

UR1975-17

Foundation problems at a house in Junction Street, East Launceston.

C.J. Knights

The house, at 21 Junction Street, East Launceston [EQ129111], is 27 years old and has been occupied by the present owners for one year. The owners are concerned about cracks in the house, which is located near the boundary between Class III and IV land on the Tamar Valley Landslip Zone Map.

The house is situated on steeply sloping ground on sediments of Tertiary age. Near the ground surface these sediments are mostly orange coloured and mottled sandy clays.

There are many structural cracks especially in the foundations of the north-west corner and of the northern side of the house. Inside the house there are cracks in the plaster work, across walls and in corners, and some of the doors no longer fit properly. It appears that many of these cracks are old and have been patched over. However, the owner considers that many of the cracks are recent and occurred for the first time during last winter.

When a house is situated on a steep slope of soft rocks it is inevitable that it will be under stress from the downhill creep of near-surface material, and over the years these stresses will cause cracks. Last winter was exceptionally wet, so creep would be more active, and the stresses greater. This could be the main cause of the increase in cracking.

In front of the house is a high retaining wall built by the council about two years ago. The wall has very few drainage outlets and trapped run-off probably escapes beneath the wall into the subsoil and so could increase the rate of creep of the soil down hill. To investigate the drainage for the wall, two holes could be drilled into the retaining wall, towards its base. If soil water pressures are developing then the holes will weep significantly, and additional drainage should be considered.

During the winter months the owner reported that an excavation 4.5 m deep was left open and unsupported in the adjacent block. Such an excavation could allow horizontal expansion of the clays and could also accelerate cracking.

Next winter should indicate if the acceleration in house cracking is indicating anything abnormal.

It is recommended that any additions to the house or garden should comply with the regulations for building in landslip areas.

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