



Ensuring Quality for Building Products

(Managing risks associated with the sourcing of components, design, assembly and installation of building products through the use of quality plans)

- a Paper from C R Prouse, Director at BEAL.

Background

Quality plans for business, using **ISO9001** as the criterion, originally based on the British Standard BS5750, have been around since 1987. **ISO 10005**, Quality management systems — Guidelines for quality plans, was first published in 2005. Both documents are useful in the development of quality plans, whether for a manufacturer, importer/distributor, or installer of building products. The key purpose, is to ensure a defined quality and performance of a product when in use. To compliment these, another ISO Guide that has been used, has been *Guide 65*, which has recently been updated to become a full ISO Standard, called **ISO17065** Conformity assessment — Requirements for bodies certifying products, processes and services. This latter Standard references ISO 9001 and another standard, **ISO 17011**, Conformity assessment — Requirements for bodies providing audit and certification of management systems — Part 1: Requirements.

These four ISO documents are now used globally for the development of quality plans that are also audited on an aged frequency, to ensure continuous application. They are particularly suited to the development and monitoring of quality plans for building products.

The Role of BEAL

When BEAL commenced testing and appraisal activities in 2004, there was little in the way of published quality plan material related to building products. The Government had little on their web site, the Building Research Association had nothing and Councils were only too aware of the need, especially after experiencing the beginning of the Leaky Home fiasco. As a result, BEAL made contact with an internationally experienced risk management specialist, to help develop a template

for appraisal-holder quality plans. They were eventually called “Building Product Quality Plans” or BPQPs.



The policy at that time, was to carry out an office and site audit of how well the specific requirements of each BPQP, were being implemented. Its still the same purpose of an audit 16 years later. In the meantime, it has become apparent that not all building products carry the same level of risk. For example, a simple insulation product doesnt have the number of risks associated with a building system comprising many components.

As a result, several attempts were made to provide differing levels of fees and audit requirements. After several years of this policy, it soon became obvious that other factors needed to be taken into account, especially concerning the need for having properly trained and approved persons on site. This then led to the inclusion of requiring trained persons to be included in the BPQP and audit process.

In 2008, the Government formally introduced the CodeMark Scheme. The scheme’s rules required what was termed a “product quality plan” - but with no specific requirements. The result was, that each approved ‘product certification body’, made up their own requirements. The Councils and other affected parties considered this farcical and that the scheme ‘administrator’ lacked the necessary skills to manage the scheme as it was intended. BEAL’s quality plan requirements prevent this.

In the meantime, Councils, by and large, have accepted BEAL’s approach to product quality as being on the right path. This was endorsed by the major Councils, when BEAL introduced its own product certification scheme, emphasising the use of a number of new ISO Standards and Guides, to ensure continuous application of the BPQP.

The BEAL Quality Policy for Building Products

BEAL's policy is based on a pragmatic approach to the management of all the key risks, covering the steps beginning with the sourcing of components, all the way through to the final installation of the product.

BEAL eventually arrived at a simple classification of risk as being either 'high', 'medium' or 'low'.

The definition for high is based on those products for which there is either a history of failures, or the product has elements in the design and or assembly and or installation that are prone to error leading to premature failure;

The definition for medium is based on those products for which there is *some history* of failure, but not as often as a product deemed to have a high risk, and there is also some aspect of the design or assembly or installation that is prone to failure;

The definition for low is based on those products for which there is no history of failure, other than it is prone to failure through poor installation.

This classification is used to determine two key parts of the monitoring of product quality plans approved by BEAL:

- a) the frequency for on site or remote auditing;
- b) the frequency for testing of key products or components.

The following table sets out the rationale for implementing this approach:

<u>High risk</u>	Auditing shall be carried out at the Office & sites soon after certification, then every year afterwards	Where there have been three consecutive audits with no non-conformances, then every second year with remote audits between	Testing of products or specified high risk components shall be carried out each year
<u>Medium risk</u>	Auditing shall be carried out at the Office & sites soon after certification, then every second year	Remote audits shall be carried out where there is no office and site audit	Testing of products or specified higher risk components shall be carried out every second year
<u>Low risk</u>	Auditing shall	Remote audits shall be	Testing of

	be carried out at the Office & sites soon after certification, then every third year	carried out where there is no office and site audit	products or components shall be carried out every third year
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Each year before the anniversary of the appraisal or certificate, the certificate-holder will be notified of a) the need to revalidate their appraisal or certificate, b) the need for an audit, if applicable, and c) the need for testing when required. Determining and agreeing which components need testing will be reviewed during each audit.

Verification of Conformance

Currently, there is no public means of verification of conformance of the BPQP. BEAL now propose notifying the public through use of the current certificate register on the BEAL web site. The main purpose of this is to reassure Councils that there has been active monitoring of the certificate-holder's quality plan and, to emphasise to designers and architects, that BEAL provides users with the confidence of continuous application of the quality plan, thus ensuring quality and reliability of the product when in use.

The introduction of this verification process will be initially voluntary. However it is certain that designers and the Council will eventually insist on this being mandatory, to provide the level of assurance that they are seeking. BEAL will keep all parties up to date with progress. In the meantime BEAL will be explaining the verification process to all major architectural and design companies. This is bound to have a benefit to all BEAL certificate-holders. The process begins now.

C R Prouse - August 2020.