

Cunsey beck incident– Analysis



On Wednesday 22nd June 2022 South Cumbria Rivers Trust (SCRT) were alerted by a member of the public to a pollution incident on Cunsey beck.

It was reported that there had been a large number of fish deaths and visual accounts of grey and foul-smelling water. Environment Agency (EA) officers have attended the scene and started an investigation.

SCRT staff were on site Thursday 23rd June to take water samples at three locations on Cunsey beck; Cunsey wood, Eel House Bridge and Esthwaite. We analysed the samples on the same day, for total reactive phosphate (TRP), soluble reactive phosphate (SRP) and Ammonia. We also tested additional environmental parameters; temperature, pH, dissolved oxygen (DO), turbidity and conductivity of the beck at these locations.

Water samples are analysed on a DR1900-02L Portable Spectrophotometer, by trained staff members with appropriate PPE and set analysis techniques.

The results are as follows:

Location (upstream to downstream)	TRP (mg/l)	SRP (mg/l)	Ammonia (mg/l)	Turbidity (NTU)	DO (% saturation)	Conductivity (SPC)	pH
Esthwaite	0.05	0.04	0.10	5.61	109.4	12.7	8.32
*Outflow	6.6	2.9	Greater than 5mg/l. Out of measurable range for SCRT equipment.	-	-	-	-
Cunsey Wood	0.06	0.03	0.14	4.22	96.9	9.3	7.62
Eel House Bridge	0.07	0.05	0.09	15.03	120.0	92	9.21

*On the evening of Tuesday 21st June, concerned locals took a sample from an inspection chamber, connected to an outflow pipe on Cunsey beck, below Esthwaite. SCRT were asked to analyse the results, due to the scale of the incident. The sample had been kept refrigerated and the bottle used has been washed before the sample taken.

Turbidity levels at Eel House bridge, the downstream section of Cunsey beck were three times the standard amount, at 15.03. Ammonia levels are higher than expected at all sites. As previously stated, the ammonia and turbidity levels are higher than typical values.

There will be a difference in an outflow sample to a river/beck sample, due to the diffuse effects of water. The samples from the outflow pipe had to be diluted by 10, in order to read a result on the Spectrophotometer for TRP and SRP.

SCRT take water samples at Cunsey beck every two weeks, as part of our ongoing Windermere monitoring. We can therefore compare typical levels on this beck with unusual results/varied levels.

We eagerly await the results of the EA's investigation when it has been concluded. Until then, we will keep you updated with further developments and release another statement once the investigation is complete.

SCRT continue to sample seven locations around Windermere bi-weekly, which provides us with vital data about the Windermere catchment, its tributaries and ongoing pressures on this system. We have been sampling these locations since 2020. This data is currently being compiled and will be published to ensure a peer review is conducted.

We will continue our hard work to help our rivers and lakes thrive. See our website for more information; www.scrt.co.uk

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