Building Standards: Flooding and Groundwater Guidance

Scottish Government Consultation

To: All Chief Executives, Main Contacts and APSE Contacts in Scotland. For information only England, Northern Ireland and Wales.

1. Executive Summary

The Scottish Government has launched a consultation on proposed updates to Section 3.3 – Flooding and Groundwater of the Building Standards Technical Handbooks. The revisions seek to strengthen guidance on Property Flood Resilience (PFR) and ensure that new developments and conversions are better prepared for flood events and groundwater risks, in line with Mandatory Standard 3.3 of the building (Scotland) Regulations 2004.

The updated guidance aims to:

- Provide clearer, more practical advice for designers and verifiers;
- Embed resilience and recoverability measures into building design;
- Align building standards with planning policy and flood risk management strategies;
- Improve consistency of application across all local authorities.

Responses are due by **Friday 3 October 2025.**

To read the full report click here, to answer the consultation click here.

2. Overview

The Scottish Government is seeking views on proposed revisions to Section 3.3 – Flooding and Groundwater in the Building Standards Technical Handbooks. The draft guidance aims to strengthen the way buildings are designed, constructed, and adapted to withstand flood events, protect health and safety, and enable rapid recovery after damage. This consultation is a critical step in ensuring that building standards remain aligned with evolving climate risks, modern technical practice, and national resilience policy.

National Context

Flooding represents one of the most acute climate-related risks in Scotland. The Scottish Environment Protection Agency (SEPA) estimates that approximately 229,000 properties are currently at risk, with projections indicating significant increases by mid-century due to climate change. Surface water flooding is a particular concern, as heavy rainfall events become more frequent and intense.

The impacts of flooding extend beyond physical damage to include increased insurance costs, reduced property values, disruption to local economies, and effects on community wellbeing. The Scottish Government's Flood Resilience Strategy (2024–2045) provides a long-term framework for adapting to these risks, with building standards forming a key component of property-level resilience measures.

The revised Section 3.3 guidance is designed to support this strategy by ensuring new and adapted buildings are resilient, recoverable, and safe in areas at risk of flooding or groundwater-related hazards.

Policy Alignment

The proposals support and reinforce existing national frameworks, including:

- **National Planning Framework 4 (NPF4):** Directs development away from high-risk areas, while requiring resilience measures for permitted development.
- **Flood Risk Management (Scotland) Act 2009:** Establishes duties on public bodies to reduce overall flood risk.
- **Scottish Climate Change Adaptation Programme:** Identifies flood resilience in the built environment as a national priority.
- **Property Flood Resilience Action Plan and Delivery Group:** Promotes best practice in resilient and recoverable construction.

By aligning guidance with these frameworks, the updated Section 3.3 ensures that building standards contribute effectively to national resilience objectives.

Why Guidance is Being Updated

The existing Section 3.3 guidance has been in place for several years and has limitations in scope and technical coverage. Stakeholder feedback has highlighted:

- **Inconsistent interpretation** of guidance across local authorities.
- **Limited coverage** of surface water and groundwater risks.

- **Lack of practical examples** for designers and verifiers.
- **Outdated references** to external standards and best practice.

Mandatory Standard 3.3 provides the statutory framework for protecting health and safety from flooding and groundwater hazards, but the supporting guidance has not fully kept pace with policy, technical practice, or climate science. Consequently, the application of current guidance varies across Scotland, leading to uneven outcomes for resilience and safety.

The proposed revisions aim to modernise guidance, provide detailed technical support, and ensure consistency across local authorities, developers and designers.

Scope of Changes

The consultation proposes four major revisions to Section 3.3, each designed to strengthen resilience, provide practical guidance, and improve consistency in application across Scotland:

1. **Flood Risk Assessments (Clause 3.3.1)**
    - Introduces clearer requirements for when and how Flood Risk Assessments (FRAs) should be undertaken, including both new developments and conversions.
    - Emphasises proportionality, allowing the scope and depth of assessment to reflect the size, type, and location of the development.
    - Incorporates climate change allowances to ensure long-term resilience against increasing flood risk.
    - Provides guidance on assessment methodology, referencing SEPA standards and recognised best practice to ensure reliable and consistent outputs.
    - Clarifies how FRAs interact with other statutory obligations, funding eligibility, and regulatory requirements.
2. **Groundwater Impacts (Clause 3.3.2)**
    - Updates guidance on assessing and managing groundwater risks, particularly in areas prone to water ingress or with high water tables.
    - Offers detailed advice on site investigation techniques, mitigation measures, and engineering solutions to protect foundations and substructures.
    - Highlights the importance of understanding subsoil conditions, drainage systems, waterproofing, and their impacts on structural integrity.

- Encourages consistency in assessment approaches while allowing flexibility for site-specific conditions.
- Includes practical considerations for designers and verifiers, drawing on current best practice and case study examples.

3. **Flood Resilient Construction (Clause 3.3.3)**
    - Expands guidance on resistance and recoverability measures to improve building performance during and after flood events.
    - Provides detailed examples of flood-resilient construction techniques, including wall and floor detailing, drainage solutions, and material specifications.
    - References the CIRIA Code of Practice for Property Flood Resilience to align with UK-wide best practice.
    - Offers guidance on both preventative measures (resistance) and post-event strategies (recoverability), supporting buildings that can tolerate water entry and enable rapid recovery.
    - Discusses principles for communal and shared buildings, ensuring whole-building resilience is considered.
4. **Annex 3.B: Background Information**
    - Consolidates essential information on flood sources (fluvial, coastal, surface water, groundwater, and sewer-related risks).
    - Clarifies statutory roles, responsibilities, and processes for local authorities, designers, and building owners.
    - Replaces outdated references with current guidance and links to technical resources, case studies, and recognised standards.
    - Acts as a practical reference for implementing the guidance consistently across Scotland, supporting both policy alignment and technical understanding.

Application and Methodologies

The updated guidance applies to:

- New developments in areas with identified flood risk, where planning permission has been granted.
- Conversions or adaptations of existing buildings requiring resilience measures.

- Groundwater-prone areas, where construction must address water ingress and foundation stability.
- Shared or communal buildings, such as flatted developments, ensuring resilience at a whole-building level.

Key features of the revised guidance include:

- Recognition of multiple flood sources**:** fluvial, coastal, surface water, groundwater, and sewer.
- Proportional assessment approaches**:** scaled to the type, size, and location of development.
- Integration of climate change allowances**:** ensuring long-term resilience.
- Practical design examples**:** including wall/floor detailing, drainage solutions, and material recommendations.
- Focus on recoverability**:** acknowledging that water entry may occur but designing buildings to minimise damage and enable rapid recovery.
- Alignment with CIRIA Code of Practice**:** providing consistency with UK best practice in property flood resilience.

Local Authority Implications

The updated guidance will provide:

- Clearer and more enforceable criteria for warrant verification.
- Reduced inconsistencies between authorities in decision-making.
- Improved integration between planning and building standards functions.
- Support for local resilience outcomes by ensuring robust design of new development.

By standardising expectations, the revisions aim to enhance confidence in local decision-making and contribute to Scotland-wide resilience.

Expected Outcomes

The finalised guidance, to be published in the 2026 editions of the Domestic and Non-Domestic Technical Handbooks, is expected to deliver:

- Greater consistency in the application of Standard 3.3 across Scotland.
- Improved resilience for communities, properties, and infrastructure.

- Enhanced clarity and support for designers, building warrant applicants, and verifiers.
- Stronger integration between planning and building standards systems.
- Increased public confidence that new developments are designed to be safe, resilient, and recoverable in the context of a changing climate.

Note to Readers
This overview provides a summary of the key updates and context for Section 3.3, but the full consultation report is highly detailed. A thorough reading of the complete guidance is strongly recommended to fully understand the technical requirements, practical examples, and policy implications.

3. Consultation Questions

The Scottish Government is seeking views on the following points in relation to the proposed revisions to **Section 3.3 – Flooding and Groundwater** of the Building Standards Technical Handbooks.

Introduction (Clause 3.3.0)

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

Flood Risk Assessments (Clause 3.3.1)

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?

Groundwater Impacts (Clause 3.3.2)

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

Flood Resilient Construction (Clause 3.3.3)

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?

5. Resilient construction in flood risk areas - Are there additional construction details or other useful information which could be included in the draft?

Background Information and Annex 3.B

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?
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."
8. General - Do you consider that the proposed draft guidance will add to the potential cost of development?
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?
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?

4. APSE Comment

APSE encourages our local authority members in Scotland to engage with this consultation on an important issue which is ever increasing due to climate change. APSE's climate change and renewables as well as it's Housing, Construction and Building Maintenance networks have discussed this important area. For further information and previous presentations on all of the APSE Networks please click here At the 2024 Scottish Energy Event, Angus Council provided a presentation on "Addressing the threat of flooding with projects, plans and a long term approach". To discuss this and other similar related issues please click here to access the Scotland Network diary of upcoming dates.

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