

# IMPROVING QUALITY IN THE BUILT ENVIRONMENT



# FOREWORD



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and Past President of the CIOB

**The failures of quality that resulted in the recent incidents at Grenfell Tower and the Edinburgh schools highlighted the need for an urgent review of the way in which quality is managed within the construction industry.**

In trying to understand why this was happening, it became apparent to me that somewhere along the way an institutional acceptance of error had crept into the construction process. There is no other way to describe it. It's not happening everywhere, but it is enough to ring alarm bells. What's more, it's unlikely that this acceptance of error can be self-correcting without a change in culture such as we've undergone for health and safety.

These incidents were not just isolated events, they were systemic. In order to examine and address the issue, the CIOB launched the Construction Quality Commission to identify the behaviours, both individual and corporate, that were either promoting or preventing delivery of quality, and what steps could be taken to bring about the change that was needed.

In gathering evidence, we consulted with industry, and the response pointed overwhelmingly to the need for top-to-bottom change, underlining the fact that quality was being sacrificed for time and cost considerations. Inherent industry systems and culture may be too weak on their own to restore quality as a priority.

**In response, the Commission settled on two broad strategies:**

**One is to offer the industry a Code of Quality Practice** that will provide guidance on the best practice currently to be seen in the industry and propose the standards for which we should be aiming.

**The other is education.** We want to raise awareness of quality management and give people the knowledge and practical tools to deliver it; this includes developing a training course on managing quality and establishing a system of certification.

In order to raise the profile of the need for quality in the industry, we want to take this opportunity to share what the commission has learned, not just with those already in the industry, but also with policymakers and those who understand the importance and influence of our industry.

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# INTRODUCTION

In February 2017, Professor John Cole published a report into the defects that led to the closure of 17 schools in Edinburgh. Around the same time, diminishing consumer satisfaction with new homes identified a need to address serious quality failings in the residential sector.

Just a few months later, in June 2017, the tragic fire at Grenfell Tower in London claimed the lives of 71 people. Both incidents spawned official inquiries and their subsequent reports made for uncomfortable reading for all those in the sector. Their outcomes are proving influential in shaping the industry's response to addressing quality in the built environment and this document serves as an update on our activities.



# WHAT IS QUALITY AND WHY DOES IT MATTER?

As highlighted in a recent RIBA, RICS and CIOB report, 'quality is not just a measure of regulatory compliance or aesthetic appeal...neither is it merely about satisfying clients' briefs so that the building allows them to perform better and contribute more...'<sup>1</sup>

Quality is critical. It is about the greater public good we expect from our buildings to promote human health, safety, and wellbeing as well as addressing today's many social, cultural, environmental and economic concerns.

As such, quality, or rather the failure of quality, is arguably the most important issue facing the construction industry today. The events that have focused attention on the failure of our industry to consistently deliver the required levels of quality in the buildings and infrastructure that we create are well known. But the underlying causes of these failures are something that we are only now beginning to understand.

<sup>1</sup> RIBA, CIOB, RICS, Building in Quality, October 2018

<sup>2</sup> Hickton, <https://hickton.co.uk/>, January 2018

<sup>3</sup> Home Builders Federation & NHBC, National New Home Consumer Satisfaction Survey, March 2016, 2017 & 2018

<sup>4</sup> Get it Right Initiative, Improving value by eliminating error: A Strategy For Change, 2016

2,224

defects on  
59 projects

Research on building quality undertaken during one week in May 2017 by independent quality inspection company Hickton identified 2,224 defects on 59 projects. Defects ranged from fairly minor issues, such as a broken shower door, to major issues such as missing fire protection.<sup>2</sup>

99%

reported problems  
to their builders

The house building industry's Customer Satisfaction Survey, carried out by the Home Builders Federation and the NHBC, found that 93% of respondents to the 2014/15 annual survey reported problems to their builders. The 2015/16 survey recorded an increase to 98% while the 2016/17 survey recorded a further increase to 99%. Even though some will be snagging issues that are easily resolved, results from the 2015/16 survey found one in four reported 16 or more separate issues.<sup>3</sup>

£5bn

direct cost of  
avoidable errors

International studies suggest that the measured direct costs of avoidable errors are in the order of 5% of project value. This equates to approximately £5bn per annum across the sector in the UK and is higher than average profit levels across the industry (around 3%). When unmeasured and indirect costs are included the situation gets worse with estimates of total costs ranging between 10% and 25% of project cost or between £10-25bn per annum across the sector.<sup>4</sup>



# THE CIOB RESPONSE

In response to the series of failings outlined in the introduction, it became clear that changes are needed in how construction quality is managed. This is why, in June 2017, we launched a Construction Quality Commission (CQC) to investigate the issues of quality in the sector and address what needs to be done to improve it.

The aims of the CQC are:

- To encourage a new quality culture to instil pride in the work of the construction sector
- To improve the quality of the product, people and process, whilst recognising the regulatory, statutory and compliance requirements for design, off-site assembly and site production in the sector
- To instil a greater awareness of quality in construction in the education and training of CIOB members and the wider construction community
- To recognise the role of government, clients, owners, the design team, contractors, site production team, and subcontractors in the delivery of quality
- To recognise the reality of constraints (e.g. skills availability) on the workforce and the fragmentation of the supply chain

## THE CIOB CONSTRUCTION QUALITY COMMISSION

We have worked with our members, and wider industry, to identify the main issues in regards to quality in construction. Workshops with our members and desk based research identified clear factors impacting quality.

Factors include regulations, standards and codes, certification, client's demands, procurement practices, company policies, and workers' job satisfaction.

We ran a further call for evidence between October and December 2017 to delve deeper into these issues and begin to identify solutions. We gathered views and data from our members, the wider construction sector, government, and other interested stakeholders on construction quality issues. These were specifically linked to areas in which the CIOB can have influence.

The CIOB CQC is chaired by Past President Paul Nash. Other members include CIOB Past Presidents:



James Wates CBE



Professor Roger Flanagan



Peter Jacobs



# FINDINGS

The important issues to be addressed from our research can be captured under four broad headings:



EDUCATION, TRAINING  
& KNOWLEDGE



LEGISLATION, CODES  
& STANDARDS



INSPECTIONS / SIGN-OFF



CONSULTATION /  
CO-OPERATION WITH  
OTHER PROFESSIONAL  
BODIES AND GOVERNMENT

These issues are industry-wide and are created by, and involve, all stakeholders. Therefore any solutions need to take a holistic view involving as many different viewpoints as possible. The majority of responses indicate an appetite for change and recognition for the strength of the industry, particularly the professions.

The findings reflected that, by having greater support through stronger regulations, better resourced training (e.g. apprenticeships) and clearer codes and standards for quality, great strides in improving quality in construction could be made. A widely shared opinion is to treat quality management in the same way that health and safety management is regulated.

There were also many examples of existing processes, practices and initiatives which should be encouraged and scaled up, many of which will be showcased in the Quality Code.

“Software has been developed to make recording so easy... However, supervision and control are about being out on the workplace constantly and not sitting at a computer all day.”

SUPERVISION

“The sign-off stage needs to be quality-focused and not merely ‘get the payment and let’s hand this over’.”

SIGN-OFF

“Make it personal, generate a culture of pride.”

WORKMANSHIP

“Developers often use private building control surveyors to circumvent regulations. Most 1930s properties have suspended timber floors and there are thousands of these properties across London that have been split into HMOs which are now a huge fire [risk].”

REGULATIONS

“It has led to a culture of form-filling and audits, but the industry lacks robust day-to-day checking due to the demise of the independent clerk of works role.”

CERTIFICATION

“It’s all about building to a cost rather than building to a quality.”

VALUE ENGINEERING

“Include a quality syllabus in existing certification schemes, such as CSCS and SMSTS.”

EDUCATION

“Innovation and technology can improve the way we perform tasks or build things but we will still be dependent on skilled operatives with a passion to produce good quality work.”

TECHNOLOGY



# NEXT STEPS

Based on the findings, the CQC recommends a number of initial measures:

- To offer competency-based training for the construction industry with longer term aims to develop into a qualification in quality management
- To ensure that quality has greater emphasis in the CIOB Education Framework
- To create a quality code that will capture best practice and set the standards to be expected from the industry
- To support the quality work and initiatives with our partner organisations/bodies

## Competency-based training

In November 2018, we launched a Quality Management course through the CIOB Academy. The course addresses the fundamentals of construction quality management. Those attending the course will be able to demonstrate an understanding of widely-used quality management systems, and will be given the tools to initiate and measure quality management on their own projects and, ultimately, work towards achieving quality on every programme. The course will link to a competence based certification scheme in quality management. This scheme is in development and a pilot will be launched in July 2019 alongside the launch of the Code of Quality Practice.

## Quality Code

The aim of the Quality Code will be to highlight quality issues across the construction process, from pre-production to completion. As well as guidance on best practice, the Code will bring together the information sources already available, in the form of practice notes, regulations, codes and standards. This single information source will help any project team to improve construction quality by establishing a quality management process to be customised according to a firm's needs.

The Quality Code will not be another report condemning the industry for bad practice. It is a reference source for quality management for everyone involved in delivering customer satisfaction.

## Education Framework

The Education Framework sets out the CIOB published standards for higher education awards in construction management in the UK and across the world. We are currently reviewing the framework to ensure that quality has greater emphasis for those undertaking higher education.

## Collaborative working – the Building in Quality Initiative (BIQ)

The CIOB, Royal Institute of British Architects (RIBA) and Royal Institution of Chartered Surveyors (RICS) have launched a simple, straightforward system for documenting and tracking risks to quality through the life of a construction project.

Since launching the initiative, the group has produced a new free-to-use digital tool, the Quality Tracker, to improve the quality of outcomes in the construction industry. The Quality Tracker sets up a chain of custody allowing project teams to track quality on construction projects.

This tool resonates strongly with what Dame Judith Hackitt described in her Independent Review of Building of Building Regulations and Fire Safety as the 'golden thread' of information from concept to finished building and beyond.

A draft version of the Quality Code has been produced. A consultation process will take place early in 2019 to ensure it fulfils these objectives. To participate please visit:

[www.ciob.org/quality-code](http://www.ciob.org/quality-code)

QUALITY CODE

The Quality Tracker is currently being piloted on a number of real projects to provide structured feedback so that we can improve the system. To get involved, please visit:

[www.architecture.com/  
working-with-an-architect/  
building-in-quality-pilot](http://www.architecture.com/working-with-an-architect/building-in-quality-pilot)

COLLABORATIVE WORKING

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# OUR ASKS

## + New legislation to maintain and improve building quality

The Government must implement the recommendations in the Hackitt report that require legislation, to ensure building quality remains a focus of all forms of construction in the UK. In particular, inspection of both planned and current construction projects must be carried out by approved inspectors, with no commercial ties or any other conflicts of interest.

## + An Industry Safety Steering Group

The establishment of a Construction Industry Safety Steering group to hold the industry to account for delivery and adherence to safety standards, particularly in terms of high-rise complex buildings (those of ten storeys and above). A joined-up approach to the regulation of such buildings should be taken, with no distinction made between commercial and residential buildings when considering safety measures. In managing and maintaining the current (and future) Construction Sector deal between Government and industry, special regard should be taken to addressing procurement processes, which have in the past allowed for quality-cutting measures in order to reduce costs.

## + Ongoing dialogue between Government and the construction sector

A fixed bi-annual meeting between the above group, the Housing Minister and senior MHCLG officials to discuss the current state of construction. These meetings should include a report on improvements being made, or required, in the construction sector, with recommendations for policy or legislative changes as required. This should also include notice of relevant consultations and inquiries in order to engage with industry in a more timely and responsive manner.

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# KEY PRINCIPLES

- 1 Safety and quality must be the focus for everything in construction; from quality products, to quality services, and quality design.
- 2 Change the mind-set about quality requirements by embedding a culture of quality production. Achieving good quality is not about more bureaucracy and boxes being ticked, it is about ensuring compliance and exceeding customer expectations.
- 3 Learn from other industries and from CIOB members overseas, helping to capture, share and encourage best practice and innovation to continually improve quality standards.
- 4 Embed zero tolerance towards poor quality work and be proud to exceed customer expectations. The importance of a happy customer and satisfied workforce is paramount.
- 5 Prioritise education and training for site quality delivery across the construction industry, with the introduction of new training and qualifications focussing on best practice.





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