EJF CONSULTING ENGINEERS PTY LTD

ABN: 74 167 351 331
63 DEEPFIELDS ROAD, CATHERINE FIELDS NSW 2557
ELIE FEGHALI B.E.Hons
MOB: 0415 572 771
EMAIL: eliejfeghali@live.com.au

24th February, 2020 REF NO. 20200022

Mr Michael Yarak

RE: STRUCTURAL INSPECTION OF THE EXISTING SINGLE STOREY HOUSE AT 98 HAY STREET, ASHBURY.

At your request, an engineer form our office undertook a site inspection of the house at 98 Hay Street Ashbury on 01/02/2020. The purpose of the inspection is to provide a report on the structural defects that have appeared after recent renovations and rectifications work undertaken by the owner. Structural drawings were not available for our review. Our inspection was based on a visual observation of elements inspected from ground level. We did not undertake any destructive testing during our review.

The property at 98 Hay Street Ashbury is a single storey double brick house with shallow foundations supporting a raised timber floor. The internal floor bearers are supported of brick piers. The roof consists of conventional timber framing supporting a tiled roof. We understand that the house has been recently refurbished to fix cracked brickwork, strengthening of the roof framing that have moved off the wall supports, additional strutting of the roof, repairing rotated and settled brick piers supporting the floor joist as well as cosmetic finishes around windows and doors. We also understand that the house has required ongoing major maintenance to and repairs to ensure that the roof and floor structure is structurally adequate to support the loads.

During our inspection, we observed the following defects;

- Cracking in brick walls
- Rotated brick work
- Cracking in cornices
- Bouncy floor joists
- Cracking in the ceiling finishes
- Cracking in tiles
- Settlement of the entry floor structure
- Opening up of gaps around windows
- Doors jamming

Based on our review, the cause of the ongoing structural and cosmetic issues is differential foundation movement. The existing foundations are bearing onto reactive soil. During wetting and drying of the soil, the house is experiencing significant differential movement that is causing the structural defects. Given the ongoing nature of the movement, it is our opinion that ongoing maintenance is not feasible to maintain the cosmetic and structural integrity of the house. We do not recommend underpinning the footings for this house as access is limited to East, South and West perimeter only. Access to the Northern boundary for underpinning is limited by the boundary fence and the neighboring house. Underpinning to the internal walls of the house cannot be done without removal of the roof structure and the floor structure. By underpinning the perimeter only, the internal walls of the house will likely experience additional cracking due to the differential movement between piled foundations and shallow foundation. Therefore we recommend consideration be given to demolition of the house and new foundations be installed that comply with the current residential structural code and the site conditions. A geotechnical engineer will be required to assess the ground conditions and provide recommendation for the foundation.

We trust that this report is satisfactory, contact the undersigned should you require further assistance.

Regards

ELIE FEGHALI – B.E. (HONS.)
DIRECTOR

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PHOTOGRAPHIC RECORD OF INSPECTION DONE ON 01/02/2020

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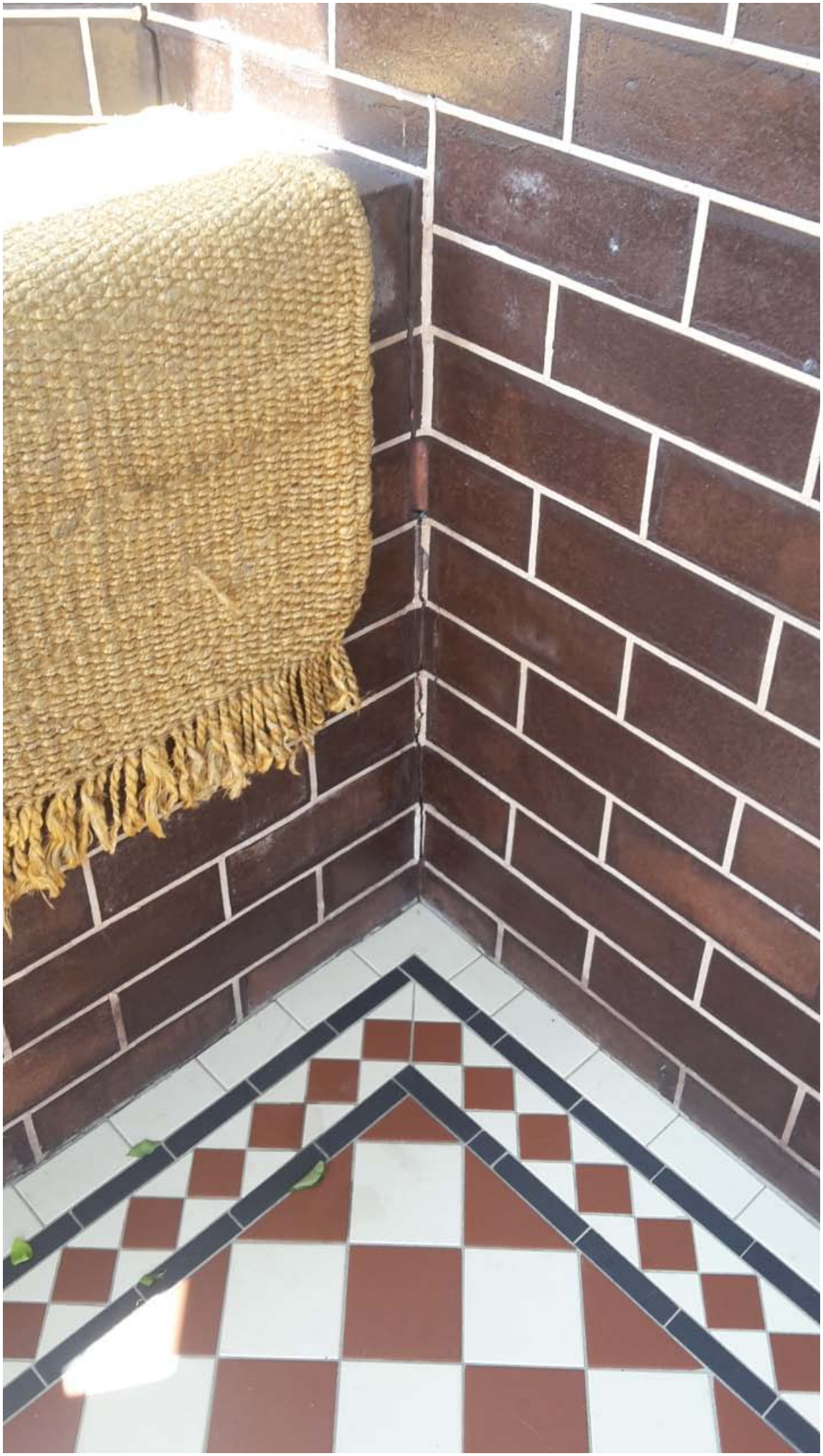

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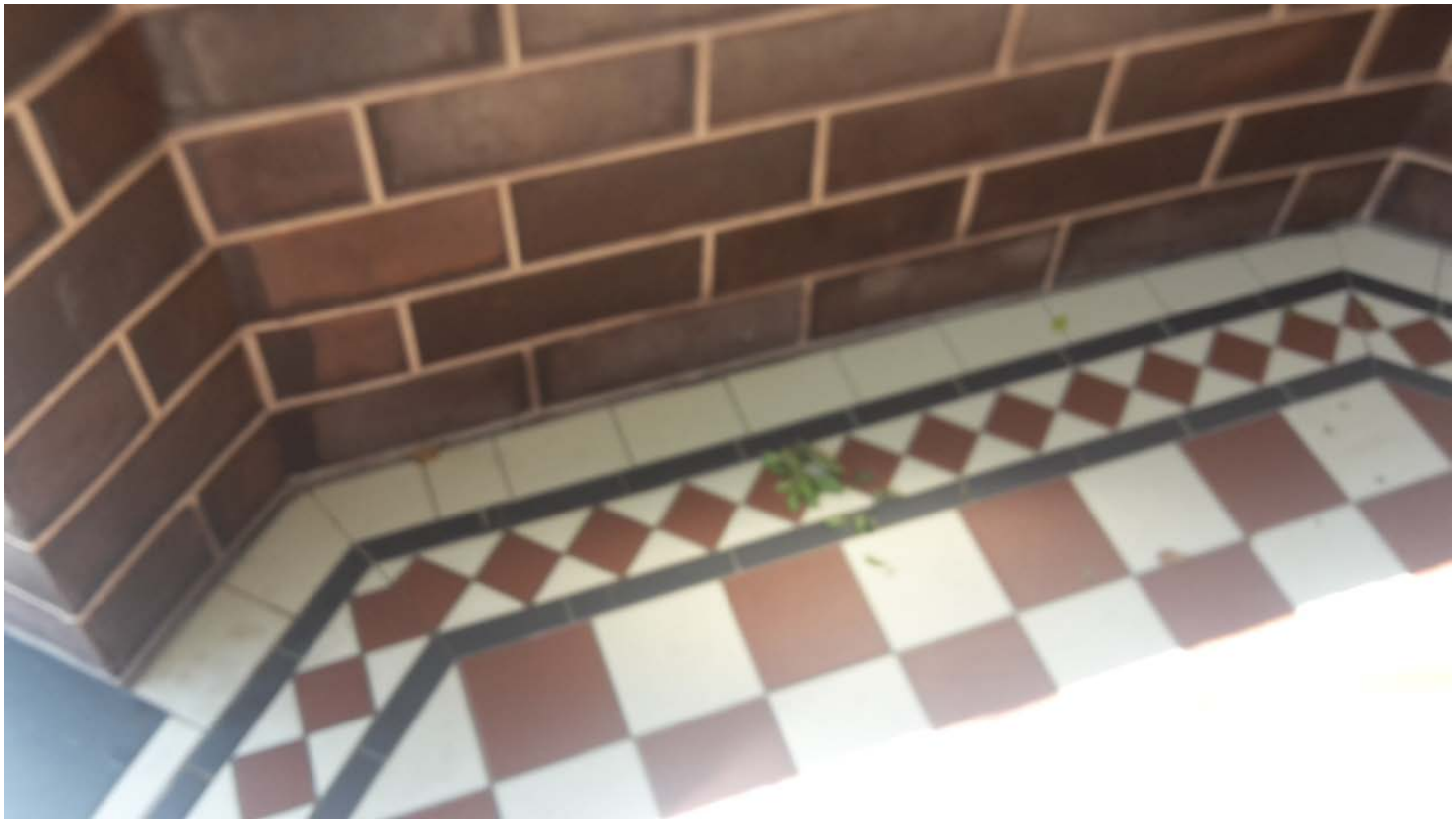

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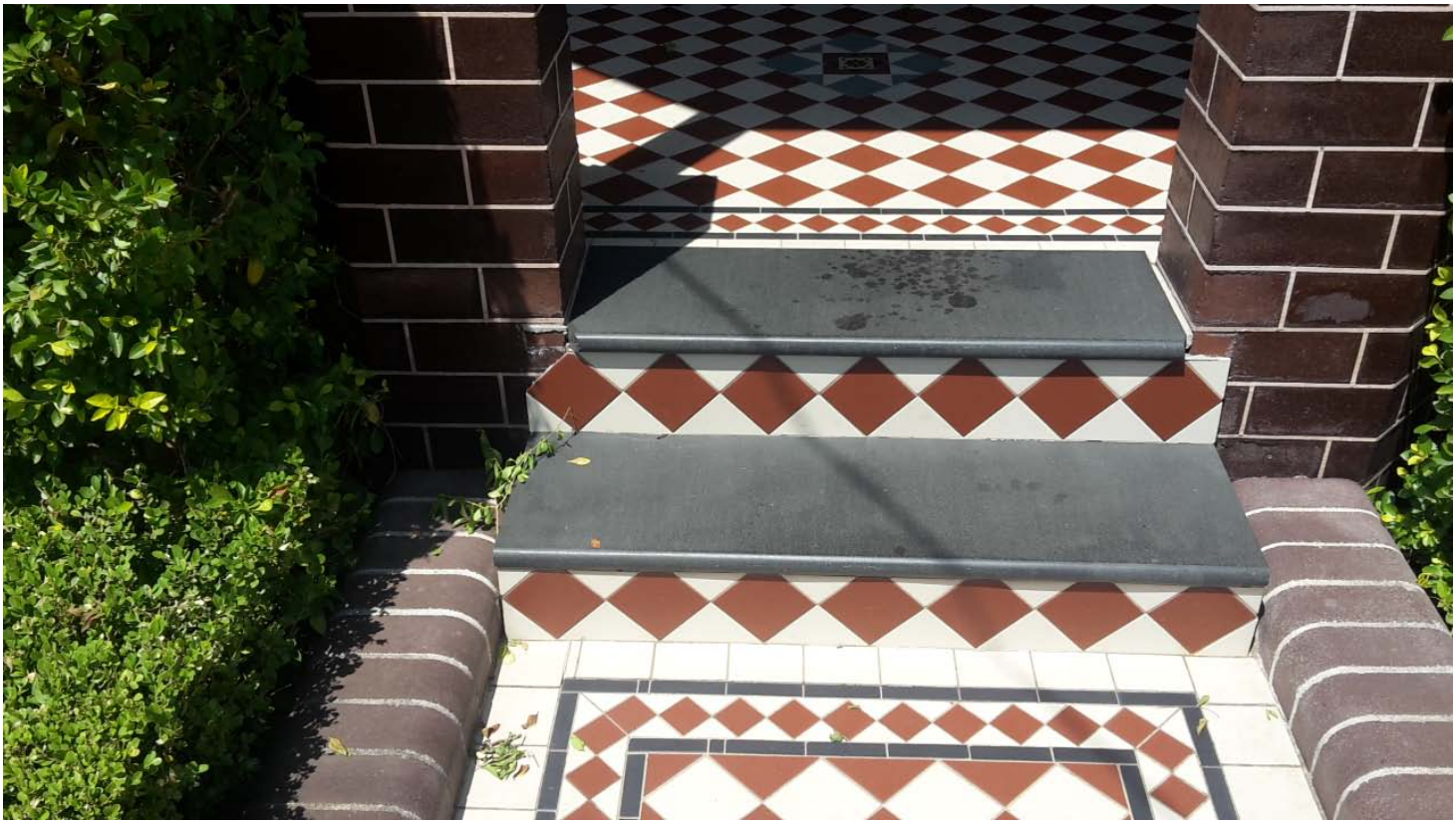

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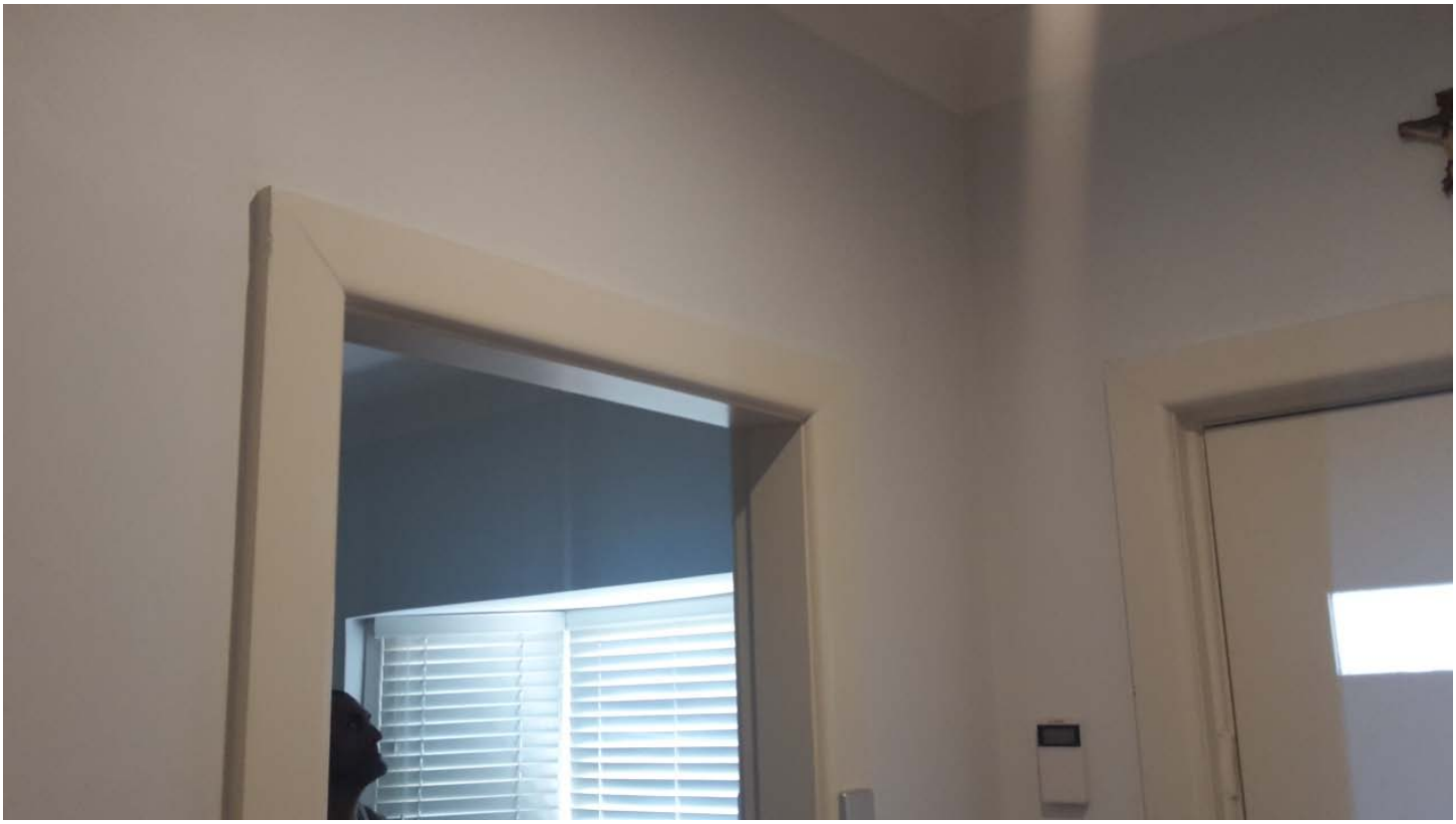

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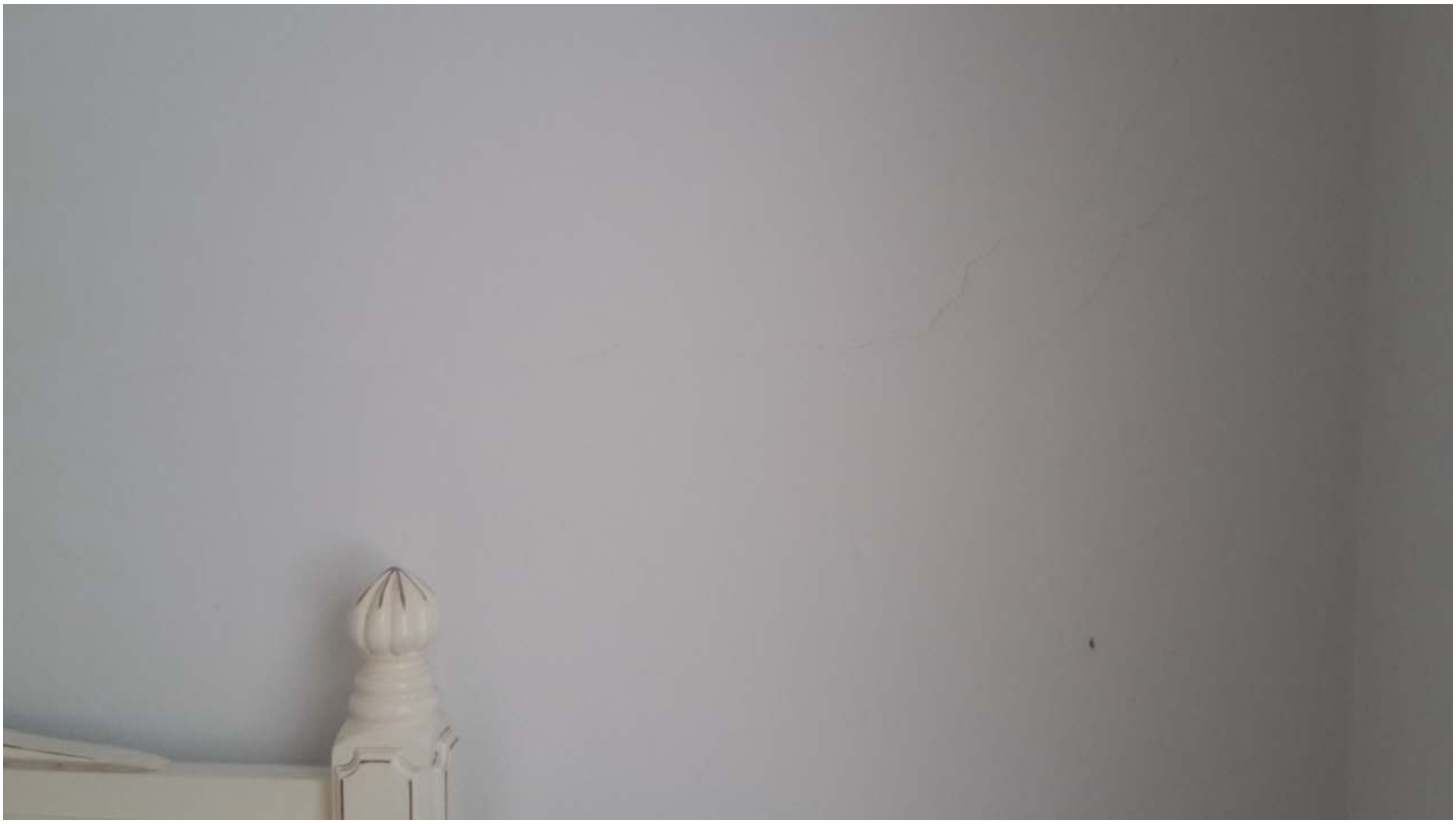

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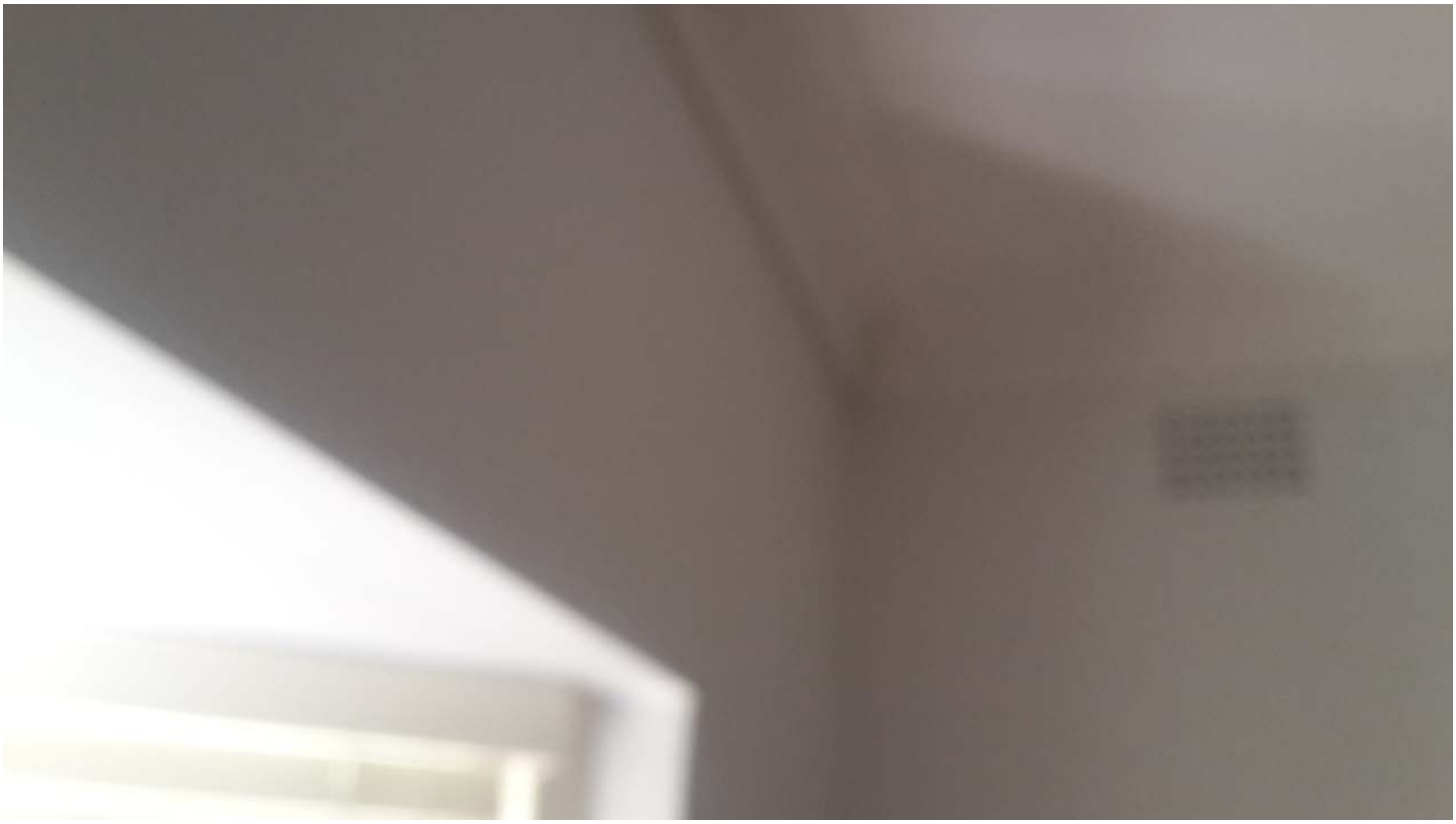

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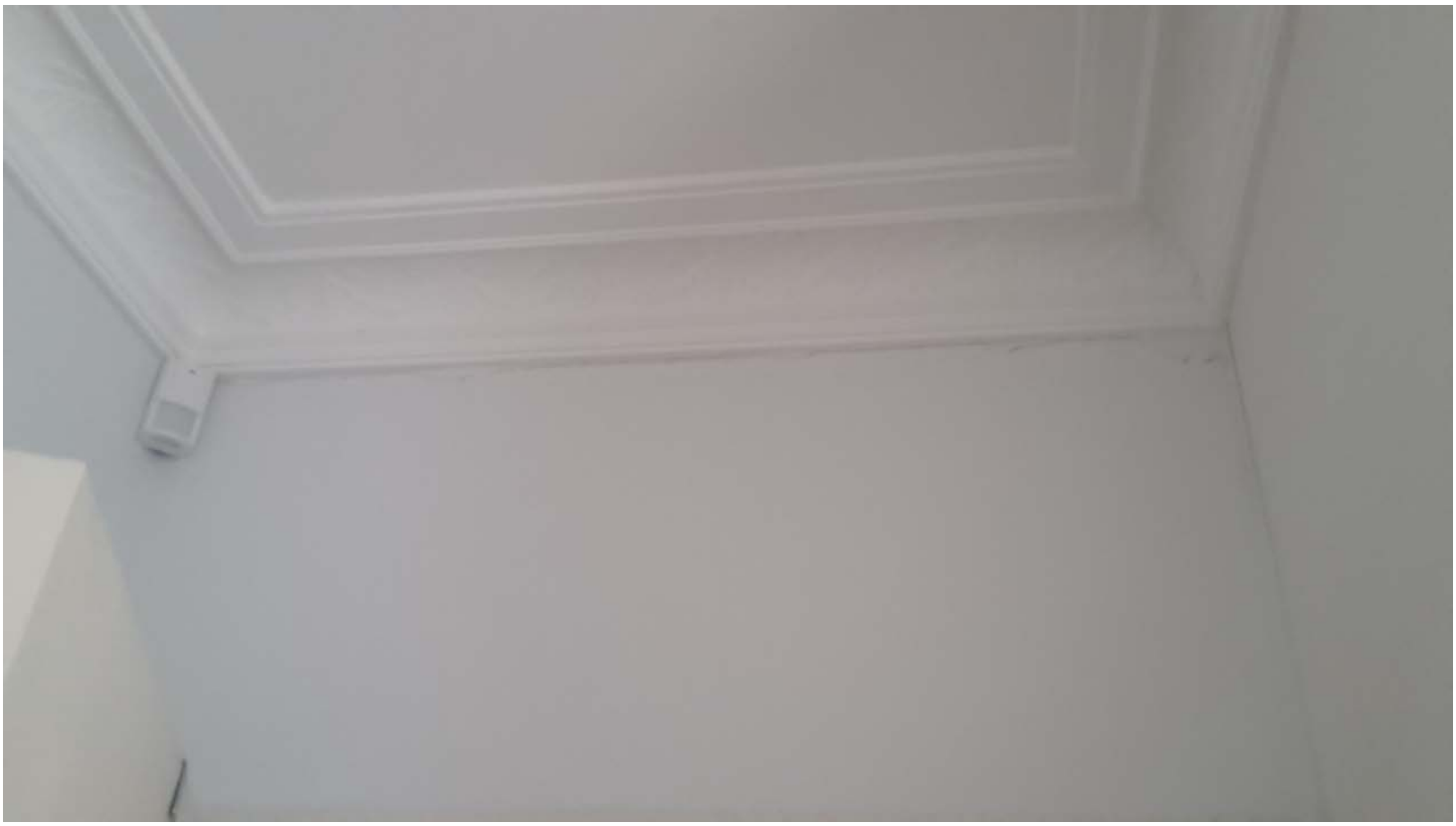

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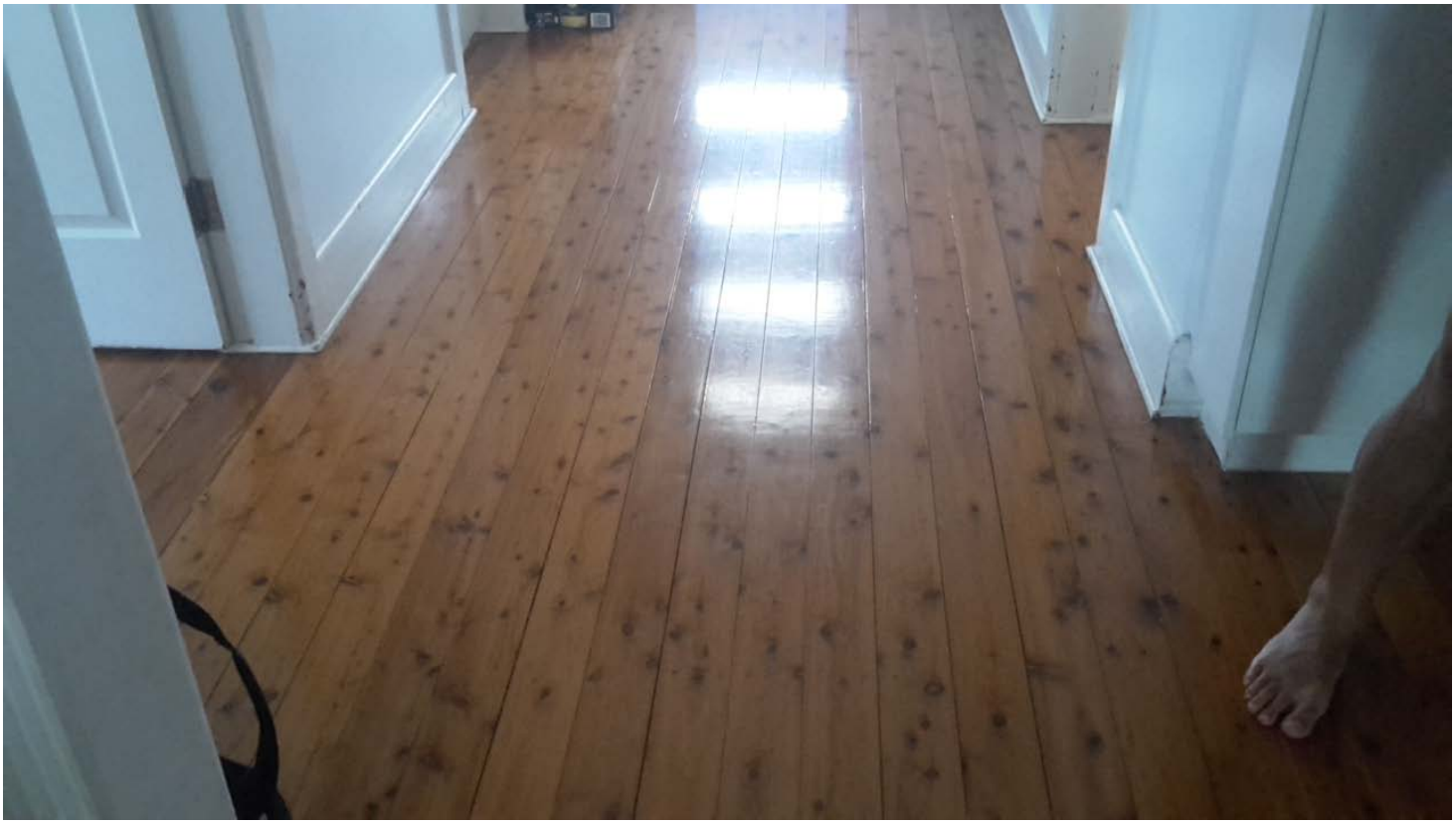

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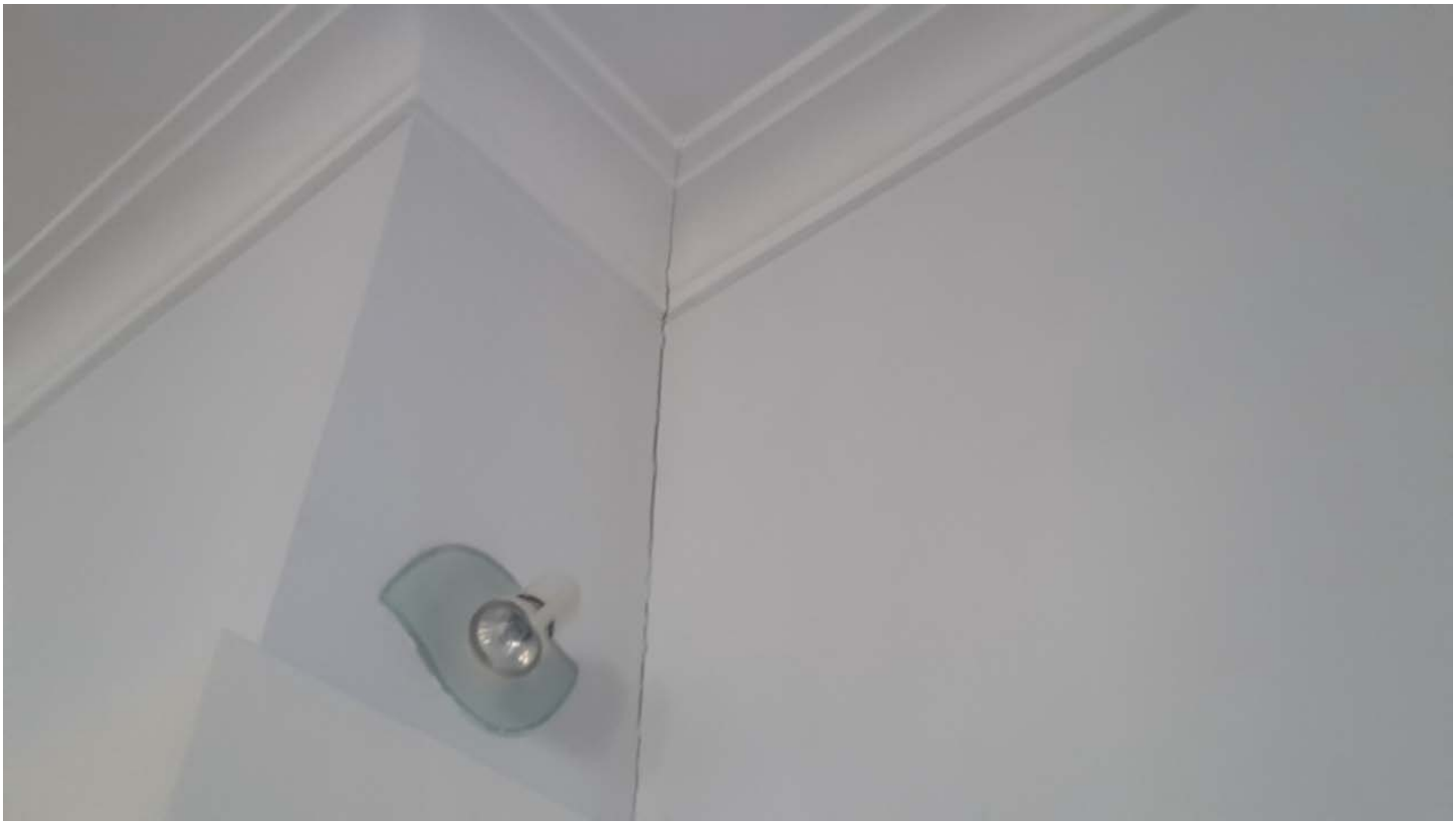

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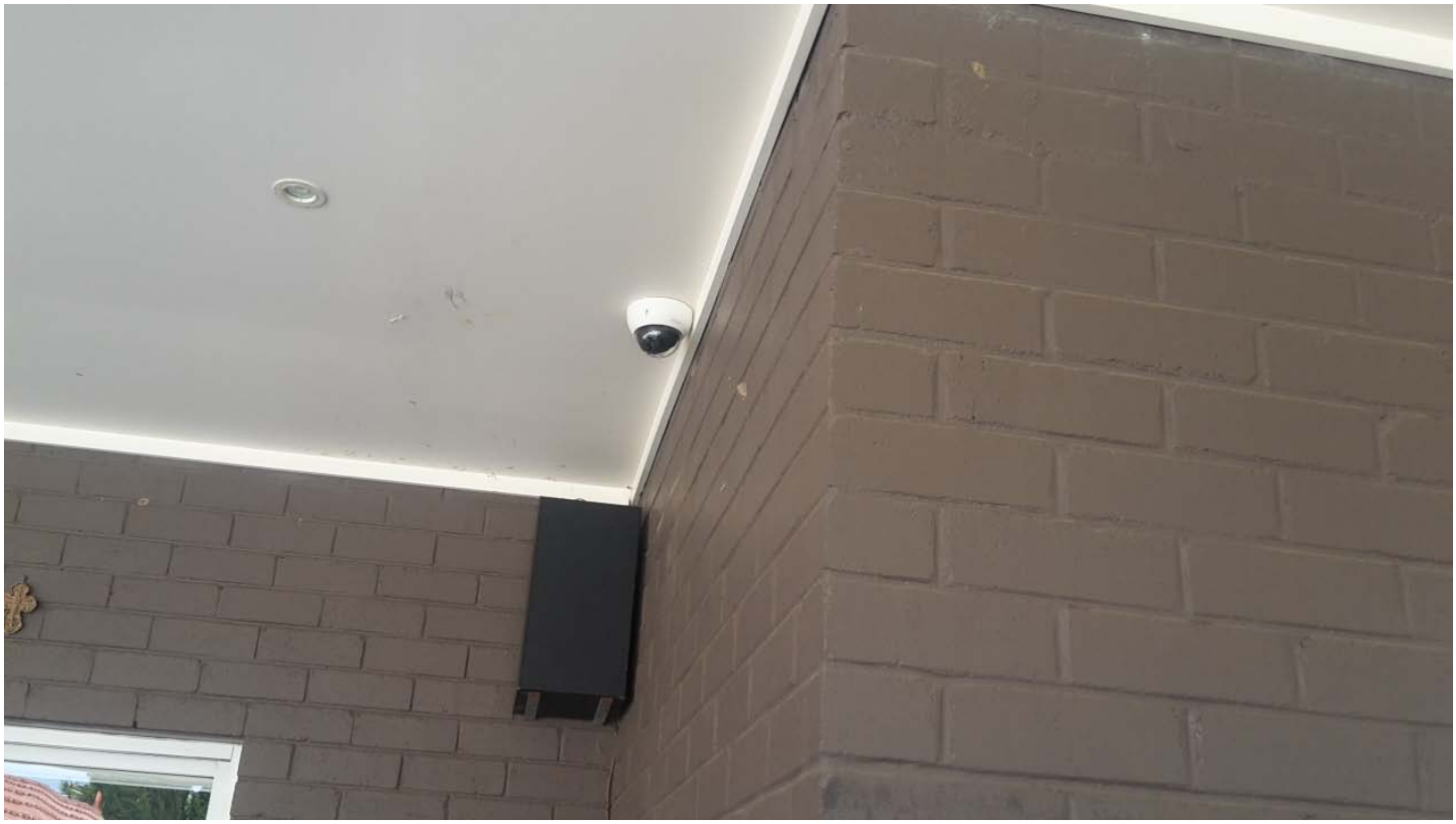

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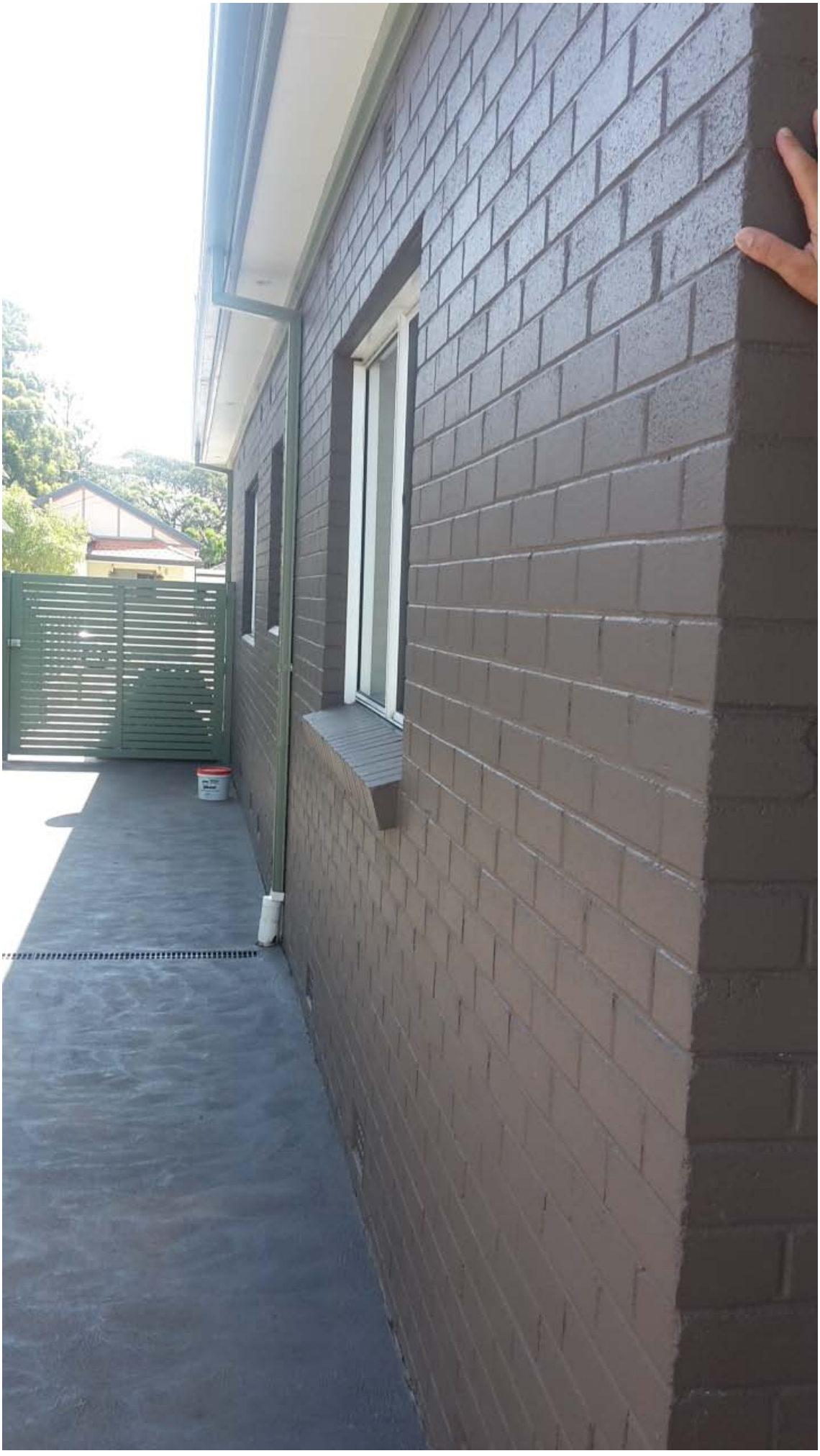

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