

Construction Quality Management & Awareness Courses

Introduction

Just as we require that construction personnel successfully complete courses providing the knowledge and understanding to effectively undertake their role with respect to Health & Safety and Environment (HSE) aspects, so must we with quality.

Courses such as IOSH Managing Safely, IOSH Supervising Safely, and CITB Site Environmental Awareness Training (SEATS) are recognised to provide a basis upon which we can bring about the required standards of HSE and drive continual improvement. Exactly the same principle applies to quality.

Thus, the proposed Quality Awareness Courses aim to deliver the equivalent of these HSE courses providing an industry wide recognised qualification specific to quality.

Consequently, just as it is the aspiration that the Construction Industry achieves appropriate Health & Safety leadership, behaviours and culture, these courses aim to provide a foundation for:

- Quality leadership within the context of role
- Quality culture across construction projects and within construction organisations
- The right behaviours to bring about Right First Time, Defect Free, Excellence and reduce errors.

The syllabus of each course is based on a framework developed by the ConSIG CWG whose members include senior construction quality professionals representing major UK Construction Industry organisations.

Courses

The ConSIG CWG proposes that a graduated range of quality awareness training course profiles and courses be developed; the individual courses would be:

- Quality Awareness for Directors
- Quality Awareness for Managers
- Quality Awareness for Engineers
- Quality Awareness for Supervisors
- Quality Awareness for Operatives

A rough outline of each of the courses is appended.

It is planned that the range of courses then be extended to cover more specialised professional groups which may include the following:

- Quality Awareness for Clients
- Quality Awareness for Designers

- Commercial Quality Awareness

Style and Structure

The content, duration and verification regime for the courses would be developed to be very similar to IOSH Directing/Managing/Working Safely and CITB's SMSTS/SMSTS/SEATS courses that have become embedded in construction. This approach has several advantages, for example, directors and managers are familiar with the type/style of the courses, and HR teams are familiar with the planning and graduated director/manager/supervisor/worker levels of the courses.

Course Delivery

To provide flexibility, the courses are designed to be delivered by means such as the following:

- 1) **'Off the Shelf'**: Procure the services of a CQI Approved Training Partner to deliver a CQI Approved Quality Awareness Course.
- 2) **Bespoke Organisation Course**: Use the syllabus to develop a bespoke Quality Awareness Course for the organisation to be delivered by a CQI Approved Training Partner. The course will need to be approved by the CQI. (This enables an organisation to develop a course covering the fundamental aspects but tailor it specifically to the company.)
- 3) **Bespoke Course delivered by organisation trainers**: Use the syllabus to develop a bespoke Quality Awareness Course which is then approved by the CQI. Obtain CQI status as an Approved Training Provider. (This enables an organisation to not only develop a course covering the fundamental aspects and tailor it specifically to the company but also deliver the course via trainers employed within the organisation. This may reduce costs in the long run especially for large companies with significant numbers of employees who require training.)

Delegate Assessment

The knowledge gained by delegates would be assessed via means appropriate to the course. For example,

- The Operatives and Supervisors Quality Awareness courses would be assessed via a multi-choice question paper to verify understanding of the principles learned.
- The Quality Awareness for Managers and the Quality Awareness for Engineers, being more involved, would require a coursework exercise be completed which would verify understanding and the ability to practically apply the principles learned.

Training organisations would be required to mark the assessments against a specified criteria. Marked assessments would then be moderated by the ConSIG CWG.

Upon successful completion of the course, it is proposed that the CQI or other recognised industry body would maintain a register of all those who pass and issue Certificates of Completion.

A series of pilot courses may be delivered by members of the CWG to prove the concept and determine any amendments to the initial course structures and control processes that go live.

Background to Course Development

In early-2014, the Competency Working Group (CWG) membership reached a consensus that one of the greatest barriers to the achievement of 'quality' in construction is a lack of awareness of the value and practices of quality management. Furthermore, this lack of awareness is manifested not just at operations level - but at all business and project levels. It was proposed that the CWG could be the catalyst for the development of a range of courses for public or in-house delivery.

A wide-ranging discussion of the potential structure, format and content of the courses settled upon the analogy of IOSH's and CITB's Health & Safety courses that provide a graduated range of awareness training modules for construction personnel. Thus, the CWG resolved to pursue the development of a similar range of course structures.

In mid-2014, a brainstorm session identified a wide range of topics that ought to be included in the potential courses. In late-2014, ConSIG members were asked to identify, via a simplistic SurveyMonkey poll, which of the identified topics should be included in prospective courses for directors, managers, engineers, supervisors and operatives. Members' responses were analysed to provide a profile of the degree to which a particular topic should be covered in each of the prospective courses. The results were distributed to ConSIG members and discussed at CWG meetings in early-2015. The CWG concluded that the analysis provided a reasonable guide to the importance of each topic for inclusion in each of the prospective courses. During mid-2015, CWG members discussed outline information for the prospective courses.

A framework for the quality awareness courses was subsequently developed 2016 – May 2017 via workshops attended by members of the ConSIG CWG. Subsequent to agreement of the framework by the ConSIG CWG, it was determined that focus should be placed on developing a syllabus for the Supervisors' Quality Awareness Course which could be then distributed for comment among key construction companies. It was also proposed that a pilot scheme for the course be developed.

The work to date has been championed by (alphabetically): Hellen Ball, Mike Buss, Paul Greenwood, Tony Hoyle, Louise Jones, Karen McDonald, Neil Mellor, Ian Mills, and David Myers.

Competencies Working Group

APPENDIX

The Proposed Courses

	Introduction	Content Guide ... for further development	Duration
1	<p>The 'Directing Quality' course is intended primarily for directors and other business leaders with strategic responsibility in the Construction Sector; i.e. those who define the overall policy and direction of the business, provide resources and ensure effective implementation.</p> <p>Such individuals may include: Managing Director, Chief Executive Officer, Finance Director, Chief Operating Officer, Programme or Project Director, Construction Director, Commercial Director, etc.</p>	<p>Understand the importance of a quality culture and the costs and benefits of a systematic approach to the management of risk and quality - and the need for the integration of 'quality' with other business management aspects within a Construction context.</p> <p>Have an appreciation of:</p> <ul style="list-style-type: none"> - What is 'quality' in a business context - How leadership frames the business' governance, assurance and improvement - How 'quality' affects reputation, profitability and value, systematic business transformation - How competence, resources and materials affect quality - The legislative and standards requirements for quality - The benefits of managing quality - The consequences (cost++) of failing to manage quality effectively - ... 	0.5 -1 day
2	<p>The 'Managing Quality' course is intended primarily for operational managers in the Construction Sector; i.e. those required to define operational processes and manage quality, in order to meet their organisation's objectives and comply with their clients', customers', regulatory and other stakeholders' requirements.</p> <p>Such individuals include: Project Managers, Contract Managers, Site Managers, Site Agents, etc</p> <p>Others who may have an interest include: Quality Graduates, Quality Engineers, Quantity Surveyors, Supply-Chain Managers, Procurement/Purchasing Managers, Estimators, Planners, Temporary Works Managers, H&S Managers, Environmental Managers, etc.</p>	<p>Understand the principles of quality management, assurance and control, and the common components of a recognised management system (e.g. ISO 9001) within a Construction context.</p> <p>Have an appreciation of:</p> <ul style="list-style-type: none"> - What is 'quality' in an operational management context - The effect of risk and variability on quality - Legislation and standards requirements for quality - How competency and the working environment affect work - Operational planning and process management - Verification and validation - Review, audit, certification and accreditation - Non-traditional management methodologies, tools and techniques (lean, 6σ, TOC, etc) - ... 	3-5 days Day or block based

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3	<p>The 'Engineering Quality' course is intended for managerial and supervisory staff who have a greater technical responsibility for delivery of the works in the Construction sectors; ie. those who define, plan and/or verify the conformity of the works with contract or other technical requirements.</p> <p>Such individuals may include: Site Engineers, Sub Agents, Package Managers, M&E Managers, Temporary Works Engineers/Supervisors, Technical Advisors, Technicians, etc.</p>	<p>Understand the principles of quality management, quality assurance and quality control, and the common components of a quality control system within a Construction context.</p> <p>Have an appreciation of:</p> <ul style="list-style-type: none"> - What is 'quality' in an engineering/technical context - The effect of risk and variability on quality - Legislation and standards requirements for quality - Planning for quality control - Controlling materials, including quarantine - Ensuring competence - Monitoring, inspection, testing, calibration and commissioning - Controlling and analysing non-conformities - Records, certification and archival - ... 	<p>3-5 days Day or block</p>
4	<p>The 'Supervising Quality' course is designed for operational supervisors, team leaders or junior managers in the Construction Sector.</p> <p>Such individuals may include: Trade Supervisors, 'black hat' Supervisors, Foreman, Site Supervisors, assistant managers, etc.</p>	<p>Understand the principles of quality assurance and quality control on construction site.</p> <p>Have an appreciation of:</p> <ul style="list-style-type: none"> - What is 'quality' in a site supervisory context - Operational planning - Planning for quality control - Materials control - Competency verification schemes - Monitoring, inspection, testing, control of non-conformity - Improving quality - ... 	<p>2-2 days Day or modules</p>
5	<p>The 'Operating Quality' course is intended for all those who carry out tasks on construction sites that may have an effect upon the quality of work or the works (and who are not within the scope of one of the above courses).</p> <p>Such individuals include: site operatives either directly or subcontract employed electricians, carpenters, ground workers, etc.</p>	<p>Understand the principles of planning for and achieving good workmanship and operational performance on construction sites.</p> <p>An appreciation of:</p> <ul style="list-style-type: none"> - What is 'quality' (acceptance criteria) - Controlling your own work - Pride in work well done - The need for verification - Improving quality - ... 	<p>½ - 1 day Day or modules</p>