

Aluminium alloy failures in bathroom drainage

The following images are from one building site and are typical examples of the ~160 bathrooms. The supplier and original manufacturing companies have been wound up.

The builder has currently 160 bathrooms being rectified and is replacing all the bathrooms and drains. His estimate of costs at present is about \$3.5 million. He currently wishes to remain anonymous, and also wishes the site address to be not released for owner and tenant privacy. Subject to suitable confidentiality, an inspection could be arranged.

The failures began at the aluminium drainage channel. The drainage channel is formed from interlocking extrusions that also form the floor.

The waterproofing primer & membrane detached from the aluminium, and the tiles became 'drummy' and 'leaks' appeared as water was able to escape the bathroom.

There was primer and waterproofing over the aluminium surface forming the floor, however this also detached from the aluminium substrate in patches and sheets.

Essentially it seems the crevice corrosion has occurred as stated in the Joint Technical Bulletin from the Aluminium Council and the Australian Window Association, not only on the many crevices, but on the broader anodised surface as well.

A copy of the Joint technical Bulletin is attached and 9 pictures of damage are shown below.

Dr Graham Sussex
Corrosion & Materials Consultant
ACA Certified Corrosion Consultant #136 (1995)
ASSDA Technical Specialist (2001 -)

25 November 2024









