Expert commentary

BS 8680:2020 — *Water quality – Water Safety Plans – Code of practice*

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1 Overview

This Code of Practice (COP) takes the reader through the processes needed to develop water safety plans (WSP) for all types of water systems and equipment associated with buildings which have the potential to cause harm to human health. It is written in such a way that owner-managers of small and medium-sized enterprises (SMEs) will understand what is required for relatively simple water systems within a small business as well as those responsible for water safety within large organizations or those with more complex water systems such as in healthcare premises. It describes a systematic approach to identifying the hazards (situations or agents which can cause harm) and hazardous events which can lead to hazards being present and/or increasing to concentrations which can cause harm, so all potential risks from water are identified and managed.

Many inherent problems with water systems occur because of poor design: poor specification, installation commissioning and operation and not involving the relevant people at appropriate stages. Following this COP will help to make sure that the relevant stakeholders are involved at each stage of a new system design or system refurbishment or upgrade with an ongoing process of risk assessment and review from the concept, design and specification stages through to handover and ongoing normal operation. This COP will also assist those responsible for existing systems and associated equipment. This COP provides a useful tool to ensure all aspects of risk arising from water have been considered and managed appropriately and will be especially useful when developing plans to manage water safety risks including under extraordinary circumstances, where for example, water systems and associated equipment have been left unused for extended time periods – particularly where there has been little advanced notice for pre-planned shutdown procedures to be implemented.

1.1 Reasons for this standard

The concept of water safety planning, as advocated by the World Health Organization, is now widely accepted and understood by the water industry. Its benefits in both terms of improved water quality and economy together with improved resilience are undisputed. The use of WSPs to manage water risks within healthcare buildings is advised by both the Health and Safety Executive and the Department of Health and Social Care, however, the benefits of this approach have not been widely adopted outside of healthcare settings. This COP will support the development of WSPs which are proportional to risk and ensure the safe design, specification, build, installation, commissioning and operation of small, large and complex water systems and associated equipment so that they do not pose a risk to the end-user. Ensuring water safety requires not just an understanding of risks to health from building architecture and water system engineering, but also public health microbiology, water chemistry, physical risks such as scalding, drowning, electrocution, those caused by flooding and spillage and where applicable, radiological risks. There is currently no standard or guidance which pulls together all these aspects that should to be considered. This COP pulls together, in one place, all the relevant factors that need to be considered whether it is to develop a comprehensive water safety plan for designing a new water system within a building, for refurbishment of existing systems or simply managing a small domestic type system within a small premises or managing water on complex sites including industrial and healthcare premises including during shutdown and re-commissioning.

1.2 Summary

This COP:

- provides the framework for the development of water safety plans (WSP) for all types of water systems associated with the built environment building on existing Legionella risk assessments and schemes of control;
- lays out what is required in the form of supporting processes and documentation;
- makes it clear that the WSP should be proportional to the size and complexity of the organization, taking into account the numbers and types of systems and associated equipment and the range of potential hazards and associated risks;
- makes it clear that different organizational arrangements are considered together with the skills and competencies required for those responsible for managing water safety, whether for a single individual in a small organization or a multidisciplinary water safety group in larger and more complex sites;
- takes account of all types of hazard including biological, chemical, physical and radiological;
- emphasizes the multidisciplinary approach needed to ensure water building water systems do not incorporate inherent risks via an ongoing risk assessment and consultation approach with stakeholders throughout the design and build process; and
- brings the soft landings approach into water safety planning.

2 The water safety plan

This COP states that 'a WSP is applicable to any premises where there are business activities or rent payable to ensure the safety of staff, visitors, members of the public, patients in healthcare, etc.' and that 'developing and implementing a WSP is a sustainable and effective way to achieve safe water for all types of use and user'.

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