



Press Release
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BS 8102:2022 Update Delta Membranes

With much anticipation, BSI launch BS8102:2022 Protection of below ground structures against water ingress. Code of practice.

BS8102:2009 is without doubt, a great Standard which has been enhanced with the launch of BS8102:2022. It should be noted that BS8102:2009 is now superseded and withdrawn. There has been much speculation on BS8102:2022 and it has been right to fine-tune such a crucial document, ultimately BS8102:2022 has been developed as a cornerstone to reduce risk. Reducing risk is quite an open term and covers measures to reduce the frequency or severity of failure and includes fire protection, life cycle, safety, and design approaches.

Changes in terminology

Whilst only small changes, these changes reflect the widespread adoption of terms and definitions to ensure the avoidance of miscommunication.

'Watertight' has been replaced with 'waterproof' (impervious to free water).

'Waterproofing admixtures' should be referred to as 'water resistant admixtures'. This amendment avoids any misconception that the admixture can solely be relied upon to provide a waterproofing system alone. It should be noted that water resistant admixtures reduce the capillary absorption of hardened concrete.

When referring to existing structures assessment of any "direct" has been replaced with "actual" or potential discontinuity. This amendment emphasises a wider scope for design considerations.

Bonded, becomes fully bonded, this new term covers compatibility, durability, and buildability, included within this umbrella is the prevention of lateral migration of water from a defect and resistance to negative hydrostatic head. Membranes should be fully bonded to prevent lateral migration of water from a defect, provide resistance to negative hydrostatic head and in all cases the level of bond is relevant to depth of use or water pressure.

Transparency in the Golden Thread

Waterproofing products should no longer be termed as "certification". Product information should include manufacturers data sheets, installation guides, accredited performance test data and any regulatory compliance data.

Materials should be used in accordance with the conditions and requirements set out in the relevant technical product information in accordance with the manufacturers recommendations by personnel trained in their use and application.

Schematics which illustrate Type A, B and C waterproofing have been updated.

Where continuity between Types A, B & C waterproofing are required, designers are required to verify full compatibility of systems.



Manufacturers should be consulted and able to produce performance data of a specific water resisting admixtures.

Changes to Design Considerations

Those responsible for the overall waterproofing design should be identified at the planning stage or as early as possible. All decision made by others that might have impact on the waterproofing design should be brought to the attention of the waterproofing specialist, design team and installing contractors. Final decisions and any recommendations should be approved by those taking overall responsibility for the design of the waterproofing.

If RIBA stages are used, a waterproofing specialist should be appointment before the technical design stage at the latest.

Considerations for effects of climate change, burst water mains, flooding, etc should be included in all designs.

Waterproofing measures should be designed on the basis that during the life of the structure water might come against any part of the structure that is at or below ground level or is earth retaining. Waterproofing should therefore be continuous.

Where Ground Gas Protection is incorporated into the waterproofing design compatibility and continuity are key.

As with all elements of construction, workmanship and quality control are crucial in designing for success. A robust quality assurance process/integrity testing should always be carried out to avoid any potential mistakes.

To ensure waterproofing designs are durable and fit for purpose, correct detailing and implementation of penetrations are an important discipline. Whether pre- or post-construction these should be carefully detailed to minimize the risk of water ingress.

Continuity is crucial for successful construction and waterproofing. BS 8102:2022 places additional emphasis on good planning, correct sequencing and site management processes are in operation. The BS 8102:2022 recognises advancement in technologies from its predecessor but emphasises the importance of transparency between manufacturer and installer in verifying compatibility between products.

Design approaches to basement drainage continue to be a key element.

Requirements for servicing and maintenance of basement drainage should be incorporated into the waterproofing design and upon completion be included in the Operation and Maintenance Manual (O&M).

Designers are required to include assessment of remedial treatment of their designs and included as a contingency measure.

Reducing Carbon Footprints

Sustainability is one of the greatest challenges within the construction industry, regardless of what waterproofing system is utilised, designers should be mindful of minimizing the embodied carbon over the whole life cycle of the structure when designing below ground structures.



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