

## Structural problems: Cracks in my townhouse

Monday, 03 March 2014

I purchased a townhouse in 2011 and in the past year or so bad cracks have started developing. Most of the units have cracks in the same places.

There are no plans or engineering certificates at the Tshwane municipality. The ground is very clay-like.

I have had quotes and explanations for the cracks ranging from foundation sinking, paving not sealed, settling cracks, etc., but each time its a different reason.

I am struggling to find someone who will give me an honest opinion on whether I should just get out as fast as possible or whether I should fix the issues.

I would really appreciate any advice you can offer.

Les advises:

There is really only one real reason that cracks appear in a building and that is because something is moving. It can sometimes be the roof but in the vast majority of cases, it is the foundations. Once again, there could be a few reasons for that to happen. Either the ground has a low bearing capacity and the weight of the building causes it to be compacted as the house settles or there could be different types of soil present with differing densities which compact at different rates. The one which seems to be most likely in your case, is that the clay that you mentioned is heaving clay.

Heaving clay is not always a problem if it is managed properly and it either stays wet or stays dry and if the foundation design takes this into account.

The difficulty is that it unfortunately shrinks when dry and expands when wet, causing the foundations to move. The problem with cracks in this scenario is that they will always come back each change of season and any repairs cannot be guaranteed to last for much more than a few months.

My advice to you is to engage a structural engineer who has no vested interest in your townhouse development to do an inspection and to give you a written report. He may need to test the clay or investigate other geological issues but in the end, you will have the true answer regarding what the underlying cause of the problem might be. You will also then get an idea of what could be done and the cost of resolving the problem or have the choice of moving if a satisfactory solution is not forthcoming.