WHAT TO INSPECT ON A COMMERCIAL FLAT ROOF, IN ORDER

A flat roof fails in a pattern. Water stands where it cannot drain, the details move before the field does, and the insulation holds the water long after the surface has been patched. This checklist follows that pattern rather than the shape of the roof.

This is an inspection checklist for a commercial flat roof of any membrane type. It is ordered by how flat roofs actually fail: drainage first, then the details, then the field, then the inside of the building.

Walk it the same way every time and mark findings on a roof plan. A checklist worked through in a consistent order produces reports that can be compared year to year, which is where the value sits.

BEFORE YOU GO UP

Check the access, the fall protection and the weather. A wet single ply membrane is slippery, a ballasted roof hides what you are standing on, and an older roof with wet insulation can be soft underfoot without looking it.

Take the roof plan, a camera, a probe and a broom. Note the date, the temperature and whether it has rained in the last day, because all three change what you will see.

DRAINAGE

LOOK AT	WHAT A PROBLEM LOOKS LIKE
☐ Outlets and strainers	Blocked, missing, crushed, standing proud of the membrane
☐ Sumps	Flat or filled, so water never reaches the outlet
☐ Ponding	Standing water, or a tide mark and silt where it has dried
☐ Falls	Water running along a lap or towards a wall rather than an outlet

LOOK AT	WHAT A PROBLEM LOOKS LIKE
☐ Overflows and scuppers	Absent, blocked, or set too high to work
☐ Gutters	Debris, vegetation, water held behind a joint

Ponding is the finding that decides most of the others. Water that stands works on every seam it touches, loads the deck and keeps the insulation below it wet, so record how long it takes to clear as well as where it sits.

THE DETAILS

LOOK AT	WHAT A PROBLEM LOOKS LIKE
☐ Upstands at walls	Too low, membrane pulling away, termination unsupported
☐ Curbs under units	Flashing slipped, fasteners through the horizontal face
☐ Pipe and cable penetrations	Sealant as the only detail, collars standing open
☐ Corners	Patched rather than detailed, stretched or split membrane
☐ Drain flashings	Clamping ring loose, membrane torn at the collar
☐ Movement joints	Covered over, split along the line of movement

THE FIELD

LOOK AT	WHAT A PROBLEM LOOKS LIKE
☐ Seams and laps	Open, fish mouthed, probing apart, sealant squeezed out
☐ Splits and punctures	Anything through to the insulation or the deck
☐ Blisters and ridges	Growing year to year, soft, or split at the crown
☐ Surface condition	Crazing, chalking, loss of granules, exposed scrim
☐ Underfoot feel	Soft, spongy or dishing areas, which suggest wet insulation
☐ Fasteners	Backing out and tenting the membrane above them

A soft area is the one finding you should not try to settle by eye. It means the insulation may be holding water, and the only way to know how much is a roof moisture survey or an infrared scan.

ROOFTOP TRAFFIC AND EQUIPMENT

Check whether the units are being serviced across bare membrane, whether condensate is discharging onto the roof rather than into a drain, and whether anybody has fixed a cable tray or a conduit through the waterproofing. Equipment added after the roof was built is responsible for a large share of avoidable leaks.

INSIDE THE BUILDING

Finish indoors. Look at ceilings below the areas that concerned you, at plant rooms, and at the underside of the deck where it is visible. A stain inside is often the first evidence of a leak whose entry point on the roof still looks sound.

WHAT TO DO WITH THE COMPLETED CHECKLIST

1. Split findings into urgent, planned and monitor.
2. Mark every urgent item on the plan with a photograph.
3. Get the urgent items priced as a single visit.
4. Carry the planned items into the next budget cycle.
5. File the plan and the photographs for comparison next time.

If the roof has never been surveyed, the commercial roof inspection checklist covers the wider building, and what happens during a roof inspection sets out how a professional works through the same ground.

Walked by _____ Date _____ Roof _____