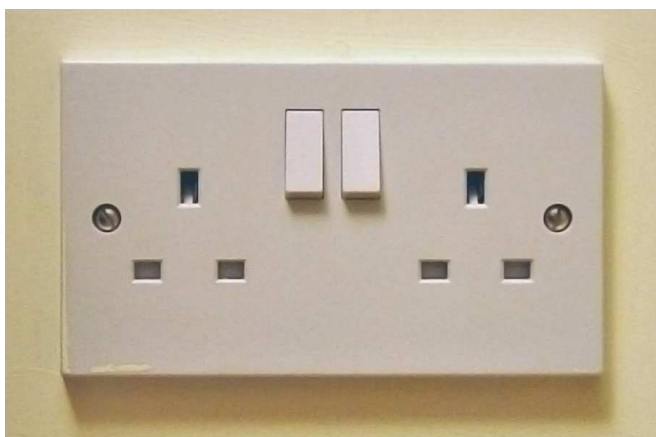


Common Leakages Areas & Improvements for Domestic Housing when air permeability targets are below 5.0m³/hr/m²

All these items should be sealed as an absolute minimum before site testing occurs. Whilst this is usually applicable for smaller detached, semi-detached properties and apartments the principles are universal and can be applied to all domestic properties.

- **Electrics** - All Plugs, aerials, TV points always show leakage (Seal/Tape Hole in Vapour Barrier behind for Timber Frame, OR seal at top of conduit in Roofspace for Masonry Houses) for all penetrations. Plugs and Fittings cannot be temporary taped for the duration of the test.



Seal around Downlights with suitable sealant. It would also be advisable to purchase good quality airtight fittings as manufacturers are very varied when it comes to airtightness.

Consider using specialist airtight hoods to isolate light fittings and other wiring such as speakers.



- **FF Perimeter** of Floor must be sealed. The 300mm deep Floor Void is a massive risk. If the airtight detail isn't correct or leaks any air (between floors to external wall) then the whole void becomes a potential risk.



- **GF Perimeter** of Floor must be adequately sealed.





- **FF Joints in Flooring/Ground Floor Ceiling.**
Light Fittings etc – all becomes a potential risk when the air barrier at the cassette is ripped, damaged or fitted/taped incorrectly which is very common



PS – Just because the bath panel is in place does not negate the need to seal everything behind it



- Large Holes such as this into the Floor Void are unacceptable and generally show excessive leakage because of damage to the Air Barrier on the perimeter wall (SIPS/Timber Frame) or in the case of Masonry, shrinkage in Timber Joists along with poor beam filling

- **Hot Presses, every hole into floor void needs sealed**



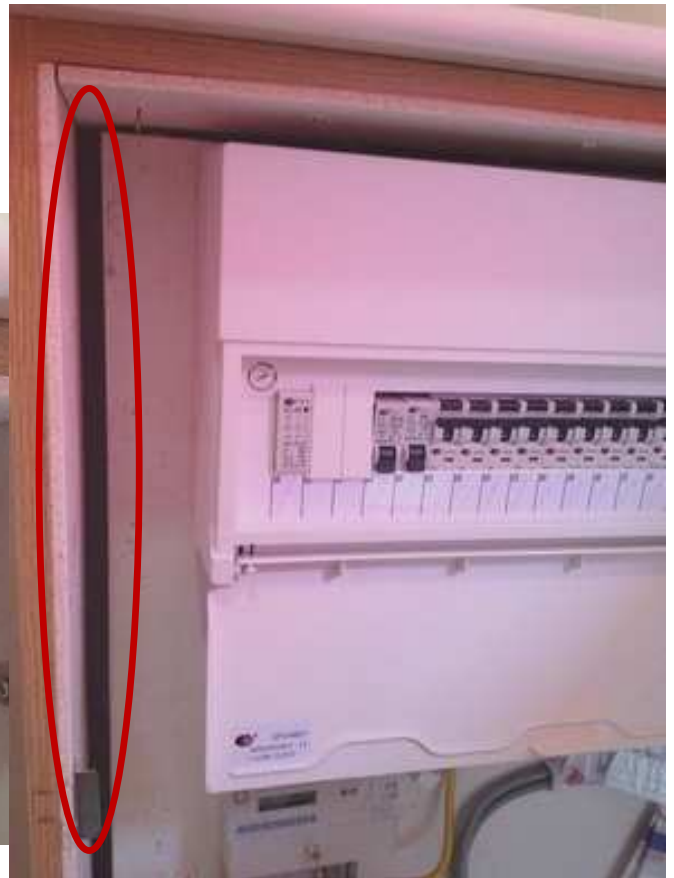
- **Perimeter Wall of Hot Press Should be sealed well at the Plywood sheeting**



- Around Extract Fans to wall/Ceiling, we can only seal the ventilation opening itself



- Consumer Units – electricians always leave large holes here – seal around perimeter of board that consumer unit is mounted to, take care here also with ducts bring NIE Power into houses.



- **Soil Stacks – be careful when they extend under kitchen units. Ensure that they are sealed to floor and not left open anywhere in the kitchen. Also take care in bathrooms were 100mm waste pipes from toilets enter them. Normally soil stacks are left open into the Roofspace and so this is leakage to outside. It is worth taking care where they pass through floors or unconditioned spaces.**



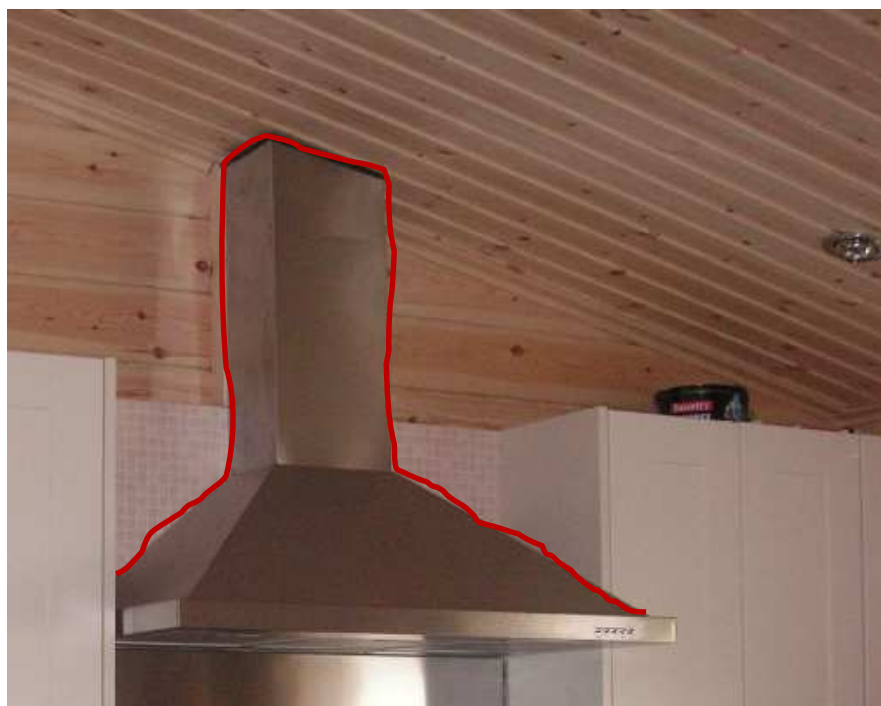
- Be Careful if Boiler Flue is boxed in as it is never usually airtight around the flue hole behind the facing board



- Condensing Boilers – Make sure the boiler itself is a sealed unit and no air can escape through the pipework/flue itself



- Cooker Hoods – if boxed into a self-contained metal hood the hole is generally larger than the vent pipe. Hoods should be taken off and hole sealed behind the line of sight. The tester only tapes the ventilation opening itself for the duration of the airtest.



- **Windows and Doors – Are the seals fitting tightly. Have they been adjusted? Have the cill boards been sealed? Have they been checked underneath at the Wall Junction?**
- **Full Height Windows – there’s always leakage between the DPM and the screed/window cill. Has this been suitably sealed?**



Have you sealed Windows to Main Wall Construction at an early stage with suitable tapes and sealants?



- Under Kitchen Units – Check for leakage behind kicker boards, has the Perimeter Wall/Floor Junction been sealed?
- Is there an external Tap in the Kitchen? Has the plumber punctured the air barrier anywhere else?
- Check Where Mains Water, Gas and Electric enter House. Is there a permanent seal?





- Around Stairs/Floor Void Junctions



- Around Trap Doors & Sunpipes etc. Ensure Airtight Seal to Plasterboard Ceiling



Install good quality trap-doors fitted with airtight seals. Trap-doors & Loft Hatches cannot be taped for the duration of the airtest.

Have you taped the joints of the insulation? This can make a great difference to the airtightness of the property.



Have you taped or suitably sealed between building elements such as Roof Insulation to Wall as shown below?



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