SAVE CANNOP PONDS TEAM

Reply to

FORESTRY ENGLAND'S LATEST PRESS RELEASE

ARUP Downstream Flood Risk - Hydraulic Modelling Results Note
(20 October 2023)
(File reference 292427-ARP-XX-XX-RP-XX-0001)

This long awaited report is the cornerstone of FORESTRY ENGLAND'S claim that it has a “legal and moral responsibility” to 'do something' about Cannop Ponds on the grounds of Flood Risk downstream.

However what is does show, quite clearly when you look closely is that -

- **None of the 4 Options presented by Forestry England are shown to offer significantly improved flood protection.**
- **The existing ponds and dams are actually doing a fine job.**
- **Repairing the existing dams is the best option**

To Summerise

The report is filled with much basic inaccuracy and unproven speculation but on the four options put forward it clearly concludes -

Option 4 – RE WILDING , which has now, thankfully been formally taken off the table, **Makes potential flooding markedly worse**

Option 3 – REMOVING THE TOP POND Appears to be offering **less flood resilience** than provided already by the existing dams & ponds

Option 2 – REDUCING THE SIZE OF BOTH PONDS ***Might*** offer a **slight theoretical improvement** in flood resiliance but **at huge cost** disturbance to resident wildlife and the cultural function of the site.

Option 1 – NEW BIGGER SPILLWAYS would appear to offer **no great improvement** and still be very costly to install

The option we have called for from the start (which FORESTRY ENGAND has always claimed was not possible) simply **repairing the existing dams and spillways** , now appears to be **the best** for all concerned offering the **lowest cost and least disturbance** to wildlife

TAX PAYER'S MONEY

The report itself actually shines a bright spotlight on the huge waste of time and public money PROJECT CANNOP has proved to be from the very start.
A viable repair option was offered to FORESTRY ENGLAND several months ago and allowed the dams to be brought up to legally required standards for a fraction of the cost of any of the options they present , but this was IGNORED.

REPLYING TO THE REPORT – POINT BY POINT

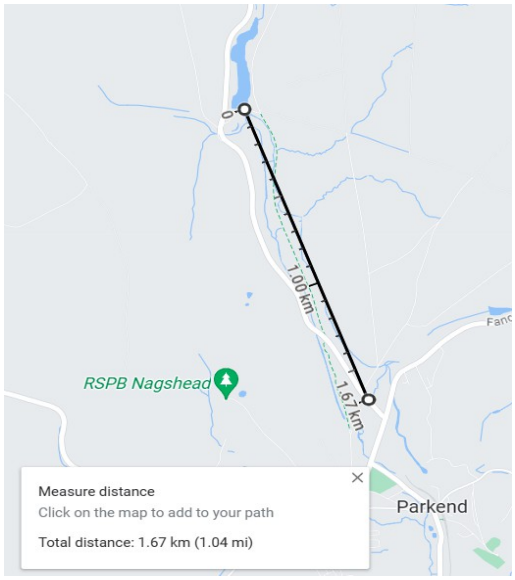
Page 1

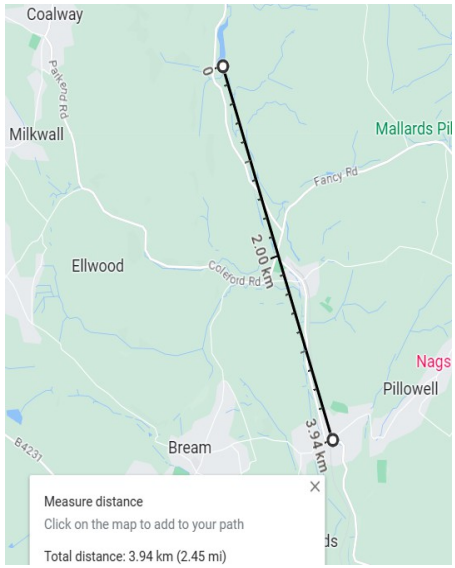
" *the Baseline, which represents the current situation. This modelling exercise* *does not cover dam failure*

Considering this as been a key aspect of the issue, one that KEVIN STANNARD , Deputy Surveyor of Forestry England has emphasised throughout, one must ask WHY HAS THIS NOT BEEN DONE? Does this suggest the potential for failure has been overstated ?

Page 2 Part 2.1.

The report twice states " *the nearest significant settlement along the Cannop Brook being Parkend, located approximately 4km downstream* "
On the Google Maps you can clearly see this is incorrect by a huge margin as it's only 1.67km to the first house on the edge of the village (below left)





4kms downstream is actually the next village, Whitecroft (above right)

You have to ask yourself how accurate ARUP reports can be if they cannot get such a basic fact correct at the very start of their own report !

Page 3 Part 3.3

> Hydrology estimation points shown on the map and in the chart appear to show flood water “peak ” rates for Parkend (Near the Scout lodge) at 13.4 m/s, for the infamous “150-year-event” and yet at Whitecroft (near the Forest Of Dean Tyres) Which is much lower down the Cannop Brook/RiverLyd and much further away from Cannop Ponds the figure is 33.4 m/s .

Why is there *double the rate of water so much further from the ponds*? Does this indicate a much greater secondary source of flood water than the Ponds? If so, the Ponds would not appear to be the major source of potential flood water in Whitecroft.

If so, what is? And why is it ignored? Or could Forestry England / ARUP explain this finding properly?

Page 3 Part 3.4

> On the 'comuter modelling it satates “ *Structures were added into the 1D element of the hydraulic model to represent bridges, culverts and weirs* “

Does this mean they represent the ACTUAL structures already in place? Or is this a selection of random, or average, structures that MIGHT be expected there?

Can Forestry England / ARUP please confirm?

Page 6 part 3.6

> “ *The hydrological analysis identified two critical storm durations (13 hours and 45 minutes and 22 hours and 45 minutes); the storm duration of 22 hours and 45 minutes was found to maximise flooding in the study area and was therefore selected as the default storm duration* “

Why is this ?

What examples of storms lasting 22 hours 45 mins are there on record?
Why is a worst-case-scenario used as a 'default' ?

Perhaps the line “ *in the absence of gauged data to calibrate the model* “ **actually indicates the data used is only an estimate and not backed up by any historical fact? Can Forestry England/ ARUP explain please?**

Page 7 Section 4

> "*Properties were considered as flooded if the maximum flood depth was above 15cm which is the typical property threshold level corresponding to a doorstep. Threshold levels have not yet been verified by survey*"

This implies that to count as 'flooding' the water needs only rise above the "*Typical property threshhold*" **by as little as 1mm to be counted. BUT the report has in any case not actually measured ANY thresholds in the village and is just using a presumed 'typical' value for that 15cm height.**

There may even be NO actual propeties flooded on this basis . This figure is pure speculation and is, in truth, valueless.

Even so it still indicates that the current "baseline" (the dams as they now are) seems to offer a scenario that can be little improved upon by any of the other options across the wide range of scenarios. There is certainly nothing dramaticly different given the potential vast cost of these options in financial and cultural terms

Page 9 Part 5

> Reiterates the lack of actual measured data on the figure for flooding
> " *This estimate is not based on topographic survey and it is recommended that threshold levels of any properties predicted to flood are surveyed for ... further modelling stages* "
>
> There is a further admission that "*there are no gauging stations which can accurately record the most extreme flood events* " And in fact "*This increases the uncertainty around ... hydrological analysis... There are no operational records for the Upper Cannop and Lower Cannop ponds which would allow a better understanding of how much flow was passed forward by the reservoirs' spillways and over the dam crest respectively, during past flood events. No observed flood extents or wrack mark levels have been recorded for previous flood events, making it impossible to calibrate the hydraulic model against known events* "

Which suggests nothing more than speculation is used here as there appear to be very few hard facts upon which to base the claims that are being made.

Further more the report admits " v*alues have been based on photographic evidence or chosen following available guidance* **" So nothing has been measured on the ground? Why not? And from whom does the "***Guidence***" derive? Under what remit ? And verified as correct by whom ?**

Given how inaccurate ARUP are in placing Parkend " *4km* " away from Cannop instead of the real distance, which is less than 2kms, one must question how accurate the rest of this "*photographic evidence***" might be for arriving at any meaningfull figures ?**

On the computer model used there is a damning admission " *the model demonstrated a number of stability issues, which required the usage of stability patches to assist with model running* " **or in plain english it looks like the results are being 'manipulated'**

CONCLUSION

It would appear that the current 'baseline' dams and ponds actually work very well and none of the Options present by Forestry England offered any great improvement.

Most of the data that the report draws from appears to be 'industry standard' and not taken from the actual area in which it is concerned.

Most of the measurements included appear to be estimates due to either a lack of existing historical data or a lack of people ' on the ground' checking actual landscape features.

Some of the data quoted is clearly inaccurate , and by a wide margin (distance to Parkend for example) . How much trust can one put in the rest?

That the law requires any 'improvements' to the dam and ponds to show a net reduction in flood risk downstream rules out most of the options presented.

The practical repair option offered to Forestry England by civil engineer Phil Roberts and the findings of experienced dam engineer Crawford Munro *BSc CEng CWEM FICE FCIWEM,* have not been considered. Why?

The cost of PROJECT CANNOP continues to spiral upwards unchecked at a time of national economic crisis.

Compiled October 30th 2023 by

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