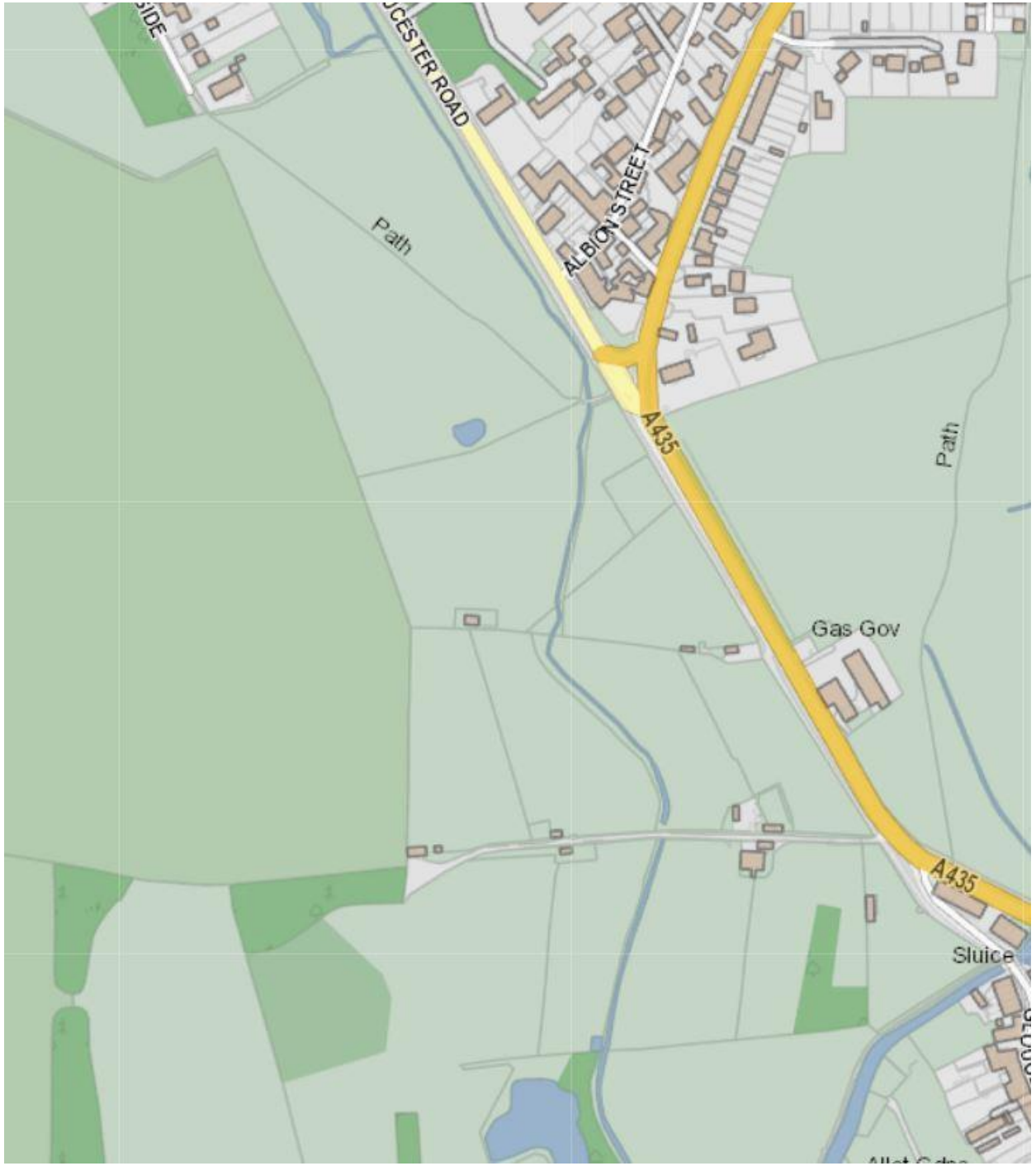
River Dan & Gumstool Brook Flood & Drought

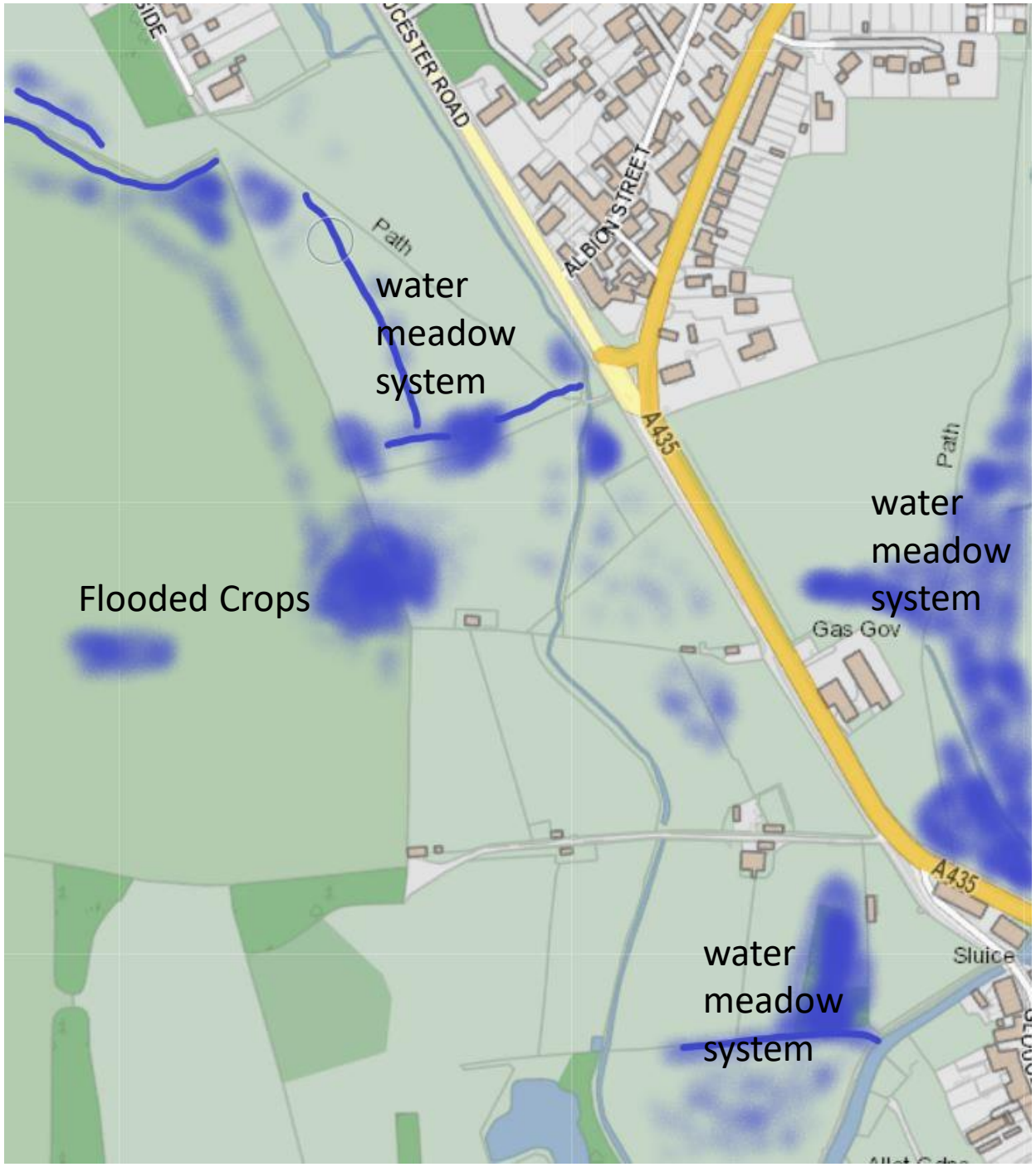


Current river course from Dan (Daglingworth Stream) & Churn into Gumstool Brook

Stratton to Barton Mill

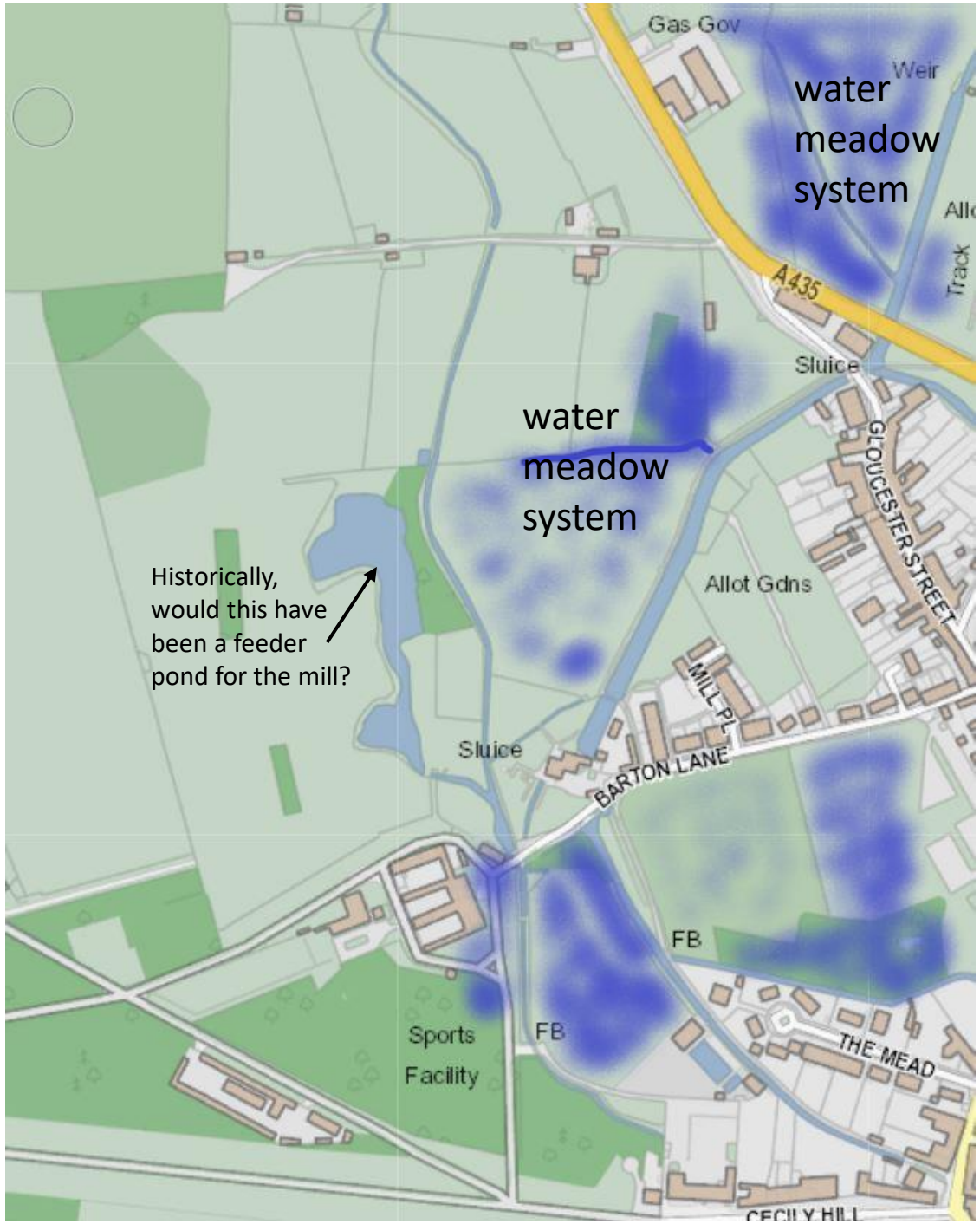
Current river course from Dan (Daglingworth Stream) & Churn into Gumstool Brook

Barton Mill to Town



Flooded river course from Dan (Daglingworth Stream) & Churn into Gumstool Brook

Stratton to Barton Mill

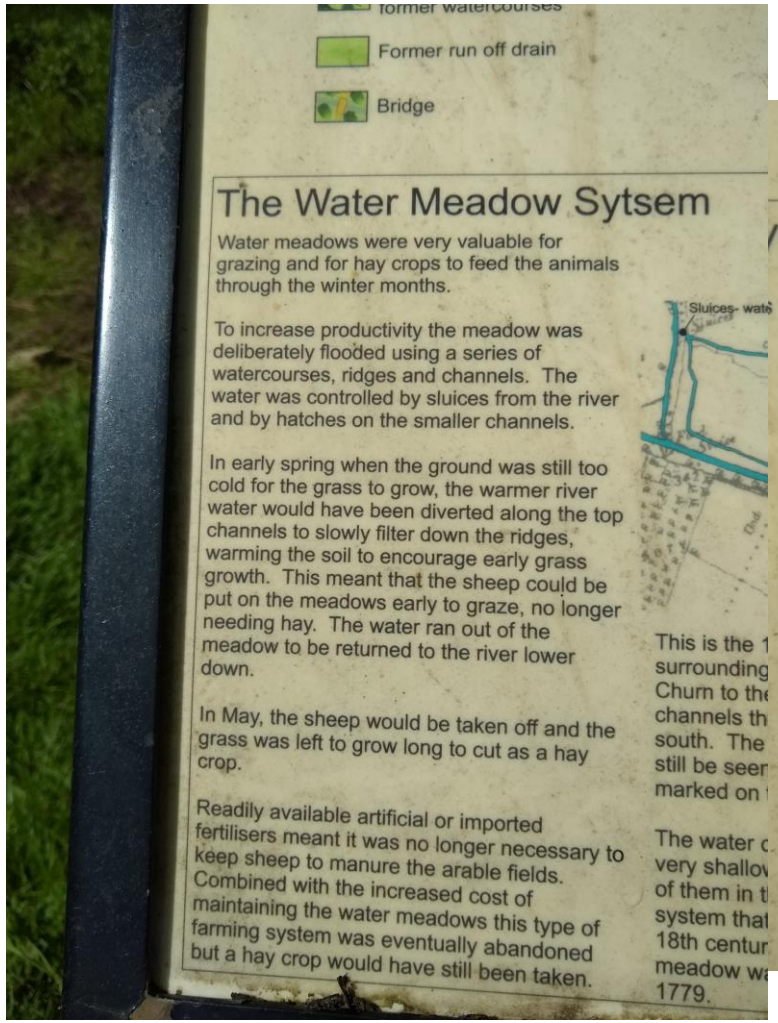


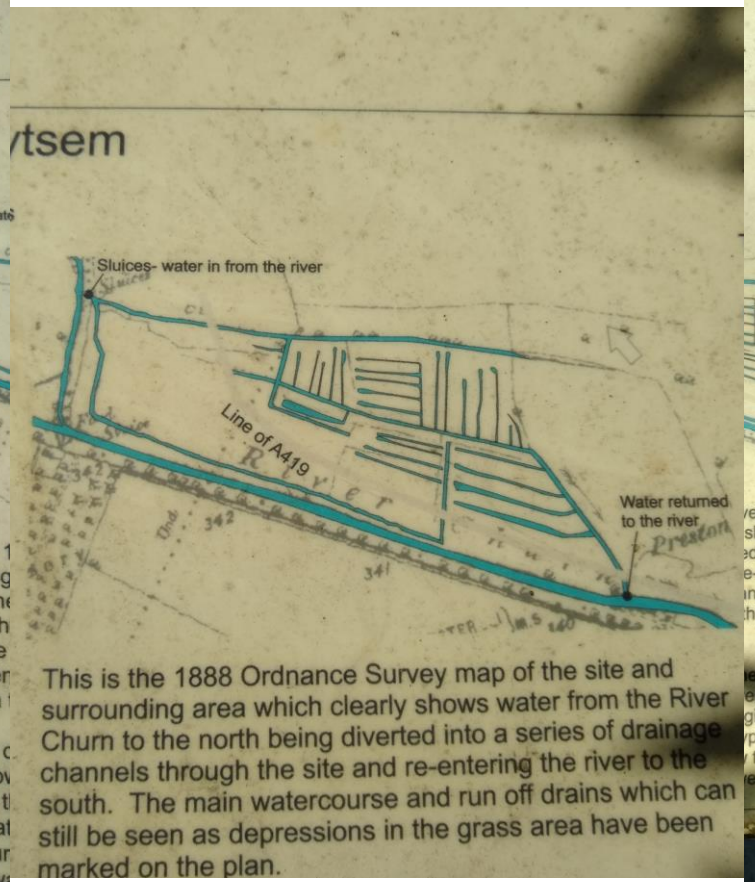
Flooded river course from Dan (Daglingworth Stream) & Churn into Gumstool Brook

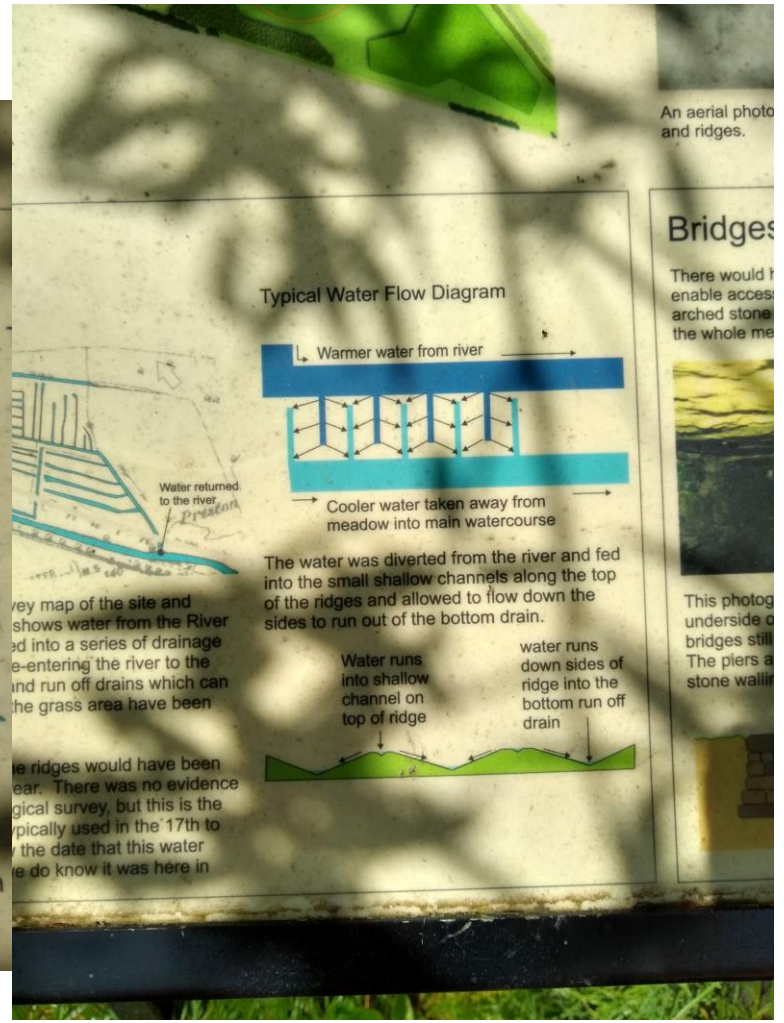
Barton Mill to Town

Flood Mitigation:

Water Meadows work! plus: Leaky Dams; Brook ponds; hedging on farm-uplands, upstream in the Churn Catchment North of Stratton (DAN), Daglingworth (DAN), and North Cerney (Churn – Rendcomb, Colesbourne,…)







Funding for biodiversity enhancements & flood mitigation

Thames Water

Environment Agency

Department for Environment Food & Rural Affairs

Promotional material

The Environmental Land Management scheme: public money for public goods

Published 14 October 2020

Gloucestershire COUNTY COUNCIL

cirencester · town council ·

FWAG Farming & Wildlife Advisory Group

NATURE CAPITAL

COTSWOLD DISTRICT COUNCIL

But what about drought in the Gumstool?

Looking back into recent history, Mill Ponds controlled the regularity of flow for the Mills in the area. Taking low lying areas that currently flood anyway, and create deeper clay bottom lakes/ponds that can hold more water they catch in winter. Which can then be used to flow back into the streams in the spring/summer.

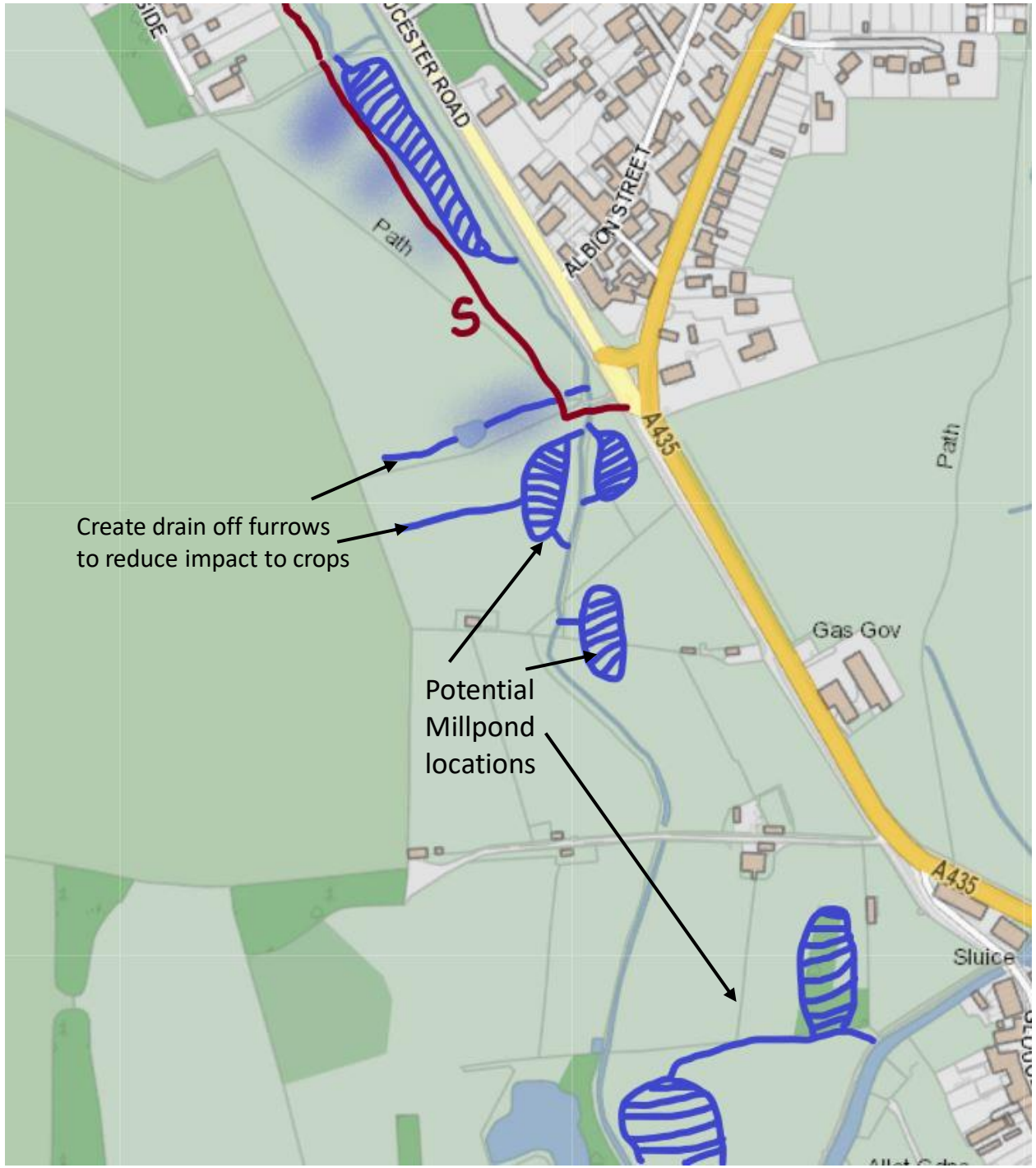
But.....

This is Bathurst Estate land.

Clearly, it would need their desire, approval, and commitment to the work.

- It would be about **increasing habitat & biodiversity**,
- helping to **alleviate flooding** for people in Cirencester.
- Create a **healthy continuous flow** into the Gumstool Brook **all year** round **for wildlife**,
- and **enhance** the surroundings for **residents** and **tourists** alike.

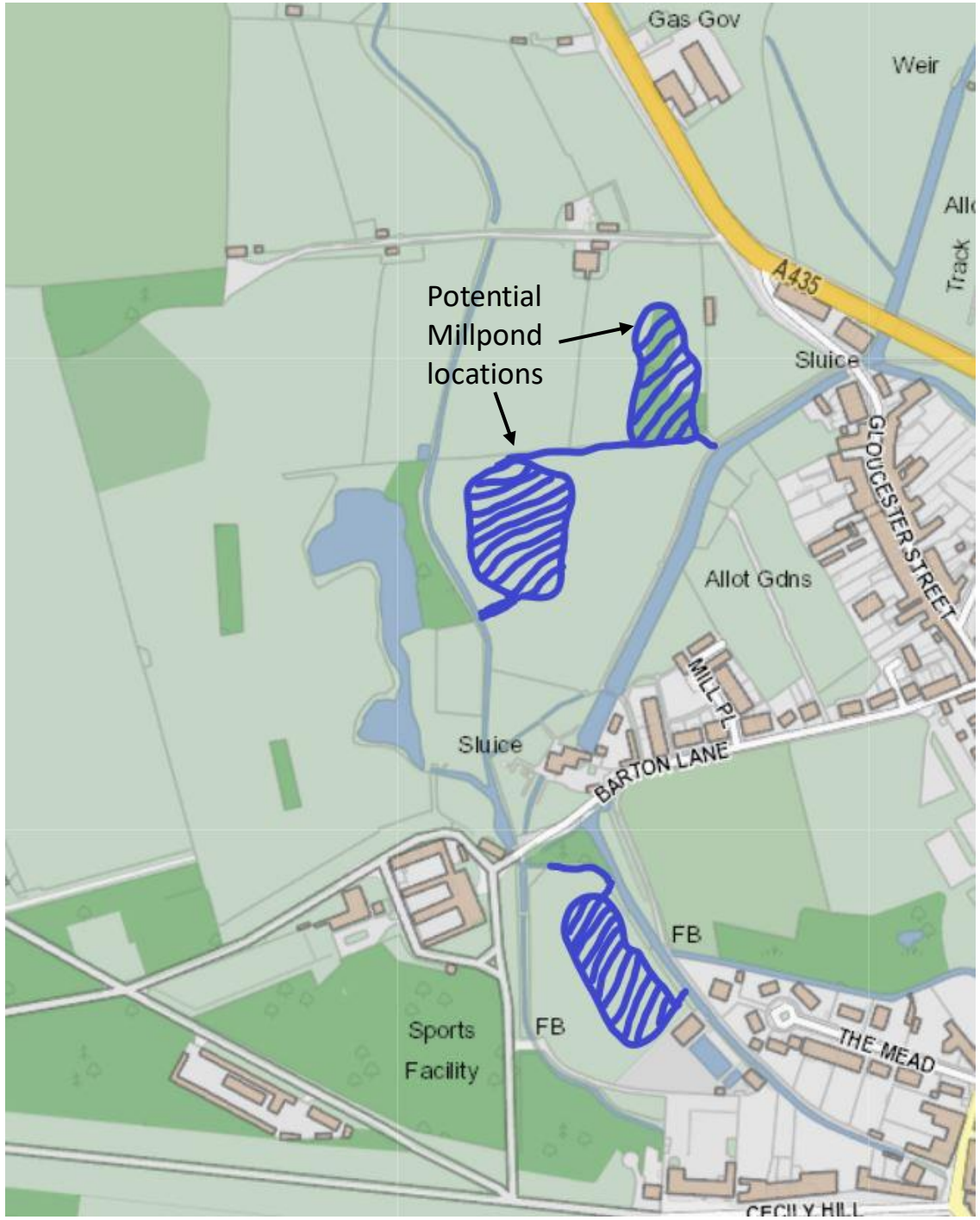
Could the ‘Friends GSB’ support finding funding & volunteer in any construction, operation and maintenance?



Mill Ponds in river course from Dan (Daglingworth Stream) & Churn into Gumstool Brook

Stratton to Barton Mill

(S – red line, denotes Sewer pipes)



Mill Ponds in river course from Dan (Daglingworth Stream) & Churn into Gumstool Brook

Barton Mill to Town

Is the clay from Smyths contract for bund construction of sufficient quality for mill ponds?

Controlling Flow?

To control the flow into water meadows & mill ponds, a cutting is made from a stream at a height that means water only flows when the stream is at flood level. Once the stream levels recede, the mill pond is then cut off from the stream.

To move water from the millpond back to the stream in drought conditions, by using a Hydraulic Ram Pump, no power is needed. Just someone to charge the pump to get it going, it then runs under its own steam. For our application the pump runs from the millpond back into the stream.