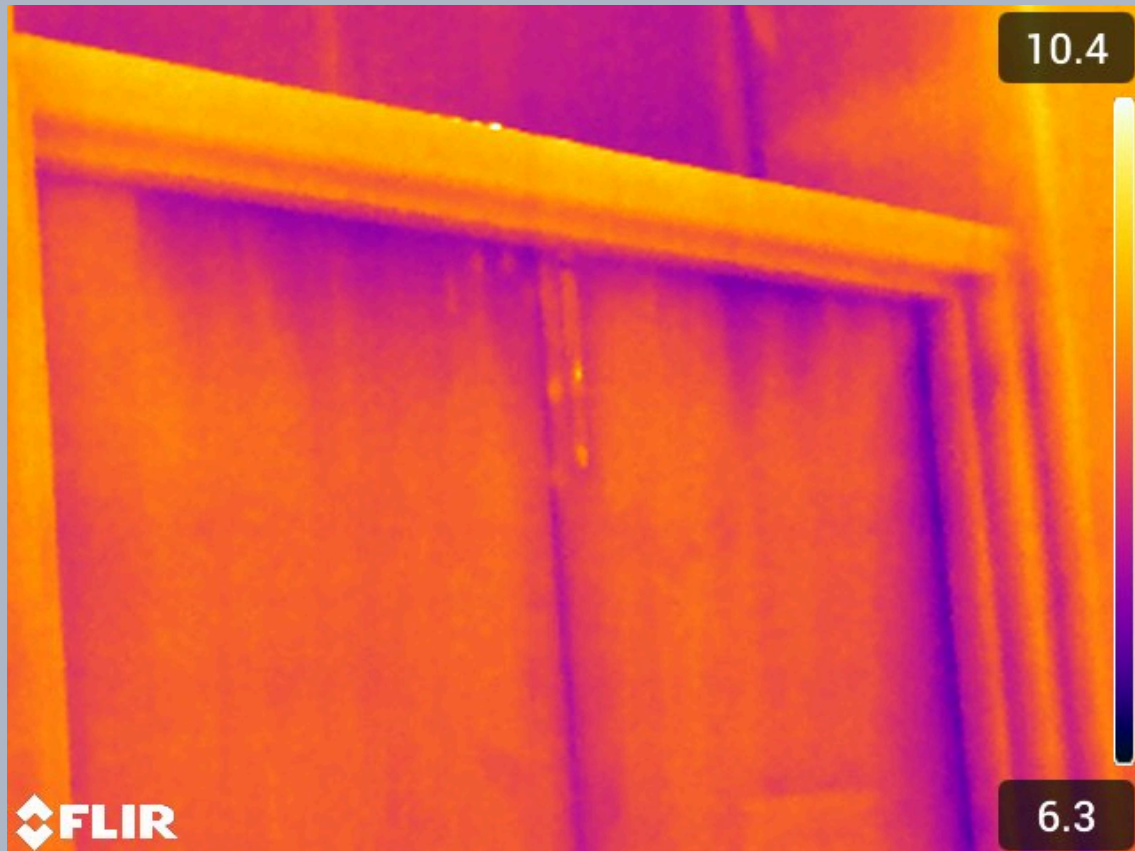


Thermal imaging survey report



Cromarty Hall, St Margaret's Hope

Thursday, February 27, 2025

Report information

Survey information

Customer	Community Energy Scotland 67A Castle Street, Inverness, IV2 3DU
Inspection location	Cromarty Hall, St Margaret's Hope Cromarty Square, St Margaret's Hope, Orkney, KW17 2TP
Inspection date and time	February 27, 2025 1030 to 1300

Surveyor information

Thermographer	Andrew Gibb
Qualifications	ITC Level 1 Thermography

Camera information

Manufacturer	Teledyne FLIR
Model	E54
Serial number	13300680

Environmental conditions

Outside temperature	8.0°C
Outside relative humidity	73.8%
Inside temperature	10.0°C
Inside relative humidity	65.0%

Qualification certificates



Declaration of Conformity

Awarded to

Andrew Gibb

Who has successfully completed a BINDT accredited training course in the following

Condition Monitoring Method and to the category stated

THERMOGRAPHY

CATEGORY 1

Sector: IRT

Trainer: J Willis

Course duration: 33 hours

Location: FLIR Office Kent

Course dates: 4th to 7th December 2023

ITC Certificate number: 2023GB49N007

Date of Issue: 12th December 2023

Signed for and on behalf of ITC (FLIR Systems Ltd)

Name: Jon Willis

Position: ITC Manager

Signature: J Willis

INFRARED TRAINING CENTER

FLIR SYSTEMS LTD

2 Kings Hill Avenue, Kings Hill, West Malling, Kent, ME19 4AQ

Survey items

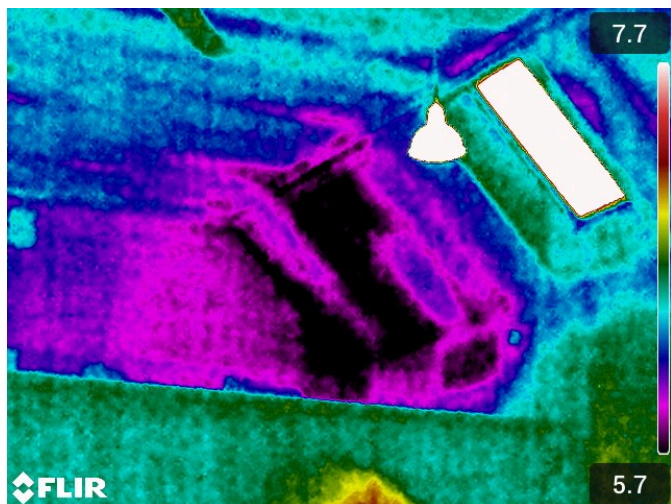
Survey item	Location
Foyer	Ground floor
Main room	Ground floor
Stage	Ground floor
Dressing room	Ground floor
Store	Ground floor
Cloak room	Ground floor
Bar / meeting room	Ground floor
Toilets	Ground floor
Stairway	Ground floor
Servery	Ground floor
Kitchen	Ground floor
Balcony	First floor
Yoga room	First floor

Survey limitations

The following items, which impacted the effectiveness of the survey, were noted:

1. The difference in temperature between the inside and outside of the building was 2°C. Typically, a temperature differential of 10°C is required for a thermal imaging survey. This will limit the type and number of anomalies detected.
2. In the cloakroom, chairs prevented access to view the outer wall.
3. In the dressing / book room, full bookshelves prevented access to view large areas of the walls.

Survey item	Location	Anomaly
Main room	Comarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 10:41:24
File name	FLIR0124.jpg
Width	640px
Height	480px

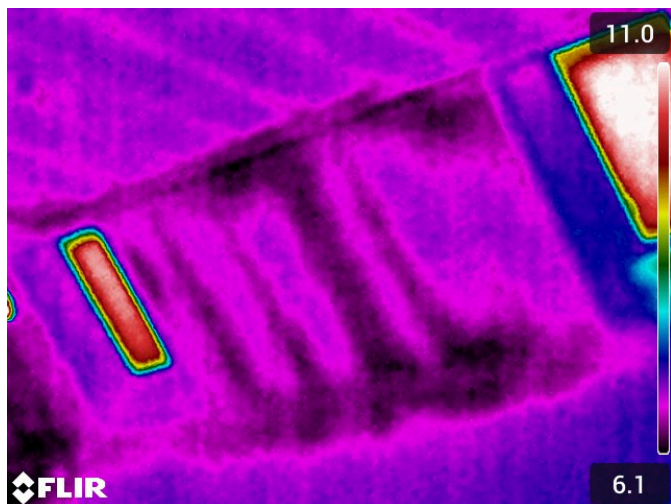
Measurements

Min. temp.	5.7°C
Max. temp.	7.7°C

Comments

Evidence of heat loss in area of sloped ceiling on the north side of the hall, above the balcony.

Survey item	Location	Anomaly
Main room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 10:44:14
File name	FLIR0126.jpg
Width	640px
Height	480px

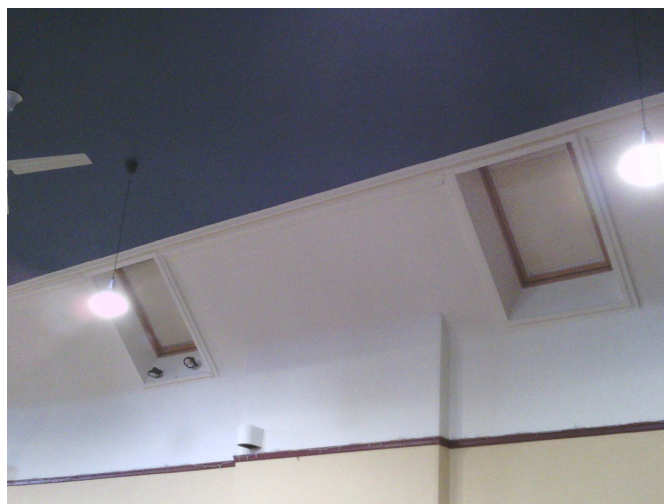
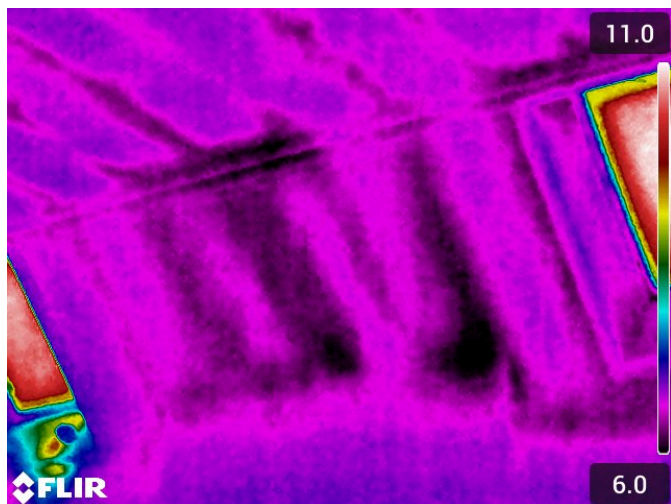
Measurements

Min. temp.	6.1°C
Max. temp.	11.0°C

Comments

Evidence of heat loss on area of sloped ceiling, between skylights on north side of the main hall.

Survey item	Location	Anomaly
Main room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 10:45:19
File name	FLIR0128.jpg
Width	640px
Height	480px

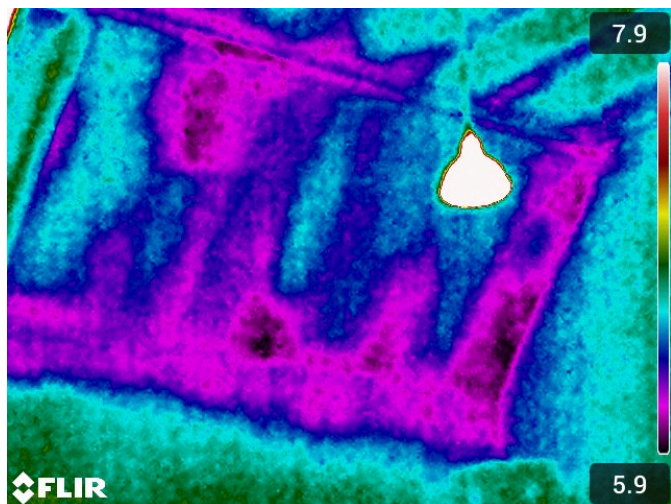
Measurements

Min. temp.	6.0°C
Max. temp.	11.0°C

Comments

Evidence of heat loss on area of sloped ceiling, between skylights on north side of the main hall.

Survey item	Location	Anomaly
Main room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 10:48:15
File name	FLIR0132.jpg
Width	640px
Height	480px

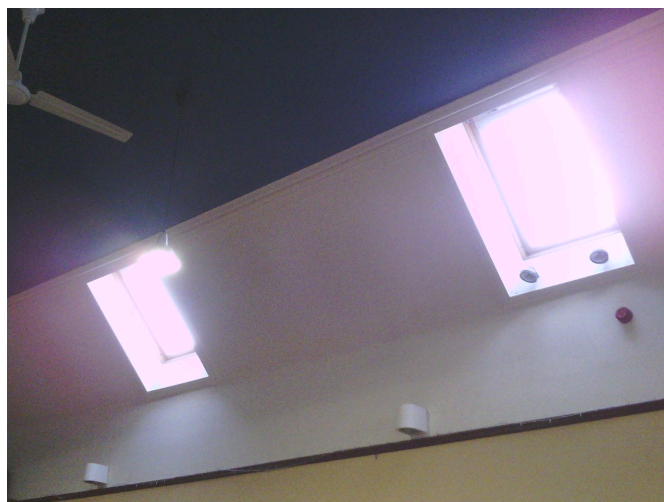
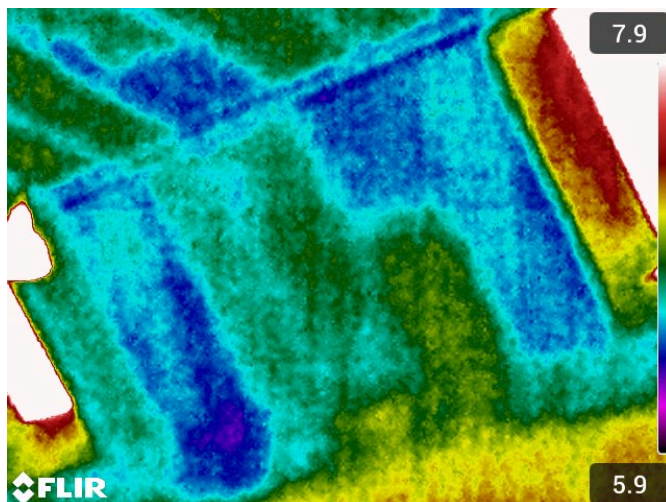
Measurements

Min. temp.	5.9°C
Max. temp.	7.9°C

Comments

Evidence of heat loss on area of sloped ceiling, next to stage in main hall.

Survey item	Location	Anomaly
Main room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 10:49:53
File name	FLIR0134.jpg
Width	640px
Height	480px

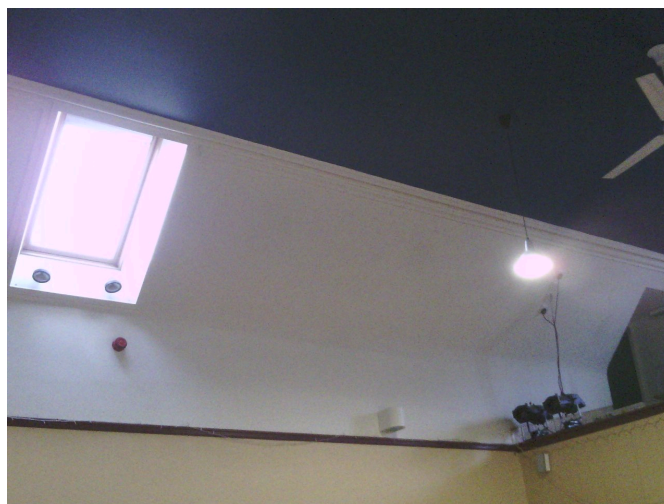
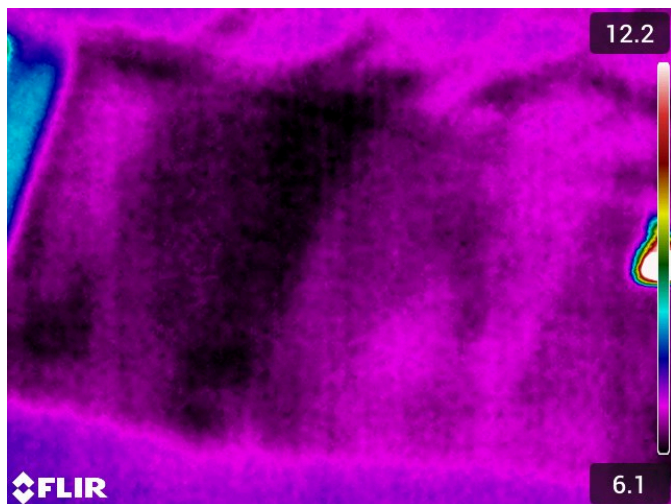
Measurements

Min. temp.	5.9°C
Max. temp.	7.9°C

Comments

Evidence of heat loss on area of sloped ceiling, between skylights on south side of the main hall.

Survey item	Location	Anomaly
Main room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 10:52:15
File name	FLIR0136.jpg
Width	640px
Height	480px

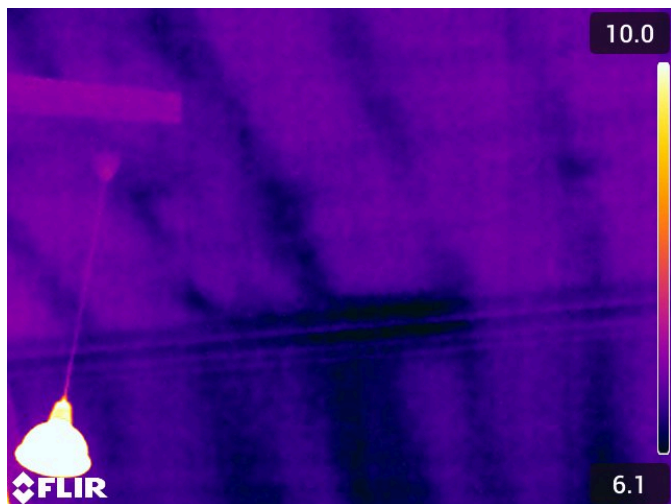
Measurements

Min. temp.	6.1°C
Max. temp.	12.2°C

Comments

Evidence of heat loss on area of sloped ceiling, between skylights on south side of the main hall.

Survey item	Location	Anomaly
Main room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 10:58:09
File name	FLIR0138.jpg
Width	640px
Height	480px

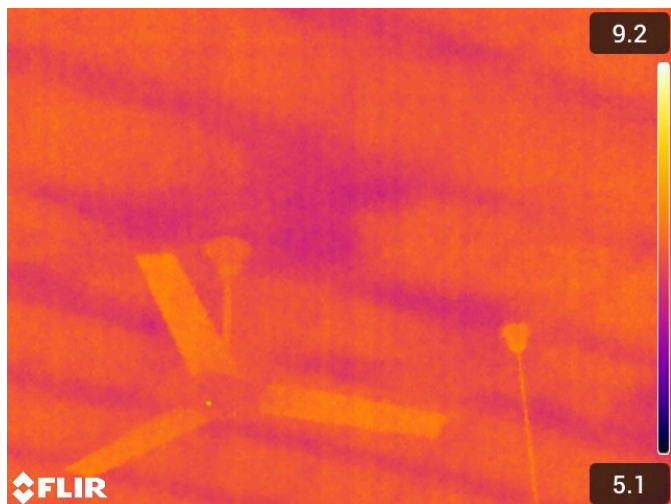
Measurements

Min. temp.	6.1°C
Max. temp.	10.0°C

Comments

Evidence of heat loss at wall ceiling joint on north side of main hall.

Survey item	Location	Anomaly
Main room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 11:00:33
File name	FLIR0140.jpg
Width	640px
Height	480px

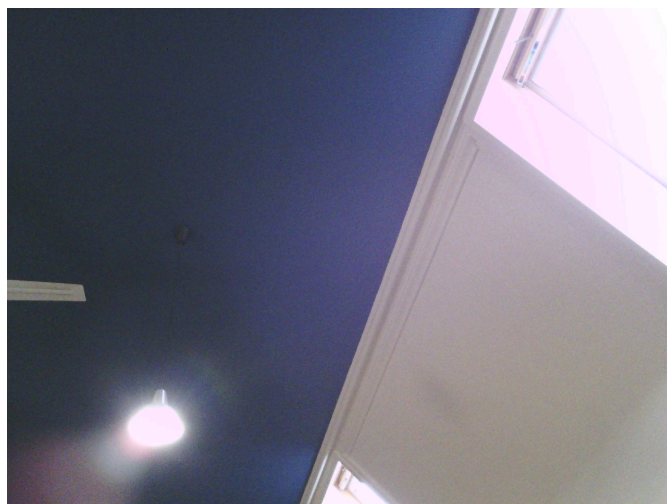
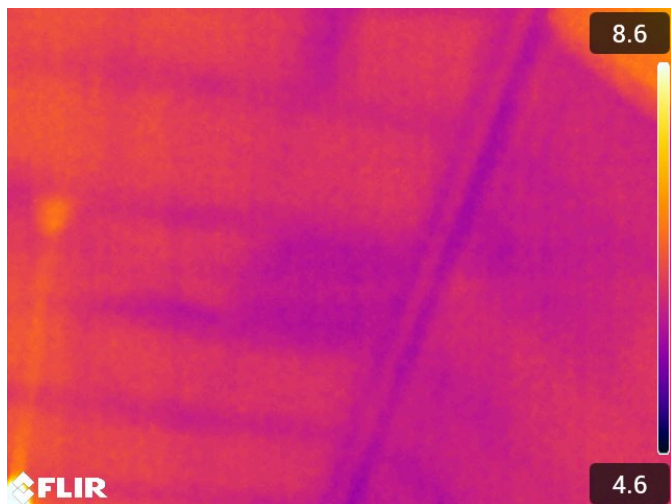
Measurements

Min. temp.	5.1°C
Max. temp.	9.2°C

Comments

Thermal pattern suggests area of poor insulation next to ceiling fan.

Survey item	Location	Anomaly
Main room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 11:02:33
File name	FLIR0142.jpg
Width	640px
Height	480px

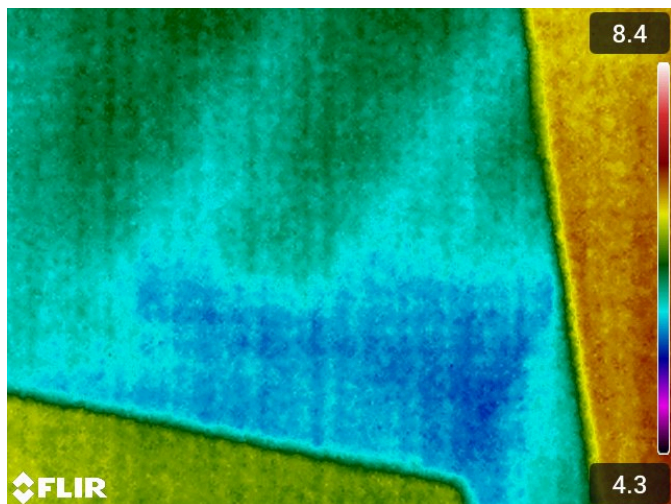
Measurements

Min. temp.	4.6°C
Max. temp.	8.6°C

Comments

Area of heat loss; thermal pattern suggests poor insulation.

Survey item	Location	Anomaly
Main room (stage)	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 11:11:11
File name	FLIR0144.jpg
Width	640px
Height	480px

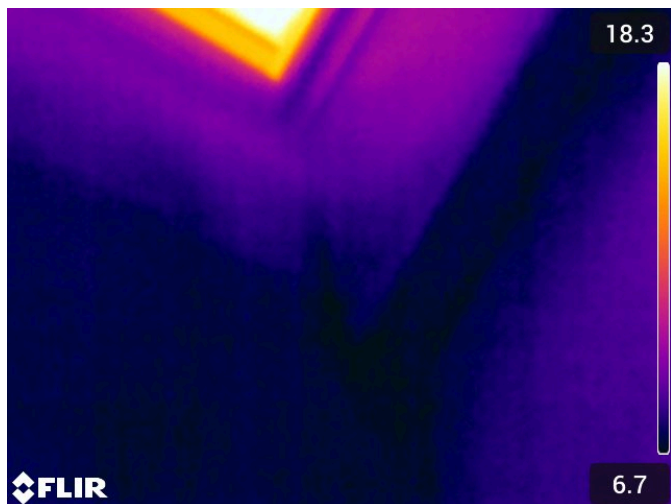
Measurements

Min. temp.	4.3°C
Max. temp.	8.4°C

Comments

Area of heat loss on sloped ceiling, on the north side of the main hall stage.

Survey item	Location	Anomaly
Main room (stage)	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 11:14:40
File name	FLIR0146.jpg
Width	640px
Height	480px

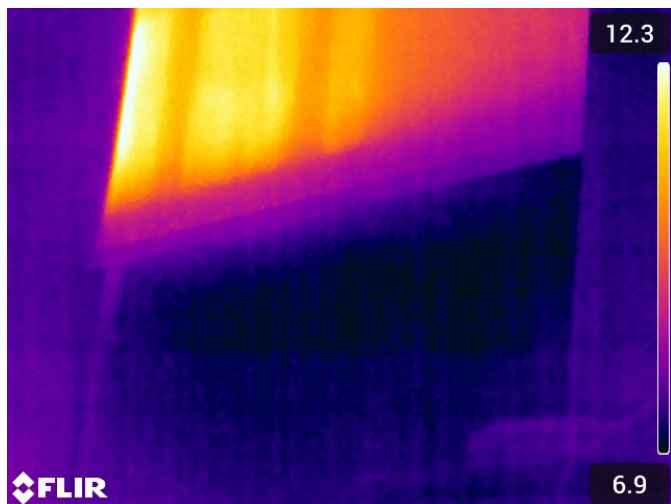
Measurements

Min. temp.	6.7°C
Max. temp.	18.3°C

Comments

Evidence of heat loss from area below skylight on north side of stage.

Survey item	Location	Anomaly
Main room (stage)	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 11:16:55
File name	FLIR0148.jpg
Width	640px
Height	480px

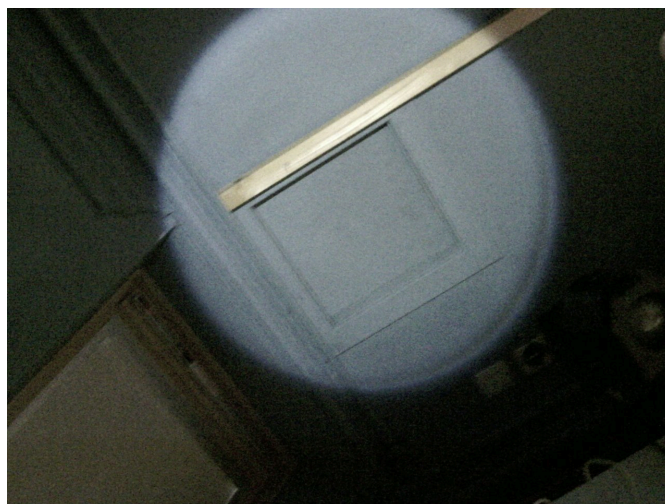
Measurements

Min. temp.	6.9°C
Max. temp.	12.3°C

Comments

Area of heat loss from below window at the rear of the stage. Thermal pattern suggests poor insulation below the window.

Survey item	Location	Anomaly
Main room (stage)	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 11:19:34
File name	FLIR0150.jpg
Width	640px
Height	480px

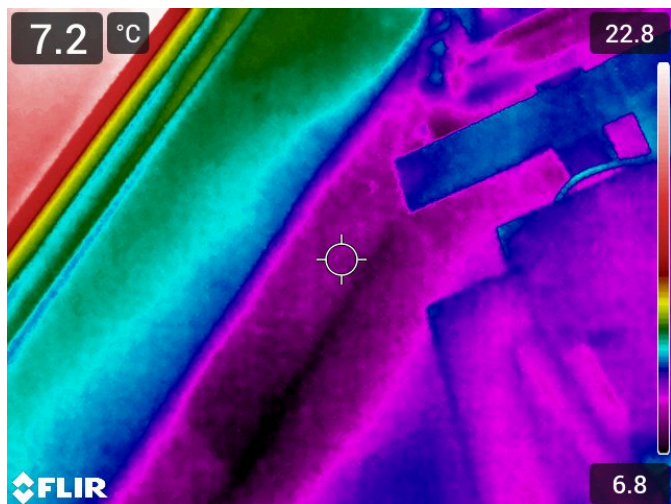
Measurements

Min. temp.	6.9°C
Max. temp.	15.2°C

Comments

Thermal pattern suggests cold air leakage from attic hatch on north side of stage.

Survey item	Location	Anomaly
Main room (stage)	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 11:23:09
File name	FLIR0152.jpg
Width	640px
Height	480px

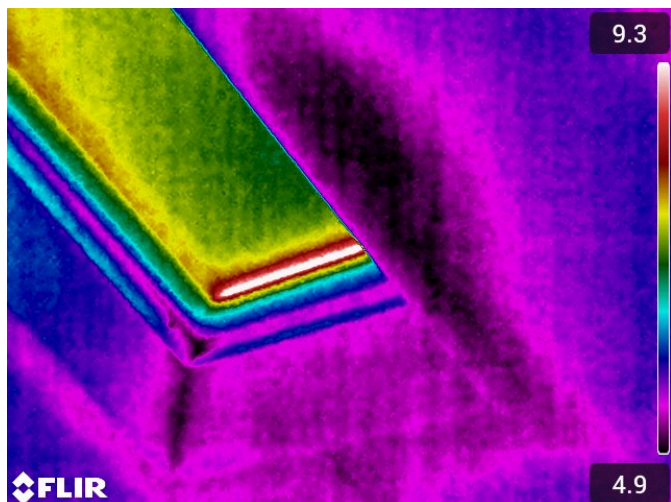
Measurements

Min. temp.	6.8°C
Max. temp.	22.8°C

Comments

Evidence of heat loss to the right of skylight above the stage.

Survey item	Location	Anomaly
Bar / meeting room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 11:29:28
File name	FLIR0154.jpg
Width	640px
Height	480px

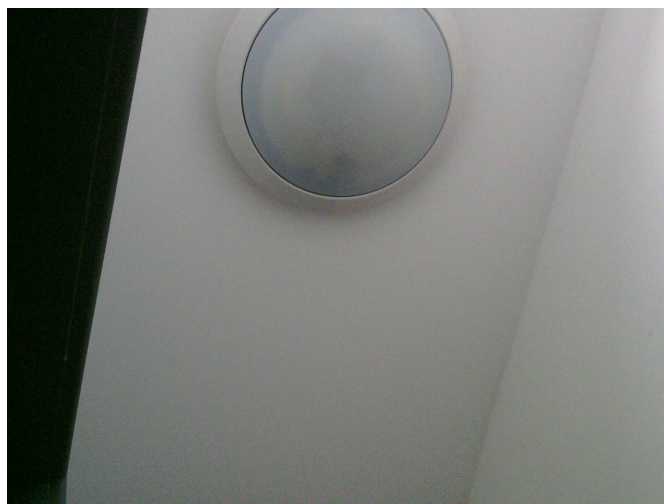
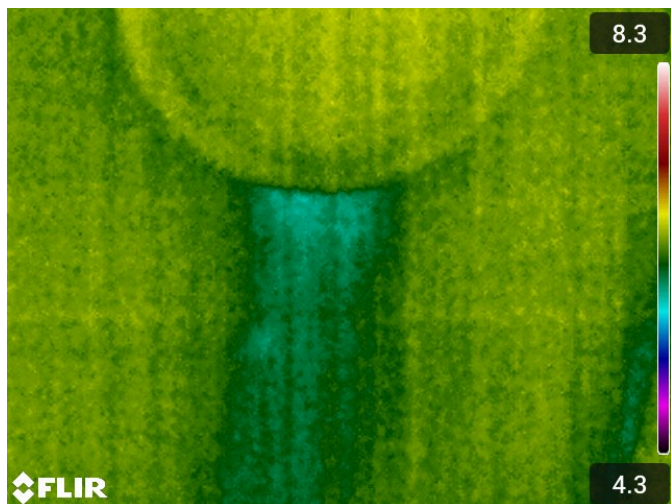
Measurements

Min. temp.	4.9°C
Max. temp.	9.3°C

Comments

Evidence of heat loss to the right of skylight in bar / meeting room.

Survey item	Location	Anomaly
Bar / meeting room toilet	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 11:34:39
File name	FLIR0156.jpg
Width	640px
Height	480px

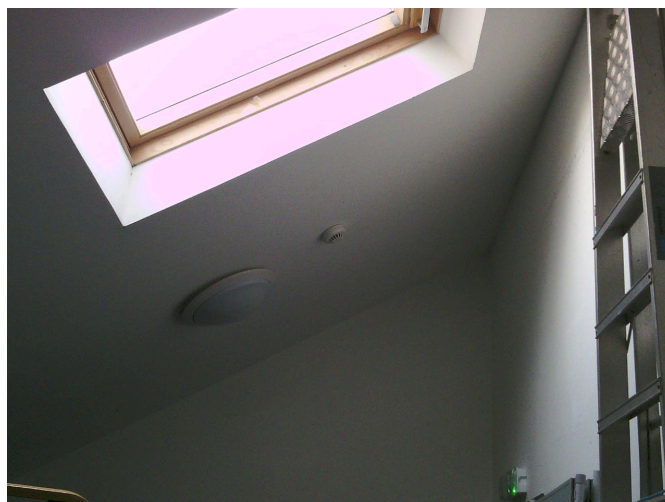
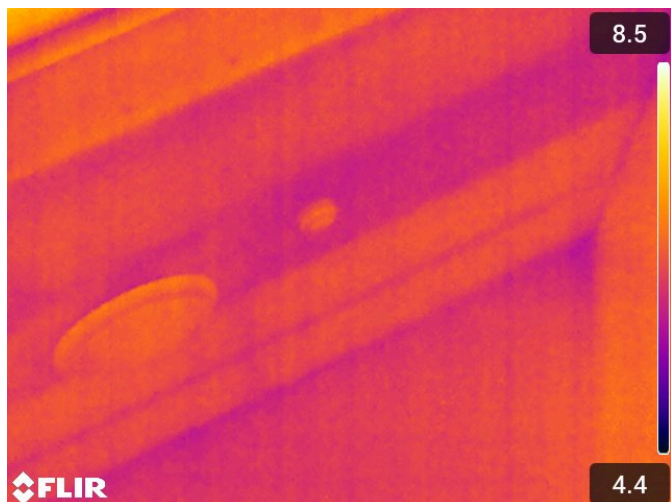
Measurements

Min. temp.	4.3°C
Max. temp.	8.3°C

Comments

Area below light in bar / meeting room toilet. Thermal pattern suggests cold air entering below the light fitting.

Survey item	Location	Anomaly
Bar / meeting room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 11:36:54
File name	FLIR0158.jpg
Width	640px
Height	480px

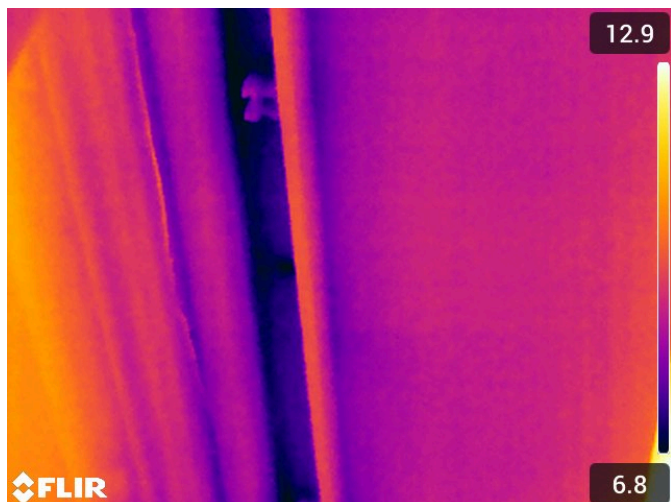
Measurements

Min. temp.	4.4°C
Max. temp.	8.5°C

Comments

Area of heat loss in line with light fitting in bar / meeting room. Thermal pattern suggests poor insulation in this area.

Survey item	Location	Anomaly
Dressing / book room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 11:48:38
File name	FLIR0166.jpg
Width	640px
Height	480px

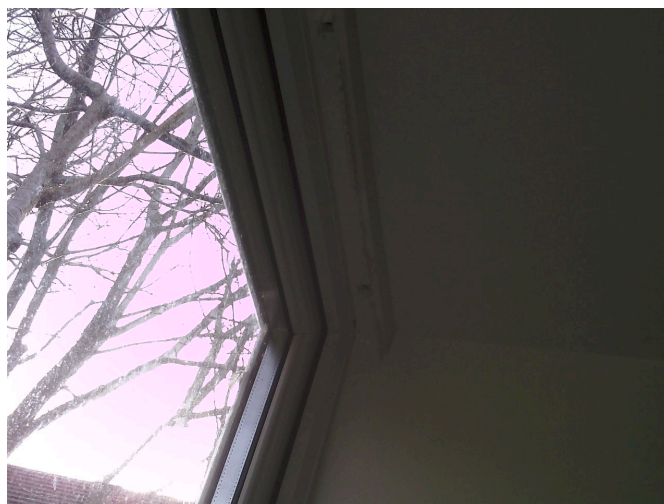
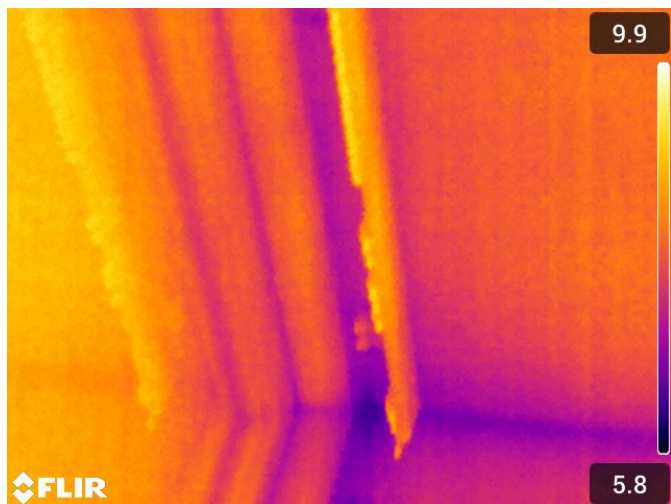
Measurements

Min. temp.	6.8°C
Max. temp.	12.9°C

Comments

This image shows the left-hand (from inside) window in the dressing / book room. Thermal pattern suggests cold air is entering the building at the window seal. Mould also observed at the top of the window frame. The following image, of the right-hand window is shown for comparison — little or no cold air ingress.

Survey item	Location	Anomaly
Dressing / book room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 11:49:40
File name	FLIR0168.jpg
Width	640px
Height	480px

Measurements

Min. temp.	5.8°C
Max. temp.	9.9°C

Comments

This image shows the right-hand (from inside) window in the dressing / book room. As mentioned in the previous comment, little or no cold air ingress can be seen. It was also noted that there was no mould on this window.

Survey item	Location	Anomaly
Store	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:09:06
File name	FLIR0186.jpg
Width	640px
Height	480px

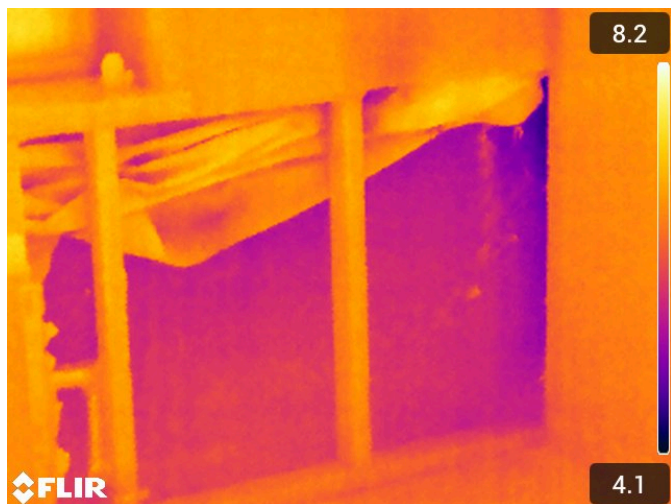
Measurements

Min. temp.	4.5°C
Max. temp.	8.6°C

Comments

Images show missing plasterboard in the store. The lack of insulation in this area will result in significant heat loss.

Survey item	Location	Anomaly
Store	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:10:05
File name	FLIR0188.jpg
Width	640px
Height	480px

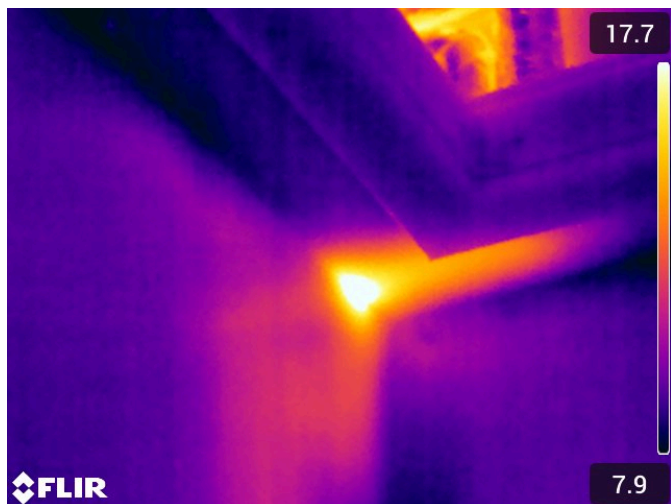
Measurements

Min. temp.	4.1°C
Max. temp.	8.2°C

Comments

Additional images of the missing plasterboard, and resultant heat loss, in the store.

Survey item	Location	Anomaly
Hallway	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:15:40
File name	FLIR0190.jpg
Width	640px
Height	480px

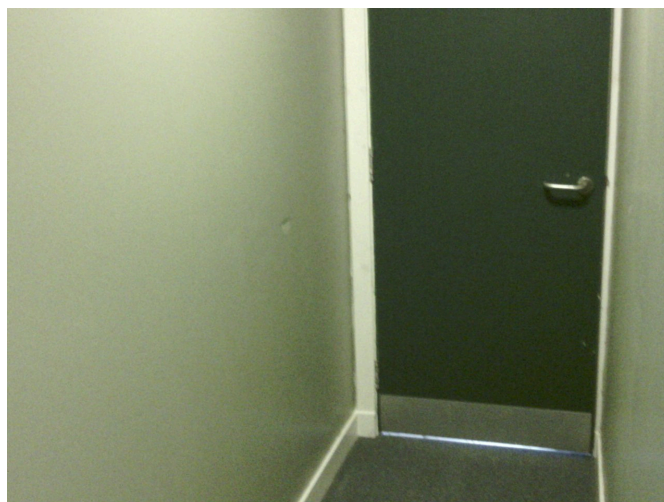
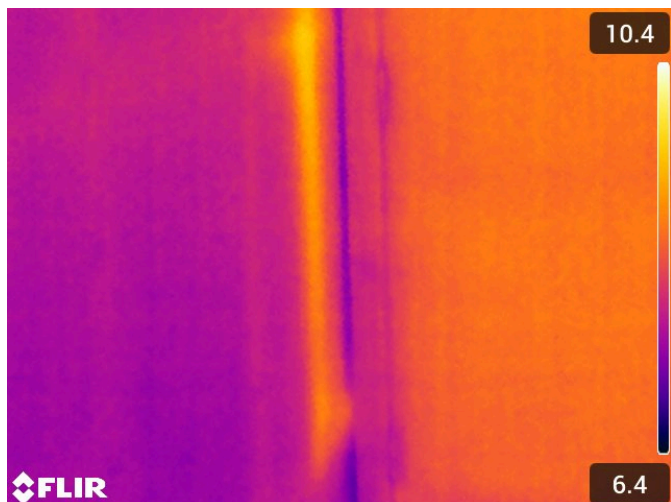
Measurements

Min. temp.	7.9°C
Max. temp.	17.7°C

Comments

Thermal image shows a warm area next to the hatch in the hallway (behind the stage). This is likely due to a lack of insulation on hot water pipes above. Consideration should be given to insulating the hot water pipes to ensure they do not lose heat.

Survey item	Location	Anomaly
Hallway	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:16:37
File name	FLIR0192.jpg
Width	640px
Height	480px

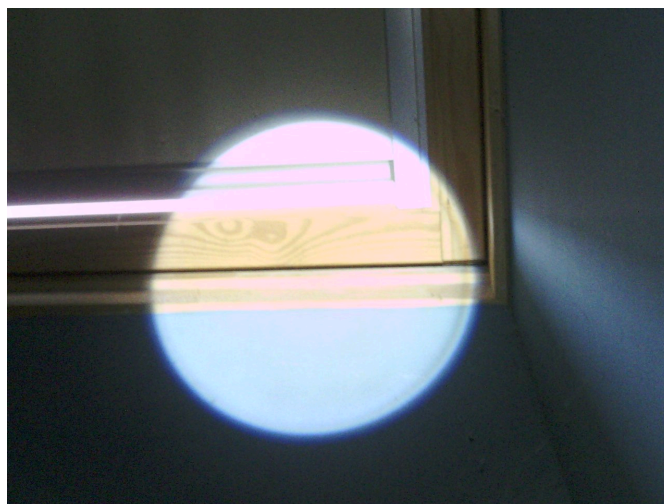
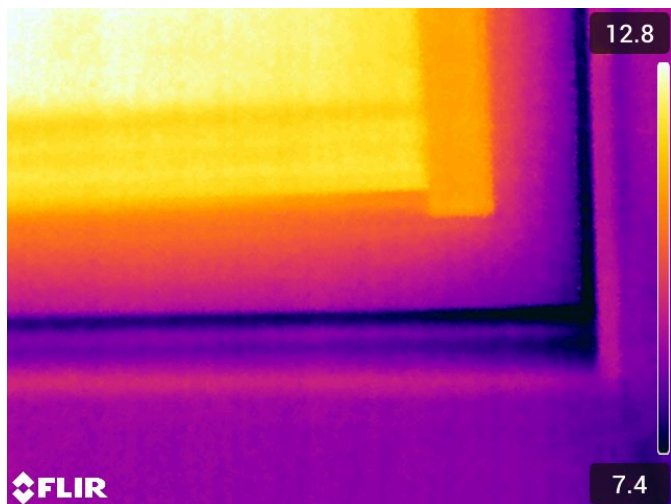
Measurements

Min. temp.	6.4°C
Max. temp.	10.4°C

Comments

Additional image of the warm area in the hallway, likely caused by heat from hot water pipes.

Survey item	Location	Anomaly
Main room (stage)	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:23:28
File name	FLIR0194.jpg
Width	640px
Height	480px

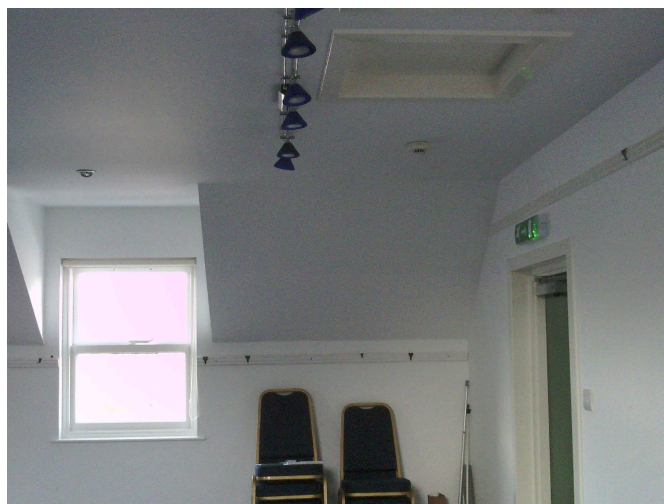
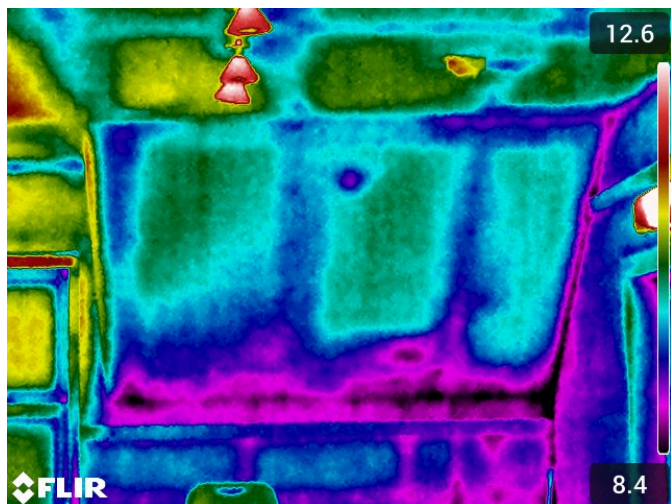
Measurements

Min. temp.	7.4°C
Max. temp.	12.8°C

Comments

Image shows skylight above the north end of the stage. The thermal pattern suggests cold air entering the building at the bottom of the skylight seal.

Survey item	Location	Anomaly
Yoga room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:32:58
File name	FLIR0196.jpg
Width	640px
Height	480px

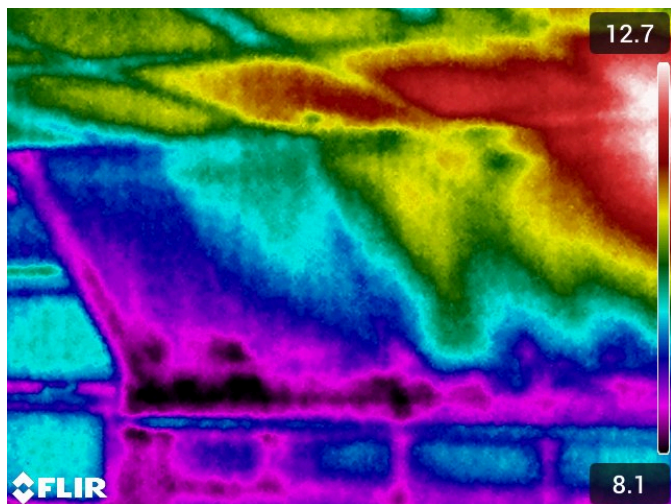
Measurements

Min. temp.	8.4°C
Max. temp.	12.6°C

Comments

Throughout the yoga room, there is evidence of multiple small thermal bridges around the joint between the walls and the sloping ceiling.

Survey item	Location	Anomaly
Yoga room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:34:03
File name	FLIR0198.jpg
Width	640px
Height	480px

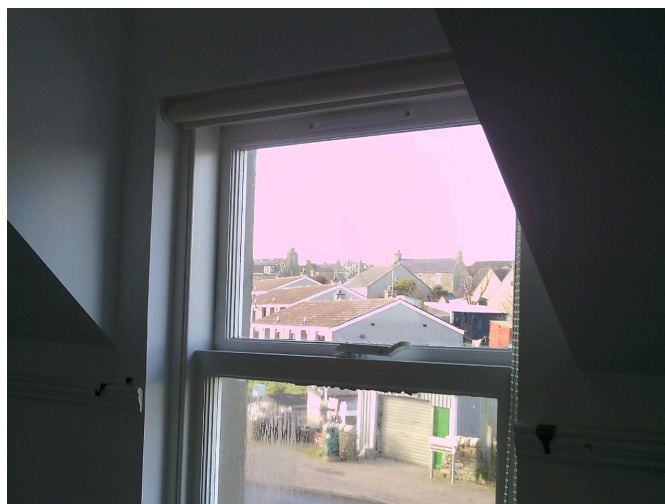
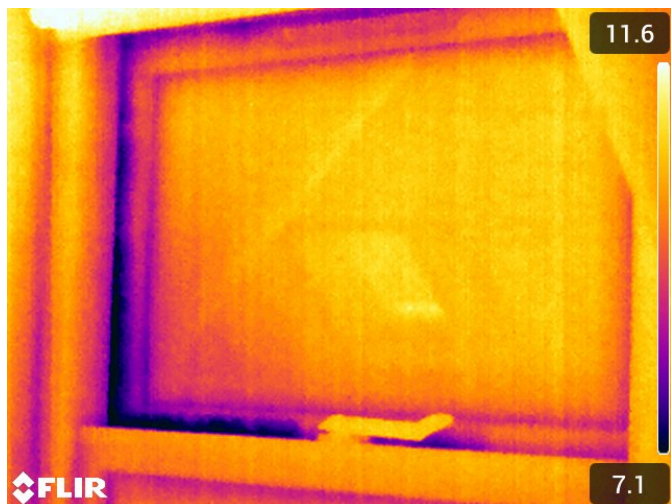
Measurements

Min. temp.	8.1°C
Max. temp.	12.7°C

Comments

Throughout the yoga room, there is evidence of multiple small thermal bridges around the joint between the walls and the sloping ceiling. The red area in the thermal image can be ignored; this is due to sunlight on the skylights.

Survey item	Location	Anomaly
Yoga room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:37:45
File name	FLIR0202.jpg
Width	640px
Height	480px

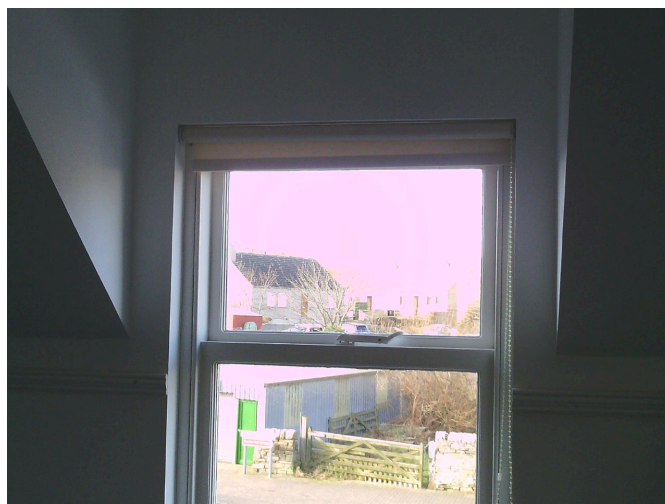
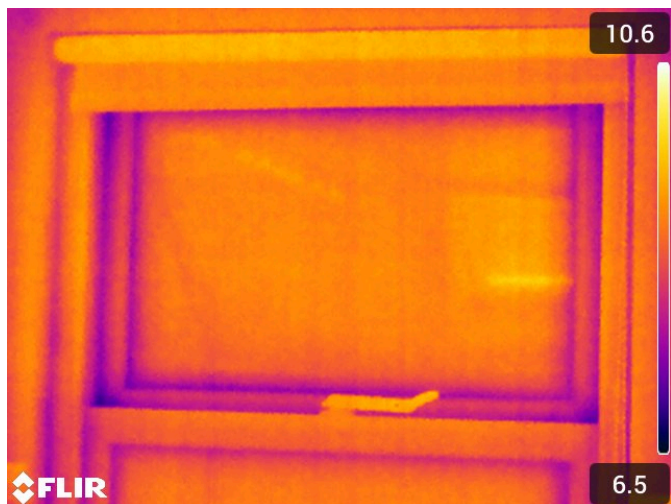
Measurements

Min. temp.	7.1°C
Max. temp.	11.6°C

Comments

This image shows the first window on the right, on the west wall of the yoga room. Thermal pattern suggests cold air entering through the seal in the opening part of the window.

Survey item	Location	Anomaly
Yoga room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:39:11
File name	FLIR0204.jpg
Width	640px
Height	480px

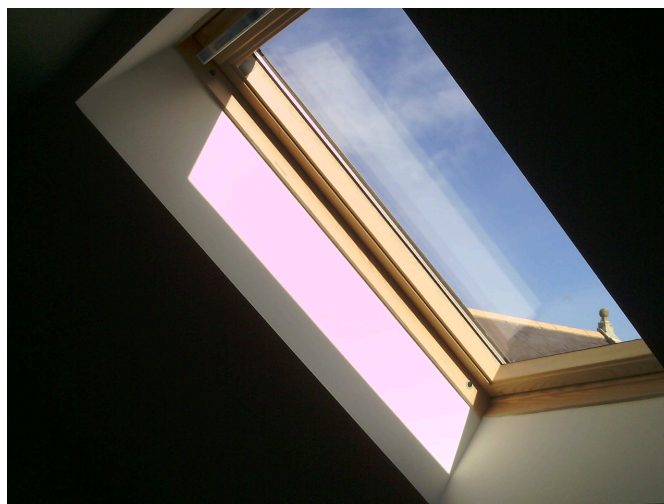
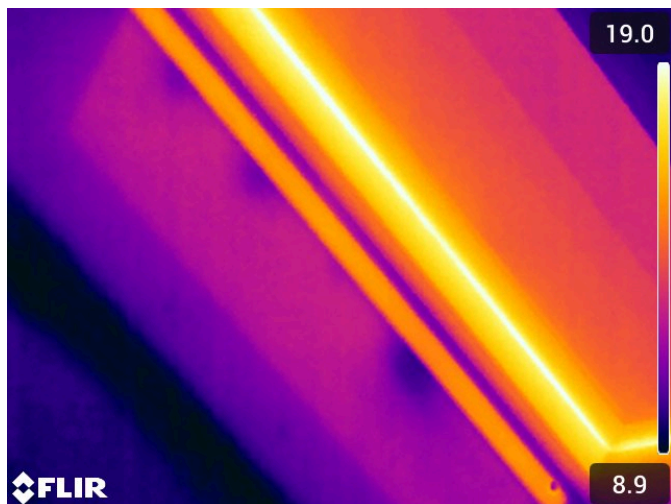
Measurements

Min. temp.	6.5°C
Max. temp.	10.6°C

Comments

This image shows the second window on the right, on the west wall of the yoga room. Thermal pattern suggests cold air entering through the seal in the opening part of the window — particularly at the corners.

Survey item	Location	Anomaly
Yoga room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:41:40
File name	FLIR0206.jpg
Width	640px
Height	480px

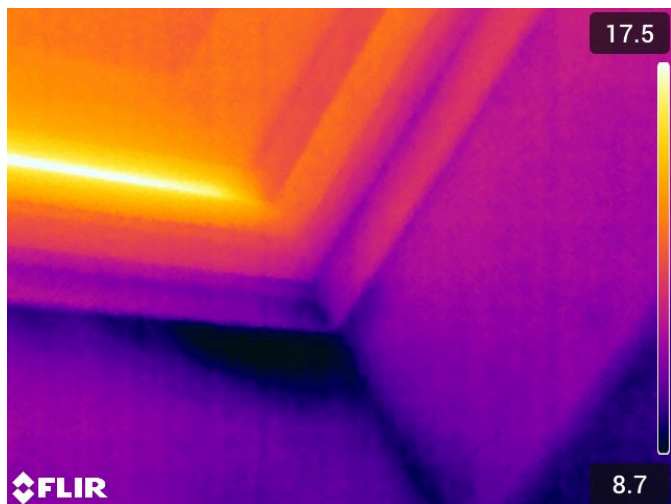
Measurements

Min. temp.	8.9°C
Max. temp.	19.0°C

Comments

This image shows the first window on the left, on the east wall of the yoga room. The thermal image shows three areas where cold air is entering through the seal between the window flashing and the ingo.

Survey item	Location	Anomaly
Yoga room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:42:09
File name	FLIR0208.jpg
Width	640px
Height	480px

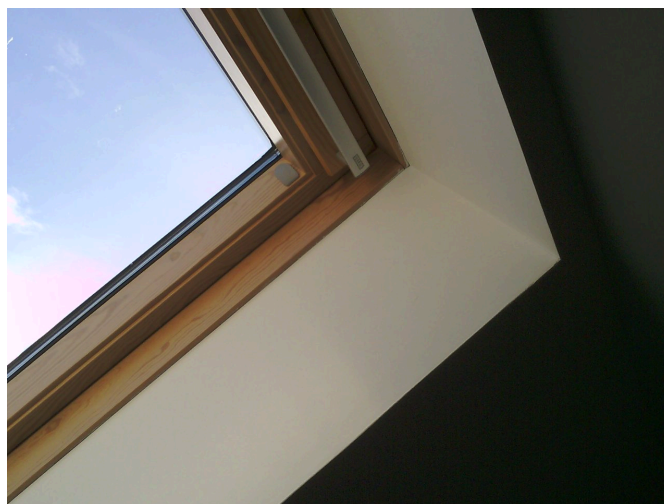
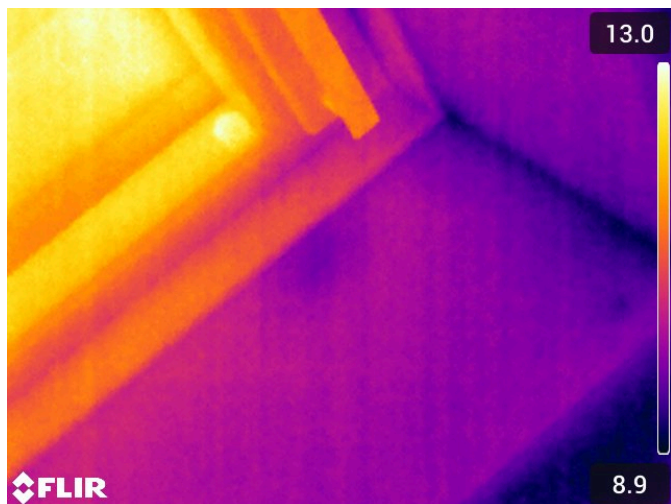
Measurements

Min. temp.	8.7°C
Max. temp.	17.5°C

Comments

This image shows the first window on the left, on the east wall of the yoga room. The thermal image shows a cold area at the bottom right of the skylight. This could be caused by cold air or a thermal bridge in that area.

Survey item	Location	Anomaly
Yoga room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:42:55
File name	FLIR0210.jpg
Width	640px
Height	480px

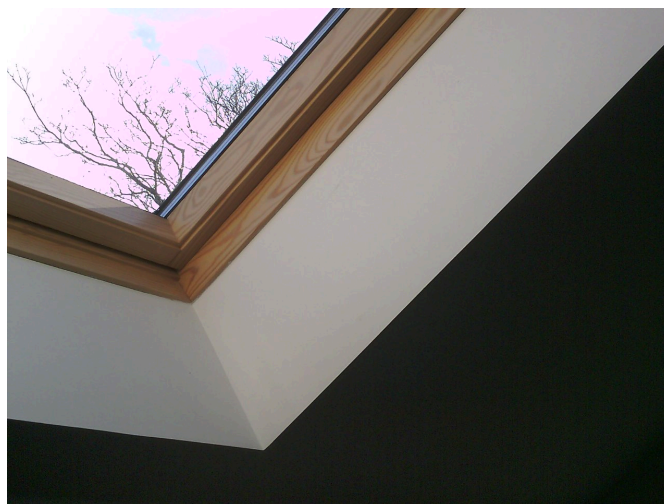
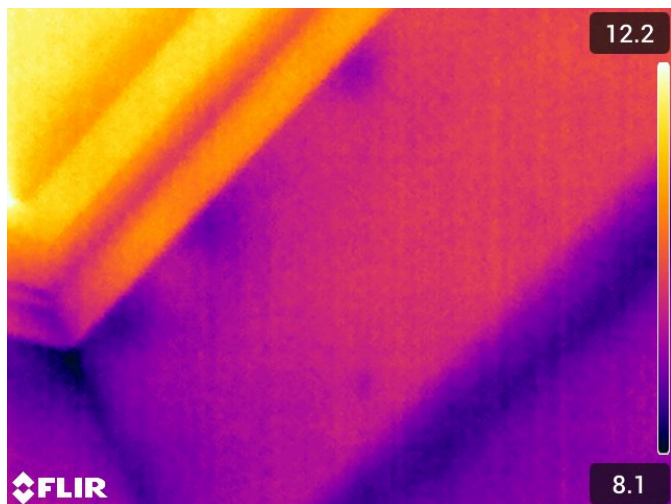
Measurements

Min. temp.	8.9°C
Max. temp.	13.0°C

Comments

This image shows the first window on the left, on the east wall of the yoga room. The thermal image shows a small area where cold air is entering through the seal between the window flashing and the ingo.

Survey item	Location	Anomaly
Yoga room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:44:26
File name	FLIR0212.jpg
Width	640px
Height	480px

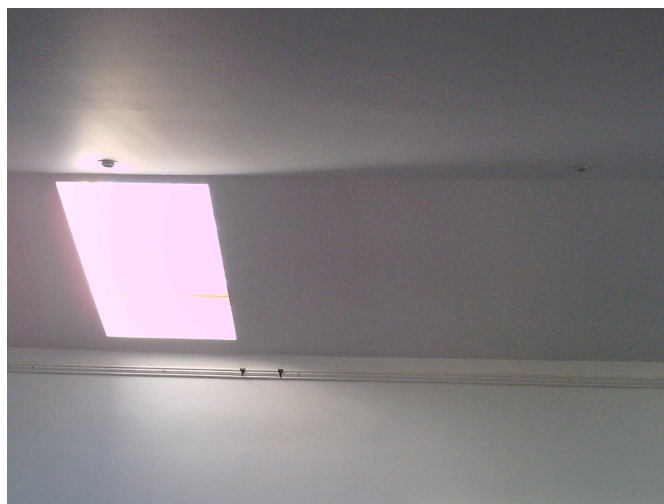
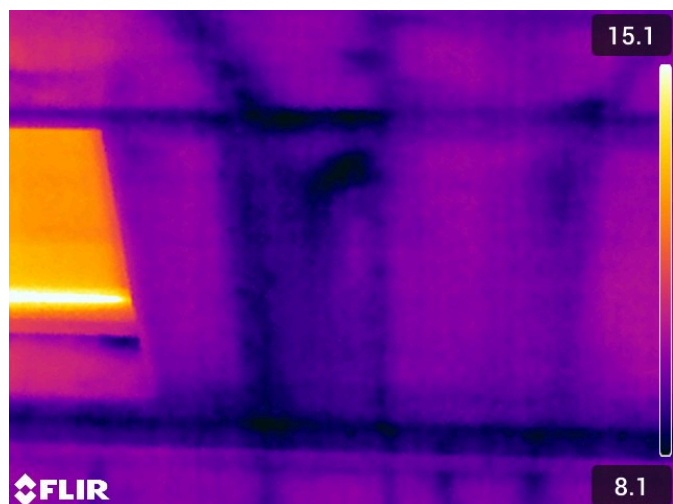
Measurements

Min. temp.	8.1°C
Max. temp.	12.2°C

Comments

This image shows the second window on the left, on the east wall of the yoga room. The thermal image shows three small areas where cold air is entering through the seal between the window flashing and the ingo.

Survey item	Location	Anomaly
Yoga room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:45:30
File name	FLIR0214.jpg
Width	640px
Height	480px

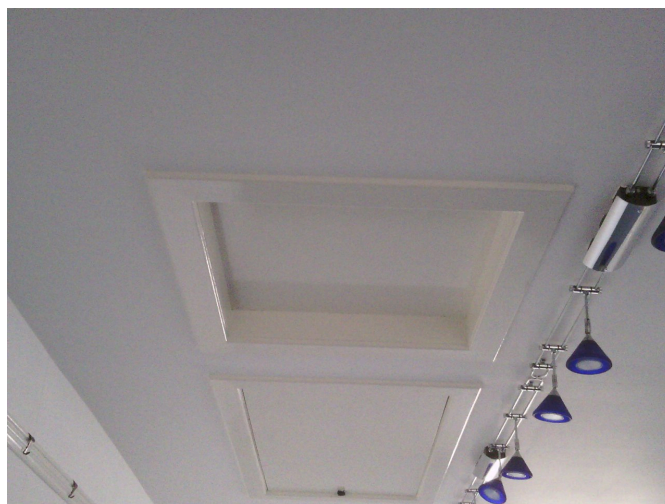
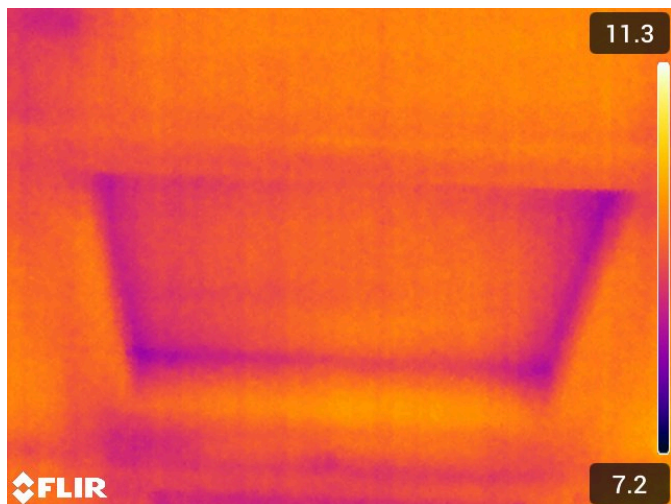
Measurements

Min. temp.	8.1°C
Max. temp.	15.1°C

Comments

Thermal bridge noted in the yoga room to the right of the first-right skylight.

Survey item	Location	Anomaly
Yoga room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:48:12
File name	FLIR0216.jpg
Width	640px
Height	480px

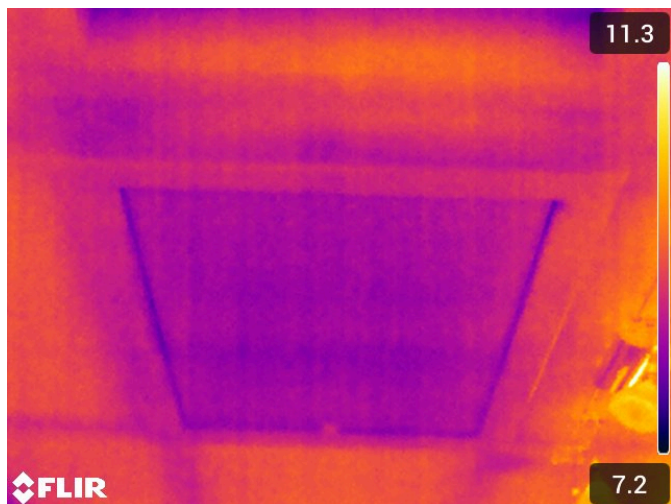
Measurements

Min. temp.	7.2°C
Max. temp.	11.3°C

Comments

Image shows cold air entering the yoga room from the seal on the attic hatch.

Survey item	Location	Anomaly
Yoga room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:48:43
File name	FLIR0218.jpg
Width	640px
Height	480px

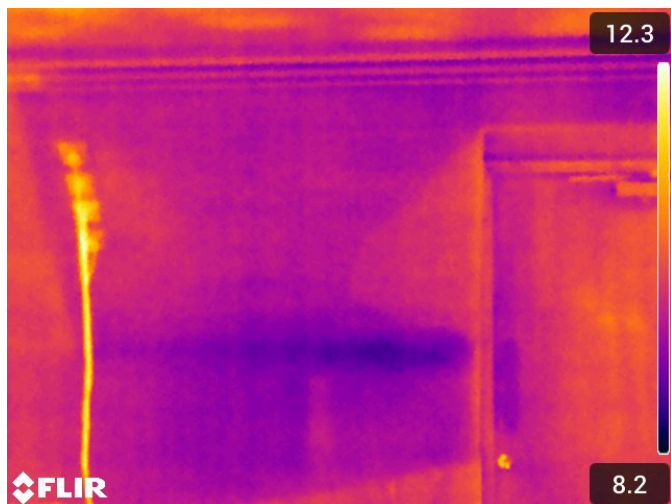
Measurements

Min. temp.	7.2°C
Max. temp.	11.3°C

Comments

Image shows cold air entering the yoga room from the seal on the attic hatch.

Survey item	Location	Anomaly
Balcony	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:53:39
File name	FLIR0222.jpg
Width	640px
Height	480px

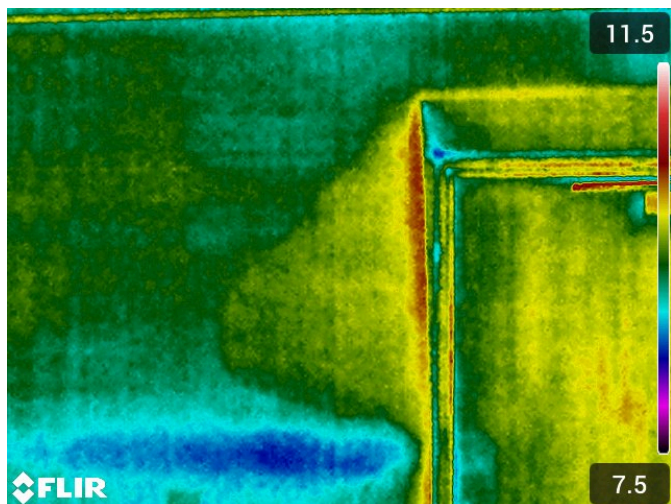
Measurements

Min. temp.	8.2°C
Max. temp.	12.3°C

Comments

Image shows the area of sloped ceiling on the south side of the balcony. This area of sloped ceiling, and also the area on the north side of the balcony, are colder than the rest of the ceiling in the main hall. This suggests a lack of insulation in the sloped ceiling above the balcony. Also, note the thermal pattern to the left of the door; this curved area has defined edges, suggesting it may be due to moisture. There is also discolouration noted on the wall on the leading edge of the curved area. This anomaly should be further investigated to understand the cause.

Survey item	Location	Anomaly
Balcony	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:57:15
File name	FLIR0226.jpg
Width	640px
Height	480px

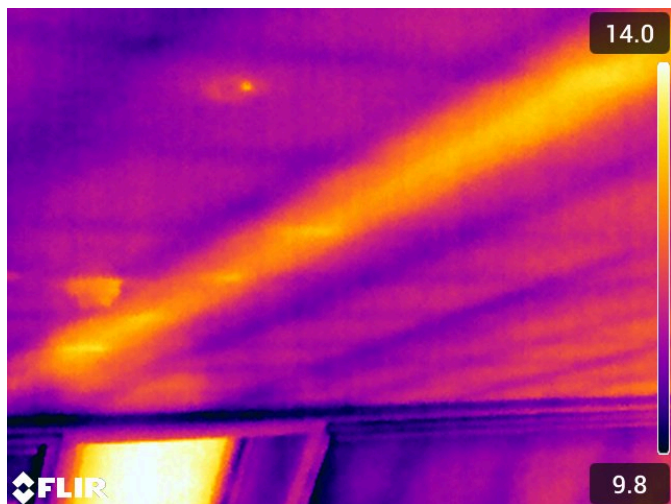
Measurements

Min. temp.	7.5°C
Max. temp.	11.5°C

Comments

Image shows the area of sloped ceiling on the south side of the balcony. This area of sloped ceiling, and also the area on the north side of the balcony, are colder than the rest of the ceiling in the main hall. This suggests a lack of insulation in the sloped ceiling above the balcony. Also, note the thermal pattern to the left of the door; this curved area has defined edges, suggesting it may be due to moisture. There is also discolouration noted on the wall on the leading edge of the curved area. This anomaly should be further investigated to understand the cause.

Survey item	Location	Anomaly
Balcony / Main room	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 12:59:01
File name	FLIR0228.jpg
Width	640px
Height	480px

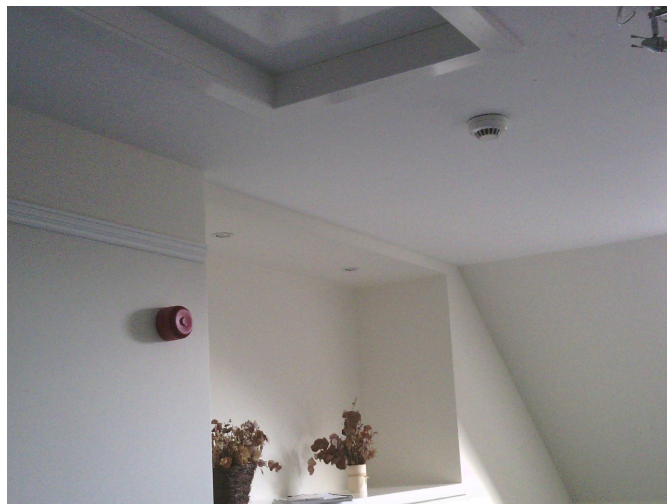
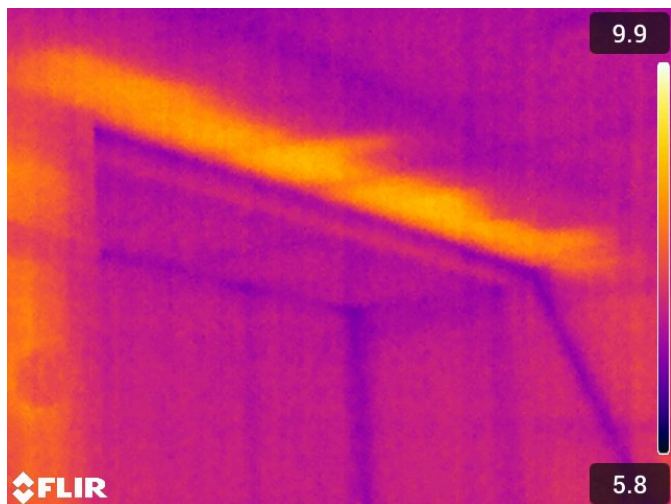
Measurements

Min. temp.	9.8°C
Max. temp.	14.0°C

Comments

Thermal image shows hot water pipes above the ceiling of the main hall, as viewed from the balcony. Consideration should be given to insulating the hot water pipes to ensure they do not lose heat.

Survey item	Location	Anomaly
Stairwell	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 13:00:36
File name	FLIR0230.jpg
Width	640px
Height	480px

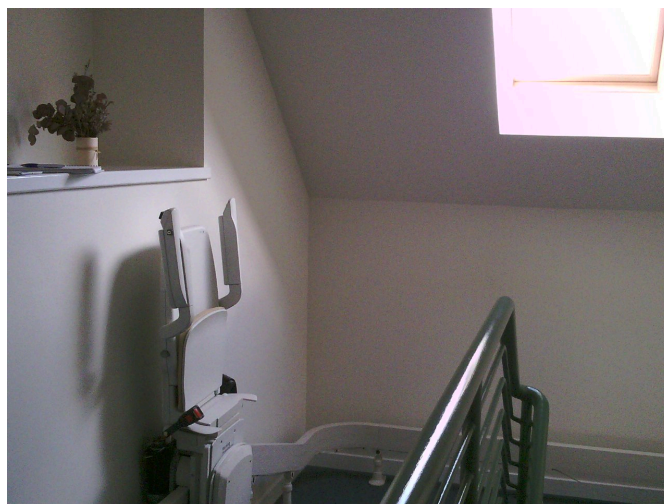
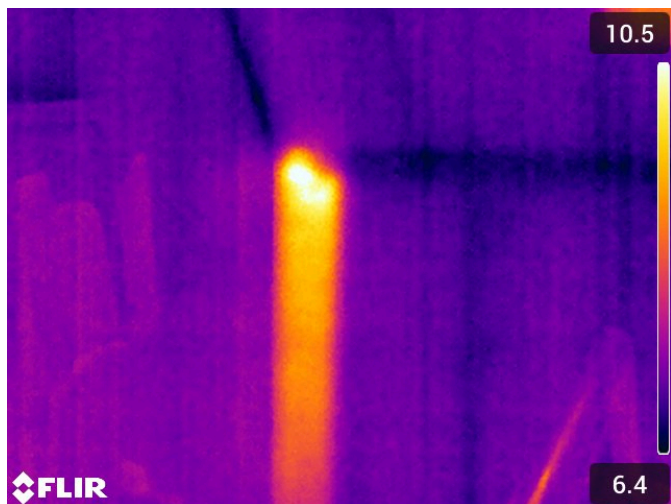
Measurements

Min. temp.	5.8°C
Max. temp.	9.9°C

Comments

Thermal image shows hot water pipes above the ceiling in the stairway. Consideration should be given to insulating the hot water pipes to ensure they do not lose heat.

Survey item	Location	Anomaly
Stairwell	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 13:01:34
File name	FLIR0232.jpg
Width	640px
Height	480px

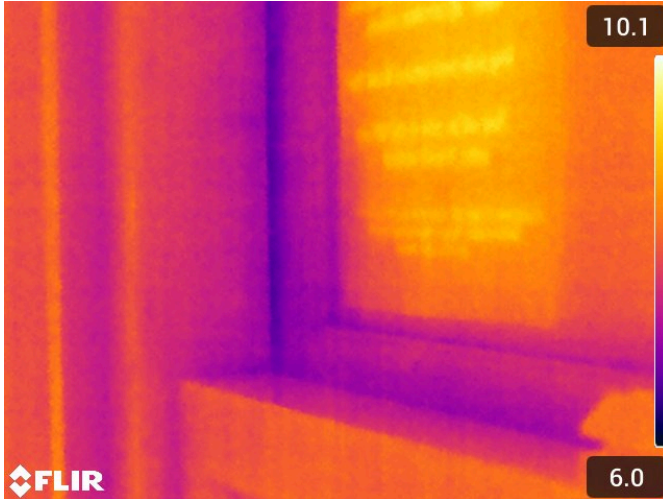
Measurements

Min. temp.	6.4°C
Max. temp.	10.5°C

Comments

Thermal image shows hot water pipes running vertically behind the plasterboard in the stairway. Consideration should be given to insulating the hot water pipes to ensure they do not lose excessive heat.

Survey item	Location	Anomaly
Servery	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 13:08:41
File name	FLIR0236.jpg
Width	640px
Height	480px

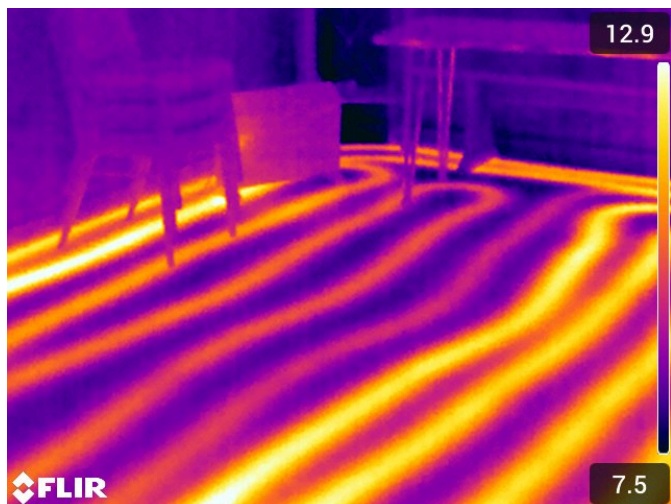
Measurements

Min. temp.	6.0°C
Max. temp.	10.1°C

Comments

Image shows window in the servery. The thermal pattern suggests cold air ingress through the sealing surface of the opening window.

Survey item	Location	Anomaly
Servery	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 13:22:08
File name	FLIR0238.jpg
Width	640px
Height	480px

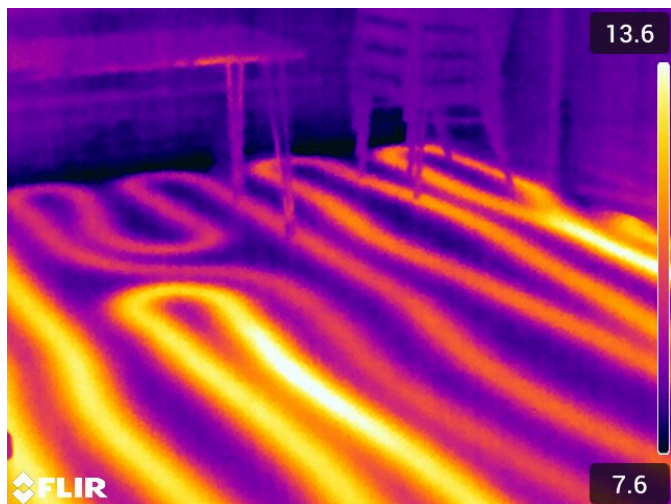
Measurements

Min. temp.	7.5°C
Max. temp.	12.9°C

Comments

Image shows the underfloor heating elements in the servery. Note the difference in the surface temperature of the different circuits. Consideration should be given to mapping the underfloor heating system and adjusting the circuits to ensure they are heating the room evenly.

Survey item	Location	Anomaly
Servery	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	10.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 13:22:54
File name	FLIR0240.jpg
Width	640px
Height	480px

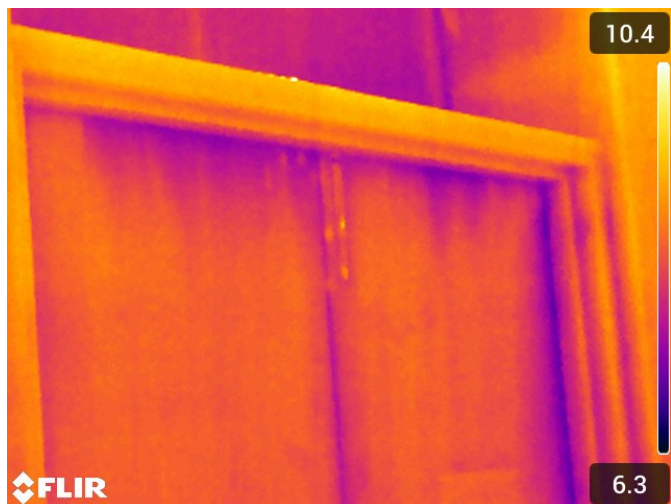
Measurements

Min. temp.	7.6°C
Max. temp.	13.6°C

Comments

Additional image of the underfloor heating elements in the servery. Note the difference in the surface temperature of the different circuits. Consideration should be given to mapping the underfloor heating system and adjusting the circuits to ensure they are heating the room evenly.

Survey item	Location	Anomaly
Foyer	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	13.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 13:27:20
File name	FLIR0242.jpg
Width	640px
Height	480px

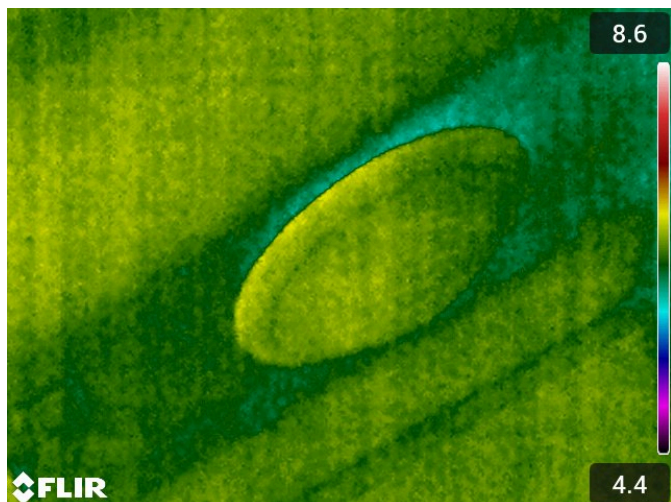
Measurements

Min. temp.	6.3°C
Max. temp.	10.4°C

Comments

Image shows an internal view of the main front door. Thermal pattern suggests cold air ingress through the sealing surfaces of the door, particularly through the top of the door.

Survey item	Location	Anomaly
Ladies' toilet	Cromarty Hall, St Margaret's Hope	Yes



Camera information

Camera model	FLIR E54
Camera serial number	84511072
Range max.	120.0°C
Range min.	-20.0°C
Field of view	23.5°

Measurement parameters

Emissivity	0.98
Distance	5.00m
Reflected temp.	11.0°C
Atmospheric temp.	13.0°C
Relative humidity	65.0%

Image information

Created	2025:02:27 13:37:28
File name	FLIR0248.jpg
Width	640px
Height	480px

Measurements

Min. temp.	4.4°C
Max. temp.	8.6°C

Comments

Image shows an area of the ceiling above the cubicles in the ladies' toilets. The thermal pattern suggests cold air entering at the top of the light fitting and poor insulation in this section of the ceiling.



Orkney Inspection Services

3 Grain Court, Junction Road

Kirkwall, KW15 1AX

andrew@orkneyinspection.co.uk

01856 881 910