NEWS

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> PK LIM, A PANEL ARCHITECT OF ARCHITECT CENTRE SDN BHD

KUALA LUMPUR

Watch out for your retaining walls!

Improper or blocked drainage is a main contributor to retaining walls collapsing

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WITH incessant heavy rain causing water levels to rise well above the norm, homeowners have been advised to protect their properties by carrying out frequent checks on any retaining walls they may have.

The property inspection arm of Pertubuhan Akitek Malaysia, Architect Centre Sdn Bhd (ACSB), advised homeowners to regularly check for earth movements.

Its panel architect, PK Lim, said, "Water including rain is a major cause of retaining wall failure as improper installations and lack of maintenance of the wall will cause water to build up behind the wall. This will exert pressure on the wall which then can crack and fail."

He added that even though the weakening and failure of retaining walls have become a common sight, homeowners and the public in general do not know much about how cracks develop in the retaining walls. They would only seek advice when the situation worsens – when cracks widen and there is shifting of the wall.

"Homeowners should take cracks in retaining wall seriously and undertake early repairs. For instance, cracks in the retaining wall adjacent to a swimming pool could be due to water seeping or leaking onto the back of the retaining wall.

He pointed out that a houseowner may hesitate to dole out RM350 to repair a crack in the retaining wall at the onset of the problem but if left unchecked, in six months the crack could widen to a greater degree and cost ten times more to repair.

Lim also urged homeowners to share the responsibility in maintaining retaining walls built along a common boundary.

He advised them to be observant of the condition of the retaining walls and take steps to prevent cracks and wall collapses by carrying out the following:

- Place stones behind the wall so that the water draining out from the soil flows out between them rather than accumulate and form a force against the wall;
- Allow for weep holes of 150mm in diameter at regular intervals to drain the water from behind the wall;
- Stop at source the water that drains or leaks to the back of the wall;
- Ensure that the weep holes remain clear and there is no blockage;
- Go for a retaining wall that is built of reinforced concrete to an engineer's design for heights above 900mm;
- Ensure that the walls are hefty, for example, 200mm thick bricks, to resist the movement and collapse of the wall; and
- Always consult the professionals on cracks in retaining walls and perform checks on them.

ACSB's Australian counterpart, Archicentre Ltd, concurred that rain is a major contributor to the failure of retaining walls, with a collapsed boundary having a major impact on the value of the affected home.

It also said that the problem could lead to a costly legal battle between neighbours if the walls are on a common boundary or close to another property.

It said its architect inspectors have observed many instances of retaining walls cracking due to construction shortcomings and that the relevant paperwork is also often unavailable in relation to the design of the retaining wall or any approval process.

Archicentre stressed that paperwork can be vital in protecting homeowners in the case of retaining wall failure, both in terms of having it fixed and also in countering legal action by a neighbour whose home had been damaged or devalued by the failure of the retaining wall.

PREVENTION IS BETTER THAN CURE: Collapse of retaining walls could result in homeowners forking out huge sums to repair them

The Australian centre added that the use of retaining walls to support land higher than a footpath is common and varies from low walls to above head height which could present major legal problems if they collapse and injure pedestrians.

Any movement of a retaining wall which is close to a property can have dramatic impact on the existing structure, causing it to have structural damage and in some cases, the house will have to be pulled down, it said.

Impact on the integrity of a retaining wall can be caused by, among others:

- The presence of large trees close to the retaining wall;
- Poor drainage resulting in the structure being weakened by hydrostatic pressure;
- Poor construction through the use of the wrong materials for the site;
- Lack of proper and approved construction; and
- Changes in earth levels at the top or bottom of the wall.