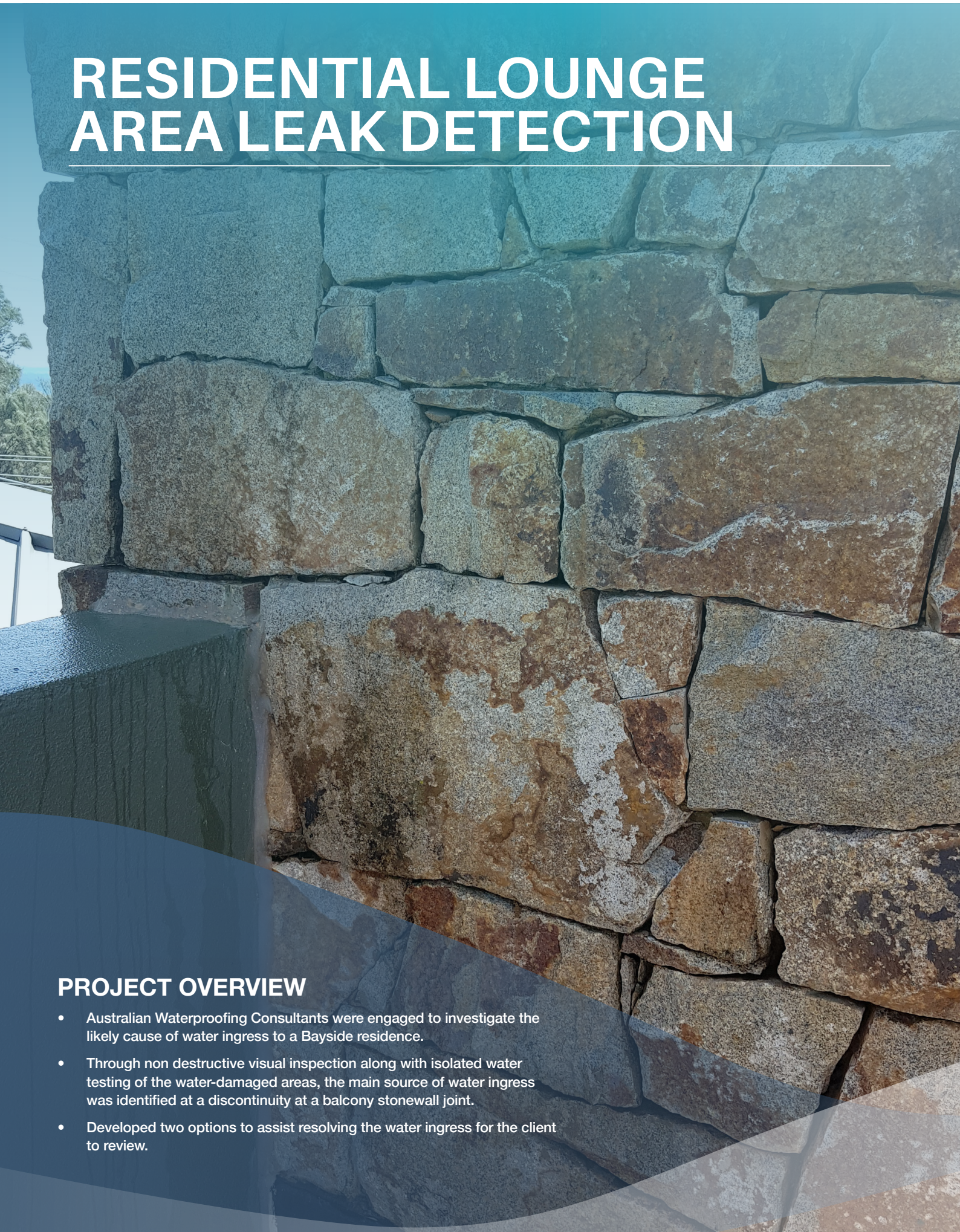
AUSTRALIAN WATERPROOFING CONSULTANTS

RESIDENTIAL LOUNGE AREA LEAK DETECTION



PROJECT OVERVIEW

- Australian Waterproofing Consultants were engaged to investigate the likely cause of water ingress to a Bayside residence.
- Through non destructive visual inspection along with isolated water testing of the water-damaged areas, the main source of water ingress was identified at a discontinuity at a balcony stonewall joint.
- Developed two options to assist resolving the water ingress for the client to review.

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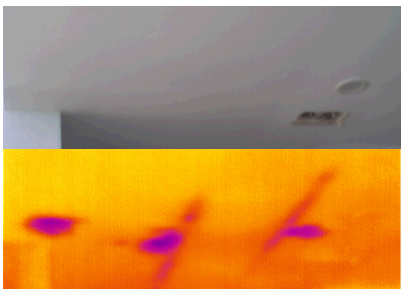
Areas showing where damage to ceiling plaster and redundant light fitting has occurred.



Thermal imaging (bottom) indicating areas containing water and their corresponding location on the ceiling photograph (top).

Stonework has unfilled joints, this allows water which strikes the stonewall during rain events to percolate to the back of the stone to the mortar/ adhesive bed. This water is able to track behind the stonework until it meets a breach or other discontinuity.

Area that has been isolated and is likely the primary area of water entry to the ceiling below.

Australian Waterproofing Consultants (AWC) were engaged to investigate the likely causes of the water ingress to a Bayside residence lounge area which was experiencing water leaks from the ceiling of the first-floor.

It was suspected that the leak was originating from the rooftop balcony. AWC were able to identify the likely cause of the leak and provide recommendations on repair and future remediation.

AWC performed a non-destructive visual inspection of the water-damaged areas along with isolated water testing, moisture meter testing, and thermal imaging. There was damage to the ceiling below the balcony with the plasterboard staining and paint blistering.

One side of the balcony was enclosed by a stonewall. AWC noted the joints in the stonework were not fully grouted.

An isolated water test survey was conducted across the wall with thermal imaging carried out in the living room below to determine if there was a breach at the stonewall. When there is water present in an enclosed area, that area will become cooler compared to its surroundings and this can be detected by AWC's thermal imaging. Prior to our testing, the ceiling of the first-floor lounge area was a uniform temperature, which was not the case after testing.

AWC found that the main source of water ingress into the ceiling of the lounge area was from a discontinuity in the stonewall at the balcony parapet wall to stonewall junction. This is most likely due to a breach in the waterproofing membrane where it junctions with the parapet wall, resulting in a poor connection and allowing water penetration.

AWC provided two options to help resolve the water ingress depending on the client's preference. One, use a sealant to provide a seal at the indicated breach point. Although this would stop the water on its current path, it would likely be diverted to another part of the stonewall due to the number of open joints, and continued maintenance would be needed. Two, remove stone at the junction with the parapet wall for the full length from balcony to the top of the parapet wall. This would allow identification of the breach and a complete repair to the parapet wall to stonewall junctions with a compatible membrane product.

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