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Project title: How effective are NFM interventions? Trialling monitoring and quantification methods at Fountains Abbey



Sediment sampling at the River Skell, Fountains Abbey, North Yorkshire

Project outline:

The River Skell runs through [Fountains Abbey and Studley Park](#), a UNESCO world heritage site, which is susceptible to flooding. Furthermore, the high levels of sediment deposited from the River Skell is threatening the local ecology and contributing to a reduction in water quality. As part of the [Skell Valley Project](#), the NERC-funded [Yorkshire iCASP](#) programme are working with the National Trust and Nidderdale Area of Outstanding Beauty (AONB) to understand where sediment is sourced from and how natural flood management (NFM) interventions, like leaky dams, can influence the amount of sediment and rainfall reaching the river. These data will help inform the best places to install future NFM measures.

In parallel, a Payment by Results framework is being established to reward landowners for delivering effective flood and sediment management on their land, making farm businesses more resilient.

As part of this programme of activity we are offering a SENSE placement that will help to trial Earth Observation methods aimed at monitoring the effectiveness of NFM interventions. In particular, repeat photogrammetric models using uncrewed aerial vehicles (i.e., drones) will be built to assess and quantify changing patterns and volumes of erosion and deposition around leaky dams and ponds. The placement will be based in the [Sorby Environmental Fluid Dynamics Laboratory](#) in Leeds.