Scottish Water Consultation Response

Building Standards: Flooding and Groundwater Guidance

October 2025

1.	**Introduction** **Do you have any comments on the amended introductory information setting out background to the issues to be addressed by standard 3.3?**

We support the explicit recognition of the importance of Property Flood Resilience (PFR) measures within the background section and the linkages of how this can help meet various Scottish Government strategy objectives.

The amended introduction usefully sets out the context for Standard 3.3, particularly the links to climate change and the flood resilience strategy.

We would encourage the introduction to place stronger emphasis on the role of catchment processes and the benefits of integrating nature-based solutions with built form, so that practitioners are reminded from the outset that resilience is multi-scalar (site, neighbourhood, catchment).

2.	**Flood risk assessment** **Do you find this expansion of the guidance on flood risk assessment useful in better framing the action expected and where to access supporting information on undertaking the assessment?**

The expanded guidance is valuable. More precise framing of responsibilities and signposting to SEPA datasets, national climate change scenarios, and BS/CIRIA resources will support more consistent practice.

We recommend that the guidance explicitly acknowledge that flood risk assessment should extend beyond property boundaries to consider upstream land use, surface water pathways, and cumulative development effects.

The identification of a requirement for an FRA for basement conversions is welcomed. Consultation with Scottish Water should also be considered for basement alterations as we have found that unauthorised connections in basement extensions can increase risk from sewer flooding if they are below the hydraulic top water level of the sewer network.

3.	**Groundwater** **Do you have any comments on the revised guidance on assessing groundwater risks?**

The revised guidance is welcomed. Too often, groundwater risk is underestimated or only considered at late stages of the design process.

We suggest emphasising the influence of soil structure, permeability, and seasonal fluctuations, and encouraging the use of SuDS that maintain infiltration and mimic natural groundwater recharge, while preventing saturation-related risks.

4.	**Resilient construction in flood risk areas** **This is a very significant expansion on previous guidance on flood resilient construction. Do you have any views on the usefulness of this additional information, including example construction details?**
The additional information and construction details are very useful. They provide clarity on practical measures. However, I would stress that resilience should not be framed solely in terms of hard defences or impermeable materials. Including references to complementary green infrastructure measures (e.g. rain gardens, green roofs, riparian planting) would create a more holistic approach that reduces reliance on engineered barriers alone.	
5.	**Resilient construction in flood risk areas** **Are there additional construction details or other useful information which could be included in the draft?**
Within the *Basements* section, consideration of sewer flood risk should also be highlighted. Additional suggested additions include: • Example details for integrating permeable paving with sub-base storage. • Guidance on using SuDS as flood pathways. • Examples of how flood-resilient detailing can be combined with low-carbon materials. These would demonstrate that ecological and construction-based resilience measures can be combined.	
6.	**General** **Having reviewed the proposed changes in the context of current guidance to standard 3.3, do you agree there is a need to update the guidance in Section 3.3 (Flooding and groundwater) of the Technical Handbooks?**
Yes. The update is necessary. Existing guidance is outdated in relation to current best practices, climate projections, and UK/European standards. The proposed changes highlight the importance of the need to consider flood risk for development that may not be subject to planning approval. The suggested amendments align with the recommended actions for delivery identified within Scotland's Flood Resilience Strategy published in December 2024.	
7.	**General** **Does the draft guidance provide enough information to understand what is required to achieve the Mandatory Standard 3.3, Flooding, and groundwater? "Standard 3.3 Every building must be designed and constructed in such a way that there will**

	not be a threat to the building or the health of the occupants as a result of flooding and the accumulation of groundwater."
Yes. The draft guidance provides sufficient clarity to understand what is required to meet Standard 3.3. The addition of practical construction details, references to external standards, and Annex 3.B, all strengthen interpretation. Our only suggestion is to link more explicitly "no threat to building or health" with long-term maintenance requirements; resilience is not achieved solely through construction.	
8.	**General** **Do you consider that the proposed draft guidance will add to the potential cost of development?**
Yes. There may be short-term cost increases associated with the need to carry out an FRA and in those cases where planning approval is not required. Some PFR measures may also be unavoidably more expensive to install than standard products (for example in conservation areas). By providing clear guidance and expectations upfront, these costs should be able to be planned (and costed) into building designs and offset by a reduced planning timescale and resource requirements from both developers and local authorities. They are also likely to be incorporated within land purchase or property sale prices. The additional short-term cost should also be offset by the long-term reduction in damage, health impacts, potential loss of income and potential alternative accommodation costs associated with flooding of assets that are not designed and constructed to be resilient to flooding. Over the building's lifetime, this guidance is cost-saving, not cost-adding.	
9.	**Annex 3.B Building Standards Flood Guide** **Do you agree that the introduction of the guidance in Annex 3.B offers further useful information to support informed practice in flood risk assessment and the application of property flood resilience principles?**
Yes. Annex 3.B is a welcomed addition. It provides a clear practical resource, and the integration of property flood resilience principles is particularly important for practitioners. The structure is logical and will aid consistency across Scotland.	
10.	**Annex 3.B Building Standards Flood Guide** **Are there any other issues that you consider this Annex could address to further improve knowledge and understanding on this topic?**
The inclusion of any information which supports and sets the expectations for the delivery of PFR retrofit within historical environment and conservation areas would be very welcome. PFR measures are currently extremely difficult to progress in these areas. Decision making is currently devolved to local authority planning departments, and we have found a very inconsistent national approach to this, with a consistently long and drawn-out process and there seems to be a general appetite to avoid building back better with regards to flood resilience in these areas.	

In addition, Annex 3.B could be further improved by:

- Including case studies of buildings that successfully integrated ecological and engineered resilience.
- Highlighting the role of SuDS and natural flood management in supporting building resilience.
- Providing checklists or flow diagrams to help practitioners quickly identify key considerations at the design stage.

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