

## NINE COMMON BUILDING DEFECTS

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Whether it is a high-rise building or landed property, it is getting usual for owners to complain about building defects. There are several common building defects that deteriorate the condition of the building. The following are some of the common defects:

### 1) Roof Leakage

The most common roof defect is leakage. Leakage is normally due to the unsealed penetration, missing roof tiles, and improper installation of the underlayment. Roof leakage may develop moisture that causes staining on the ceiling. The parts where the staining can be seen will start to rot and this will weaken the structural integrity.

### 2) Crack

Cracks are commonly found in various structural elements in a building, for instance, beams, columns, slabs, and walls. Cracks can be classified into structural cracks and non-structural cracks. Structural crack is caused by structural factors such as overloading, settlement, foundation problems, etc. while non-structural crack will occur because of the temperature, weather condition, and internally induced stresses in building material. The severity of the crack is normally categorised by determining the crack width using crack ruler. As a rule of thumb, if the crack width is less than 2mm, it is considered as non-structural crack, and vice-versa.



*Image 1: Crack*

### 3) Dampness

The excessive moisture that exists in the building structure caused dampness. Dampness can be very serious as it can damage the brickwork by saturating them, decaying the timber, breaking down the mortar joints, and corroding the steel structure. Dampness occurs due to water penetration in the porous building material, inadequate drainage system, and poor ventilation system.

### 4) Plumbing Leakage

Plumbing leakage could cause serious damage to the structure and the properties in the building. This is because the leaking water will penetrate into the structural members like slabs, walls, beams, and columns, and start to develop massive moisture which will rot the material. Plumbing leakage is mainly due to the materials failures in the plumbing system.

### 5) Foundation Problem

Foundation settlement is usually caused by the overloading of the foundation, poor bearing capacity of the soil, or poorly designed foundation. The settlement caused by the foundation failure can be very serious as the building will start tilting eventually and it might even collapse in the worst case.

### 6) Electrical Wiring

Faulty electrical wiring can be hazardous as it may cause fires in the building. Faulty electrical wiring may be caused by human error, poor workmanship, or the deterioration of the wires used in the electrical system in the building.

### 7) Mold

Mold can grow on the surface as long as there is high moisture content. Mold can impair the concrete as the acid produced from the mold is able to degrade the concrete strength and integrity. As the mold continues to erode, the concrete will become more porous, thus allowing further intrusion of moisture and bacteria.



*Image 2: Mold*

### 8) Peeling Paint

When the painted area is exposed to high moisture, the peeling paint will occur and impair the appearance. When there is high moisture content around the area, the water will penetrate through the coats of paint, causing the paint layers to peel off the surface. The moisture can originate from roof leakage, plumbing leakage, etc.



*Image 3: Peeling Paint*

## 9) Timber Defect

Timber defect usually occurs in the old building made of timber structures. Some of the factors contributing to the timber defect are environmental exposure, insect infestation, fungal decay, etc. Dry rot and wet rot are the common timber defects that will weaken the timber strength, thus undermining the integrity of the timber structure.



Image 4: Timber Defect

These common building problems may be very troublesome and bothering. It is essential to hire a qualified professional contractor to solve these building problems to prevented worsening.

### References:

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