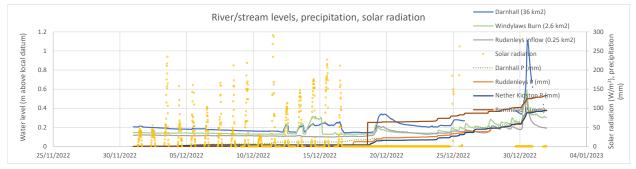


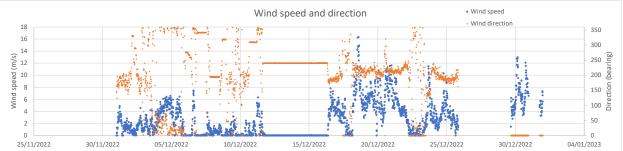
Eddleston Water Project Monthly weather and hydrology report

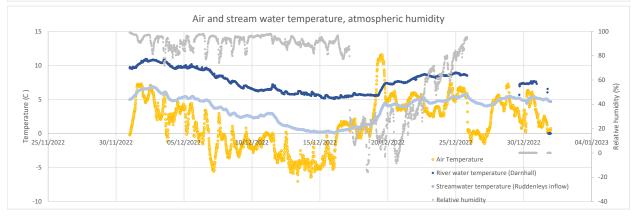
December 2022



Monthly statistics	Hourly values		Daily values				Month	
	Max Day/time	Min Day/time	Max	Day	Min	Day	Average	Total
Precipitation (Darnhall Mains) (mm)	5.8 30 @ 04:15		29.4	30				99.6
Precipitation (Craigburn Farm) (mm)	7 10 @ 08:45		34.8	10				85.2
Precipitation (Wester Deans) (mm)	9.2 17 @ 10:00		30.6	30				86.4
Precipitation (Ruddenleys) (mm)	7.6 17 @ 12:30		33	30				94.4
Precipitation (Nether Kidston) (mm)	5.6 26 @ 13:45		30.4	30				95.0
Precipitation (Burnhead) (mm)	63 18 @ 14:00		63	18				133.2
Runoff depth (Darnhall Mains) (mm)								86.0
Air temperature (Darnhall Mains) (C)	11.5 19 @ 11:45	-6.2 14 @ 8:45	8.3	19	-4.6	14	1.5	
Relative humidity (Darnhall Mains) (%)							73.1	
Sunshine hours			4.7	14			1.0	34.8







A significant month hydrologically and challenging as regards the weather station. Snowmelt was definitely detected on 18th December (notably with a sudden release of melt at Burnhead) and led to a modest rise in river levels.

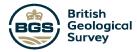
On 30th December a water level of 1.111 m was observed at the Darnhall weather station site, which likely caused local flooding impacts. The flood peak seems to have been exceptional given the apparently modest rainfall which occured: a meagre 28.8 mm over 11.25 hours. However, the rainfall profile included two periods towards the end of the event with 4 mm occurring in an hour, on ground which was by this time saturated. The height of the flood peak appears to be the result of the saturation which occurred, rather than any exceptional rainfall intensity or snowmelt.

Data capture at Darnhall was intermittent as a result of power and sensor issues: the flood peak on the 30th was captured successfully but rainfall and temperature data have been infilled from adjacent sites when necessary.

Real-time data available at: https://hydro-data.dundee.ac.uk/eddleston

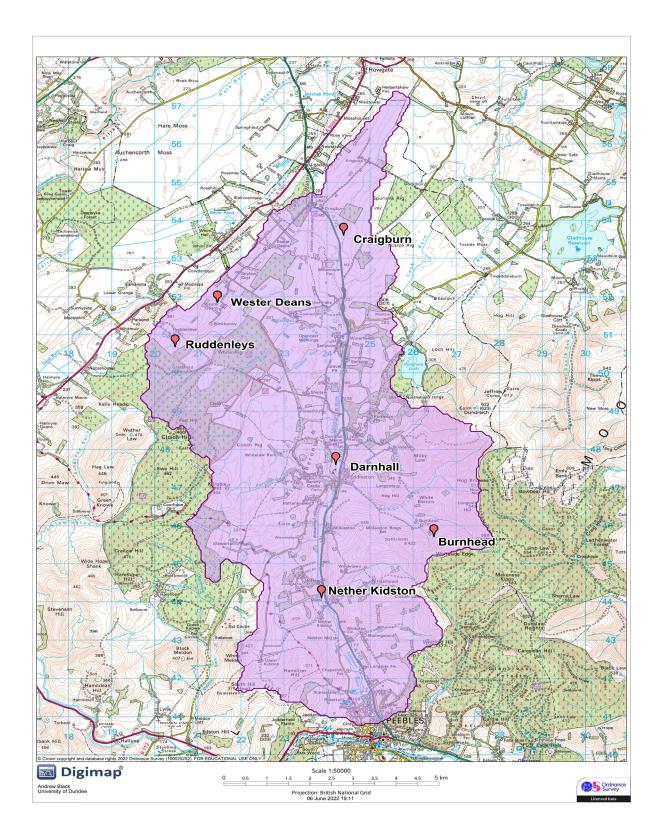












The Eddleston Water Project

Funded by the Scottish Government, Interreg and the Scottish Environment Protection Agency (SEPA), this project aims to reduce flood risk and restore the Eddleston Water for the benefit of the local community and wildlife.

The project involves river re-meandering, the planting of over 300,000 trees and the creation of new wetlands. This should slow the speed and impact of floodwaters as well as creating new wildlife habitat, such as improved spawning for salmon. Our project partnership is closely monitoring the results, including any reduction in flood risk for downstream communities.

The project is a partnership initiative led by Tweed Forum, with the Scottish Government, SEPA and University of Dundee. Other key partners include British Geological Survey, Nature Scot, Scottish Borders Council, the Forestry Commission, National Farmers' Union of Scotland, the Tweed Foundation, Forest Carbon and the Woodland Trust. Tweed Forum works closely with landowners and the local community so that everyone can contribute ideas and follow the project's progress.