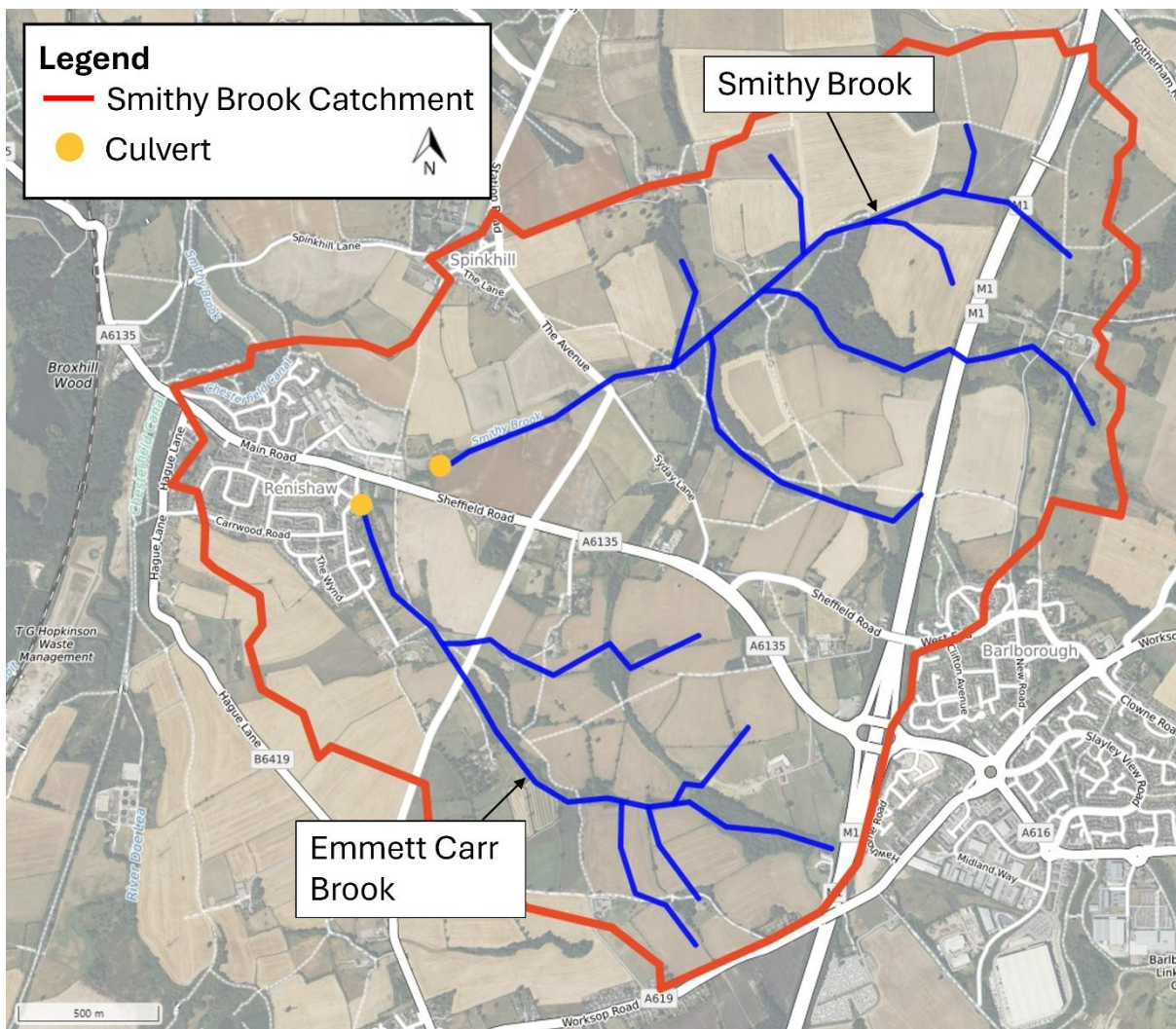


Smithy Brook Catchment NFM Feasibility Study Request for Quotes



Smithy Brook catchment map. Central Renishaw Grid Reference: SK 44797 77890

Background information

Renishaw, a village in North East Derbyshire, has experienced repeated and severe flooding, most notably during Storm Babet in October 2023, which affected 39 properties. Property Flood Resilience (PFR) measures installed in 2022 were overwhelmed, underscoring the need for a more sustainable and effective flood mitigation strategy.

Renishaw sits at the bottom of the Smithy Brook catchment, a small catchment of approximately 8km², which has two main tributaries, the Smithy Brook and the Emmett Carr Brook. Both watercourses flow from the top of the catchment around the M1, through primarily agricultural land and riparian woodland, and into separate culverts near Renishaw that then merge underground further downstream. Water backing up and overtopping at both culvert inlets has contributed to property flooding in the past, with high sediment loads at the culvert entrances being a contributing factor. A feasibility study carried out by Derbyshire Country Council to upgrade or replace the culverts concluded that this was financially unviable. Focus has therefore shifted to natural flood management (NFM) as a potential mechanism to reduce pressure on the culverts and the associated flood risk.

Initial on the ground investigations by both DCRT and a local councillor have identified NFM opportunities across the catchment. Works have been delivered at one site on the Emmett Carr Brook (leaky barriers and restoration of a field corner bund). A community engagement event was also held in March 2025 to raise awareness of NFM and ambitions for the catchment.

Funding has been secured from the Local Levy for an NFM feasibility study of the Smithy Brook catchment, the outputs of which will be used to:

- Determine whether catchment wide NFM could have a measurable impact on reducing downstream flood risk
- Identify priority intervention types and locations
- Inform funding applications for delivery including the FCERM Natural Flood Management standalone projects funding stream.

Project stakeholders include:

- Environment Agency
- Derbyshire County Council
- Local councillors
- Informal flooded residents group
- National Highways – M1 has several outlets that drain into the top of the catchment with two earmarked for improvements in their 2030 Water Quality Plan. DCRT has submitted an EOI for funding for future NFM delivery.
- Yorkshire Water – a sewage treatment works is located just downstream of Renishaw village on the Smithy Brook.

Scope of works

The outputs of the NFM feasibility study need to be of sufficient detail and quality to allow DCRT to:

- quantify whether and how much catchment wide NFM is required to have a measurable impact on reducing flood flows at the culvert inlets
- determine where efforts should be focused to deliver the greatest flood reduction benefits should delivery funds be restricted
- quantify additional ecosystem service benefits delivered through NFM interventions
- quantify indicative whole life costings of catchment wide NFM schemes
- provide the necessary detail to support applications for funding the delivery phase

Your price should include provision for:

Not necessarily in this order

1. Hydrological modelling

- Develop a hydrological model of the catchment
- Provide details of the proposed modelling approach, including the model type and justification for its selection

2. Identification of NFM opportunities

- Identify NFM intervention types and locations using the hydrological model outputs and DCRT's opportunities catalogue
- Include soil and land management measures using practical, deliverable units of measurement rather than solely indicative percentage changes where possible
- Existing datasets such as Working with Natural Processes may be used where appropriate but should be refined to reflect the specific characteristics and understanding of the catchment

3. Scenario modelling and benefit assessment

- Quantify the flood attenuation benefits of NFM interventions at the two culvert inlets by comparing the baseline hydrological models with those incorporating NFM
- Where possible, indicate the scale of NFM required to achieve meaningful reductions in flood risk
- We propose modelling the two NFM scenarios below, however, alternative scenario modelling will also be considered and should be described in the quote
 - i. an aspirational catchment-wide NFM programme incorporating many, if not all, of the interventions identified in point 2

- ii. a realistic catchment-wide NFM programme based on interventions considered achievable in practice, informed through collaboration with DCRT (methods could include workshops with DCRT and stakeholders to capture local knowledge and likely landowner willingness, site visits, use of aerial imagery etc)
- Prioritise identified NFM interventions according to their relative effectiveness
- Provide a high-level assessment of the potential for NFM interventions to increase synchronisation of flows from the two principal tributaries, Emmett Carr Brook and Smithy Brook, and any associated increase in downstream flood risk
- Specify the flood performance metrics (e.g. discharge, time to peak flow, flood volume) and return periods to be assessed, together with the rationale for their selection

4. Assessment of wider benefits

- Assess the additional ecosystem service benefits of the proposed NFM interventions in accordance with the FCERM NFM funding application requirements

5. Whole-life costs

- Provide indicative whole-life cost estimates for the proposed NFM interventions separating delivery and maintenance costs

6. Reports

- Produce a technical report detailing the methodology, modelling undertaken, assumptions, limitations, results and conclusions
- Produce a concise, accessible summary of the study and its key findings suitable for a non-technical audience

7. Stakeholder and landowner engagement (optional)

- If appropriate, provide optional proposals and separate costs for stakeholder and landowner engagement activities

8. Additional recommendations (optional)

- Include any additional recommendations you would consider beneficial to the study objectives. These should be described and costed separately

The quotation should set out the proposed methodology for addressing the questions outlined above and identify any additional questions considered necessary to ensure the overarching objectives described in the Scope of Works are fully met.

The quotation should also confirm the proposed client engagement, including meetings, whether revisions to draft reports are included, and the anticipated timescales for delivery of the work.

Following submission of quotations, shortlisted bidders may be invited to attend a clarification meeting to discuss their proposed methodology, confirm the scope of the deliverables, and ensure the proposed approach aligns with DCRT's requirements.

Outline budget

We anticipate that the project should be deliverable for approximately £23,000 + VAT. Please submit your best price for the above.

Documents and resources available to you:

- DCRT staff time and input
- DCRT NFM opportunities catalogue
- Storm Babet Section 19 report
- Local councillors Storm Babet report detailing flows and evidence from catchment walkovers
- Notes from community engagement event highlighting flows and wet areas in the catchment

Key Dates:

Please submit your proposal and quote by **noon on Friday 31st July 2026** for an immediate start. This project must be completed by the **end of March 2027** at the latest.

Pricing:

Submit itemised quote for the work as outlined above.

Queries:

Please email your proposals and direct any queries to debbie.coldwell@dcrt.org.uk (NFM Officer, DCRT), 07741 747283.