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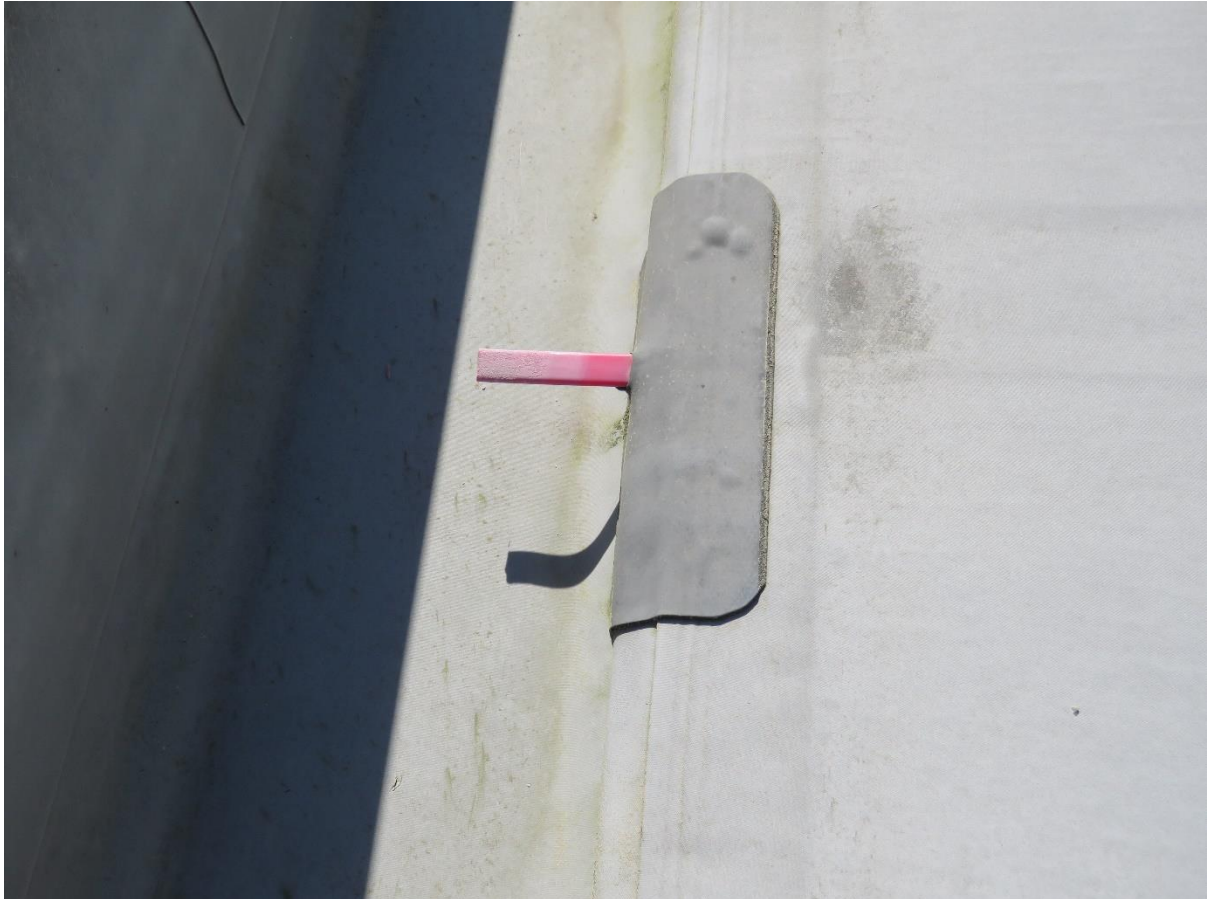
DEFECT

Engaged to inspect a building and carry out a “Building Envelope Condition” report, I came across a defect that I had not seen before.

The roof was a 100Mtr² Butynol Membrane over Plywood substrate – Non trafficable area. The plywood had been joined using a groove in each sheet with a uPVC biscuit. Thermal movement in the uPVC had pushed the uPVC jointer through the membrane at most sheet joins and on both sides of the roof.



When uPVC expands and shrinks on a cyclical daily basis, it moves in the same direction which is the direction with least resistance. It moves like a caterpillar. The daily movement is so small it is undetectable. Over a period of 10 years or more, however, it becomes pronounced and obvious, as seen below.



In this case scenario, at this joint, the membrane had been repaired once, but the uPVC had pushed through again.

If a single screw had been placed to lock the uPVC prior to the repair, would that have prevented the defect recurring?

Should a full re-roof have been undertaken?

Would the patch repair have been sufficient had single screw been installed through the joint to lock the uPVC biscuit in place?

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