Builder Air Sealing Checklist

The 10 details to seal during construction, before plasterboard goes up.

PROJECT / ADDRESS _____

DATE _____

CHECKED BY _____

1. Service penetrations

Plumbing, electrical, data, refrigeration and gas — seal at first fix, not final walkthrough.

- ☐ **Plumbing penetrations grommeted or sealed**
  EPDM pipe grommet (e.g. Pro Clima Roflex) or airtight sealant to the membrane/frame.
- ☐ **Electrical and data cable penetrations grommeted or sealed**
  Cable grommet (e.g. Pro Clima Kaflex) for single or bundled cables.
- ☐ **Refrigeration and gas pipe penetrations sealed**
  Sealant where a grommet isn't available for the pipe diameter.

2. Top plates

One of the largest leakage paths — seal the full length of every top plate.

- ☐ **Joints between top plate sections taped or sealed**
  Every join is a straight-line gap the depth of the wall.
- ☐ **Service penetrations through top plates sealed**
  Cables and pipes rising into the roof space.
- ☐ **Cracks from timber movement sealed**
  Check again once frames have had time to season.
- ☐ **Membrane junctions at top plates taped continuously**
  Don't stop the tape short of the plate — lap it across.

3. Bottom plates

Seal before skirting goes on — after that, it's hidden.

- ☐ **Bottom plate sealed to slab (sealant or gasket)**
  Continuous bead around the full perimeter.
- ☐ **Uneven slab sections given a compressible gasket**
  Sealant alone won't bridge dips and high spots.
- ☐ **Timber floor junctions and penetrations sealed**
  Same standard as a slab junction.

4. Windows and doors

Don't rely on expanding foam alone — foam is insulation, not an air seal.

- [ ] **Internal airtight tape installed frame-to-wall**
  Seals the frame to the internal airtightness layer.
- [ ] **External weather-resistant tape installed**
  Vapour-open membrane tape — sheds water, allows outward drying.
- [ ] **Low-expansion foam used only to fill the remaining cavity**
  Thermal fill, not the air or water seal.

5. Roof penetrations

Almost always forgotten — installed by several different trades.

- [ ] **Downlights sealed / IC-rated airtight fittings used**
- [ ] **Exhaust duct penetrations sealed at the ceiling**
- [ ] **Solar conduit and PV cable penetrations sealed**
- [ ] **Split system refrigerant pipe penetrations sealed**

6. Mechanical ventilation ducts

MVHR ductwork needs to be as airtight as the envelope it serves.

- [ ] **Duct penetrations grommeted**
- [ ] **Membrane sleeved and taped back to the duct**
  Don't just slit the membrane and leave it.
- [ ] **Duct joints taped**
  Both for airtightness and MVHR performance.

7. Framing junctions

Anywhere two building elements meet is a place the air barrier can break.

- [ ] **Wall-to-ceiling junctions taped continuously**
- [ ] **Wall-to-floor junctions taped continuously**
- [ ] **Junctions at material changes taped continuously**

8. Electrical boxes

One power point doesn't matter. Fifty do.

- [ ] **Airtight electrical boxes specified on external walls**
  Or:
- [ ] **Standard boxes individually sealed to the membrane**
  If airtight boxes weren't used.

9. Rangehood duct

One of the largest single penetrations in the house.

- [ ] **Duct sealed through wall/ceiling framing**
- [ ] **Damper frame sealed to the wall (not just to the duct)**
  Consider a certified airtight damper (e.g. Naber Thermobox).
- [ ] **Rough opening around the duct closed up**
  The cut opening is usually larger than the duct.

10. Before-plaster walkthrough

Walk every room and confirm the above before linings go on.

- [ ] **Every room walked and checked against this list**
- [ ] **Any outstanding items rectified before lining commences**
- [ ] **Pre-lining blower door test booked**
  Confirms the result with smoke pencils while everything is still exposed.

This checklist covers the details that are fast and cheap to seal during framing, and expensive or impossible to access once plasterboard is installed. A pre-lining blower door test with a smoke pencil is the most reliable way to confirm nothing has been missed before linings go on.