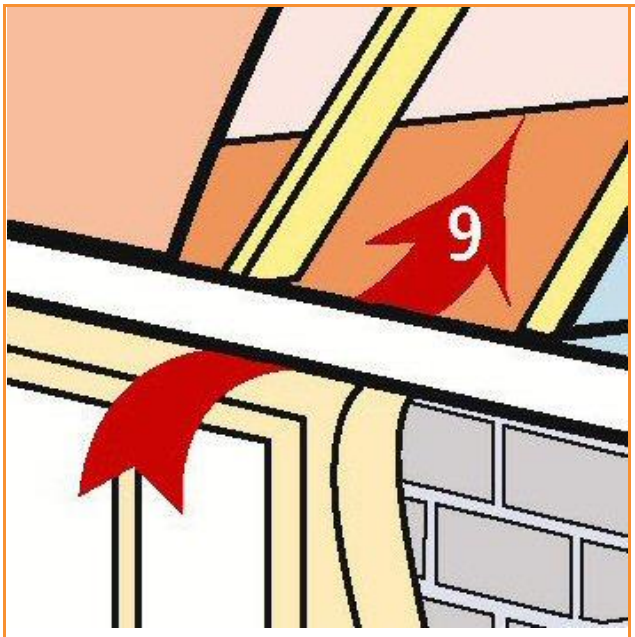
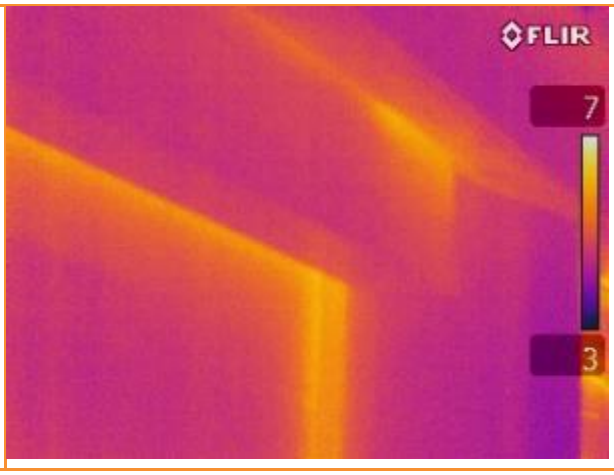
Common Leakage Sites no.9

Through the eaves.

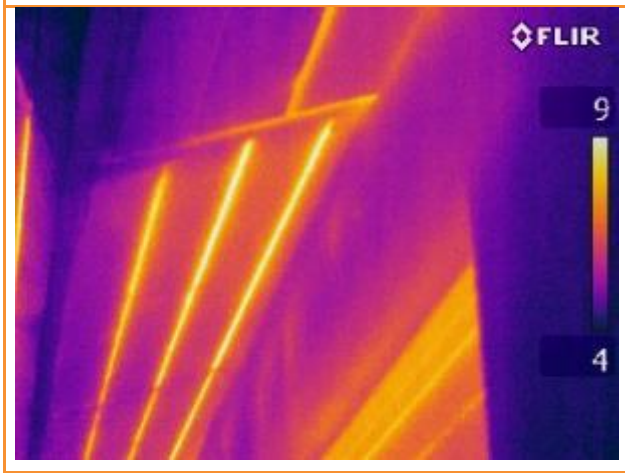


In this instance air is leaking through the eaves of the building into the roof space.

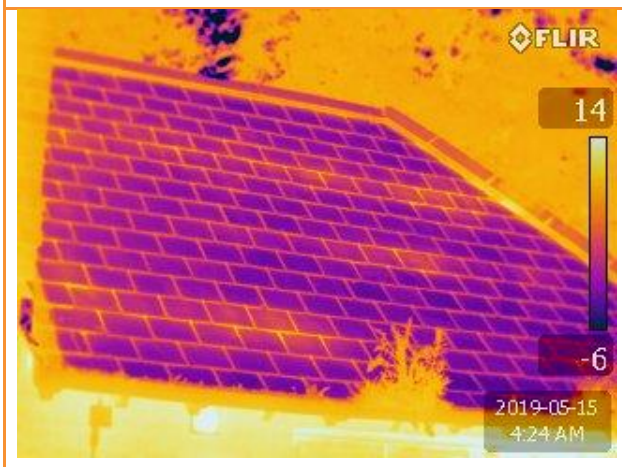
Building Fabric Leakage 9: Through the eaves



9.01: External thermographic image whilst house is pressurised showing leakage along section of eaves junction to top of wall above garage doorway.



9.02: External thermographic image showing leakage along the eaves of a house when pressurised, clearly demonstrating substantial air leakage into the ventilated roof space.



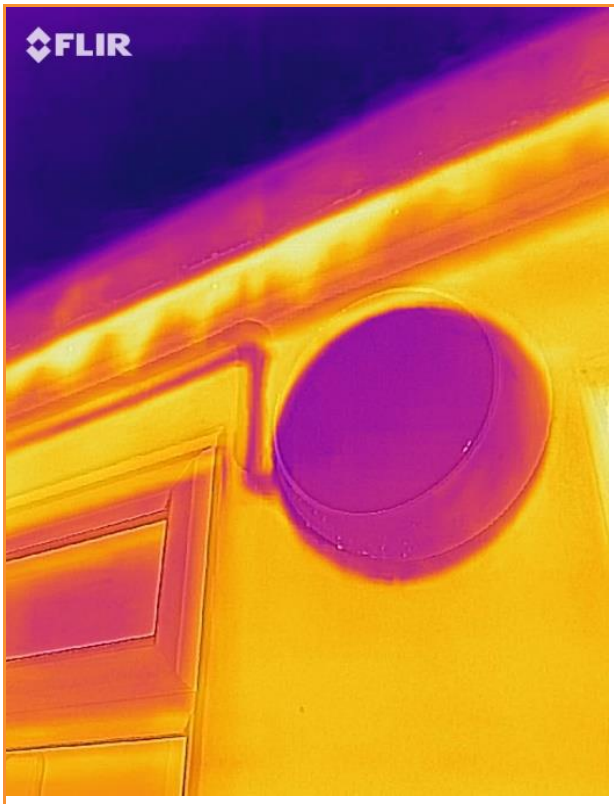
9.03: External thermographic image after house pressurised, showing major leakage along eaves, also along edges of ridge and hip tiles

9.04: External thermographic image after house pressurised, showing increased heat loss along eaves, also around top of conservatory and at ends of conservatory roof structure

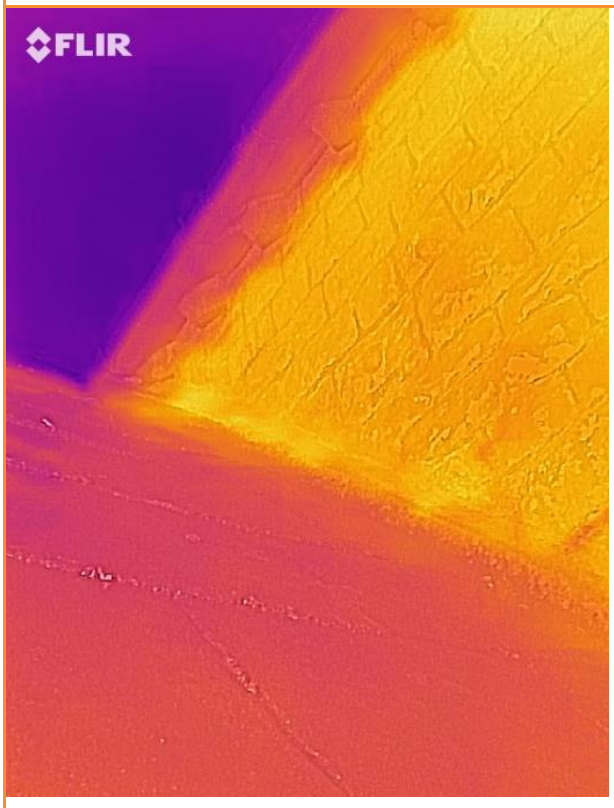
9.05: External thermographic image before house pressurised, showing heat loss along eaves driven by stack effect

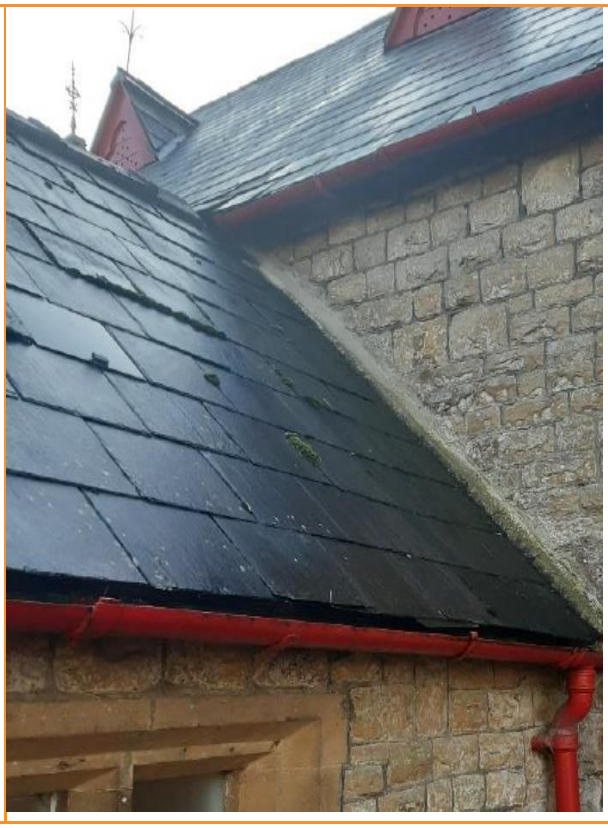
9.06: External thermographic image after house pressurised, showing heat loss along eaves, also along external edge of intermediate floor

9.07: External thermographic image after house pressurised, showing significant leakage along eaves. Also apparent leakage along vertical interface between two sections of house

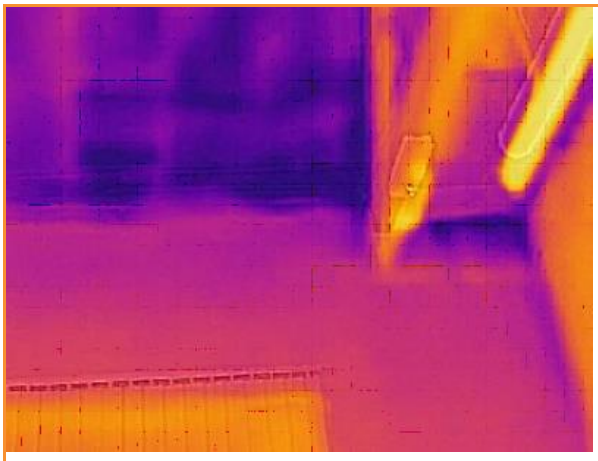


9.08: External thermographic image whilst building pressurised, showing considerable warm air (white/yellow) escaping along the bottom edge of eaves to the rear flat roof extension

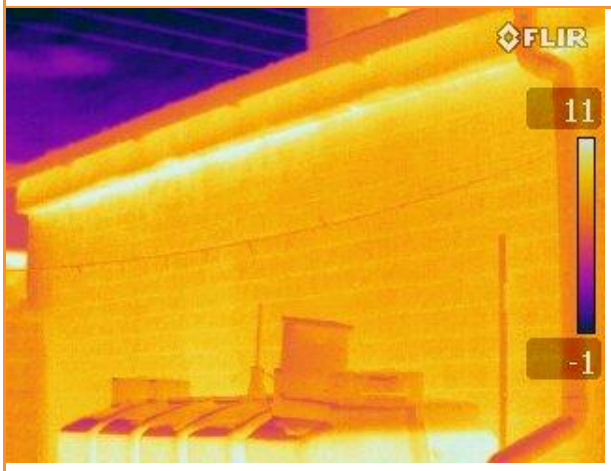




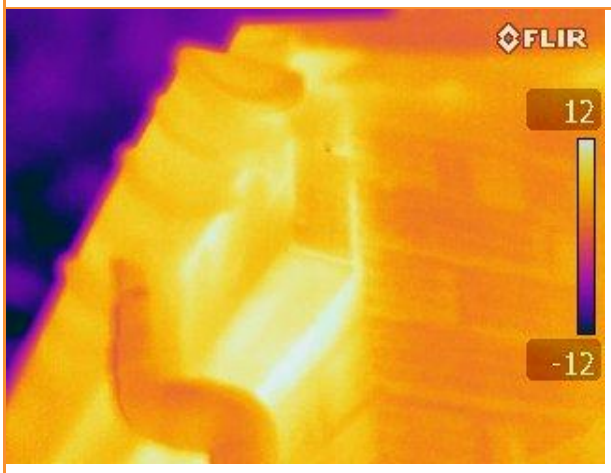
9.09: External thermographic image whilst building pressurised, showing warm air (white/yellow) escaping along (1) the sloping verge at the end of the entrance section and (2) the bottom edge of the main hall eaves



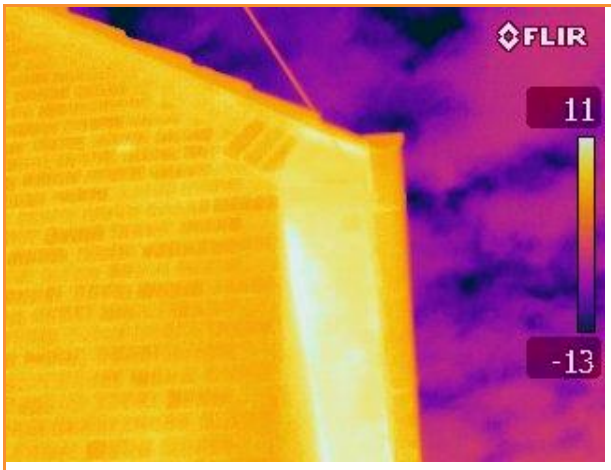
9.10: Internal thermographic image whilst building is depressurised showing substantial cold spots in the sloping ceiling above hall with considerable air leakage along eaves section at centre-right of image



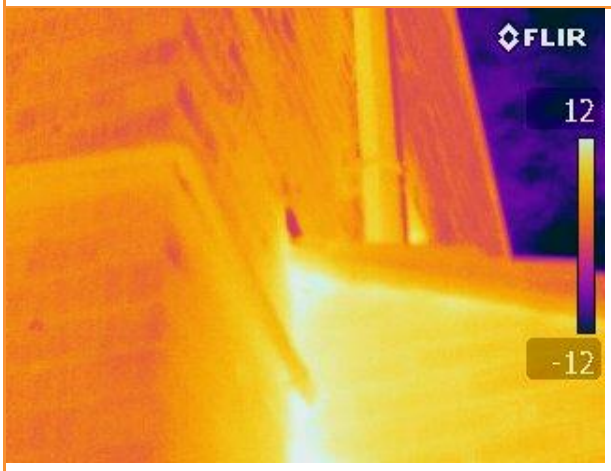
9.11: Thermographic image showing leakage along eaves of extension



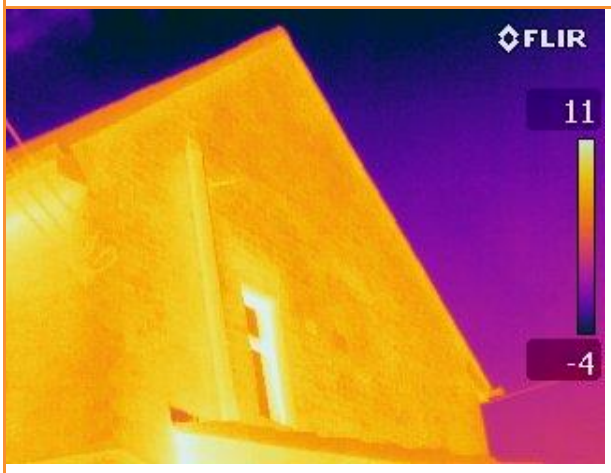
9.12: Thermographic image showing substantial leakage at rear end of extension eaves



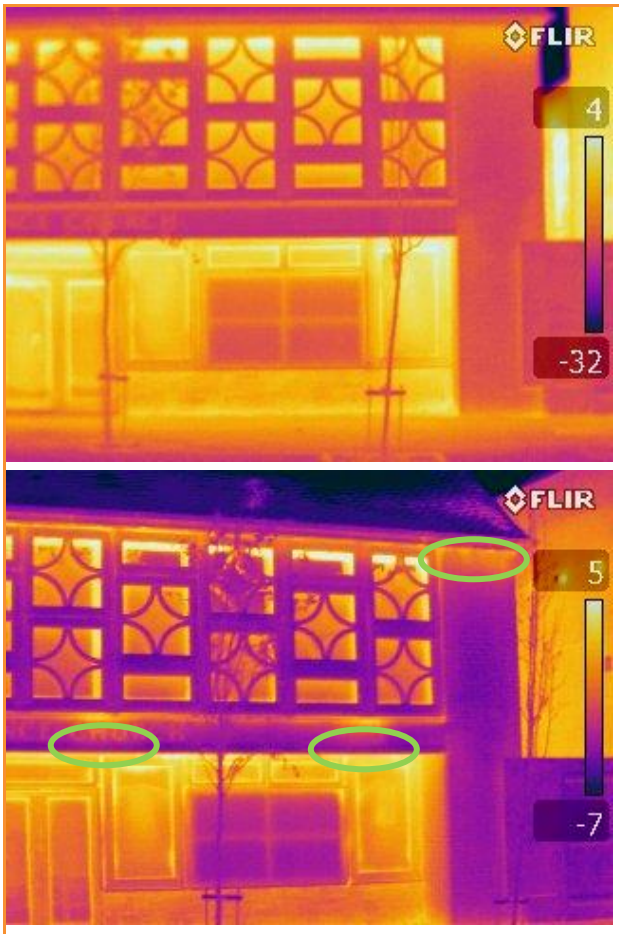
9.13: Thermographic image showing leakage associated with the eaves at the rear of the house



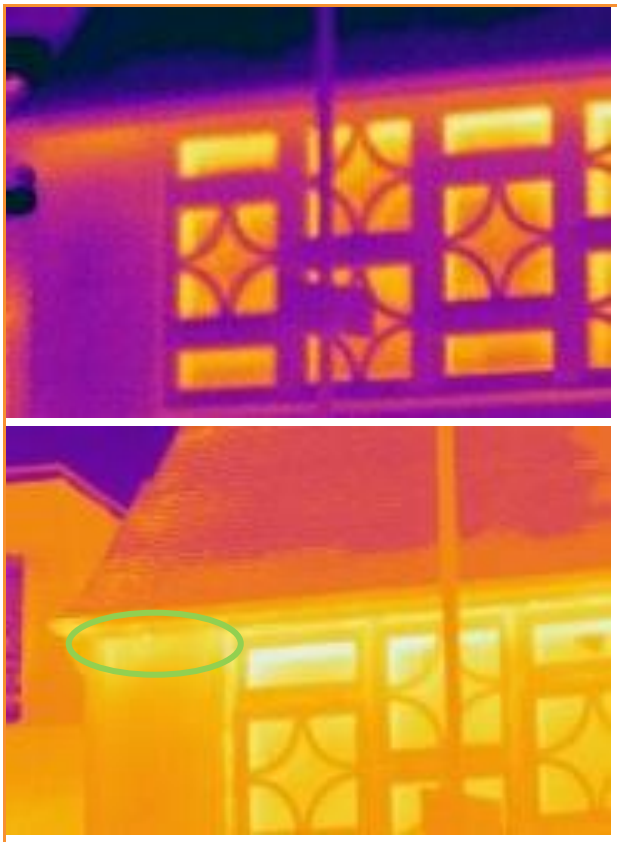
9.14: Leakage along interface between top of wall and underside of roof to lean-to extension



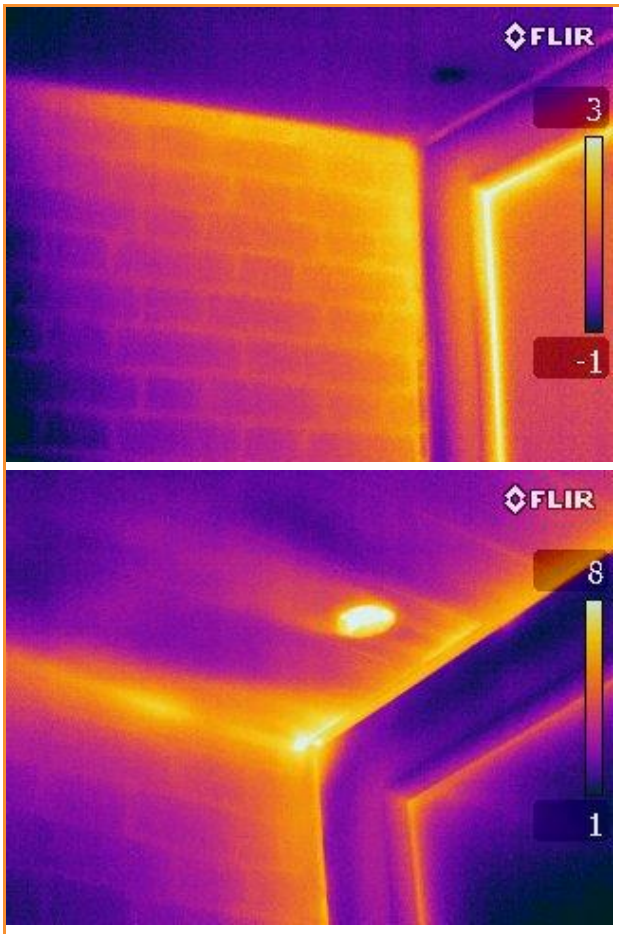
9.15: Thermographic image showing some leakage along the edge of the gable end



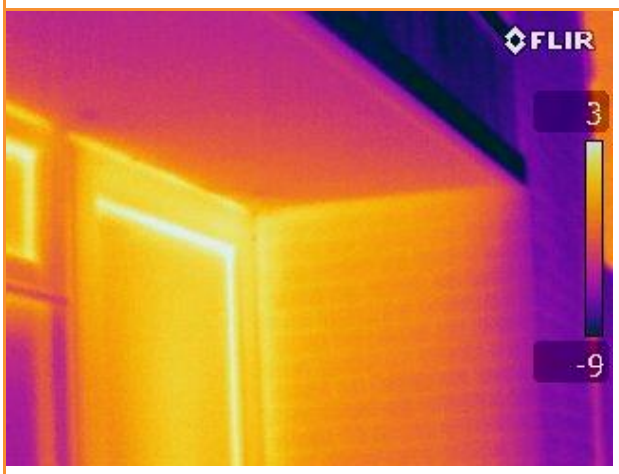
9.16: Leakage along underside of balcony and along eaves visible behind upper window frames, before building pressurised (top), then after building pressurised, showing more leakage along underside of balcony, and at top of brick column at right hand side (bottom)



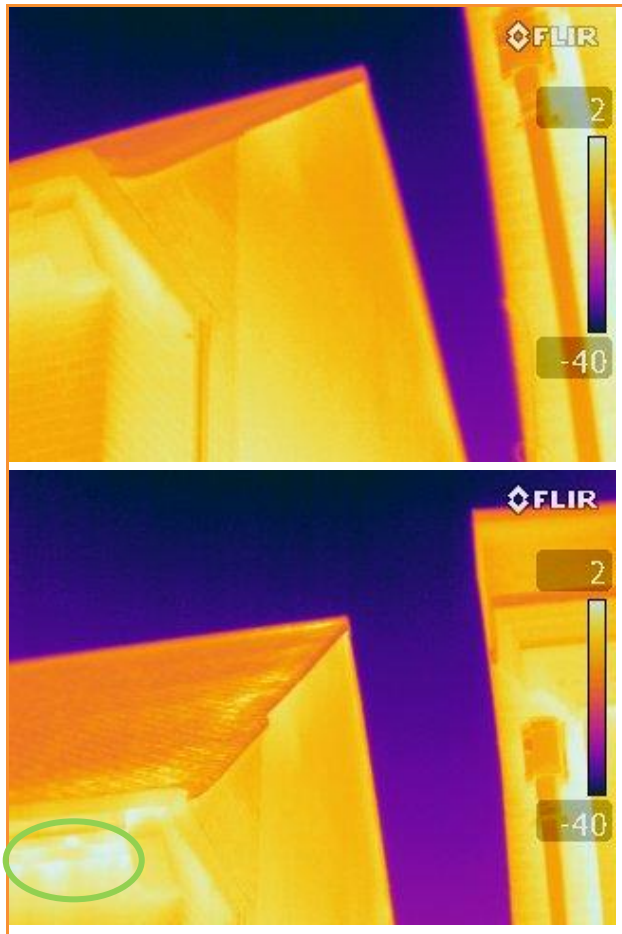
9.17: Thermal image of top of left-hand column, some heat loss before pressure applied to building (top), then after pressure applied to building, showing significantly more heat loss



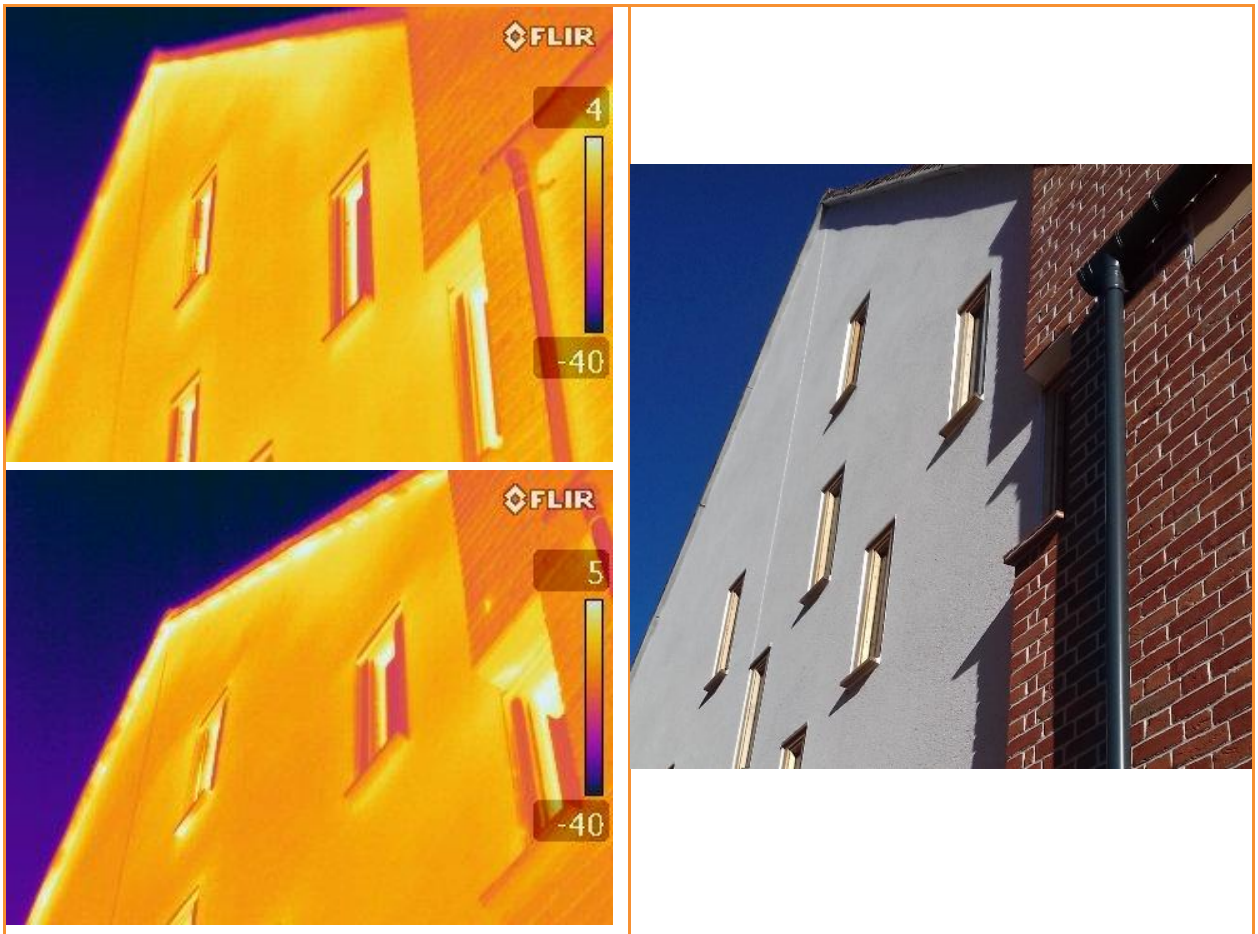
9.18: Thermographic image before pressure applied, underside of balcony left hand end (top), then after pressure applied, much more heat loss visible along top of window frame, also through vent in underside of overhang (bottom). Green arrow on right hand photo shows approximate location of these leaks



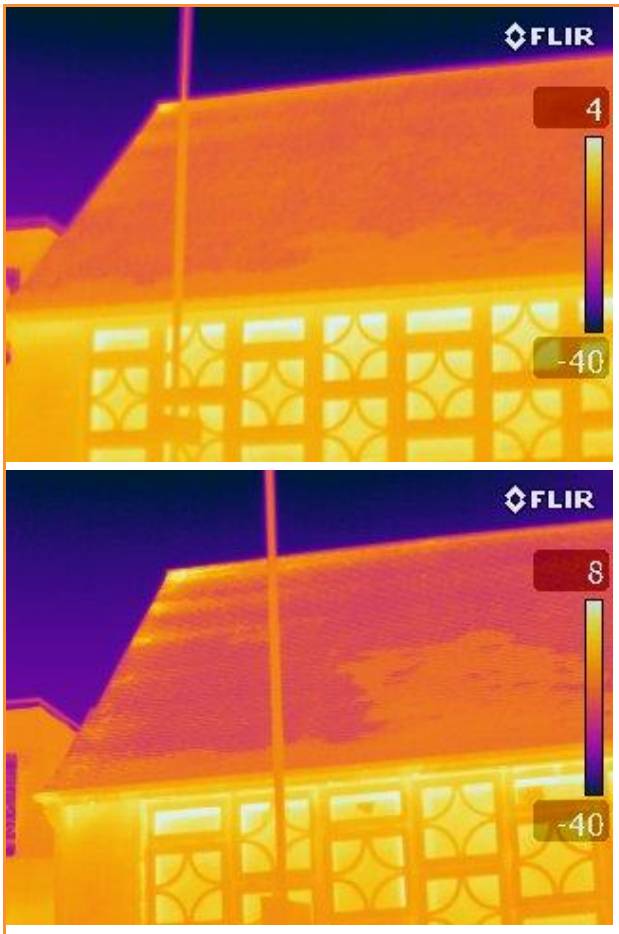
9.19: Thermographic image before pressure applied, underside of balcony right hand end, then after pressure applied, much more heat loss visible, including through vent in underside of overhang



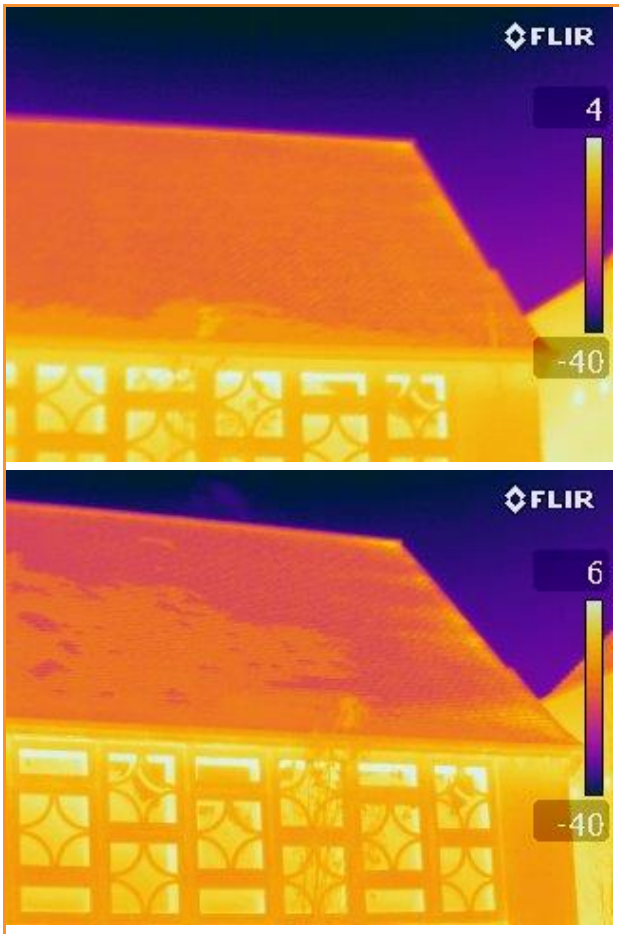
9.20: Thermographic image of eaves at eastern end, before pressure applied (top), then after pressure applied showing visible additional leakage at ridge, through roof, along eaves and particularly at top of front corner column (bottom)



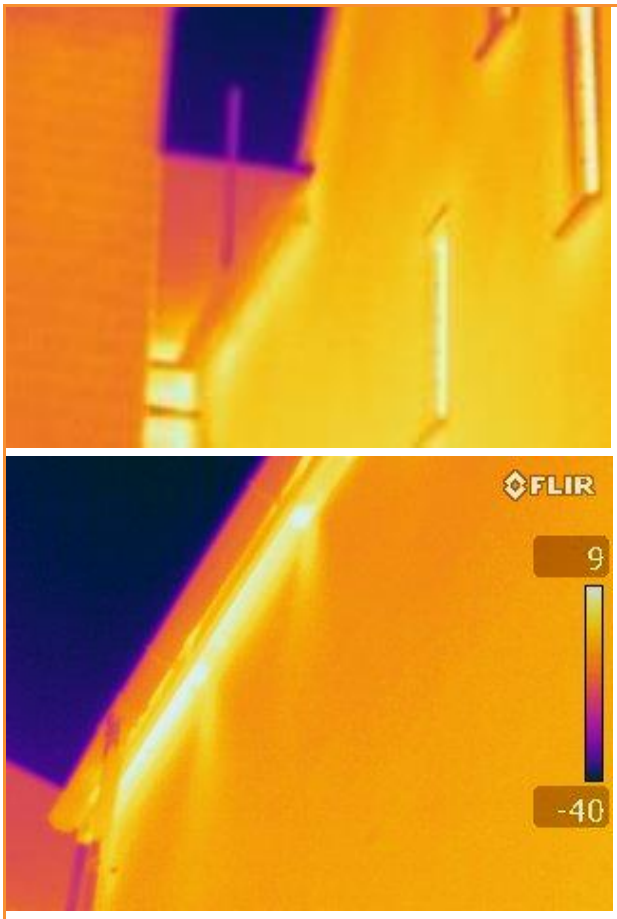
9.21: Thermographic image of eaves at western end, before pressure applied (top), then after pressure applied showing visible additional leakage at ridge and along eaves (bottom)



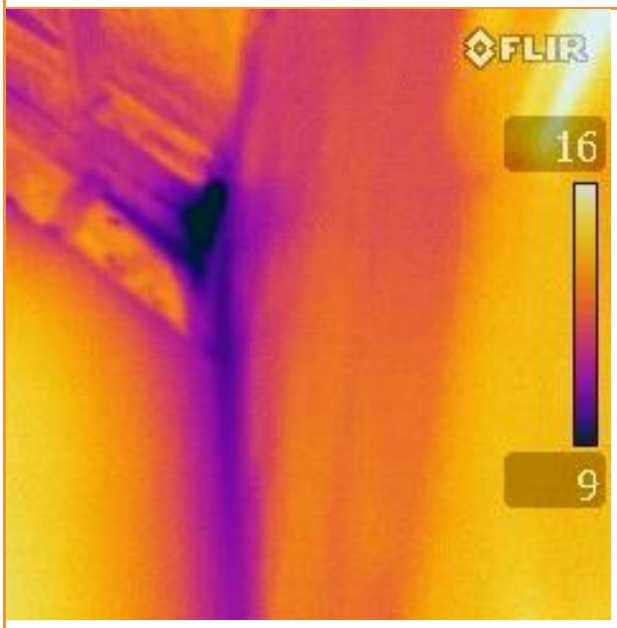
9.22: Thermographic image of western end of roof viewed from the south side, no pressure applied (top), then after pressure applied showing substantially more leakage at ridge and top of eaves (bottom)



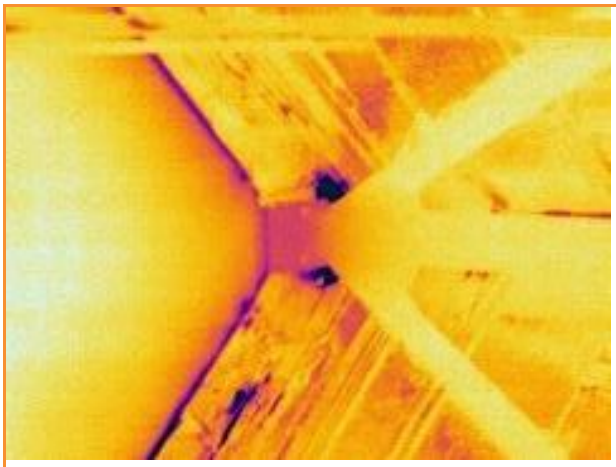
9.23: Thermographic image of eastern end of roof viewed from the south side, no pressure applied (top), then after pressure applied showing substantially more leakage at ridge and along the top of the eaves in several places (bottom)



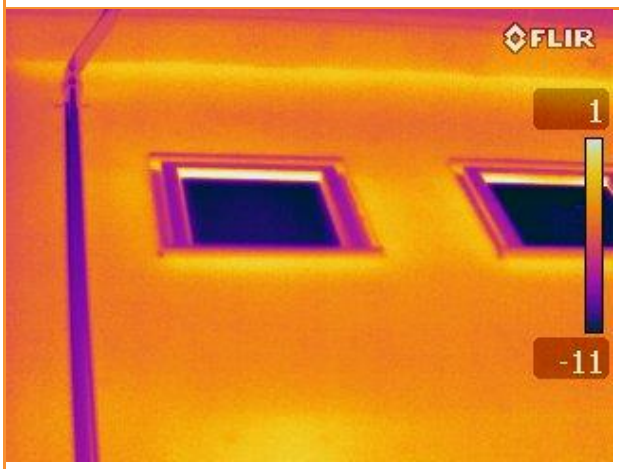
9.24: Thermographic image of section of rear eaves, western end of building, before pressure applied (top), then when pressurised showing substantially more heat loss (bottom)

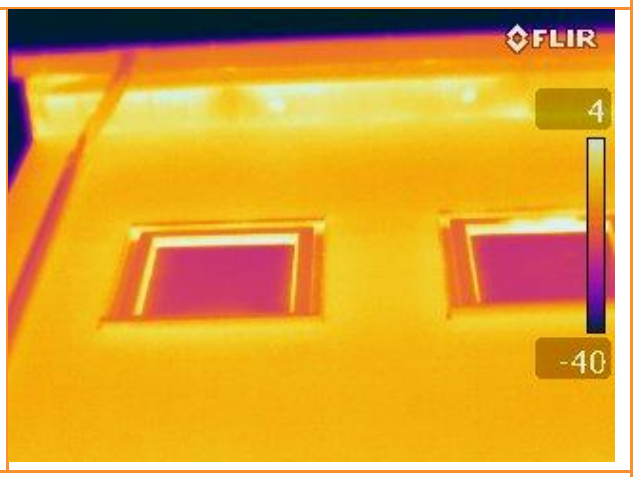


9.25: Thermographic image after depressurised, substantial cold entering building behind steel

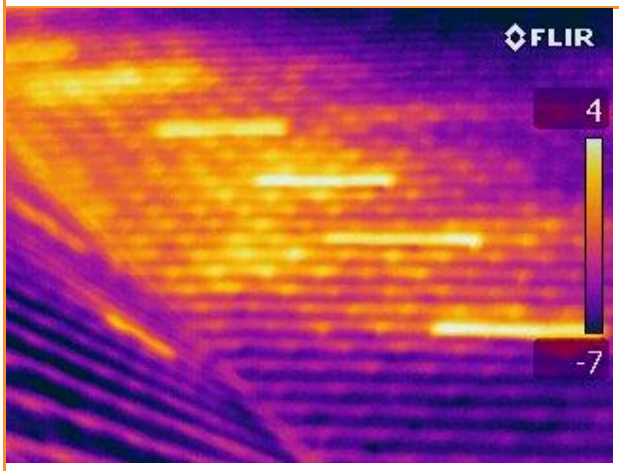


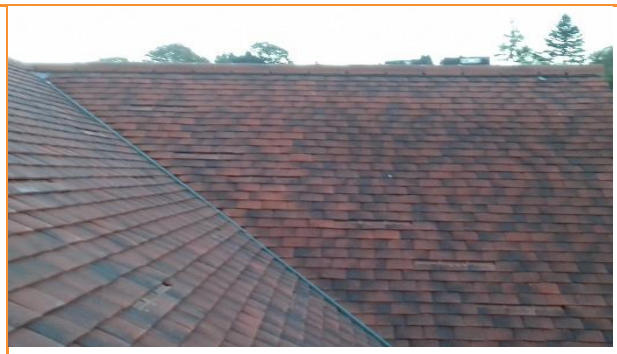
9.26: Thermographic image after pressure applied, of roof space above Sunday School room, cold incoming air clearly visible along top of gable (left side), also above joints in steel frame



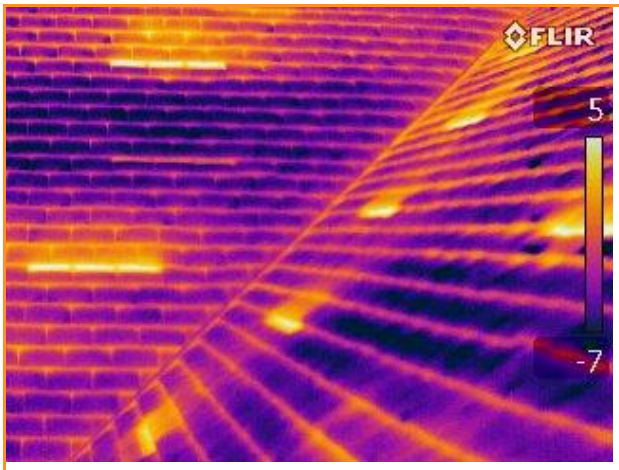


9.27: Thermographic image of eaves, rear eastern corner, before pressure applied, then after pressure applied showing visibly greater heat loss – also at head of RH window

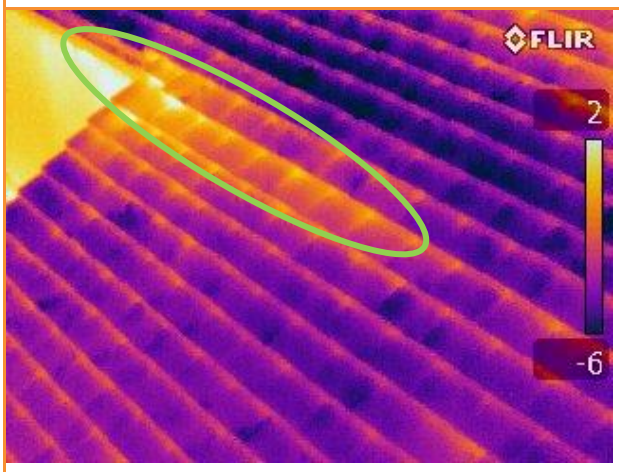




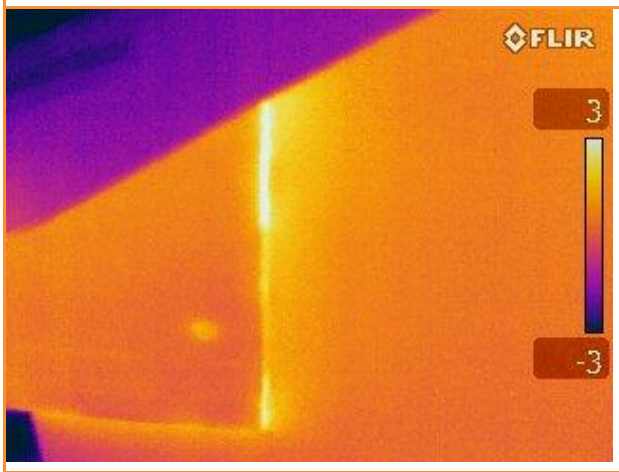
9.28: Thermographic image of rear roof, western end, before pressure applied – significant heat loss visible



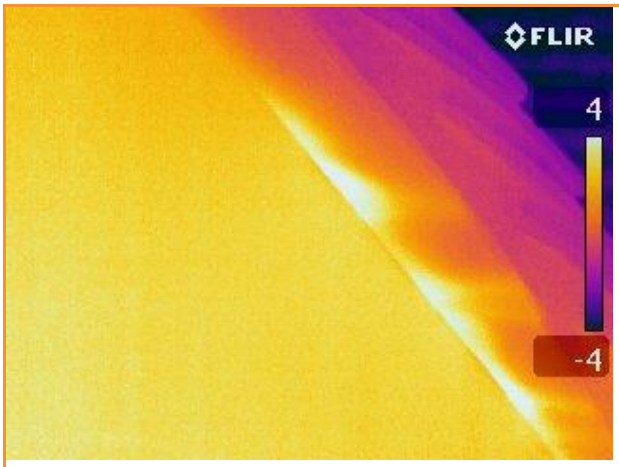
9.29: Thermographic image of rear roof, central section, before pressure applied – significant heat loss visible



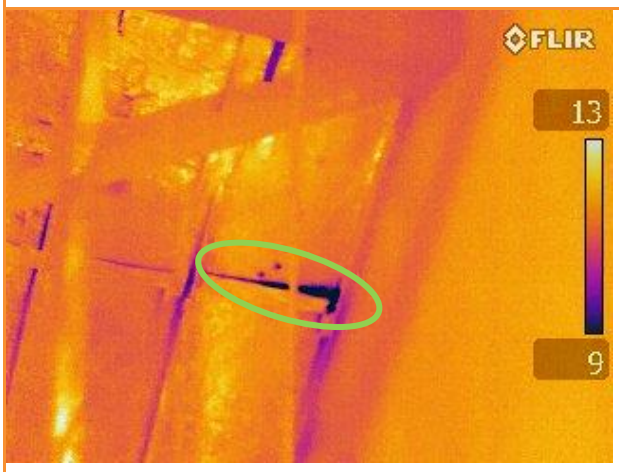
9.30: Thermographic image of rear roof, eastern end above kitchen, after pressure applied. Appears to be a leakage issue adjacent to the internal corner, extending across



9.31: Thermographic image showing substantial leakage at edge of panel beneath eaves, whilst building pressurised

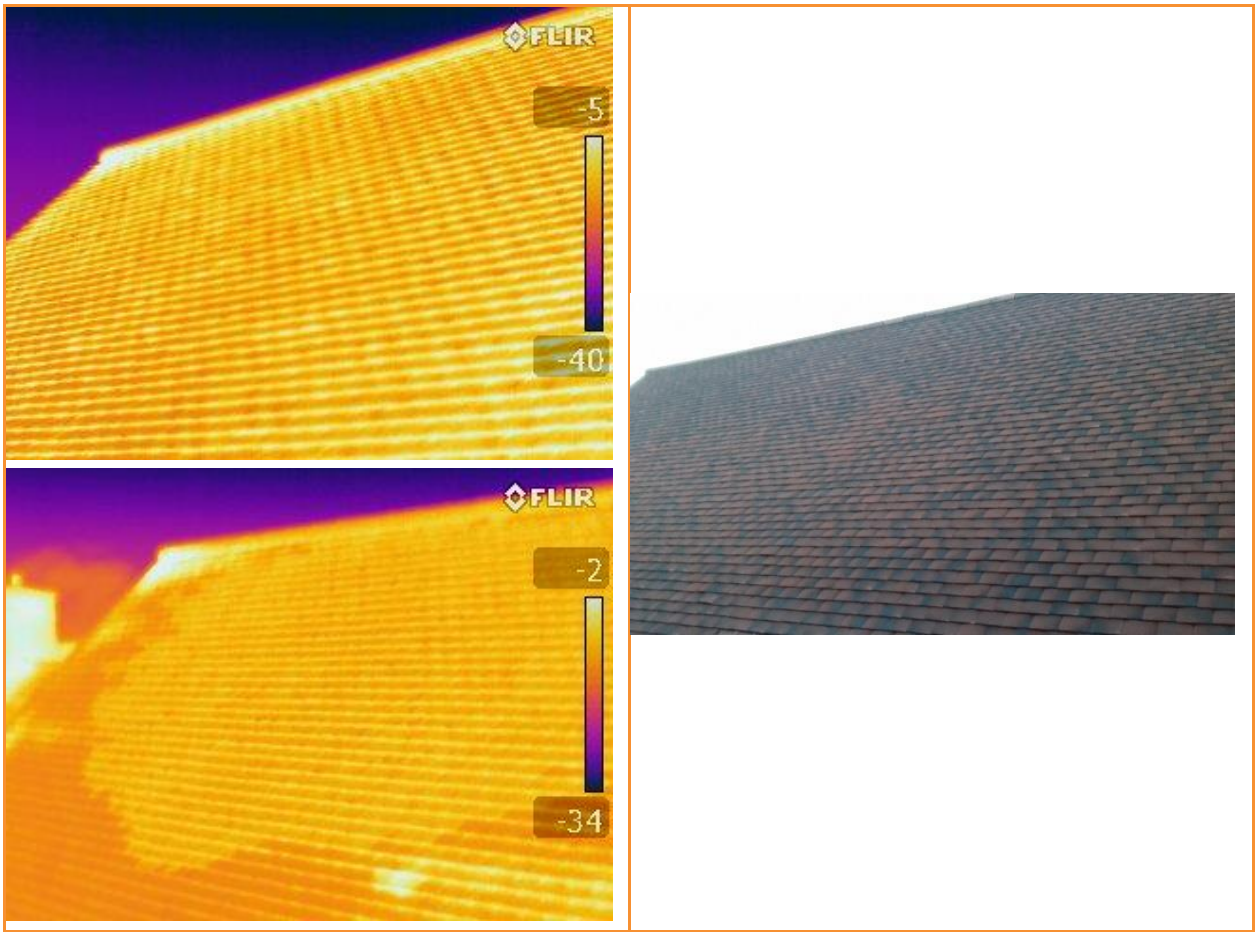


9.32: Thermographic image showing substantial leakage along eaves, whilst building pressurised

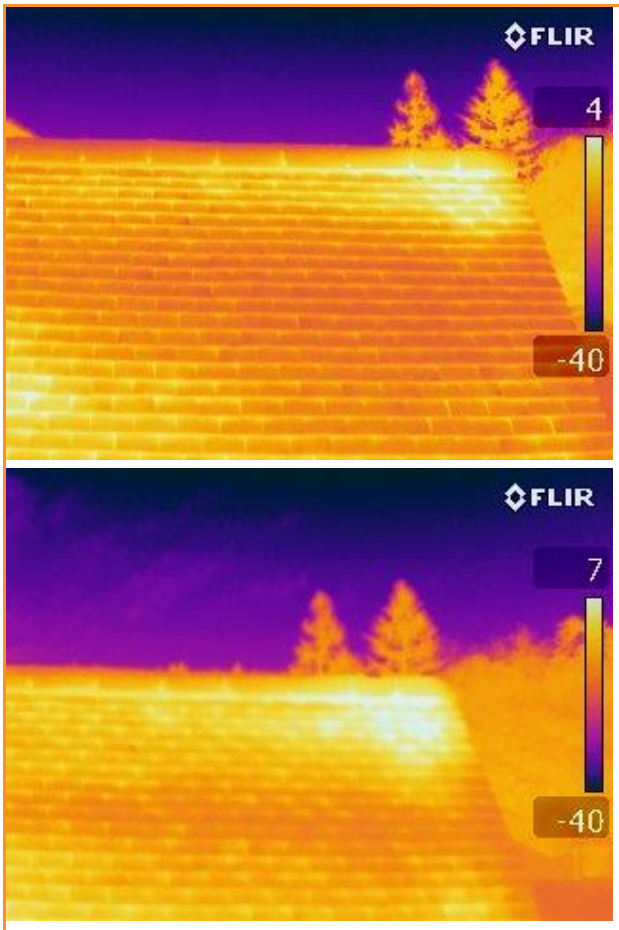


9.33: Thermographic image showing leakage where foil tape between pieces of insulation has come off, building depressurised

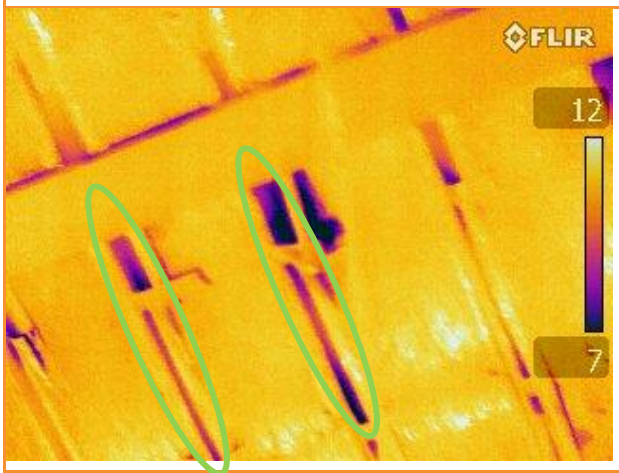
9.34: Thermographic image whilst building depressurised, showing major leak behind joint in steel frame

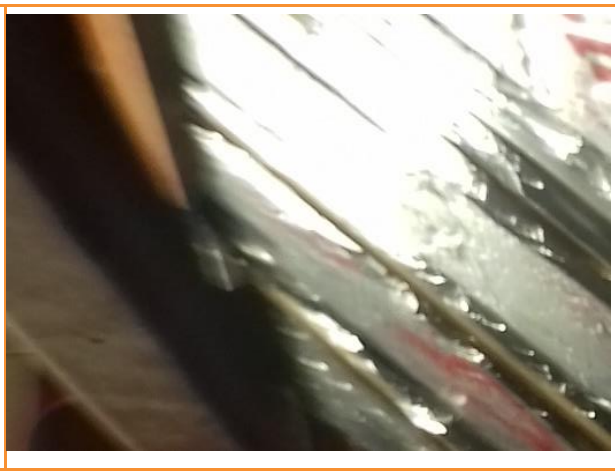


9.35: Thermographic image of rear roof, eastern end, before pressure applied (top), then after pressure applied, substantial extra heat loss

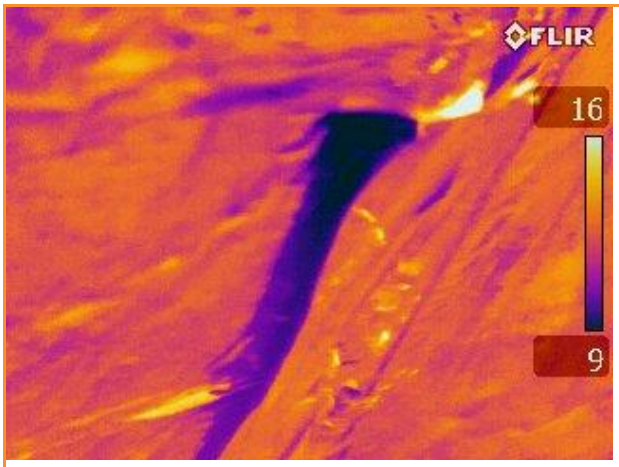


9.36: Thermographic image of rear roof, western end, before pressure applied, considerable heat loss (top), then after pressure applied, substantial extra heat loss



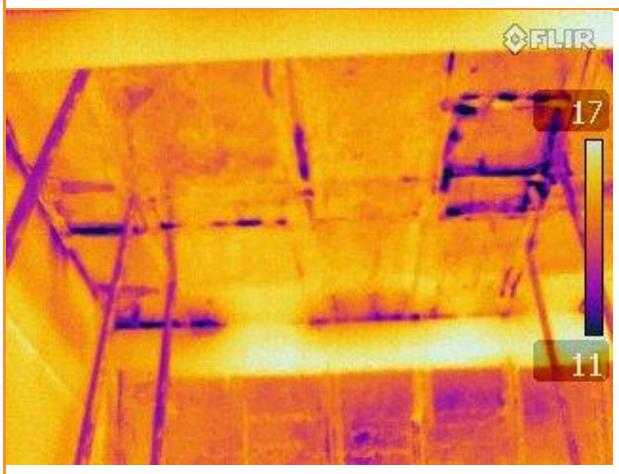


9.37: Thermographic image showing lines of leakage along roof joists where taping has failed, building depressurised

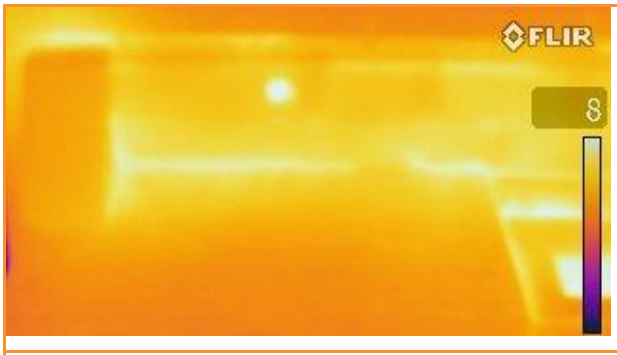


9.38: Thermographic image showing leakage past section of foil tape that has peeled off, building depressurised

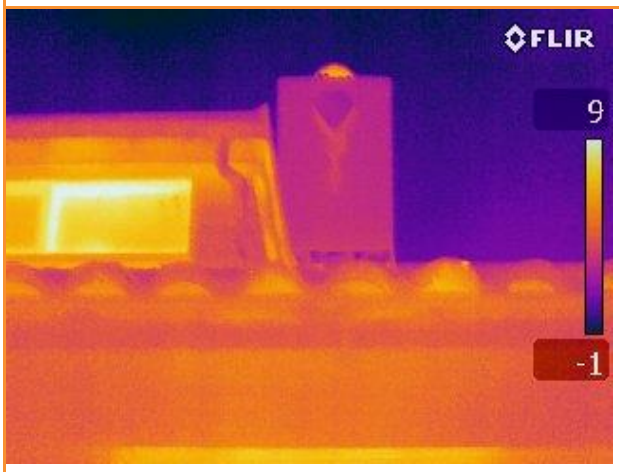
9.39: Thermographic image of leakage where foil tape has peeled off, building depressurised

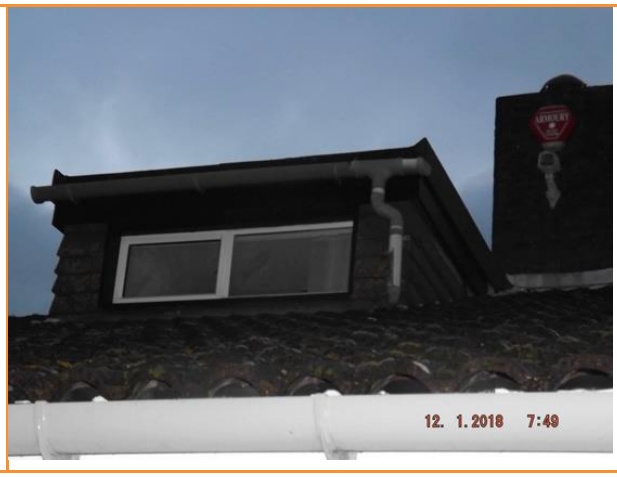


9.40: Thermographic image whilst building depressurised, leakage on many edges of roof insulation pieces where foil taping has failed

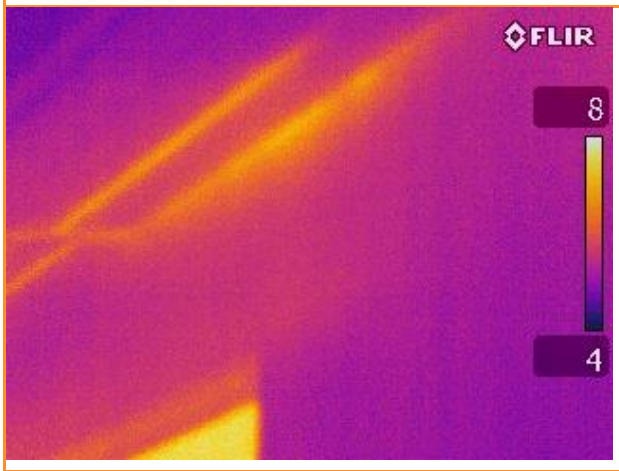


9.41: Thermographic image while building pressurised, through eaves vent & top of column

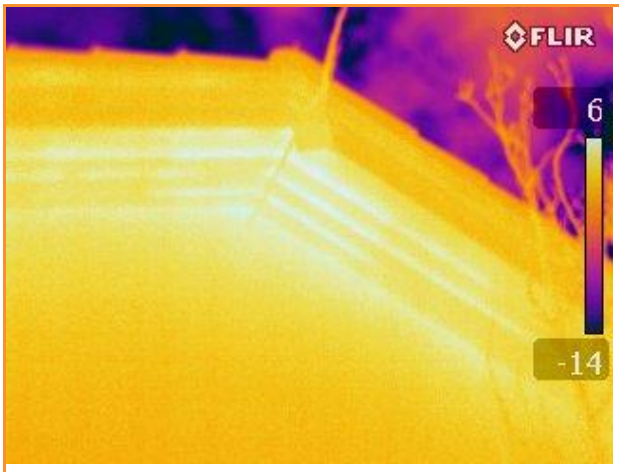




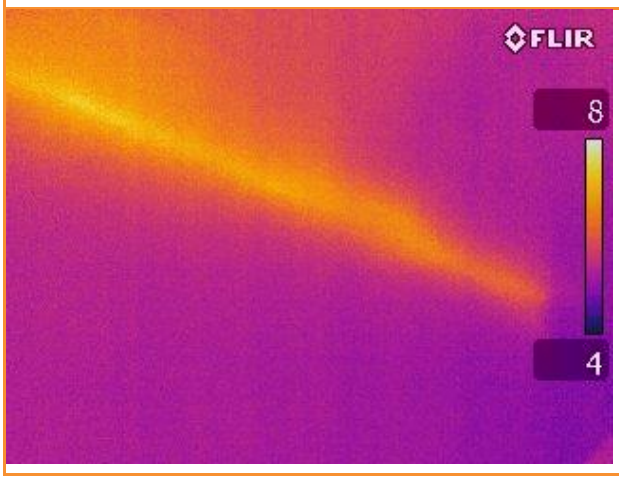
9.42: Thermographic image showing leakage beneath the curved ends of the roof tiles along the eaves, indicating significant leakage into the roof space



9.43: Thermographic image showing leakage through gaps in the boarding beneath the roof



9.44: Thermographic image showing considerable leakage at wall to roof interface and also through gaps between boarding to the underside of the roof



9.45: Thermographic image showing leakage along the interface between the eaves and the top of the wall, during pressurisation