

Thank you for giving us the opportunity to talk to the select committee. I would like to put forward some additional points, focussing on the EA's seemingly spineless relationship with water companies.

Aside from water companies' lamentable record over leaks it is clear from the latest report on the condition of rivers in England that, even where there is ample legislation in place to deal with an issue, the EA's response is inexcusable. The latest EA performance assessment revealed there were 2,204 "pollution events" last year, 52 were the most serious category 1 events. It was reported (Guardian 2/10/20) that there were 44 prosecutions against water companies, securing fines of £34m in the last 5 years. In other words, the EA have not managed to prosecute in that period as many serious incidents as occur *annually*. George Eustice & Emma Howard Boyd are reportedly summoning the worst performing firms to a meeting to demand they "step up" and do better. I doubt the water companies are quaking in their boots.

Back in 2012 a new £30+ million sewage system was completed by United Utilities (UU) for Keswick designed to only a 1:30 event. Any flows over and above that are discharged into a field beside the River Greta. When we challenged this as, to say the least, unhelpful, we were told that by then the river would have flooded the field and so the sewage would be diluted. That's OK then? Why would a water company do any more unless it was forced to? Toilet paper hanging from trees on the river bank is not a good look. If nobody has the power (inclination?) to prevent that happening in a SSSI in a National Park then there is little wonder the rest of the nation's rivers are in a poor state.

***Frankly, water companies always have an eye on shareholder profits and will never take action unless there is legislation, an enforceable timeframe and hefty penalties if there is non-compliance.***

***Keswick Flood Action Group (K FAG) believe that water companies have a duty of care to the communities downstream of their infrastructure.*** This applies not just to their waste management but also their reservoir operation. A more balanced approach is needed, taking positive actions to reduce flood risk with as much effort as drought risk reduction.

It is not good enough to say that some water companies are "doing a good job". Reservoirs could - and should be - one of the biggest tools in the box for flood prevention. There is much talk of a "full catchment approach" and "source to sea" but there is no substance/evidence that this is being achieved. Reservoir management has to be a key, early component of such aims. Legislating for a more balanced approach to reservoir management can swiftly improve flood risk for communities. Furthermore, it ***has no cost to the public purse*** but can have a far better outcome for many communities than the EA taking years to plan and build expensive barriers.

You cannot tell the communities of Keswick, Cockermouth and Workington that Kielder Water is being operated to provide storm space - especially when we have been trying to get an improved management regime at Thirlmere for 15 YEARS. If that doesn't flag up the need for legislation then what does?

The repeated complaint from the community is that we are not heard. The EA does not put people and communities first. Nobody has prioritised the community's protection. ***It is simply not good enough.***

OFWAT, the Government, someone, needs to wake up and grasp that ***what is needed is to actually invest in a national water network together with a strategic, full catchment approach which manages peak flows and avoids the misery of flooding for thousands every year.***

I mentioned to the committee the roles that full reservoirs played in the more recent floods. A KFAG report on the reservoir status before the flooding on the Don (Sheffield) and Severn is attached [not published]. We tried desperately to get United Utilities (UU) as reservoir operators to increase their releases to provide additional storm storage space in Thirlmere in the days leading up to Storm Ciara. UU's response was that "*we cannot commit to any future changes in the operation of the flood mitigation releases until those releases are approved by the Environment Agency and Natural England.*" I copied the EA into the email exchanges and their response was: "*As you know, we have no influence over UU regarding the releases that the community arranged with them over 10 years ago, and the future release regime is subject to current discussions.*" ***We view the usual buck passing as disgraceful.*** As it was we missed the worst of Ciara (report attached) [not published] BUT it could have been so much worse for our town if the storm had been just a little further north. We were again fortunate to narrowly avoid being hit by the worst of Storm Dennis.

KFAG have done a lot of research and produced a wealth of worked examples, graphs, documents and reports to back up our proposals for reservoir management. Hydrologist Dr Ed Henderson & Al Cook's "Water Balance Model" paper (attached) [not published] was clear evidence of the type of managed regime that should be adopted to protect Keswick from all but the most extreme flood conditions. Coupled with the data from a mathematical model for reservoir overflow (also attached) [not published] which Al Cook created it is the foundation of the KFAG Memorandum which has been supported by both Keswick Town Council and Allerdale Borough Council:

### **The KFAG Memorandum**

A statement of 3 targets for Thirlmere reservoir which we feel we need to give Keswick, and the Derwent catchment, the best chance of reducing flood risk:

1. United Utilities to use the two lower valves at Thirlmere reservoir (which were scheduled to be upgraded by spring 2020) to let out the combined maximum of circa 700 Ml/d to try to get some storm space particularly in the autumn/winter months ***and for this to be the routine response ensuring flood protection takes precedence over all other considerations.***
2. United Utilities to invest in upgrading the two upper valves at Thirlmere to enable their intermittent use to allow greater releases between storms to achieve space in Thirlmere between weather events (since we know that use of the two upgraded lower valves will not provide sufficient flows to keep up with incoming rainfall).
3. The schedule of "Trigger Levels" to be viewed as intended "Maintenance Levels" and these to be increased by 1m for some winter months: December from 2m to 3m and for January/February from 1m to 2m.

The River Greta has two main tributaries, the Glenderamakin and St John's Beck (the latter is the outflow from Thirlmere reservoir and represents 28% of the full catchment area for the Greta as it flows through Keswick). As far as we are aware, Keswick has never flooded from the River Greta when Thirlmere is not overflowing.

For Keswick there are 2 scenarios:

**1 The current situation:** UU has made modifications to two of the reservoir's valves but this will still not provide a realistic hope of managing Thirlmere reservoir to prevent flooding in a series of storms with high rainfall. It remains the case that there is:

- Increased risk of the reservoir being full and overflowing before a storm hits or overflowing during a storm. (NB. The water which overflows is of no value to UU.)
- Increased risk of both tributaries peaking at the same time.
- Flows which rip out bridges, pull down walls, river banks and trees leaving vast quantities of stones/boulders over fields, and drowning livestock.
- Damage to water quality through siltation as banks are eroded too quickly
- Increase risk of landslides upstream of Keswick, the whole area has been rendered extremely fragile since the floods of 2015/16.
- Stranded fish across fields as the floods subside.
- Recovery time is extensive and the area's tourist economy suffers from the bad press.
- Many in Keswick living with fear every time it rains as their homes and businesses are at risk yet again. It is widely recognised the community's flood risk is directly related to available storm space in Thirlmere reservoir.

**2 Where we need to be:** with all valves on the reservoir upgraded and fit for purpose so that:

- The reservoir can be managed to provide storm space before a storm forecast avoiding damaging uncontrolled flows.
- Overflow can be delayed so it does not coincide with the peak flows of other watercourses.
- The flows can be varied, increased in advance of a storm forecast then adjusted as rainfall amounts become clearer. This gives a more natural river environment than a minimal, static release rate benefiting wildlife. Simply by being there, Thirlmere reservoir has altered the river's state. St John's Beck is now not "natural" but manmade.
- The flows are planned, the farmers can protect their stock and the damage to land and environment can be greatly reduced.
- It has already been shown that increased flows in autumn are beneficial to salmon transit and gravel turnover can be improved for spawning.
- Damaging flows which exacerbate the fragile state (since Storm Desmond) of the river section between Keswick and Threlkeld can be avoided.

- The environmental damage of NOT operating the reservoir to avoid flooding is never fully acknowledged. Flooding lays waste to habitats too and the waste in countless skips from the contents of ruined homes has an impact on landfill.
- The risk of flooding is reduced for the Keswick community. Delaying/uncoupling peak flows can also benefit Cockermouth and other communities downstream.

***The situation is absurd. This is not simply a story of flora, fauna and fish it is a story of homes, health and heart attacks.*** In the knowledge of all the damage and misery that the last three floods have caused and, having clearly demonstrated the benefits to flood risk reduction our proposals can achieve, we find the lack of action incomprehensible. ***We desperately need a "Flood Risk Management Authority" that lives up to its title.*** Requiring reservoirs to be operated to protect communities as well as their role in providing drinking water will, in the future, prove vital nationally in the light of climate change forecasts. With this in mind I am particularly grateful that you have agreed to investigate how New Zealand manages their reservoirs. It seems clear to us that not only should water companies be required, by robust laws, to try to protect communities instead of hiding behind the view that flooding is "an act of God", but also that there should be penalties if actions are not taken.

I passionately believe that what we are asking for is reasonable and necessary. It is simply a matter of time before Keswick floods again. We hope that the Select Committee recognises this fact, heed our warnings and take up the challenge to radically reform the system for the sake of so many who live in fear of the rain.

Lynne Jones MBE

Chair of Keswick Flood Action Group

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