

Tomplan Planning and engineering Service

Flood Risk Assessment (FRA)

Site: 108 Hough Lane, Wombwell, Barnsley S73 0EF

Grid ref (approx.): SE 410 040

Coordinates (approx.): 53.5261, -1.3943

Ground level (approx.): 52 m AOD

LPA: Barnsley Metropolitan Borough Council

Lead Local Flood Authority (LLFA): Barnsley MBC

Water company: Yorkshire Water

Date: 8 October 2025

Purpose: This comprehensive FRA supports a householder/small-scale planning application for 108 Hough Lane, Wombwell. It meticulously evaluates all potential sources of flooding and provides robust mitigation and sustainable drainage measures in line with NPPF and LLFA guidance.

Executive Summary

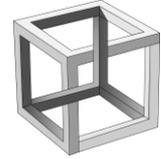
The site is an existing residential plot on Hough Lane, within a built-up area of Wombwell. EA Flood Map for Planning identifies the property as lying entirely within Flood Zone 1 (Low Probability). The EA Long-Term Flood Risk service indicates a very low risk from rivers and the sea, with limited surface-water risk along the public highway only. There are no records of historic flooding at this address. Development is classed as 'More Vulnerable' (residential), and no Sequential or Exception Test is required. The FRA concludes the proposal is appropriate in flood-risk terms, provided that sustainable drainage and resilience measures are incorporated as described herein.

Development Proposal and Site Context

Description of development: Proposed single-storey rear extension to existing dwelling (update if two-storey or outbuilding). The total additional impermeable area is approximately 95 m². No basement accommodation proposed.

Site characteristics: 108 Hough Lane sits within a residential terrace. Ground levels fall gently south-east towards the main road. Public sewers and highway drainage fully service the site. No open watercourses exist within 100 m.

Existing drainage: Roof and surface water currently discharge via rainwater pipes to the combined or separate sewer system within Hough Lane.



Site area: Approx. 0.03 ha (300 m²).

Policy and Guidance

- National Planning Policy Framework (NPPF) – Section 14 (Meeting the Challenge of Climate Change, Flooding and Coastal Change).
- Planning Practice Guidance (PPG) – Flood Risk and Coastal Change.
- Barnsley Local Plan Policy CC3 – Flood Risk and CC4 – Sustainable Drainage Systems.
- Barnsley SFRA (Level 1 & 2) – defines local flood zones, historic records
- Building Regulations Part H – Drainage and Waste Disposal.

Assessment of Flood Sources

Fluvial/tidal: The EA Flood Map for Planning indicates that the site is entirely within Flood Zone 1, which is well outside the Dearne Valley fluvial floodplain. Flooding from rivers or the sea is considered a very low probability.

Surface water (pluvial): EA Long-Term Flood Risk mapping identifies low surface-water susceptibility along Hough Lane due to minor road depressions. The dwelling itself and the rear garden are located in a very low-risk zone. Any surface runoff will tend to flow eastwards along the highway network.

Groundwater: The Barnsley SFRA indicates isolated groundwater emergence along valley bottoms; the subject site is on slightly elevated ground. Groundwater flooding risk is low.

Sewer flooding: Historical data indicate occasional combined sewer surcharges in parts of Wombwell during intense storms. The risk is low to moderate; fitting a non-return valve to the property's lowest connection is recommended.

Reservoir/canal breach: The EA reservoir-breach layer indicates no risk pathways through the site. Residual risk is negligible.

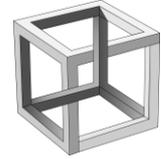
Historic flood records: Barnsley SFRA and LLFA datasets show no recorded flooding at or adjacent to Hough Lane.

Climate Change Allowances

Rainfall intensity is expected to increase by 20% (central) to 40% (upper end) over the design life. Drainage systems and attenuation storage shall be designed for 1 in 100-year + 40 % CC events.

Sequential and Exception Tests

- Development within Flood Zone 1 - Sequential Test not required.
- Residential use (More Vulnerable) - Exception Test not required.



Indicative storage: For a new impermeable area of $\sim 60 \text{ m}^2$ and a restricted discharge of 5 l/s, attenuation of 3–6 m^3 is typically required.

Foul water: Connect to existing foul/combined drain; no increase in peak foul flow expected.

Construction management: Provide temporary silt traps and protect gully inlets during works.

Finished Floor Levels & Exceedance

- Proposed FFL $\geq 150 \text{ mm}$ above external ground.
- Falls in paving and landscaping to direct excess flows away from doors and neighbouring plots.
- Paths and garden areas to grade gently towards the public highway.

Resilience & Resistance Measures

- Water-resistant plasterboard and raised electrical sockets $\geq 450 \text{ mm}$.
- Seal service penetrations and use closed-cell insulation below DPC.
- Non-return valves on combined drainage connections.
- Maintain a regular gutter and gully cleaning regime.

Safe Access and Emergency Planning

- Primary access via Hough Lane remains above the expected flood levels.
- Any shallow ponding in the carriageway will be passable by foot and vehicle.
- Residents should sign up for EA Flood Warnings and prepare a basic household flood plan (store essential items above floor level).
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Residual Risk

Residual risks are primarily related to extreme storm exceedances or sewer surcharges. However, with the implementation of raised FFLs and resilient construction, these risks are negligible and manageable, providing a high level of safety assurance.

Conclusion

In conclusion, the development site at 108 Hough Lane, Wombwell, is located in Flood Zone 1, with a very low fluvial and surface-water risk. The proposal, with the outlined drainage and resilience measures, will not increase flood risk elsewhere. Accordingly, the project is considered appropriate in flood-risk terms, as it fully complies with the NPPF, Barnsley Local Plan Policy CC3/CC4, and LLFA guidance for minor development. This Flood Risk Assessment has been prepared with utmost care for submission with the planning application for 108 Hough Lane, ensuring strict adherence to all relevant regulations and guidance.