

# FLOOD RISK ASSESSMENT

## **Land at Lane End Mews, Thurnscoe**

Proposed Single-Storey Dwelling and Detached Garage

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A – Environment Agency Flood Map (2026 Extract)

## 1. Introduction

This Flood Risk Assessment has been prepared in support of a full planning application for the erection of a single-storey dwelling and detached garage at Lane End Mews, Thurnscoe.

The site lies partially within Flood Zones 2 and 3 as defined by the Environment Agency Flood Map for Planning. The higher flood designation relates to a culverted watercourse forming the northern boundary of the site.

This report has been prepared in accordance with:

- Section 14 of the National Planning Policy Framework (NPPF, December 2023)
- Planning Practice Guidance: Flood Risk and Coastal Change
- Barnsley Local Plan Policy CC3

The purpose of this report is to demonstrate that the proposed development satisfies the Sequential Test and Exception Test, will be safe for its lifetime, and will not increase flood risk elsewhere. The assessment also considers recent infrastructure investment within the catchment and contemporary evidence from recent rainfall events.

## 2. Site Description and Context

The application site extends to approximately 512.5 square metres and comprises vacant land within an established residential environment.

A culverted watercourse runs along the northern boundary. Beyond this lies the residential development approved under application reference 2020/0510 for five detached bungalows. That development sits within the same mapped flood designations as the current site.

The proposed development comprises a single-storey bungalow (gross external area 123m<sup>2</sup>) and a detached garage (48m<sup>2</sup>). The footprint has been carefully positioned away from the culvert corridor and does not encroach into the narrow strip identified as Flood Zone 3.

The site does not function as open floodplain. It sits within an engineered residential setting where development has already been accepted in principle and implemented.

### 3. Planning History and Established Precedent

Planning permission was granted in November 2020 for five detached bungalows north of the culvert under application 2020/0510.

Condition 4 of that permission required that finished floor levels be set no lower than 35.4m AOD and that safe refuge space be provided within roof spaces.

The approved Flood Risk Assessment for that development confirmed that the site lay within Flood Zones 2 and 3 and required surface water attenuation via Hydrobrake and twin storage pipes.

That development has been implemented.

The existence of this permission and its subsequent delivery is a highly material consideration. It establishes that the Local Planning Authority has already accepted residential development in this precise flood risk context, subject to appropriate mitigation.

The current proposal is materially smaller in scale and sits south of the same culverted watercourse.

### 4. Policy Framework

Paragraph 159 of the National Planning Policy Framework states that inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk.

Paragraph 162 requires the application of the Sequential Test to steer development to areas of lowest flood risk.

Paragraph 164 states that development should not be permitted if it would increase flood risk elsewhere.

Paragraph 165 requires that where development is necessary in areas at risk of flooding, it should be made safe for its lifetime without increasing flood risk elsewhere.

The Planning Practice Guidance classifies residential development as “More Vulnerable” and confirms that such development may be appropriate in Flood Zone 3 subject to application of the Sequential and Exception Tests.

Barnsley Local Plan Policy CC3 requires development proposals to avoid areas at highest risk where possible, incorporate mitigation measures, and demonstrate that there will be no increase in flood risk elsewhere.

This assessment addresses each of these policy requirements directly.

## 5. Flood Zone Classification

The Environment Agency Flood Map confirms that the majority of the site lies within Flood Zone 2, with a narrow strip adjacent to the culvert within Flood Zone 3.

The Flood Zone 3 designation aligns with the culverted watercourse corridor rather than the proposed building footprint.

The mapping remains precautionary in nature and does not reflect recent drainage infrastructure improvements.

## 6. Flooding History and Recent Climatic Events

The Dearne Valley experienced sustained and prolonged rainfall during early 2026. These events provide a contemporary reference point for flood behaviour within the catchment under modern climatic conditions.

The applicant has visited the site during and following these periods of rainfall. There has been no evidence of flooding, culvert surcharge, or overland flow affecting the application site.

While anecdotal observation does not replace hydraulic modelling, it provides a useful real-world indication of current performance of the culverted system and wider drainage network following recent infrastructure improvements.

## 7. Yorkshire Water Infrastructure Improvements

In April 2025 Yorkshire Water completed a £500,000 investment at the Thurnscoe Combined Sewer Overflow.

The works included installation of a new surface water sewer, new manhole infrastructure, and redirection of flows into a separate surface water system to reduce storm overflow discharges into Thurnscoe Dike. The scheme forms part of a wider regional investment programme aimed at improving hydraulic capacity and reducing sewer surcharge events across South Yorkshire.

These improvements materially enhance drainage resilience within the catchment. It is important to note that Environment Agency flood mapping is precautionary and does not immediately reflect post-investment hydraulic improvements

The existence of this infrastructure upgrade is therefore a relevant and material consideration when assessing present-day flood risk.

## 8. Application of the Sequential Test

The proposal relates to a single infill plot within an established residential street.

It is not a strategic allocation and is not reasonably relocatable.

The land to the north, within the same flood designation, has already been granted permission and developed for residential use.

There are no reasonably available alternative sites within the applicant's control at lower flood risk.

Having regard to NPPF paragraph 162 and PPG guidance, the Sequential Test is satisfied.

## 9. Application of the Exception Test

As residential development is classified as "More Vulnerable" and part of the site lies within Flood Zone 3, the Exception Test is required.

**The first limb requires demonstration that the development provides wider sustainability benefits.**

The proposal delivers high-quality housing within a sustainable settlement boundary, utilises vacant land, and reflects established residential character. It is consistent with the approved neighbouring scheme.

**The second limb requires demonstration that the development will be safe for its lifetime.**

The dwelling is positioned outside the highest risk strip, maintains a margin adjacent to the culvert, incorporates elevated finished floor levels, and retains natural overland flow routes.

The development will therefore be safe for its lifetime without increasing flood risk elsewhere.

**The Exception Test is satisfied.**

## 10. Assessment of Flood Risk

The principal source of risk is fluvial flooding from the culverted watercourse.

The culvert is engineered infrastructure. No works are proposed within or adjacent to it.

The site is not within functional floodplain.

Surface water flooding risk will be managed through drainage design.

There is no tidal or coastal risk.

Groundwater risk is negligible.

## 11. Surface Water Drainage Strategy

Surface water will be managed in accordance with the drainage hierarchy set out within national guidance and Building Regulations.

Infiltration potential will be investigated. Should infiltration prove unviable, discharge will be restricted and controlled to an appropriate greenfield equivalent rate.

The approved 2020 development to the north utilised Hydrobrake flow control and attenuation storage via twin pipes. The impermeable area associated with the current proposal is substantially smaller than that scheme.

Accordingly, the development will not result in increased peak discharge rates and will not exacerbate downstream flood risk.

## 12. Finished Floor Levels and Flood Resilience

The proposed finished floor level will be set a minimum of 150mm above surrounding external ground levels, subject to confirmation at detailed design stage.

The dwelling footprint is located outside the highest risk strip associated with the culvert corridor. The proposed level differential provides proportionate mitigation appropriate to the scale and location of the development.

Where appropriate, resilient construction techniques can be incorporated within lower wall sections to provide additional robustness.

### 13. Safe Access and Egress

Access is taken via Lane End Mews, which remains operational during extreme rainfall events.

The neighbouring approved development demonstrates that safe access is achievable within this flood risk context.

### 14. Climate Change Allowance

Residential development must consider a 100-year lifetime.

Finished floor levels incorporate precautionary uplift.

Recent Yorkshire Water infrastructure investment increases system resilience beyond historic modelling assumptions.

The development remains safe under future climate scenarios.

### 15. Impact on Flood Risk Elsewhere

The proposal does not reduce flood storage, obstruct flow routes, or increase discharge rates.

Accordingly, in compliance with NPPF paragraph 164 and Local Plan Policy CC3, there will be no increase in flood risk elsewhere.

### 16. Residual Risk and Ongoing Maintenance

Residual risk is low.

The culvert remains within engineered containment.

Drainage systems will be privately maintained.

No reliance is placed on third-party mitigation measures beyond established infrastructure.

## 17. Conclusion

This Flood Risk Assessment demonstrates full compliance with paragraphs 159 to 169 of the National Planning Policy Framework, the Planning Practice Guidance on Flood Risk and Coastal Change, and Barnsley Local Plan Policy CC3.

The Sequential and Exception Tests have been properly applied and satisfied. The development is positioned outside the highest risk strip, incorporates appropriate mitigation, and will not increase flood risk elsewhere.

Recent infrastructure investment within the Thurnscoe catchment further strengthens hydraulic resilience beyond historic modelling assumptions.

For these reasons, the development is considered safe for its lifetime and acceptable in flood risk terms. Planning permission should therefore be granted.

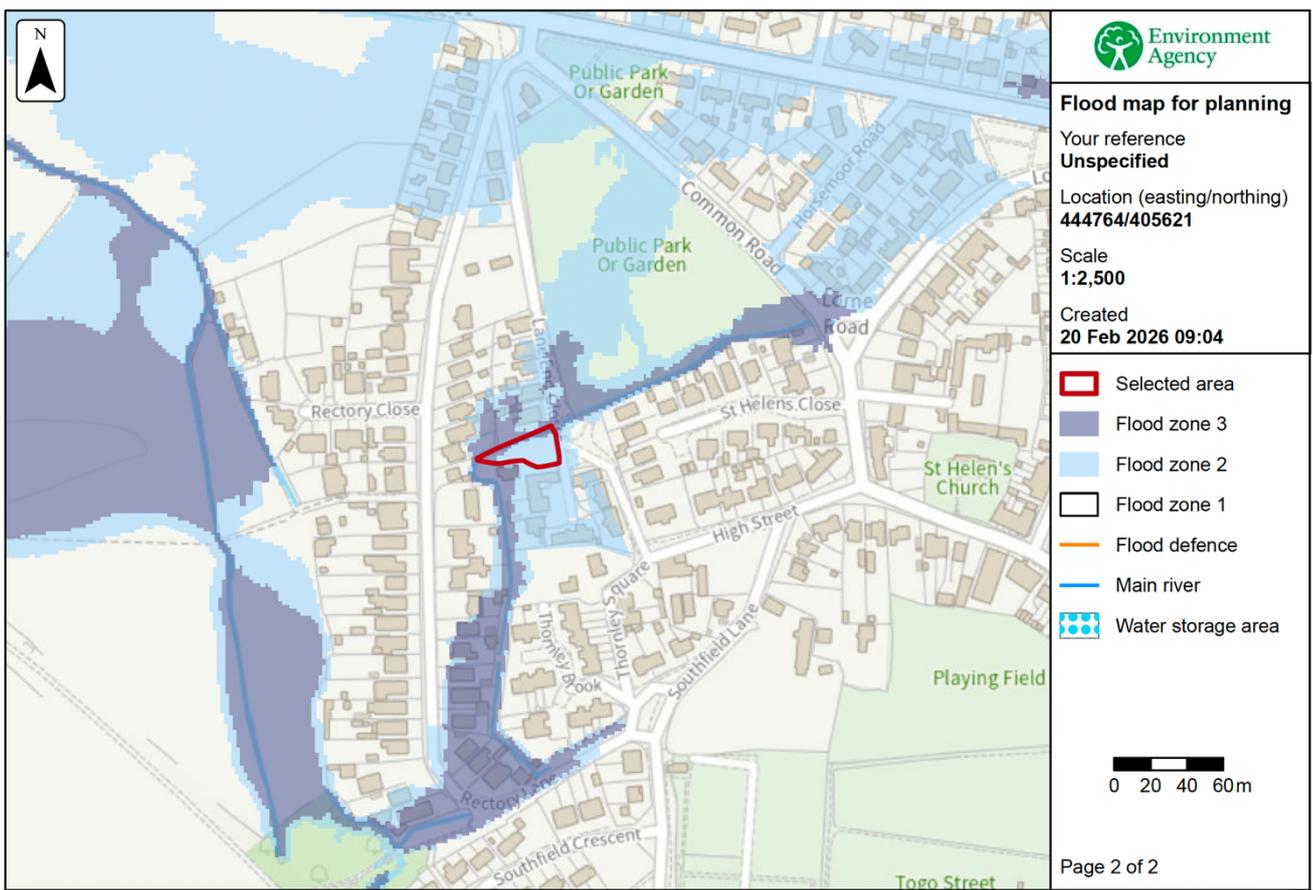
**Appendix A – Environment Agency Flood Map (Extract)**

The attached plan is an extract from the Environment Agency Flood Map for Planning, accessed February 2026.

The map confirms that the majority of the application site lies within Flood Zone 2, with a narrow strip adjacent to the culverted watercourse identified as Flood Zone 3.

The Flood Zone 3 designation corresponds to the corridor of the culverted watercourse rather than the proposed building footprint. The proposed dwelling is positioned outside this strip.

The mapping is precautionary in nature and does not reflect recent drainage infrastructure improvements undertaken within the catchment.



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