

BOURN FLOOD ACTION GROUP

"Prevention, Prediction, Protection"

AIMS AND OBJECTIVES

AIMS

1. To understand the circumstances of the flooding in Bourn on 21 Oct 01, the contribution made by the various streams that join Bourn Brook, the restrictions that impede rapid escape into the flood plain below the village and the working of the drains in the Village.
2. To press for the timely implementation of effective measures to reduce as far as possible the likelihood further flooding in Bourn.
3. Once brought up to the required standard, to monitor all Bourn flood defences, water-courses and drainage and press the appropriate agencies to keep them in working order.
4. To lobby official organisations involved in all matters concerning flood control at a national, district, county and parish level.
5. To set up a neighbourhood help scheme to ensure that no one is without help should flooding happen again.

OBJECTIVES

1. To maintain a close liaison with the Bourn Parish Council and to work through them in all that we do.
2. To keep all those who may be at risk from floods within Bourn informed of our activities by means of group meetings, newsletters, regular visits to significant sites such as the Cambourn balancing lakes.
3. To arrange visits to Cambourne as necessary to monitor the developer's adherence to the drainage requirements set out by the SCDC when planning permission was granted.
4. To press for the publication and distributions of reports and results of surveys prepared for or by official bodies and to follow up such reports by appropriate action.
5. To maintain an understanding of future action of government and insurance companies in relation to the insurance of properties in flood risk areas.
6. To maintain a register of all action being taken to reduce the risk of flooding in Bourn in the future.

Bourn Flood Group APM report - 18/06/2014

After several years in a dormant state, the group is being reactivated to support the parish council in working with CCC, SCDC and local PCs / landowners to identify and lobby for further improvements to the system from both flooding and ecological perspectives.

The objectives of the group are to –

- understand and document the catchment area
- coordinate “cross-parish” (Cambourne-Caxton-Bourn-Toft-Comberton) activities
- monitor flow and capacity at key points within the catchment area
- work with local authorities and landowners to maintain the system
- assist the BCN Wildlife Trust with ecological surveys
- identify and progress opportunities to reduce flood risk and improve biodiversity
- disseminate information to the local community

The current team membership is

- Phil & Suzanne Armitage
- Nigel Ball
- Janet Cronk
- Keith Howlett
- Peter Johnson
- Mark Proud

With Viv Bruce as our liaison councillor on the parish council.

If you wish to join us then please contact Nigel Ball at nigel.ball@cyenz.com

As to the current status of the brook, regular clearance of road drains and the watercourse has kept the system functioning reasonably well despite above average rainfall last winter.

Recent work in Caxton End has raised and re-surfaced the road level so that the brook can rise an additional 500mm before the road floods. This will not prevent flooding in the worst storms but should reduce the time that the road remains impassable to vehicles.

The work was extensive and included -

- a new drainage network to drain the road on the north side into the brook
- covers and gullies being raised to new levels.
- maintenance of drainage ditches and vegetation upstream by re-cutting to improve storm capacity.

The drains along Alms Hill have been lowered to reduce the amount of surface water lying in the road at the bottom of the hill after heavy rainfall events. Future work on this road is scheduled next year to improve capacity of the system.

The group would like to record its thanks to Sharon Maloney and Karen Lunn (from Cambridgeshire County Council) and Pat Matthews (from South Cambridgeshire District Council) for their efforts on behalf of the village.

Bourn Flood Group - status report

The 2001 flood was caused by 101 mm of rain falling in 18 hours on 21st October. This equates to a 1 in 266 year return period rainfall event (from Environment Agency statistics).

In total, 47 properties in the village were flooded; the worst affected areas were -

- Alms Hill
- Kingfisher Close (including the doctors surgery)
- Riddy Lane (lower end)
- Caxton End

After the flood, there were a number of surveys conducted by WS Atkins on specific parts of the Bourn Brook watercourse (unfortunately these are not available electronically but the Parish Council has paper copies).

As a result of these surveys (and pressure from the village), a number of incremental improvements have been made to the system to try to reduce the risk of a similar event impacting so many properties –

1. The levels of the Cambourne Western Valley lakes have been raised to increase holding capacity
2. The bed under the Great Bridge has been excavated to increase throughput under the bridge
3. A bypass drain has been installed in the lower part of Riddy Lane to take water downstream of the Great Bridge
4. A new entrance has been built from Alms Hill into Camping Close (opposite the doctors surgery) to allow water to drain away into the field
5. The drain from the Broadway down Alms Hill to the Great Bridge has been renovated (and its gratings have been lowered) to increase capacity and reduce pooling opposite the Lalbagh restaurant.
6. the Caxton End road has been raised and resurfaced to reduce the risk of prolonged flooding after high rainfall events

In addition to the above, a local landowner has introduced the following measure -

7. An attenuation pond has been created to the south east of Riddy Lane. A 100mm outlet pipe near the bottom of this pond regulates the flow of water into a 225mm pipe that has replaced the field ditch that feeds into the Riddy Lane inlets.

Measures (3) and (7) are specifically targeted at Riddy Lane; measure (4) is targeted at Kingfisher Close. The remaining measures (hopefully) improve the situation for the whole village.

The village flood group continues to coordinate activities in the village as follows –

1. understanding the system (in terms of the three flows into the ford at Caxton End)–
 - a. collating all reports / surveys into a single repository
 - b. Cambourne West lakes – how do they operate and what is their maintenance regime
 - c. Cambourne East lakes – as above plus what impact will the additional 950 homes have
 - d. Local landowners – how is the runoff rate affected by farming practices eg contour ploughing
2. monitoring the system
 - a. monitoring the state of the drains and reporting to Highways (Cambridge County Council)
 - b. monitoring the state of the brook and reporting to South Cambridgeshire District Council

- c. monitoring rainfall events and the runoff from fields neighbouring Riddy Lane and Caxton End
- 3. maintaining the system
 - a. getting Highways to clear the drains on a regular basis and after rainfall events
 - b. getting the District Council to maintain the brook on an annual basis
 - c. getting the village (via a workgroup) to clear the Riddy Lane inlets on an as-needed basis
- 4. improving the system
 - a. lobbying Highways to get the Riddy lane bypass drainage extended to Church Street
 - b. lobbying for improvements to the Great Bridge to increase flow capacity

These are all “small scale” measures because none of the surveys identified major solutions that could be justified in terms of cost-benefit. But anecdotal evidence suggests that the system as a whole is working better. There have been a number of rainfall events since 2001 (notably June 2007 and December 2012) which were monitored closely.

May 2014

Bourn Brook Open Meeting – Minutes

A total of 58 attendees signed in to the meeting.

The following is brief summary of the talks and main points from the subsequent questions.

Richard Bowen of the Environment Agency spoke about water quality. The Environment Agency is required by the Water Framework Directive (WFD) to ensure all watercourses meet certain chemical quality. On the Bourn Brook phosphate is a problem. As well as failing the WFD criteria, high levels of phosphate tend to lead to a few phosphate tolerant plants (such as nettle) dominating the banks. The reduction of plant diversity leads to a lower diversity of invertebrates and a generally poorer habitat. Phosphate enters the water via farm runoff, but by far largest source is from the sewage treatment works. Use of low-phosphate detergents such as Ecover could have a significant impact.

Q: How can changing to a low-phosphate detergent make an impact if most phosphate in waste water comes from urine and faeces?

A: Changing detergent is a relatively easy thing to do, whereas finding food with less phosphate can be difficult (for example processed cheese and coffee both have high levels of phosphate). If everyone changed detergent, the phosphate entering the sewage treatment works would be reduced by 10-20%.

Q: If development goes ahead at Bourn Airfield, how will the surface runoff be cleaned?

A: By the time any planning permission is granted, it is very likely the developers would need to include a “SUDS” or “Sustainable urban drainage system”. This would include lakes to both balance and slow the flow and at the same time provide some treatment of the water (by settling out solids and perhaps further cleaning by trickling through a reed bed. Other means to slow the rate of runoff include green roofs, water butts, permeable car parks etc.

Q: Would treated sewage from any Bourn Airfield development end up in the Bourn Brook?

A: No – the Bourn works is already at capacity so sewage would have to be pumped to Papworth (unless the developers built a new works, which seems unlikely).

Dave Gillett of the Environment Agency gave a flood risk perspective. **The Environment Agency’s responsibility extends upstream as far as Toft Bridge. Upstream of Toft Bridge, management is down to riparian owners although Cambridgeshire County Council can intervene if there is a high risk of flooding. The Environment Agency are required to prioritise their work to maximise protection of property. As the Bourn Brook affects a relatively small number of properties it is given a low priority. This means that the Environment Agency responds to incidents but does not have a regular maintenance programme for the brook. Regular dredging and weed clearance was popular in the past; the current policy is to work with natural processes so that rivers look more natural and respond more naturally. Dredging can do some good but is not the answer to all flooding.**

Q: There were plans for a reservoir at Gransden, which never came to pass. Would that have helped?

A: Possibly – upstream storage of water can reduce flooding and a reservoir is one such opportunity. Other methods include (in built-up areas) green roofs, water butts, grassy areas and permeable car parks. Ponds and low ground can also store water and release it slowly.

Q: Cambourne is an example of a new development affecting the Bourn Brook via runoff. Has anyone checked that the attenuation lakes are functioning as they were designed to? It would be interesting to compare data from controlled flows (Cambourne) and uncontrolled (upstream on the brook).

A: No-one knows of any monitoring which could provide evidence of this. The design of the lakes should ensure that the system is working to specifications.

Q: Whose responsibility is it to measure runoff? It's in the planning consent. Why put controls on developers that no-one will monitor?

A: No clear answer. Research after the meeting suggests the developers themselves should be monitoring flows and reporting to the planning authority.

Q: Does the whole of the Bourn airfield drain into the Bourn valley or does some go north?

A: Probably most of it does drain into the valley *Can we find this out?

Vince Lea, from the Countryside Restoration Trust, talked about work done by the CRT and by the Bourn Free project to improve the habitat and ecology of the brook, some of which also attenuates high flows and reduces flood risk downstream. Funding for this is in its last year, and some funding has been cut already. This work, especially outside the CRT land, will not continue. The project is planning a re-survey of the brook this spring to find out whether wildlife has responded positively to the work. Achievements include control of the invasive plants Himalayan balsam and giant hogweed, control of mink, reducing shading and plans to re-instate meanders where the brook was straightened in the past. Himalayan balsam and giant hogweed has been reduced but ideally needs a sustained effort so that these plants, particularly giant hogweed, can be eradicated.

Q: How does everything fit together – what happens when floods come and your work is devastated? Why doesn't everyone work together?

A: Summer flooding is difficult for water voles, even without pressure from mink. Projects such as ponds can help by providing safe areas for them. The various organisations do work together, but that doesn't mean they can always keep the water low.

Comment: The Bourn Brook has always flooded, since well before Cambourne was built. It used to be a much larger watercourse. If you make it more natural, of course water will be around longer.

Q: Himalayan balsam is everywhere and seems to be a massive problem. Does it have any natural predators?

A: Not in the UK. The Bourn Free project spent an estimated 500 volunteer hours pulling Himalayan balsam last year.

Q: The brook dries up in the summer; what happens to the water voles?

A: It doesn't dry completely, at least not at the downstream end where there are deep holes that always have water. Water voles seem to be able to survive, perhaps because they can breed very quickly when conditions are right.

Q: Are any other landowners re-instating meanders?

A: The CRT would like to try it first before encouraging anyone else to try it. But anyone can. It requires consent from the Environment Agency and there will probably be a requirement to remove any spoil from the floodplain.

Q: How many mink have you caught?

A: Around 35-40 on the Bourn Brook and ??? in the wider catchment.

Q: Would it be worth having a bounty on mink?

A: Probably not, although it has been done in some places. It could lead to some mink being left to breed, to ensure a regular income.

Elizabeth Ranelagh from FWAG East mentioned that help with preventing soil erosion is available for farmers via a series of workshops in March. She can provide details to anyone who is interested.

General discussion followed. Key points:

- People like the wildlife, the view, the existence of a watercourse.
- Could restore meanders, educate (not sure what education they thought was needed??)
- Different communities see their stretch differently, so maybe any groups should be village/parish based.
- Are there a couple of people from each village who could be contacts for their village?
- The Bourn Flood Action Group will be re-activated with a different emphasis – looking at wider environmental aspects of the brook as well as flows and threats from flooding.
- Toft has an active village community and could find volunteers to help out with practical work.
- Is more access to the brook needed? There is a Cam Valley Forum leaflet which may highlight where the gaps are. Of course access needs to be negotiated with landowners.
- The overflow from the brook to Caxton Moats has already been re-instated, creating a flood storage area as well as improving habitat in the moats.
- Would it be possible to filter the outflow from the Bourn sewage treatment works through a reed bed?

Members of the River Mel Restoration Group explained how their group started, what they enjoy about it and what inspires them to carry on. Achievements (including a massive improvement scheme under the A10 bridge), seeing wildlife benefit, and working as part of a community were some of the reasons given.

Local Sustainable Transport Fund (LSTF) Minor Local Improvements

Grants available to Parish/Town Councils in parts of Cambridgeshire

Cambridgeshire County Council has funding available through the Local Sustainable Transport Fund (LSTF) to assist Town and Parish Councils in parts of Cambridgeshire with minor improvement works directly related to sustainable transport initiatives.

We are seeking Expressions of Interest from parish councils located along the A428 corridor and the A10 south corridor, as well as from St Neots and Wisbech Town Councils. Suggestions for funding include the provision of cycle parking facilities or bus stop facilities, and the carrying out of minor works to improve conditions for pedestrians, cyclists and bus users (i.e. installing additional dropped kerbs, constructing small extensions to existing paths, relocating items of street furniture and hardening areas where buses stop to create suitable all weather solutions).

Successful parish councils will be able to commission and complete the works contained within their bids if they wish or the County Council will undertake this for them. The County Council will liaise with parish councils throughout to provide support. Approved funding will be passed upfront to the parish council and any remaining funding at the end of the works will be passed back to the County Council.

There are legal requirements for working on the Highway which would have to be met, but the County Council will be able to arrange for work to be undertaken should it be necessary.

Due to the fixed term nature of this funding, we will require you to complete and return the attached Expression of Interest form by **Monday 17th August 2015**.

Deadlines

- 17th Aug '15 Expression of Interest submitted to County Council
- 14th Sep '15 Parish/Town Councils informed if they are successful or not.
- 14th Oct '15 Discussions with successful applicants to finalise details of projects, and then delivery phase.
- 31st Mar '16 Facilities installation and other works all completed by this date

Possible Facilities

The items below are suggestions for minor local improvements eligible for LSTF grants. Parish/Town Councils are also encouraged to suggest other proposals of a similar nature that would improve conditions for pedestrians,

cyclists and bus users. Please note that Parish/Town Councils will be responsible for the maintenance of any new facilities such as cycle parking which are not on the public highway, that are installed through these grants.

Bus Stop improvements

Minor improvements to bus stop areas can be carried out. This could include surfacing areas where buses stop or re-surfacing existing surfaced areas that are in a poor condition. Surfacing areas around bus stops provides suitable all-weather conditions for passengers boarding and alighting buses. Town and Parish Councils may also wish to consider general refurbishments to bus stops that are dilapidated.

Benches

Benches are a highly valued community asset which assist with transforming the areas they are placed in into places for people. They may be especially useful when installed adjacent to bus stops for waiting passengers. Alternatively, benches installed alongside foot/cycleways can provide excellent rest stations for pedestrians/cyclists and may in turn help to encourage potential walkers/cyclists.

Cycle parking

Exemplary cycle parking facilities located adjacent to bus stops can encourage people from further afield to use local bus services. Alternatively, strategically placed cycle racks in village/town centres may encourage cyclists to support local facilities and encourage those who would otherwise drive to cycle. This in turn helps to reduce traffic congestion in busy areas. Cycle racks and hard surfacing if not in an existing footway are minimum requirements, but covered cycle parking may be an option. If it is proposed to be introduced on land other than public highway planning consent may be required.

Other minor works to improve conditions for pedestrians, cyclists and bus users

There are many other minor alteration works which could be carried out to improve conditions for pedestrians, cyclists and bus users. These could include installing additional lengths of dropped kerbs to facilitate easier access to paths, crossing points etc, carrying out small extensions to paths enabling them to 'tie in' more effectively and relocating inconveniently placed items of street furniture.

Criteria

This grant is available to any Parish Council located along either the A428 corridor or the A10 south corridor as well as the Town Councils of St Neots and Wisbech.

If there are more bids than the total grant we have available (£20,000), preference will be given on the basis of:

- Proposals that are most likely to realistically encourage the use of sustainable transport solutions (i.e. cycle racks installed in an isolated location are unlikely to attract high usage rates whilst strategically placed cycle racks can encourage greater use of other sustainable forms of transport such as buses)
- Offers of match funding – bids that propose some match funding from the Parish/Town Councils will be given preference
- Facilities that compliment ongoing transport developments in the county

These criteria have been developed to achieve best value for money, and to meet the objectives of the Local Sustainable Transport Fund (LSTF) funding that Cambridgeshire has been awarded.

How to bid

Simply fill in the Expression of Interest form below and return to:

William.Rayner@cambridgeshire.gov.uk

Or, by post to:

FAO William Rayner, Major Infrastructure Delivery Team,
Cambridgeshire County Council,
Box No SH1311,
Shire Hall,
Castle Hill,
Cambridge,

CB3 0AP

Enquiries

If you have any questions, please email (as above) or call 01223 715647

Expression of Interest Form

Parish or Town Council:

Contact Name:

Address:

Email:

Telephone:

Proposal:

Please detail what improvements to facilities you would like to install, including specific location/s and information on land ownership. Please prioritise the facilities if you are submitting more than one improvement. If you are planning to make a financial contribution yourself towards these improvements, please set out what that will be.