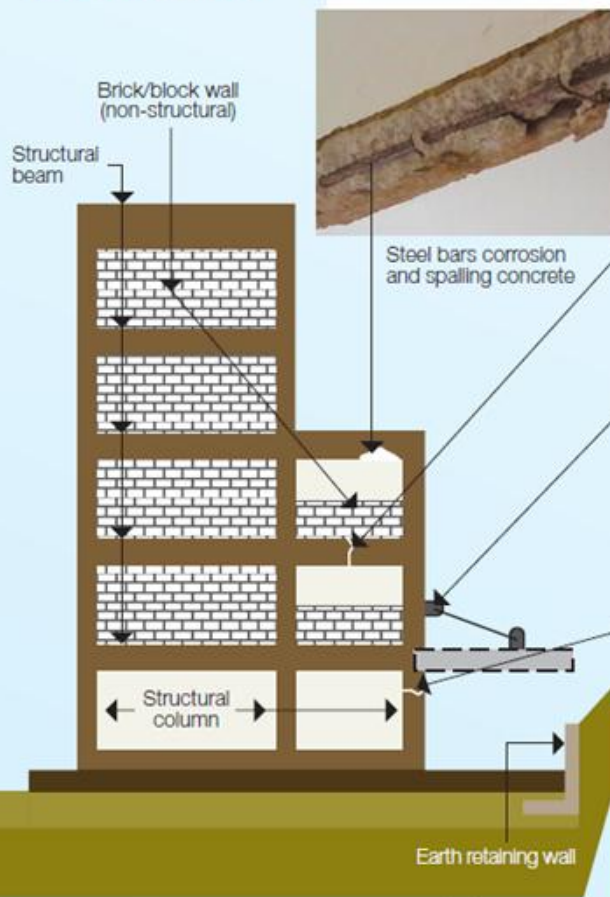


Role of Professional Engineers

- Inspect building structures, including earth retaining walls, columns, beams and flat slabs.
- Recommend how structural defects – such as steel corrosion, cracks, deflection – should be repaired.

Examples of structural defects found in a building



Cracks on beam



Steel bars corrosion and spalling concrete



Corroded steel connection



Cracked and spalling concrete on column

Building and Construction Authority

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safe
structures,
safe buildings
periodic structural
inspection

For Building Owners, Professional Engineers
and Management Corporations

Building and Construction Authority



Periodic Structural Inspection

Structural defects in a building can occur over time due to deterioration, wear and tear, overloading, and poor maintenance. They must be repaired to maintain the building's structure and to prevent failures. Regular inspection is the key to protecting the health of a building's structure.

It is required by law – under the Building Control Act – for building owners to conduct periodic structural inspections once every ten years for residential buildings* and once every five years for others.

* *Detached, semi-detached, terraced or linked houses which are exclusively used for residence, as well as temporary buildings, are exempted.*

Why regular inspection?

Buildings serve the needs of the people using them. It is important that they remain structurally sound so that they do not pose a safety hazard to occupants and members of public.

How can owners play their part?

Owners have to engage a qualified Professional Engineer**, who will:

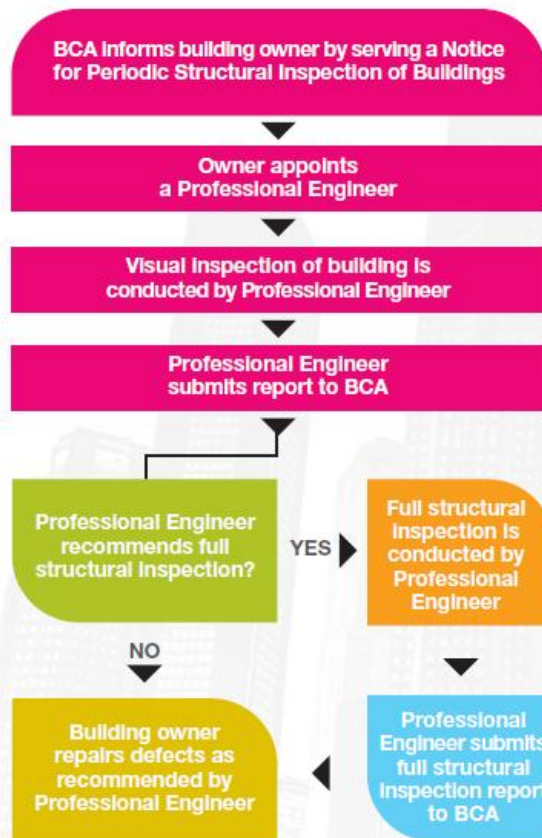
- conduct the inspection
- detect structural defects, if there are any
- recommend repairs

Owners will then carry out repairs promptly.

Periodic Structural Inspection (PSI) The process and the parties involved

Parties involved in PSI process (Figure 1)

- Building & Construction Authority
- Owner
- Professional Engineer



Examples of repairs to structural defects

Figure 2: Cracked earth retaining wall



Before repair: Cracked earth retaining wall



After repair: Reconstructed earth retaining wall

Figure 3: Repair to cracked columns



Before:
Cracked column

After:
Repaired column

** Visit www.bca.gov.sg/psi for a list of Professional Engineers and more information.