

AGENDA

- **Welcome.** Introductions from Peter Evoy, Director and Dr. Mike West, Senior Project Officer at SCRT
2pm – 2:05pm
- **Where are we now?** Details of progression
2:05pm-2:15pm
- **Why Bowston?** Details of investigations to date
2:15pm-2:40pm
- **Presentation.** Professor and resident.
2:40pm-3:05pm
- **Q & A session.**
3:05pm- 3:55pm
- **Closing remarks and future steps.**
3:55pm- 4pm





**South
Cumbria
Rivers
Trust**

Why Bowston
weir?

Further information can be found here:

<https://scrt.co.uk/what-we-do/current-projects/bowston/>

Executive summary from the Atkins River Kent and Tributaries SSSI and River Kent SAC Weirs: Audit and Options Baseline Report

“Physical modifications, including weirs have been identified in the River Restoration Plan for the River Kent SAC (Jacobs 2010) as key pressures contributing to Unfavourable Condition.”

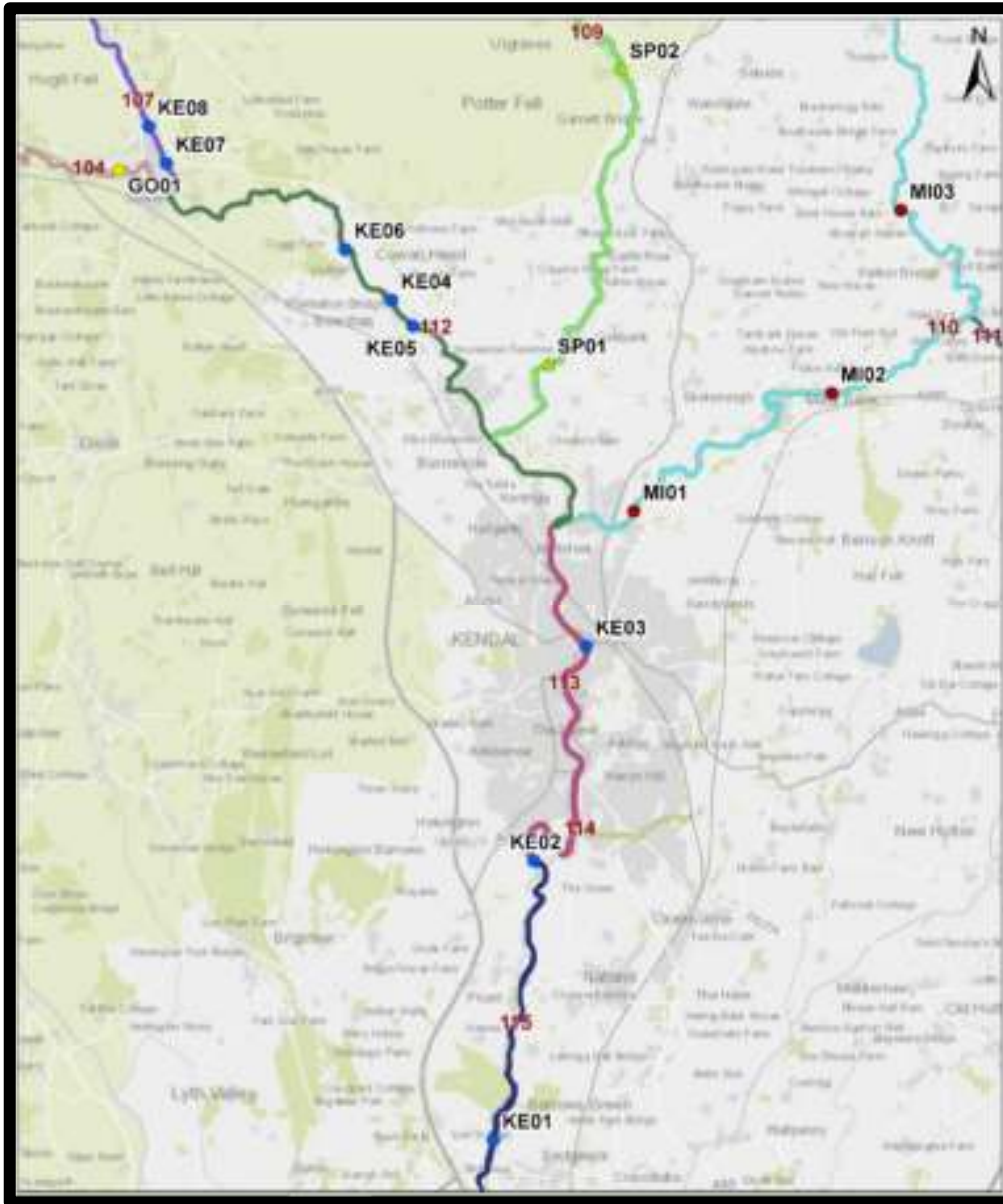
This study considers 14 weirs, identified by Natural England as disrupting the natural flow and sediment regime, and in turn the natural ecological habitat of the River Kent catchment. The main objectives of the study include:

- Baseline audit of 14 impoundment structures situated within the Kent catchment;
- Appraise the options for restoring the river ecosystems in both form and function; and
- Make recommendations and provide outline costs for future work.

This project comprised a high level geomorphology, ecology and engineering assessment to screen the 14 weirs and prioritise actions in the catchment.

A Multi-Criteria Analysis (MCA) using agreed indicators and weightings helped prioritise the weirs for removal (or partial removal).



The 14 weirs on the River Kent.







River	Weir ID and Name
River Kent	KE01 Weir at Sedgwick and EA gauging station
	KE02 Helsington Weir, Water Crook,
	KE03 Stramongate Weir, Kendal
	KE04 Weir at Bowston and EA gauging station.
	KE05 Bowston EA gauging station.
	KE06 Weir at Cowan Head
	KE07 Weir at Staveley
	KE08 Weir at Barley bridge
River Mint	M101 Weir upstream of Mint Bridge and EA gauging station
	M102 Weir upstream of Meal Bank
	M103 Weir at Patton Mill
River Sprint	SP01 Weir at Sprint Mill and EA gauging station
	SP02 Weir upstream of Garnet Bridge
River Gowan	GO01 Weir at Staveley



Scoring indicators were used to identify a preferred option for each weir.
 A short list of definitive preferred options was then identified due to a combination of factors; ecological and morphological benefits, total cost and feasibility.

Rank	Weir	What SCRT have done
#1	<p>Reason: The top ranked option is; full removal of MI03 - weir at <u>Patton Mill</u>.</p> <p>It would result in approximately 9 km of improved habitat connectivity and enhanced migratory potential for all aquatic species. Removal would also directly improve 120m of currently impounded habitat through improved flow diversity and a return to a riffle-glide sequence.</p> <p>SCRT action to date:</p> <p>SCRT has discussed removal options with the land owner at Patton Mill. The land owner is not agreeable to its full or partial removal.</p>	 

Rank	Weir	What SCRT have done
#1	<p>Reason: The other top ranked option is; full removal of SPO2 - weir upstream of <u>Garnett Bridge</u>. This has moderate ecological and morphological benefits, but high technical feasibility. Removal would result in approx. 13 km of improved habitat connectivity, improved migratory potential for all aquatic species and direct improvement of 50 m of currently impounded habitat through improved flow diversity.</p> <p>SCRT action to date:</p> <p>Positive discussions were held with the weir owner. However, the weir was in in poor condition at the time of survey and subsequently failed in a later flood. No further intervention required.</p>	 

Rank	Weir	What SCRT have done
#3	<p>Reason:</p> <p>The removal of KE02 – <u>Helsington Weir</u>, Water Crook, would result in approximately 14 km of improved habitat connectivity and enhanced migratory potential for all aquatic species. Removal would also directly improve 550 m of currently impounded habitat through improved flow diversity and minor channel migration within an agricultural field setting.</p> <p>The geomorphological risk of removal at this site is high.</p> <p>SCRT action to date:</p> <p>SCRT is due to receive a final options report from cbec in the near future. This will inform next steps.</p>	 

Rank	Weir	What SCRT have done
#4	<p>Reason:</p> <p>The removal of KE08 – <u>Barley Bridge, Staveley.</u> would result in approximately 15 km of improved habitat connectivity and enhanced migratory potential for all aquatic species. Removal would also directly improve 300 m of currently impounded habitat through improved flow diversity, redistribution of channel substrates, and some channel migration on the left hand bank into agricultural land.</p> <p>SCRT action to date:</p> <p>Steps were taken to establish ownership of this structure without success. At this time there was also little community support for this weir removal.</p>	 

Rank	Weir	What SCRT have done
#5	<p>Reason:</p> <p>The removal of KE06 - weir at <u>Cowan Head</u>, would result in approximately 5 km of improved habitat connectivity and enhanced migratory potential for all aquatic species (in particular, the removal of a barrier to spawning and local migrations for coarse fish). Removal would also directly improve 120m of currently impounded habitat through improved flow diversity and return of a pool-riffle sequence.</p> <p>SCRT action to date:</p> <p>The owner/s of Cowan Head weir cannot be identified and funding has currently stalled further investigations at this site.</p>	 

So were are here...

Rank	Weir	What SCRT have done
#6	<p>BOWSTON: The weir at <u>Bowston KE04</u>, if fully removed, would allow approximately 2km of improved connectivity and ease fish passage for all species. There would be a direct improvement of 105m of impounded habitat.</p> <p>SCRT action to date:</p> <p>Further investigations completed. Public engagement ongoing. Formal agreement with the land owner yet to be confirmed. Planning stage not yet entered.</p>	