

FELBRIDGE PARISH COUNCIL

16th October 2023

Phoebe Nelson
Sustainable Places Advisor
Environmental Planning and Engagement
Environment Agency

Dear Phoebe,

EA Ref: HA/2022/124189/04-L01

Following your request for the applicant to consider our comments regarding flood events, their flood risk consultant has responded stating;

3.5 The flood extents are shown to continue along the footpath/bridleway a short distance, which agrees with the photographic evidence provided by FPC.

3.6 The model, therefore, appears to be a good representation of known flooding at this location along the Felbridge Water. And, therefore, a good representation of the potential for flooding at the site itself, a short distance away from the watercourse.

We were disappointed that the analysis of our photographs versus the model was not directed back to RPS who authored the model and stated it would benefit from calibration/validation.

Please find below our evidence that the flood events observed frequently within the last decade exceed the 20 year event modelling. See figures 1, 2 and 3 which identify the position of the telegraph pole on the north side of Bridge 1 using the applicant's site plans. Figure 3 has used GIS mapping to identify the position of this pole in relation to the extract of the flood modelling.

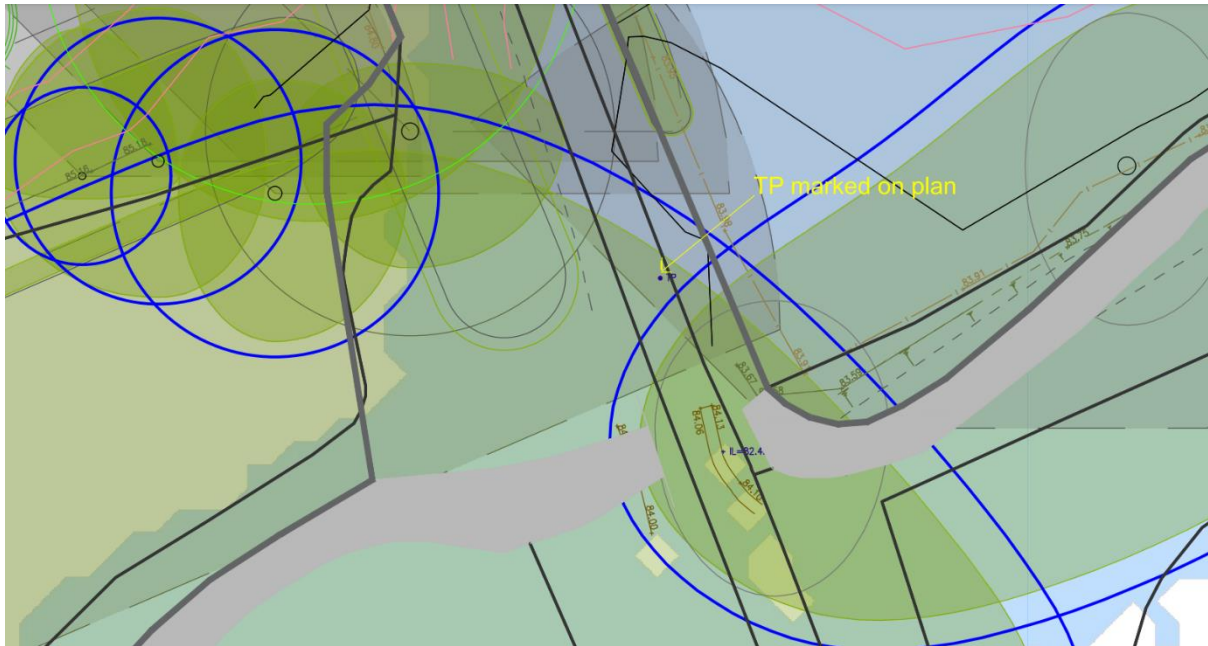


Figure 1: Site Plan showing position of Telegraph Pole

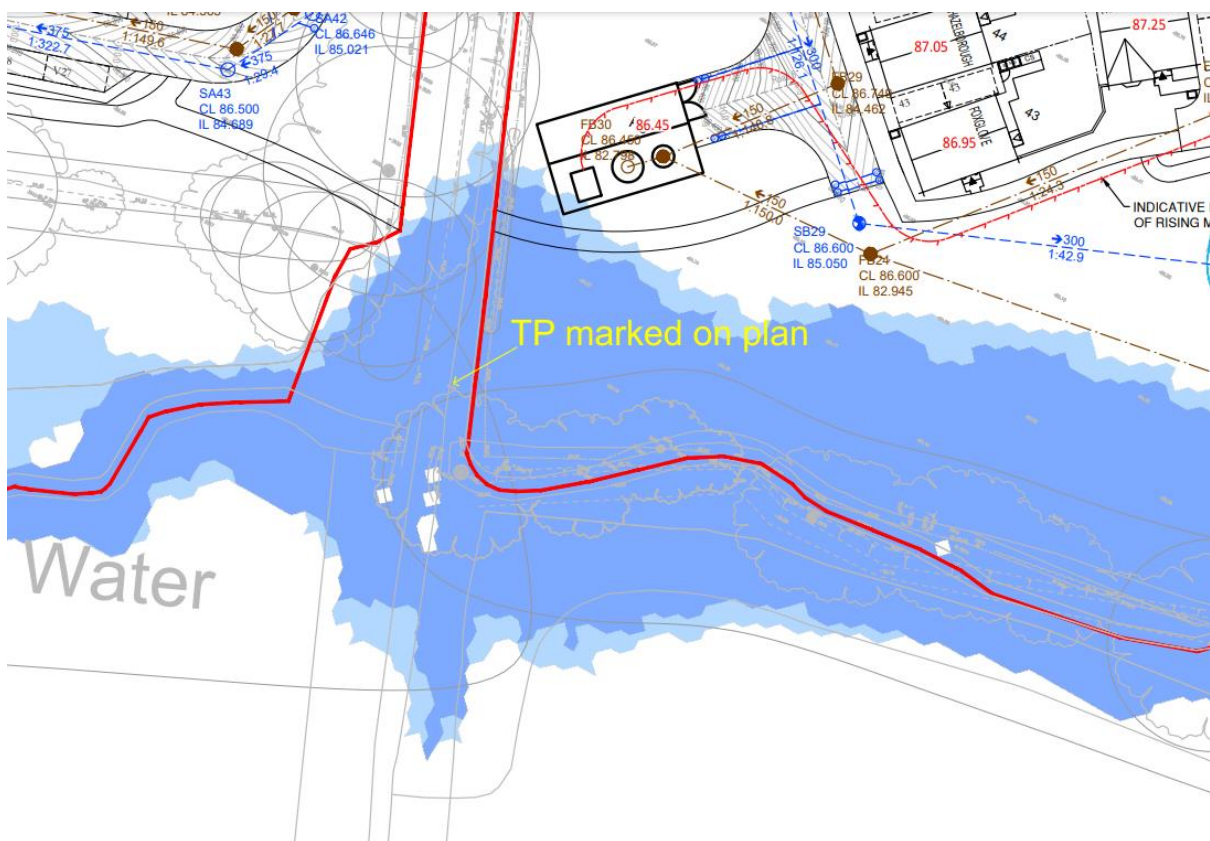


Figure 2: Drainage Plan A359-RM-51 showing position of Telegraph Pole

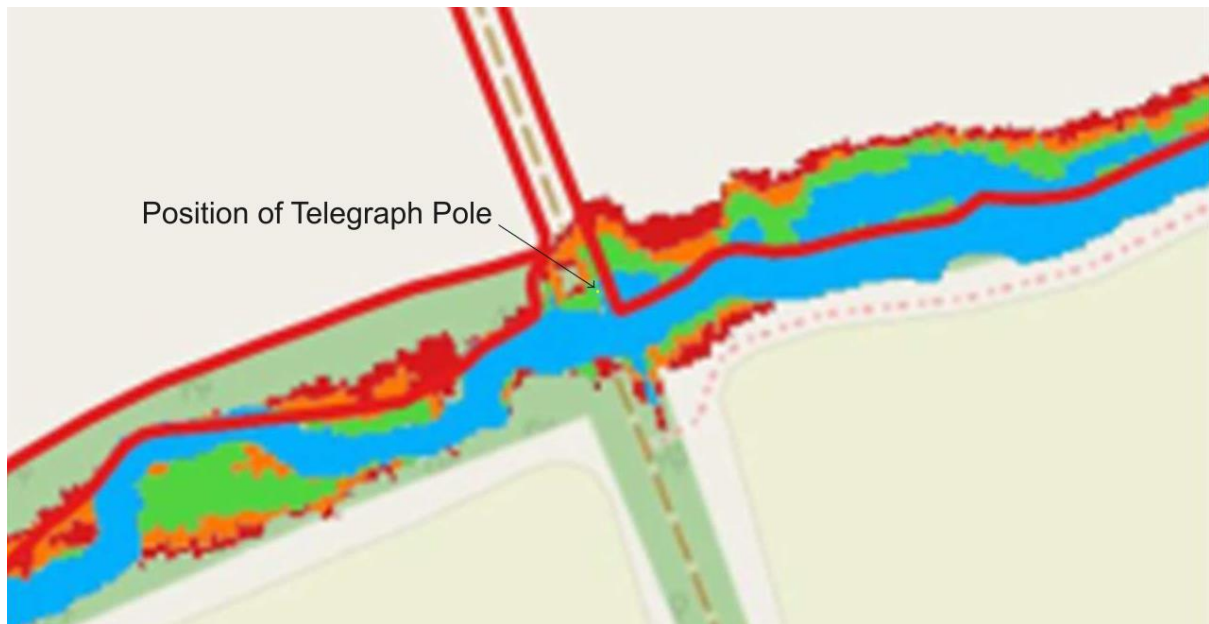


Figure 3: Position of Telegraph Pole superimposed upon the detailed extract of the flood modelling provided as Figure 2 in A359 - TN004 dated 19/9/23. Blue is the 20yr event, Green is the 100yr event.

Thus, the hydraulic modelling of the 20 year event (Figure 3) shows that the northern extent of flooding of the bridleway does not reach the telegraph pole. This is contrary to the flood event photographs in Appendix A which clearly show five photographed flood events in the last 17 years that extend to the telegraph pole and more often much beyond it. In fact, the flood extent photographed on 6th November is close to the 100 year event modelling shown in figure 3.

Figure 4 measures the approximate flooded extent of the bridleway from the modelling, the pixilation of the model means that this is an approximate flood width $\pm 1\text{m}$. However, the photograph in Appendix B looking south and the February 2014 photograph in Appendix A shows the southern extent of the flood events reaching very close to the old gate post which is 14m from the telegraph pole.

Considering that the photograph in Appendix 2 shows the water level reaching near to the old gate post on the south and also close to the telegraph pole on the north, it has to be assumed that the southern flooded extent was further for the event photographed on 6th November 2022 in Appendix 1 as the northern extent was considerably beyond the telegraph pole.

Therefore, we have at least two events within the past 19 years where the flooded extent has reached at least 14m which is far greater than the approximate 10m extent suggested by the hydraulic model for 1 in 20 year event.

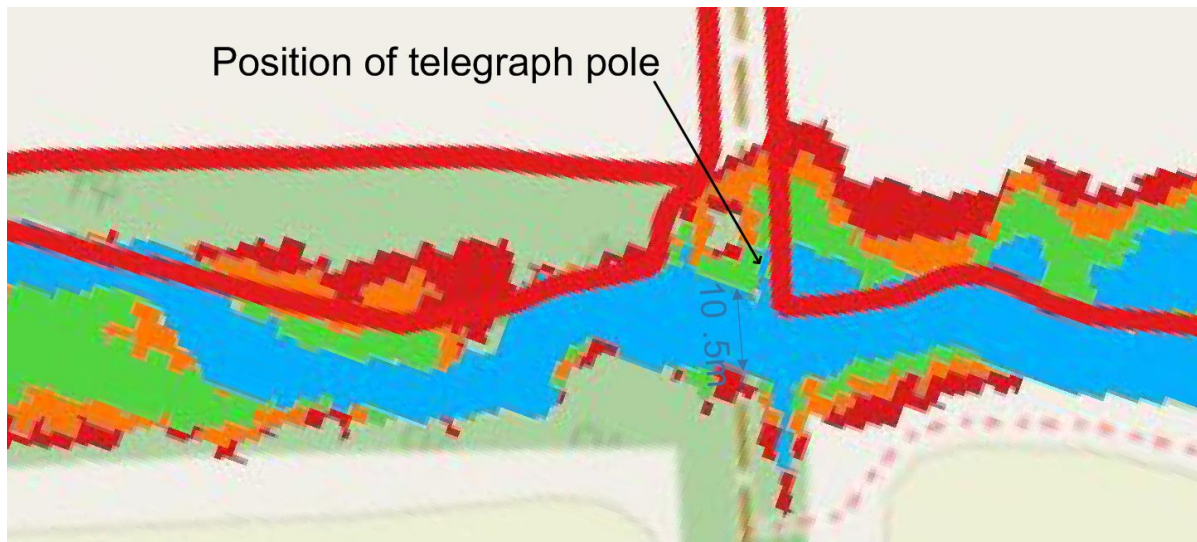


Figure 4: Showing the approximate measurement of the extent of the 20yr event flooding

We therefore continue to recommend that RPS are asked whether their hydraulic model is adequately predicting the frequency and extent of the flooding when compared to the photographic evidence. As they are the hydraulic modelling experts, we believe it is reasonable that RPS provide a response regarding this matter, rather than a third party interpreting the output of their model.

Kind Regards,

Patricia

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Appendix A and B to follow

Appendix A

Public Photographs of flood events all of which were taken looking north with the telegraph pole clearly visible on the right of the photograph.

Obviously not all flood events will have been photographed or have been at their peak.

March 2006



February 2014



6th November 2022



A video of this date is also available <https://www.youtube.com/watch?v=n2z9tvC8Uho>

6 November 2022





31st Dec 2022

Appendix B

Public Photograph of flood event looking south

Obviously not all flood events will have been photographed or have been at their peak.

February 2004

