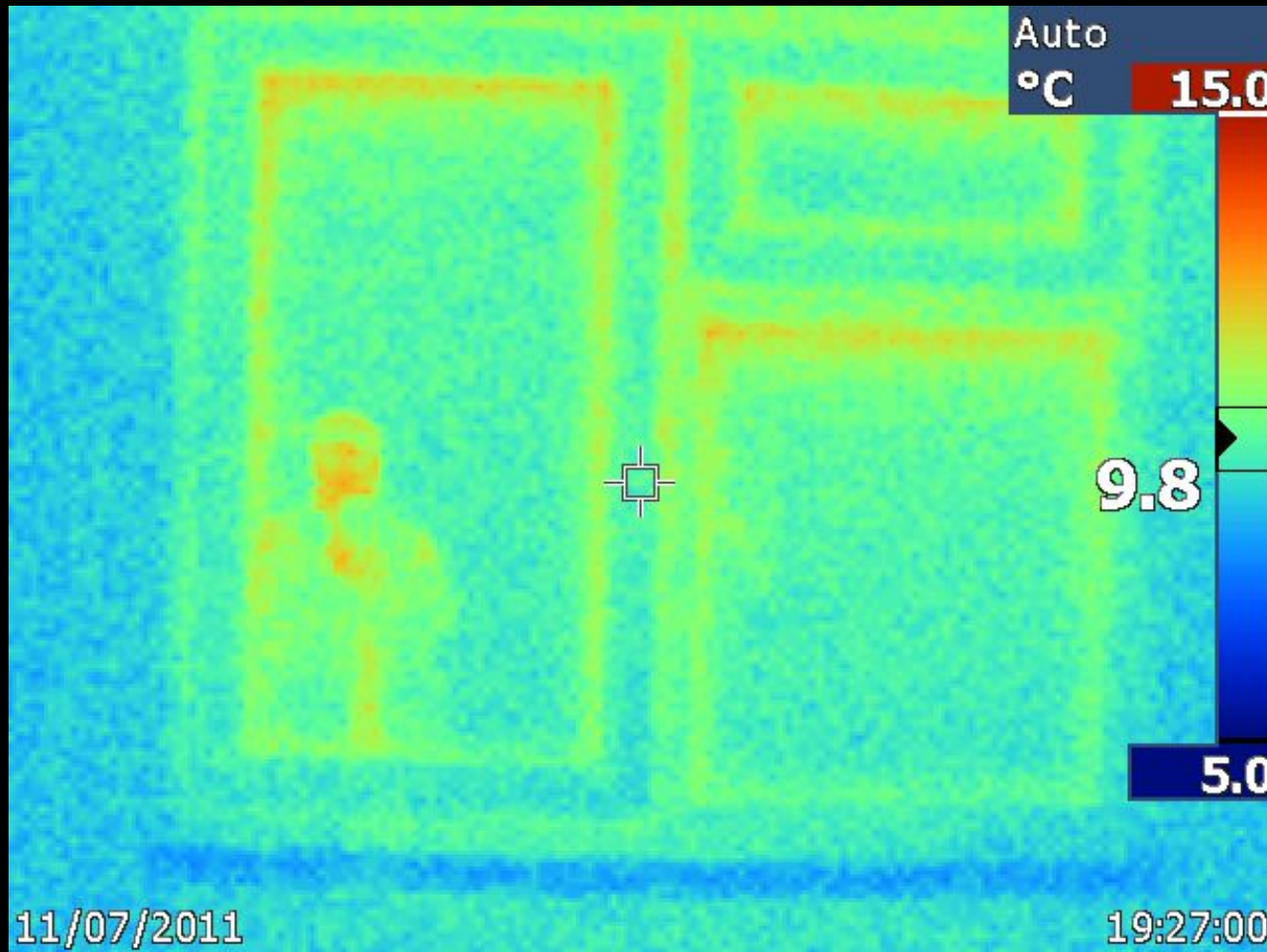
Single and Double



Typical Doors



"Boxing"



Thank You

**Any
Questions?**

