

(A STATUTORY ORGANIZATION OF GOVERNMENT)

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# Collapsing buildings in Kenya and importance of Building <u>Inspections</u>

# 1. Situational analysis / background

The widespread collapse of building structures in Kenya that has resulted in deaths and injuries in the recent past is a matter of great concern. These accidents in construction sites has claimed the lives of innocent Kenyans robbing families of their breadwinners and loved ones, and causing permanent damage to the injured workers and people whose lives revolve around the construction environment.

On various dates between now and 2006, reports of buildings collapsing have been reported in Nairobi, Kisii, Kiambu and Mombasa. These incidences have resulted in more than 50 fatalities and scores injured, maimed or permanently disfigured. The above statistics paint a grim picture, and looking closer at the reported causes of failure we can see that the collapse of buildings would have been prevented had building inspections been conducted during and after construction as part of routine maintenance.

These collapses were reportedly attributed to, among others; poor design and supervision, poor materials and workmanship. Others are columns failure due to bending, Concrete not meeting the minimum strength for structural elements, lack of proper supervision, lack of regular maintenance, poor quality materials, non approval of works, lack of professional input during supervision and drawing Inadequate design of structural members. The list is endless but points a finger at inadequate or lack of documented policies, systems, processes, and procedures that can help the county governments and other construction sector regulators to manage the way they operate, make compliance assessments, make decisions and manage risk.

According to The Institution of Engineers of Kenya (IEK journal, volume 31, issue 2, 2010), the probable causes of collapsing building structures are; inadequate geotechnical and materials investigations, use of inappropriate specifications, incompetent design, poor workmanship, lack of ethics, poor supervision, misunderstanding between parties to the contract, use of inappropriate materials and unskilled workers.

The above causes constitute some of the main activities that are part and parcel of the process of inspection of buildings from plan approval, inspection of materials, testing and construction activities. This means that embracing and entrenching building inspections as part of the construction, maintenance and statutory regulations of buildings will greatly reduce or eliminate altogether the occurrence of buildings collapsing.

## 2. What is Accreditation and how can it help to prevent these situations?

Accreditation of building inspection firms (both governmental, non-governmental, national or county) will ensure that proper procedures and standards are maintained in line with international standards such as ISO/IEC 17020: 2012 and national and county regulations are adhered. It will also ensure that only competent construction workers and inspectors are mandated to authorize, approve and supervise building works and carry out inspections. Other benefits of accreditation are as outlined below:

In New Zealand, the Building Construction Authority (BCA), which has similar mandate as the National Construction Authority (NCA), operates an accreditation and registration scheme based on international inspection standards and a suite of Building legislations designed to help improve the control of, and encourage better practice and performance in, building design, regulatory building control and building construction.

Additionally, they have established a Licensed Building Practitioner Scheme (LBPS) and a product certification scheme. The BCA scheme requires that any territorial authority or regional authority (council) that carries out building consent, inspection and approval work be accredited by a building consent accreditation body (International Accreditation New Zealand [IANZ]) against the standards and criteria in the Building (Accreditation of Building Consent Authorities) Regulations 2006. The council must then be registered by the Ministry of Business, Innovation and Employee against the standards and criteria in the Building (Registration of Building Consent Authorities) Regulations 2007.

In Kenya, The government has established the Kenya Accreditation Service, (KENAS) as the Sole National Accreditation Body (NAB) mandated to offer accreditation services in Kenya. It is established under the States Corporations Act, Cap 446; vide Legal Notice No. 55 of May 2009. It gives formal attestation that Conformity Assessment Bodies (CABs) are competent to carry out specific conformity assessment activities.

KENAS is a member of the International Accreditation Forum (IAF) and an associate member at the International Laboratory Accreditation Cooperation (ILAC) which are apex organizations that oversee accreditation activities at a global level. KENAS carries out accreditation based on international standards, regional directives; relevant statutes and government regulations; requirements for health, safety, and protection of the environment; the market and needs of clients.

In the building sector, an accreditation and registration scheme will have a host of benefits by helping to:

- assure the public of the quality of building controls
- promote consistent, standardized and ongoing good quality practice in building control
- identify good building control practice and provide mechanisms for sharing this information throughout the sector and with other interested parties
- foster continuous improvement in building controls at national and county level
- ensure better technical capabilities and resourcing of building controls
- provide an impetus for much closer and more formal relationships among national and County Construction and Building regulators, and technical consultants/contractors
- provide incentives for improving performance and raising standards in building control.

County Authorities may contract others to undertake some or all of their construction mandates such as inspection functions, but this does not relieve them of the requirement to be accredited and registered. Those not wishing to be accredited and registered can transfer their functions to another accredited and registered organization.

Accreditation is used by many professions to help ensure organizations and individuals can, and do, perform their duties to a particular standard. Accreditation involves an independent accreditation body — The Kenya Accreditation Service (KENAS) - assessing technical competencies, resources, equipment, procedures, systems and processes to ensure they are adequate are being followed and that identified outcomes are being achieved.

#### Standards and criteria for KENAS accreditation

The standards and other criteria to be applied by KENAS will be those prescribed in the Laws of Kenya and the attendant regulations as well as codes developed through extensive consultation with the sector regulators and professional bodies. In addition, conformance to the requirements of the ISO/IEC 17020 standard will be ascertained. The aim will be to help ensure improved performance and better practice and consistency in building control work.

The standards are outcome-focused and performance-based, which means that the means of achieving them can vary, depending on the National and County's circumstances, size, and the volume and type of work undertaken. There is no 'one size fits all'. The standards focus on four functional areas:

## a) Formal, documented policies, systems, processes and procedures

Documented policies, systems, processes, and procedures will help National and County Authorities manage the way they operate, make compliance assessments and decisions, manage risk and achieve better consistency and identified outcomes. The standards will help them monitor, review and continuously improve their performance. Sound record-keeping and information-storage practices are also essential in the building control environment. These provide an audit trail of how they processes consent applications, undertakes inspections and issues compliance certificates, the decisions they make and the rationale for those decisions.

The required policies, systems, processes and procedures cover statutory responsibilities and administrative and organizational activities that do not have a statutory basis, but which affect

building control functions and outcomes - for example, the way National and County Authorities assess alternative solutions and allocate work to building control staff.

#### b) Skills and resources

National and County Authorities need the skills and resources to consistently meet statutory building control responsibilities and undertake the volume and nature of work involved. Skilled and experienced internal or external (contract) resources can help them discharge their statutory obligations effectively. Having sufficient skills, knowledge and expertise (competencies) and resources (sufficient staff or contractors) helps ensure buildings comply with relevant legislation and are fit for purpose.

The accreditation standards ensure appropriate monitoring and review mechanisms to help identify skills, knowledge and expertise requirements. The right skills and experience to undertake allocated work means building controls staff can work within the limits of their technical competence and experience. Training and professional development plans are integral to ensuring National and County Authorities have appropriate skills and expertise, and to maintaining the level of knowledge needed to perform competently.

# c) Quality assurance systems

A sound quality assurance system will strengthens decision-making and leads to better quality and greater consistency in compliance and performance of regulatory building control functions.

## d) Staff qualifications

Qualifications help develop a viable career path for building officials and provide independent assessment of a person's competency in a particular area. Qualifications can help a National and County Authorities assess its personnel to demonstrate organizational competence. This long-term standard will improve both capacity and capability in the building control sector.

## e) Accreditation Process

The accreditation process has various steps:

- Submission to KENAS of application for accreditation
- Desk-based documentation review by KENAS of the applicant's systems, policies, processes and procedures to check compliance with accreditation standards and criteria. KENAS advises the applicant of the outcome of the assessment and, as appropriate, discusses any corrective actions or recommendations
- Consideration by KENAS and the applicant of the need for an on-site pre-assessment meeting to confirm that it is appropriate to proceed with a full on-site assessment
- Further corrective actions or recommendations may be made, if such a meeting occurs
- Full on-site assessment by KENAS, including a team of technical experts, advising the applicant of any further corrective actions and recommendations, with a formal report confirming those matters

• Corrective actions addressed by the applicant to KENAS's satisfaction; KENAS completes its accreditation peer review and approval process.

The time taken for these processes is driven by the level of priority each building consent authority (National or County) gives the process, in terms of resources and response times. This process, including an independent professional accreditation committee review, will usually take several months.

### **Conclusion**

Accreditation can be used by professions in the building sector in Kenya to help ensure organizations and individuals perform their duties to a particular standard.

It will ensure documented policies, systems, processes, and procedures are developed to help construction practitioners manage the way they operate, make compliance assessments and decisions, manage risk and achieve better consistency and identified outcomes.

The standards will help construction practitioners monitor, review and continuously improve their performance. Sound record-keeping and information-storage practices that are also essential in the building control environment. These provide an audit trail of how a construction practitioners processes consent applications, undertake inspections and issue code compliance certificates, the decisions they make and the rationale for those decisions. This process will provide an easy mechanism of finding the root cause in case of any failures like the latest experience in Huruma.

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**KENAS**