



ENERGY • CARBON • SUSTAINABILITY

Housekeeping and Quick Wins to Save Energy.



Matt Fulford



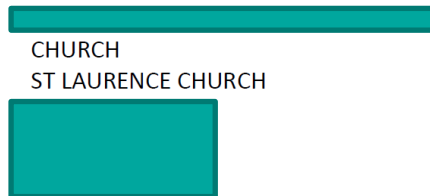
Outline

- Introduction and Outline
- House Keeping and Quick Wins
 - Procurement of Energy
 - Set boilers and frost stats correctly
 - Background / Heritage Heating debate
 - Timers
 - Draught proofing
 - Easy to change lighting
 - Water Saving
- Questions



Energy Bills

- No church should be paying 20% VAT or Climate Change Levy (CCL) due to charitable status
- Check ALL bills (especially high winter bills) and if any found to have 20% VAT send in VAT Declaration to supplier (search "<supplier name> VAT Declaration" to find forms on line)



Contract Information *	
Contract Type:	Valid
Contract End Date:	14th April 2019
Payment Method:	Direct Debit
* Please see overleaf for further details	

Gas Invoice No: 463295
Bill Date: 4th October 2018
Due Date: 14th October 2018
Our Ref: CE1263341
Account No: 042055

Total Gas Cost: £314.67
Total Standing Charge: £0.00
Climate Change Levy (CCL): £22.14
Sub Total: £336.81
VAT @ 5%: £0.00
VAT @ 20%: £67.36
Invoice Total: £404.17

Quickest Win is to procure all energy from 100% renewable suppliers



Understand baseline

Energy Footprint Results

Carbon Footprint

Gross CO2 emissions (Tonnes) ?	35.3
Net CO2 emissions (Tonnes) ?	35.3
Weather-Adjusted CO2 emissions (Tonnes) ?	35.0

Energy Efficiency

Emissions/m² rating



Emissions/person hour rating



CO2 emissions per m ² ?	34.7
Emissions/m ² rating	F
Person hours/year ?	12688
CO2 emissions per person hour ?	2.8
Emissions/person hour rating	G



Energy Meters

- Check the 'time' on dual rate meters
- As churches typically use more energy in evenings and weekends errors in the time or day can lead to high cost errors



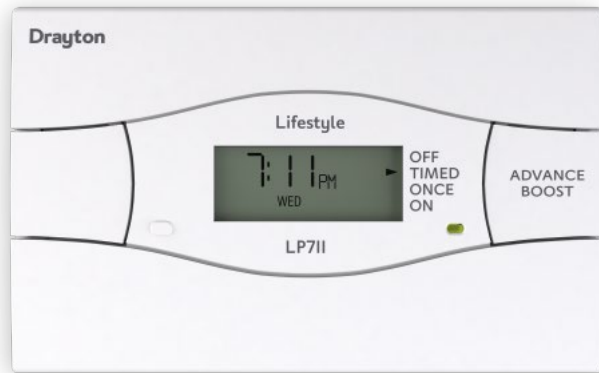
Boiler Controls

- Boiler Burner Settings – high flame should be lower temperature than low flame on dual burners
- Frost setting should be only just above freezing point – 30% of fuel costs can be due to frost protection



Background Heating

- For low use churches background heating is generally NOT required and can cause more issues than it solves
- Stable temperatures and humidity is more important
- Consider artefacts, wall paintings and organs



“Do not use background heating unless for the stabilisation of historic interiors”



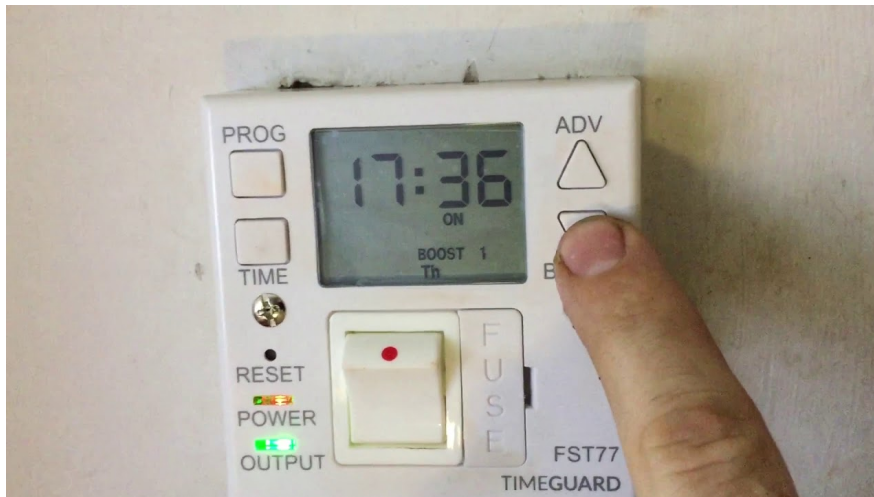
Keeping People Comfortable

- Pew Cushions*
- Pew Runners*
- Moving service times and PCC meeting venue in winter

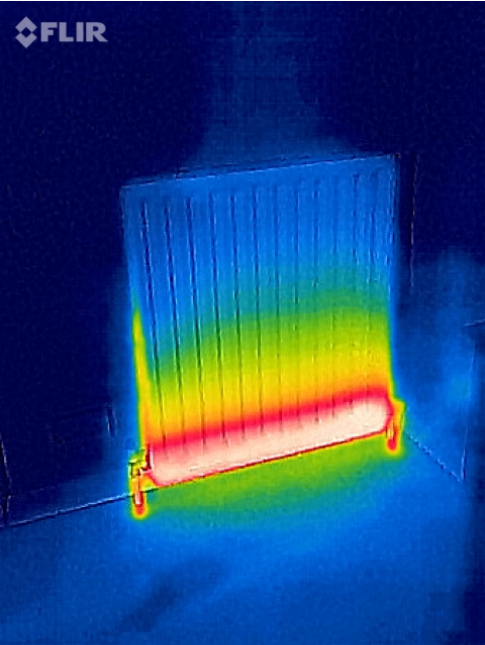
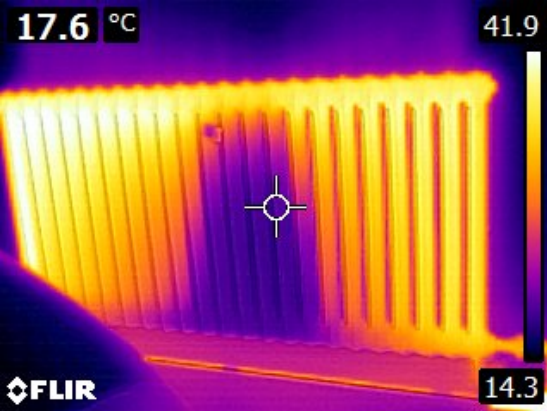
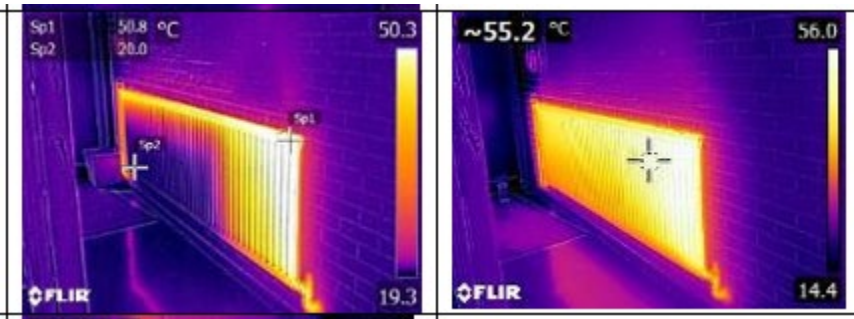


Timers

- Hot water units and external lighting suit time clock controls
- For hot water, can simply change the wiring outlet
- External flood lighting (not security lighting), set off time no later than 11pm. Considers days of week, times of year.

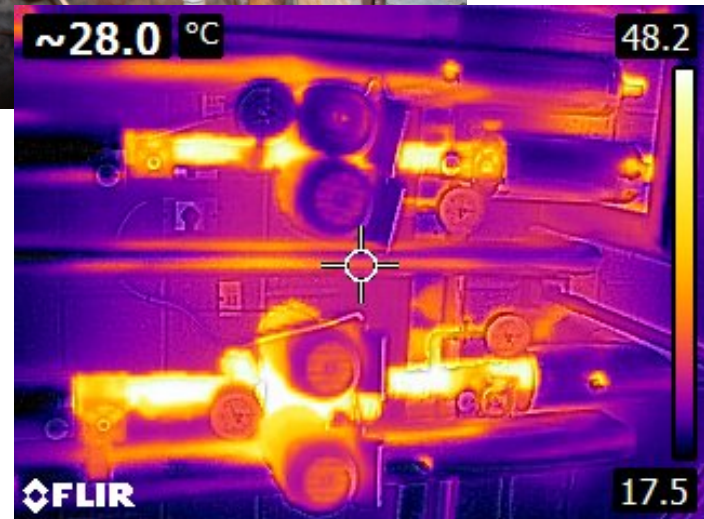


Cleaning and Dusting!



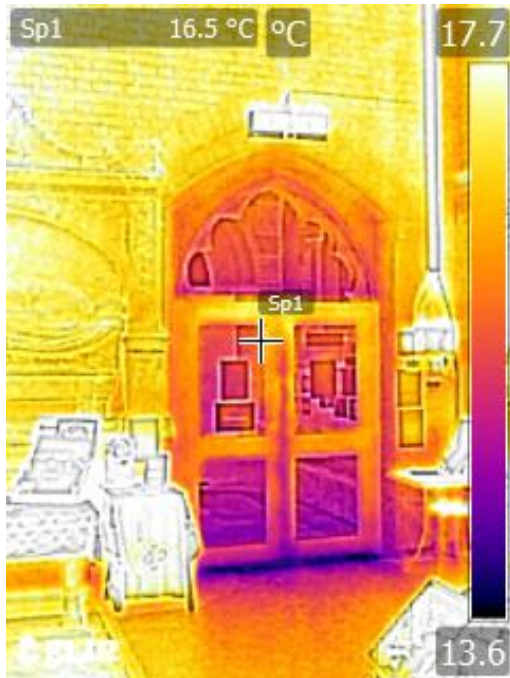
Lagging Pipes

- Boiler rooms should not be the warmest place in the church!



Draught Proofing

- Doors – particularly the base of doors – can be solved with a ‘sausage dog’
- Key holes – fridge magnets can be useful!
- Black plasticine around opening hopper windows



Easy to Change Lightbulbs

- PAR 38 - LED
- GLS (check base is Bayonet Cap or Edison Screw)
- Mains GU10 downlights (but not the Low Voltage MR12)
- All others can be changed but may require some level of expertise



Water Saving

- Can get free items from local water companies
- WC bags for placing into cisterns – also watch for leaks
- Kits to convert taps to low flow units



Questions?

