



Inspecting fire protection elements of construction – an Architect’s perspective

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Introduction

On construction projects, very often under many building contracts, architects have a responsibility for periodic inspections of the works as they are being installed on-site by the contractor. As an Expert Witness, disputes concerning defective workmanship in relation to fire-related matters are frequently encountered. Whilst it is the primary obligation of the contractor for the works to comply with the building contract, the question that often arises in forensic investigations is to what extent might an architect be liable for failures of inspection in these circumstances. The importance of an architect’s inspections has two aspects. Firstly, ensuring that the building is safe, by checking that the works are being constructed in accordance with the agreed standards, drawings, specifications, and other contractual documents. Secondly, protecting themselves from potential litigation, by fulfilling their duties and obligations under the appointment.

This article explores the principles and practical aspects of inspecting the building works, with a particular focus on fire protection elements of construction and the architect’s role during the process. It discusses the key steps and considerations relating to undertaking site inspections, including the preparation, scope, and methods of inspections.

Getting started...

Guidance and publications have been prepared to assist architects undertaking site inspections, including ‘Good Practice Guide: Inspecting Works’ published by RIBA in 2009 (“**the RIBA Guide**”) and RIBA Job Book (“**the Job Book**”).¹

Architect’s inspection work should begin with a methodical and effective preparation to understand the requirements of the project, including the basis for compliance with fire safety standards. The first steps should identify the parts of the works necessitating inspection by reference to the contractor’s programme, including

¹ The most recent version of the Job Book being 10th edition published in 2020.



“technically important elements that would be particularly expensive to rectify”² and “details that may cause danger to those occupying or maintaining the completed building, or to the public.”³ This would include internal and external fire protection elements, for example, fire-rated partitions, compartment walls and floors, cavity barriers, fire-stopping, fire doors and the like. The initial inspection plan should be updated as required, depending on the progress of the works on site, including in the context of any delays and changes to the original programme.

Coordination and liaison with the design and construction team, and the allocation of responsibilities of the parties involved in the project, are essential at the preparation stage. For example, whilst an architect would be responsible for inspecting the works, it is for the contractor to ensure that adequate management, coordination, and supervision of the operatives, and the quality control arrangements, are in place before (and then implemented during) the installation of construction details. Also, architects should be mindful that certain aspects of the works, for example, complex structural or building services works, may fall outside of their scope, knowledge, and experience. In these circumstances, architects should exercise caution to avoid inspecting such items of work, ensuring the appropriate involvement of other suitably qualified professionals for thorough inspection.

The frequency and duration of inspections should depend on the nature, size, and complexity of the project, and the duration of the works. One of the key factors that should be taken into account when considering the time required to inspect the works is “the health and safety implications of the design,”⁴ including those concerning the fire-related items.

What to inspect...

The RIBA Guide states that “inspection means looking at specific elements of work to find out whether or not they comply with the requirements of the building contract.”⁵ This means checking compliance of the as-installed works against the agreed standards (typically contained in architectural drawings and specifications) and identifying and addressing readily apparent errors, omissions, and inadequate workmanship by an architect conducting the inspection.

Generally, it is not possible for an architect to inspect every aspect of the construction, noting that the Clerk of Works typically assumes the responsibility for monitoring the works on a daily basis. It is, therefore, crucial for an architect to prepare a comprehensive inspection plan that prioritises key items to be checked at appropriate stages of the project, ensuring that all critical aspects of the works are covered. Whilst the item selection would be project-specific, in the context of fire safety, the following items may be of relevance:

- Fire-resisting construction, including walls, floors, fire doors, and fire-resisting glass, at critical locations such as risers, compartment lines, other ‘protected’ areas, and at the interfaces between different trades.
- Structural fire protection, for example, coverage of intumescent material to steelwork.
- Fire-stopping, where services are passing through fire-resisting elements of construction (walls, floors, cavity barriers, and the like).
- Cavity barriers in internal and external cavities and voids.

The focus of the architect’s inspection should be on:

- The use of particular specified products, systems, and details.

² ‘Good Practice Guide: Inspecting Works’ published by RIBA in 2009, pg.64.

³ ‘Good Practice Guide: Inspecting Works’ published by RIBA in 2009, pg.64.

⁴ ‘Good Practice Guide: Inspecting Works’ published by RIBA in 2009, pg.65.

⁵ ‘Good Practice Guide: Inspecting Works’ published by RIBA in 2009, pg.90.



- Whether the materials and products used in the installation are fixed strictly as specified and in the locations as shown in the design information.
- The quality of work by specialist sub-contractors, including, where appropriate, that those works are inspected by suitably qualified consultants.
- Areas of uncertainty and/or complexity where further input is required.

It is important that the inspections are carried out by personnel with the appropriate knowledge, experience, and understanding of the principles behind the inspected details and the significance of any omissions or inadequacies in the as-installed construction. The non-compliant fire-related works may also have implications in the light of the Gateway regime required for Higher Risk Buildings under the Building Safety Act 2022. During construction (between Gateway 2 and Gateway 3), any deviations from the approved designs at Gateway 2 require to follow the statutory change management, which would include seeking building control approval for 'major' changes or notifying the Building Safety Regulator about 'other' changes.

And how to inspect it...

Generally, the RIBA Guide describes three categories of inspection, including:

- 'Predictive' inspections, planned in advance, and which the main purpose is to view important elements of construction that have not yet been covered up by other building works. For example, cavity barriers behind the external cladding.
- 'Periodic' inspections at regular intervals, to check the quality and progress of the works. For example, the installation of fire-resisting construction (partitions, fire doors, and the like).
- 'Spot checks' during unannounced site visits, which may include instructing opening-up for the purpose of inspecting critical works already covered up. For example, the areas of fire-stopping.

The use of construction mock-ups and prototypes, and control of sample areas, can be used as an effective tool, firstly, to resolve any technical problems and, secondly, to establish the required benchmark for the quality of the as-installed works. Maintaining rigorous records of the undertaken inspections is crucial for architects, particularly for repeated items of work. It provides clarity on whether they conducted sufficient sample inspections in the course of the contract rather than relying solely on a single inspection at the first installation.

Conclusion

Preparing for and conducting inspections by an architect is an important part of every construction project. Whilst it is the contractor's obligation for the works to comply with the building contract, the importance of the architect's inspection duties in the context of mitigating fire risks and ensuring building safety when in use should not be overlooked.

In the context of fire safety, any changes to the design during the installation of the works, including the aspects relating to fire protection measures or means of escape, could have serious consequences on the safety of the building's users, while also exposing architects to risk in fulfilling their inspection responsibilities. It is important, therefore, to establish an appropriate scope of inspection, having regard to the architect's expertise and the nature/size/complexity of the project, and to keep rigorous records of inspections undertaken in the course of the installation of the works.



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