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# Monitoring Leaky Barriers for Natural Flood Management (NFM) within a community-led project

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Natural Flood management (NFM) is a nature-based solution and catchment-based approach to flood mitigation. Leaky barriers are a form of NFM and are popular amongst community groups working with natural processes as an affordable and sustainable action that they themselves can implement without investment in large infrastructure. At our research site, over 30 Leaky barriers have been implemented along a mile-long stretch of flashy river by a local community flood group and landowner in an attempt to decrease flood risk downstream in partnership with the Environment Agency. The effectiveness of these leaky barriers is being monitored in a number of ways, including: river flow, river level, geomorphic surveys and time-lapse footage. We describe the project dynamics and operational context that shaped the adopted control-intervention monitoring design. Based on previous studies, we hypothesize that leaky barriers will be most effective at mitigating smaller, rather than large flood events, such as in 2007. This is tested by examining the data collected over 2019-20, which includes storm Dennis (13th-19th February 2020) that caused widespread flooding across England and Wales. The results will contribute to a wider evidence base being collected by the Environment Agency, exploring the context in which community projects and monitoring take place against the changing expectations of funders and the evaluation of data produced.