Results of Infra-Red Surveys

Contents

Summary of Survey

Church

Average summary for Church	
Average heat loss were radiator not under window	35%
Average heat loss were radiator was under window	70%
Average heat loss walls	15%
Average heat loss for door with curtains (curtains stored and radiated heat) was	-8%
Average heat loss for door where no curtains used) was	22%
South porch double doors when both shut	5%
1853 old roof on very cold day showed heat loss between rafters.	See photo

Note 1 The walls of church slowly got warmer over the month of the surveys (were very cold at the start (8 degrees) and slowly warmed up during the month, to a point where no heat loss recorded. The outside temperature of the walls remained cold.) I suspect this contributes to the cold draft people feel when seated near the walls.

Note 2 – If church doors are left open for 20 minutes the temperature around the entrance inside drops 3 to 4 degrees, from 15 degrees even though there are many radiators (floor and standing by the south entrance.)

Note 3 – The edges of the wooden external doors are sealing well and no clear heat loss at the edges.

Note 4 – The south wall radiators in the chancel are not working as well. In particular the one under the window nearest the south porch entrance, number 6.

Church Hall

Events - Meeting room	
Average heat loss were radiator not under window	33%
Average heat loss were radiator under window	15%
Average heat loss for ceiling	27%
Average heat loss for walls	15%
Floor (when room was well heated)	70%

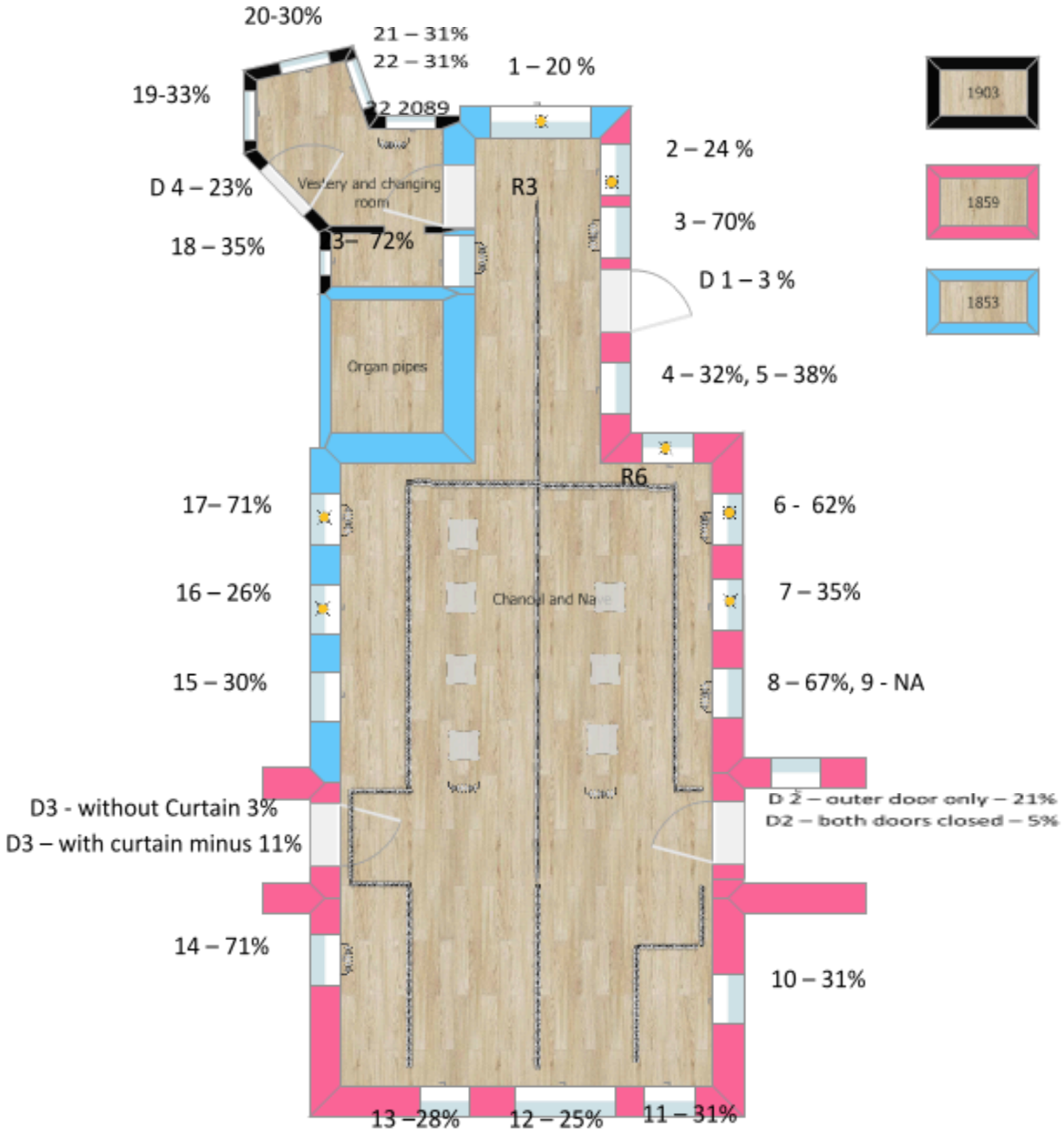
Maries office	
Heat loss were radiator not under window	27%
Heat loss were radiator under window	15%
Ceiling heat loss	26%

Walls heat loss	27%

Diagrams of Heat Loss

Church Diagram showing heat loss figures

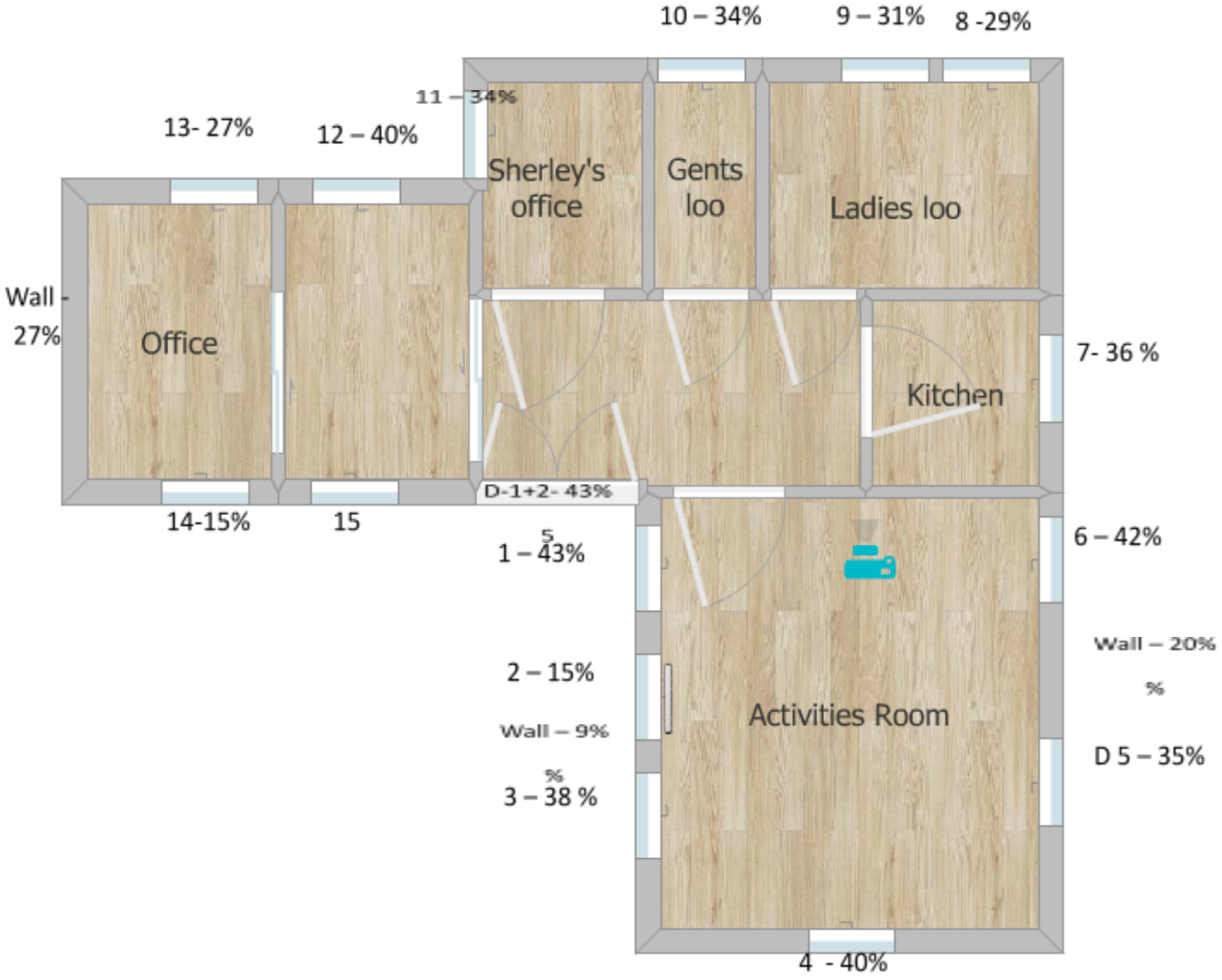
Church on average air temperature was 14.5-15 Degrees and Most of Radiators 45 degrees



Church on average air temperature was 14.5- 15 Degrees and Radiators 45 degrees

Surface Area	Temp		Temp Diff from Room	Heat loss
Window 1	12		3	20%
Window 2	11.4		3.6	24%
Window 3	13.7	radiator 55.6 degrees	1.3	70%
Window 4	10.2		4.8	32%
Window 5	9.3		5.7	38%
Window 6	13.2	radiator 35	21.8	62%
Window 7	9.7		5.3	35%
Window 8	9.8	radiator 30	20.2	67%
Window 9	na			
Window 10	10.3		4.7	31%
Window 11	10.3		4.7	31%
Window 12	11.3		3.7	25%
Window 13	10.8		4.2	28%
Window 14	12.5	radiator 42.6	2.5	72%
Window 15	10.5		4.5	30%
Window 16	11.1		3.9	26%
Window 17	12.4	radiator 44.6	2.6	72%
Window 23	11.9	radiator 43	31.1	72%
church wall v1	12.9		2.1	14%
church wall v2	13.1		1.9	13%
church wall v3	12.2		2.8	19%
Door D1	14.5	With Curtain in place	0.5	3%
Door D3 - with curtain	16.7	With Curtain in place + plus floor heater by door	-1.7	-11%
Door D3 - without curtain	14.5		0.5	3%
Door D2 (south)	14.3	Both Doors closed	0.7	5%
Door D2 (south)	11.8	Outer door only	3.2	21%

Church Hall – Diagram of heat loss



Church Hall – Note Meeting Room + Marie's office air temperature was 22 degrees and communal areas 15 degrees (except for the floor when air temp was 30 degrees)

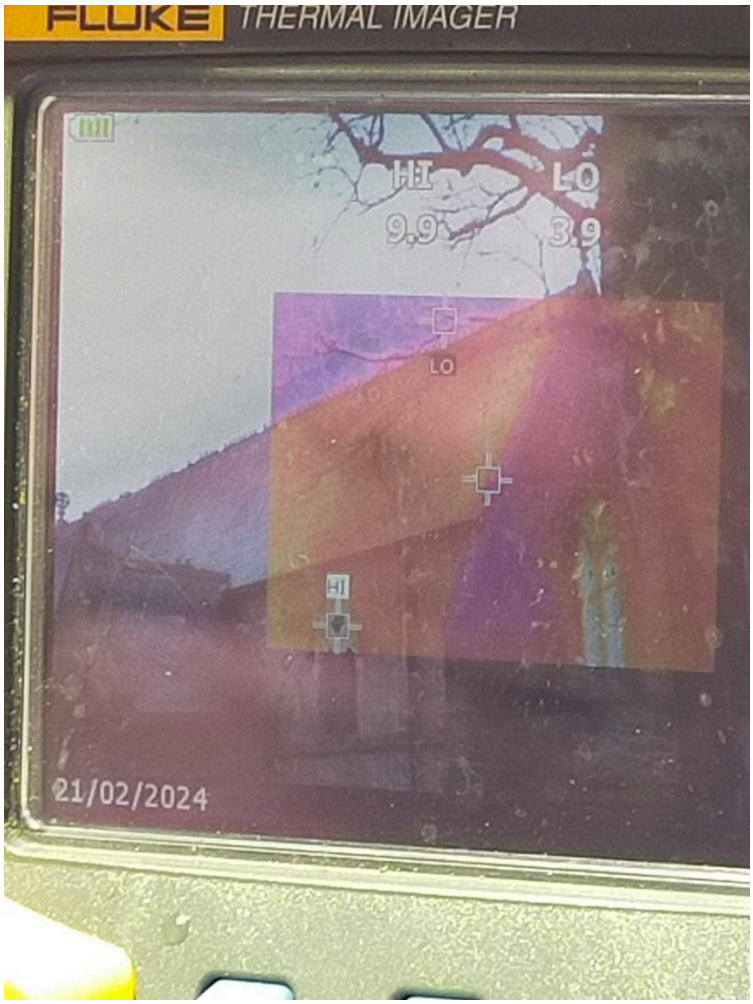
Church Hall – Note Meeting Room + Marie's office air temperature was 22 degrees and communal areas 15 degrees (except for the floor when air temp was 30 degrees)

Window	Temp	Comments	Temp Diff from Room	Heat loss
	Meeting room			
Window 1	12.5		9.5	43%
Window 2	18.6	radiator below window	3.4	15%
Window 3	13.7		8.3	38%
Window 4	13.2		8.8	40%
Window 5	14.3	Door?	7.7	35%
Window 6	12.8		9.2	42%
wall	17.5	wall by no 6 window	4.5	20%
wall	20	Wall between no 2 -3 window	2	9%
Ceiling	15.2		6.8	31%
Ceiling	15.7		6.3	29%
Ceiling	16		6	27%
Ceiling	16.2		5.8	26%
Floor	14.5		15.5	70%
	Communal Areas			
Window 7 (Kitchen)	9.6	(not heated as much 15 degree air temp during test)	5.4	36%
Window 8 (Ladies Loo)	10.6	(not heated as much 15 degree air temp during test)	4.4	29%
Window 9 (Ladies Loo)	10.3	(not heated as much 15 degree air temp during test)	4.7	31%
Window 10 (Gents Loo)	9.9	(not heated as much 15 degree air temp during test)	5.1	34%
11 (Sherley's office)	9.9	(not heated as much 15 degree air temp during test)	5.1	34%
12 (food bank)	9	(not heated as much 15 degree air temp during test)	6	40%
	Marie's office			
13	16		6	27%
14	18.8		3.2	15%
Marie's office wall	16		6	27%

Pictures

Church

Roof on first cold day.

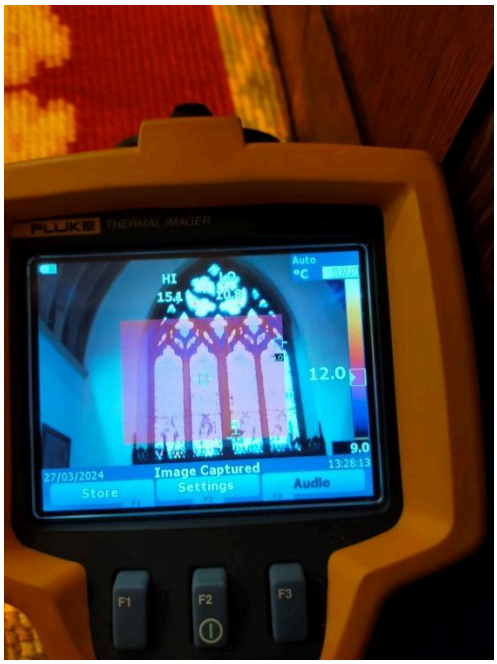


Average temp of 1853 (west end) was 6.6% - Could clearly see the heat being lost between joists.

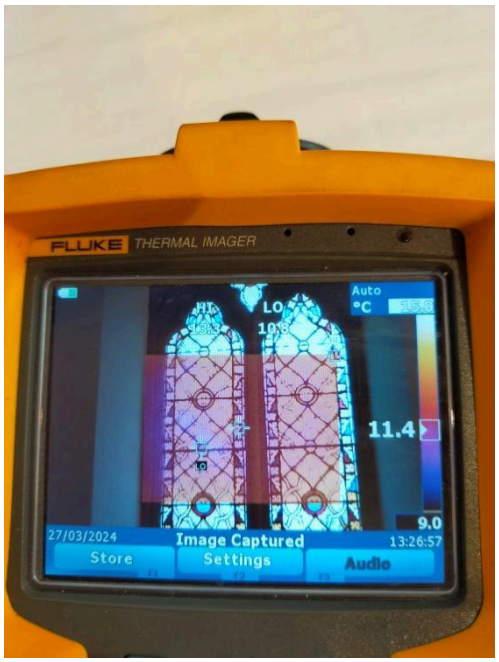
This was did not show on the new roofs.

South side (Naive)

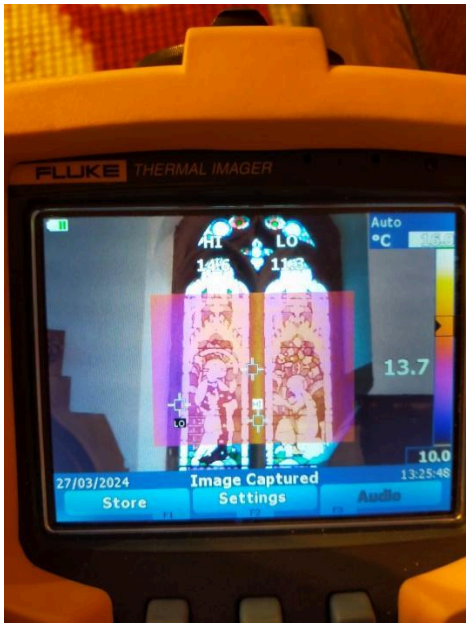
Window No 1



Window 2



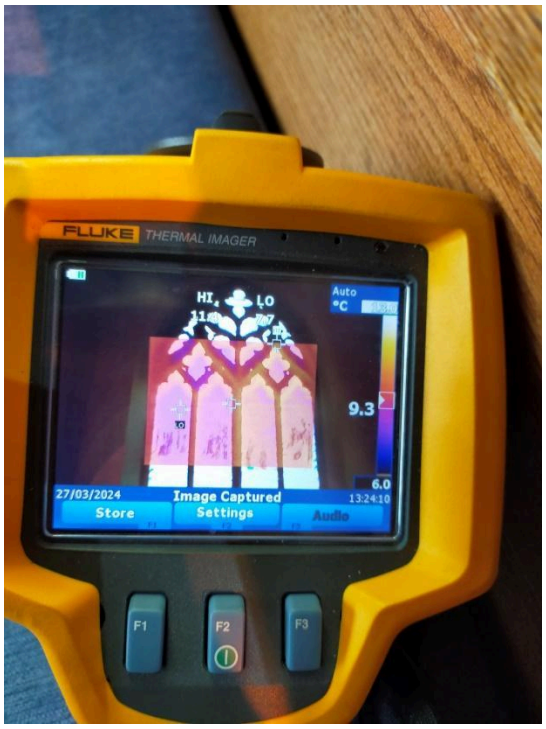
Window 3 (note there is a radiator under this one)



Window 4

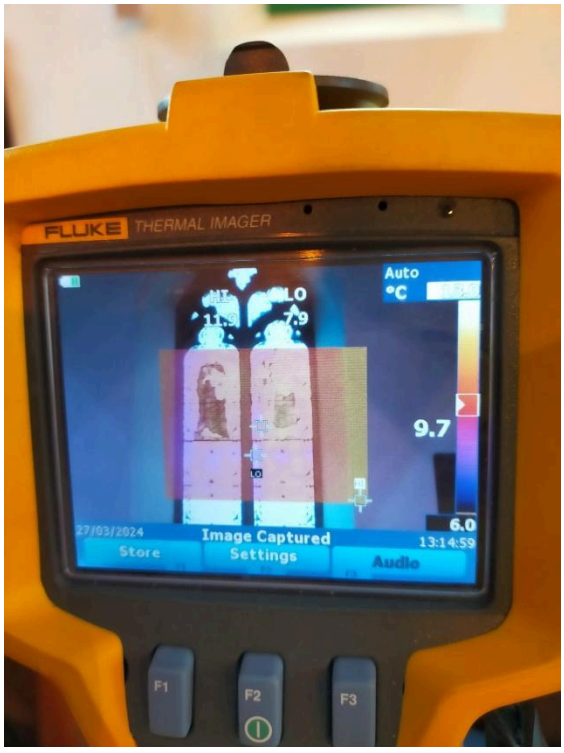
South side Chancel

Window 5

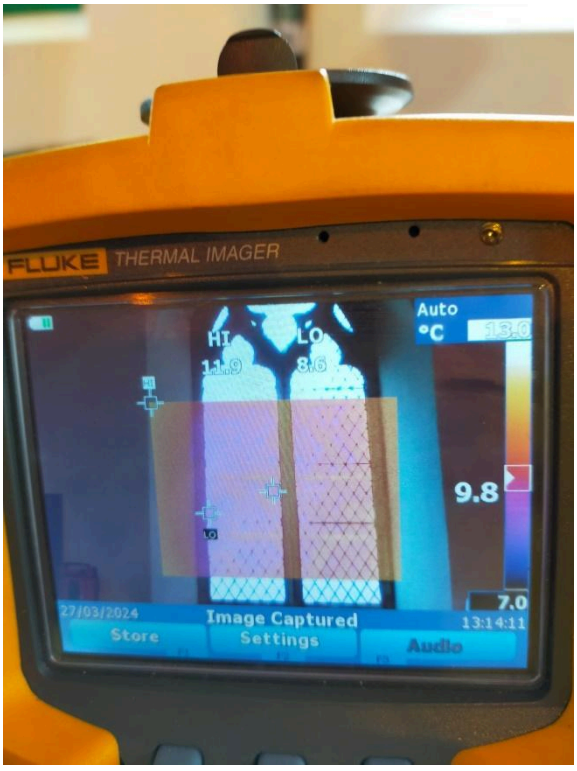


Window 6 (radiator below window)

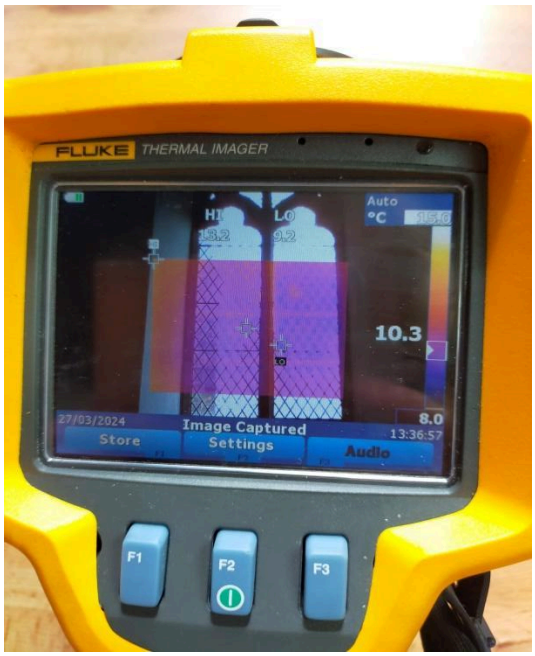
Window 7



Window 8



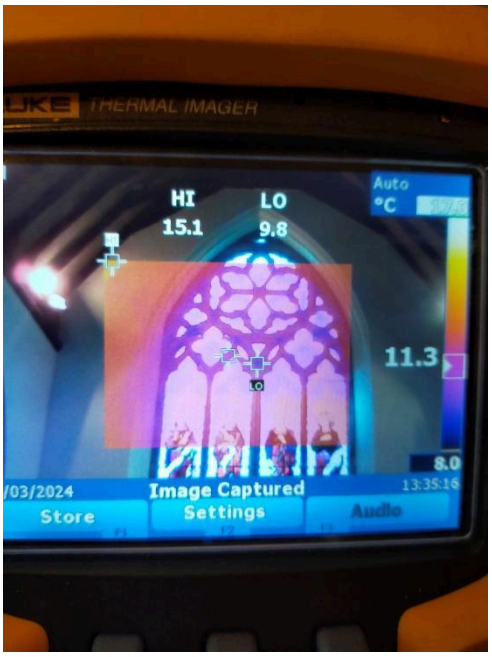
Window 10



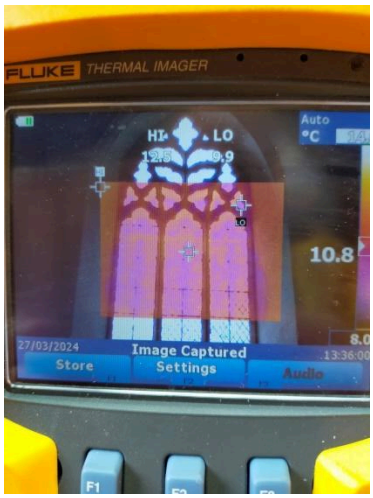
West Wall

Window 11

Window 12

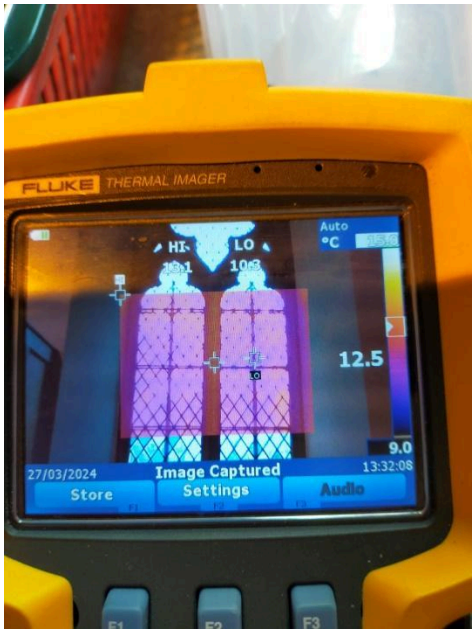


Window 13

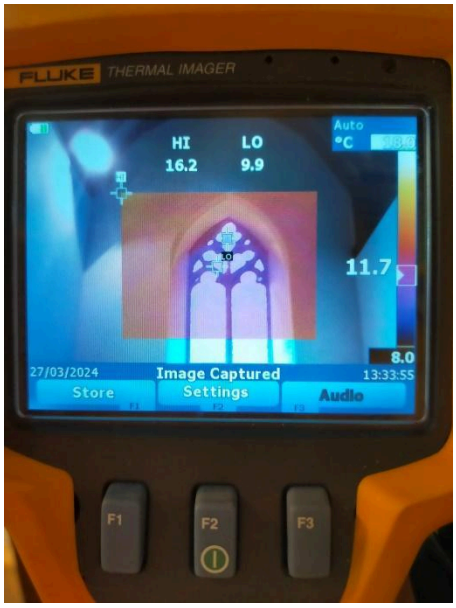


North Side Chanel

Window 14



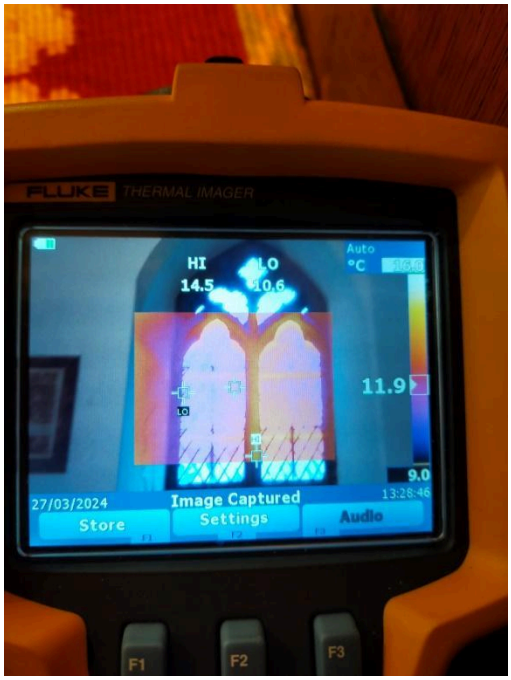
Window 15



Window 16

Window 17 (radiator under the window)

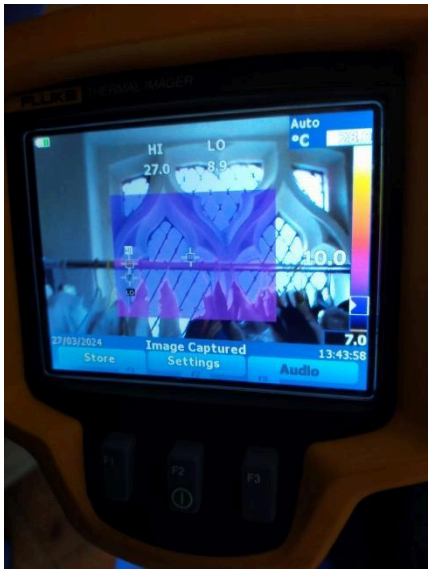
Window 23



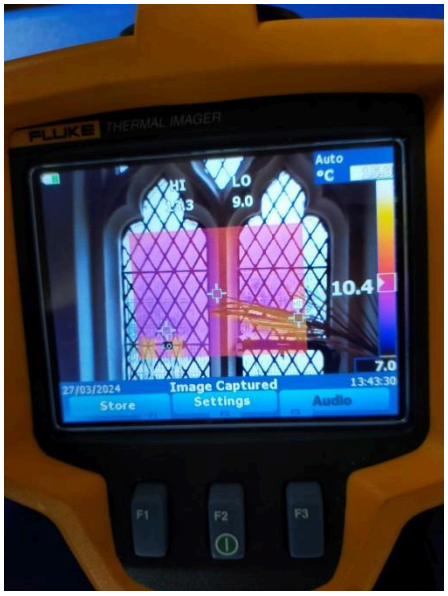
Window 18

Vestry

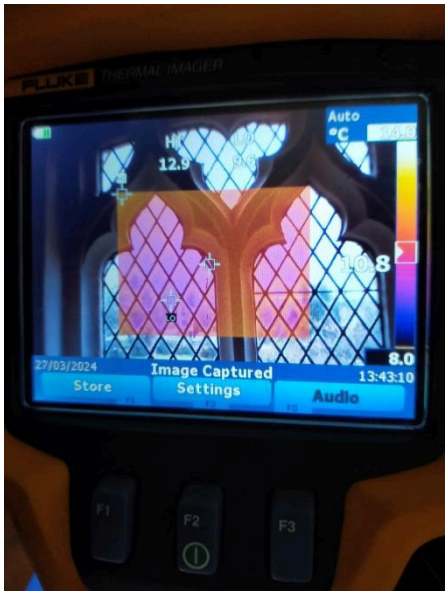
Window 19



Window 21

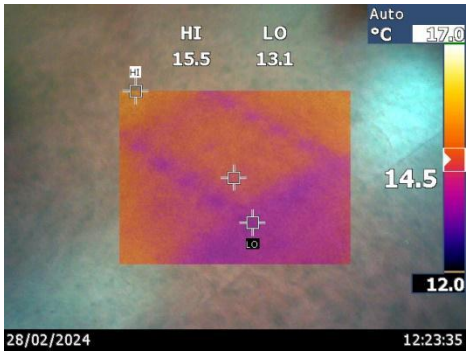


Window 22



Church Hall

Floor



Meeting room

Window 1

Window 2

Window 3

Window 4

Window 5

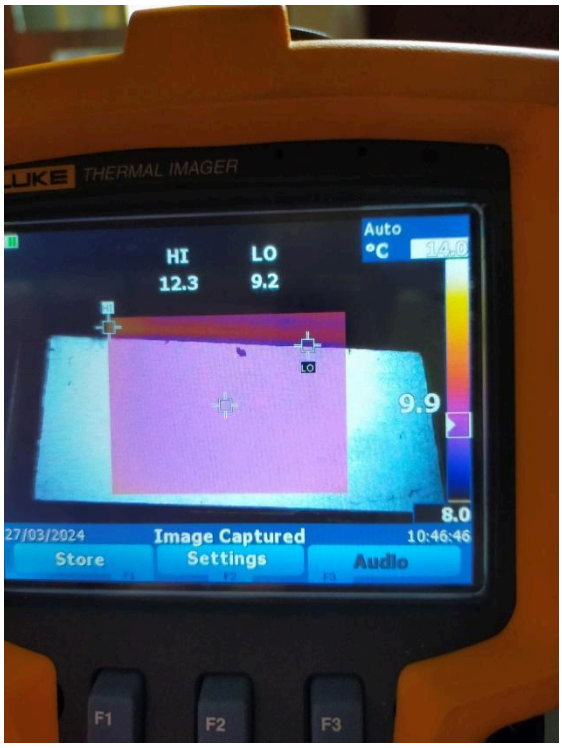
Window 6

Communal Areas

Window 7 - Kitchen

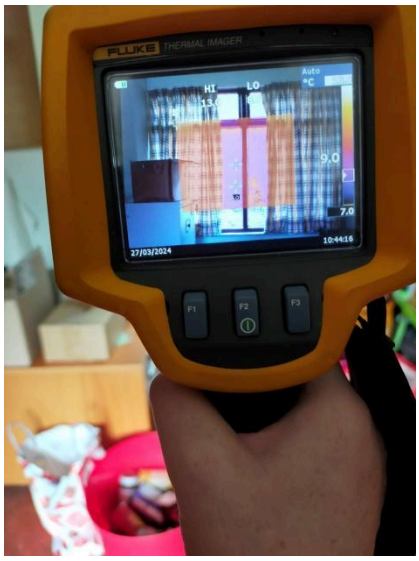
Window 8 – Ladies Loo

Window 10 –Gent's loo



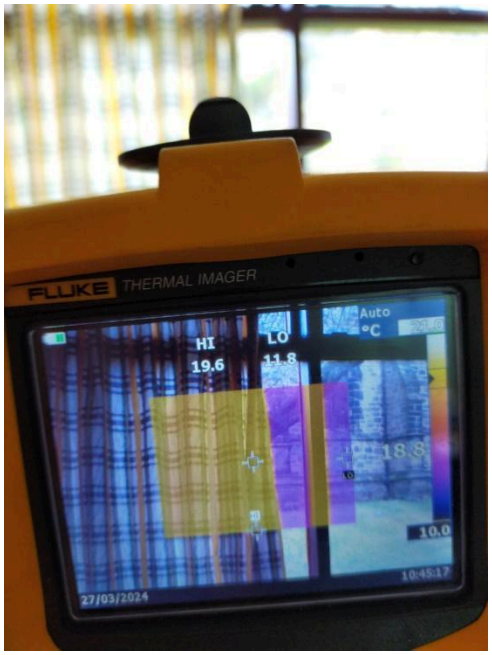
Food bank room

Window 12 (Very little heat in the room)



Marie's office

Window 14



Wall