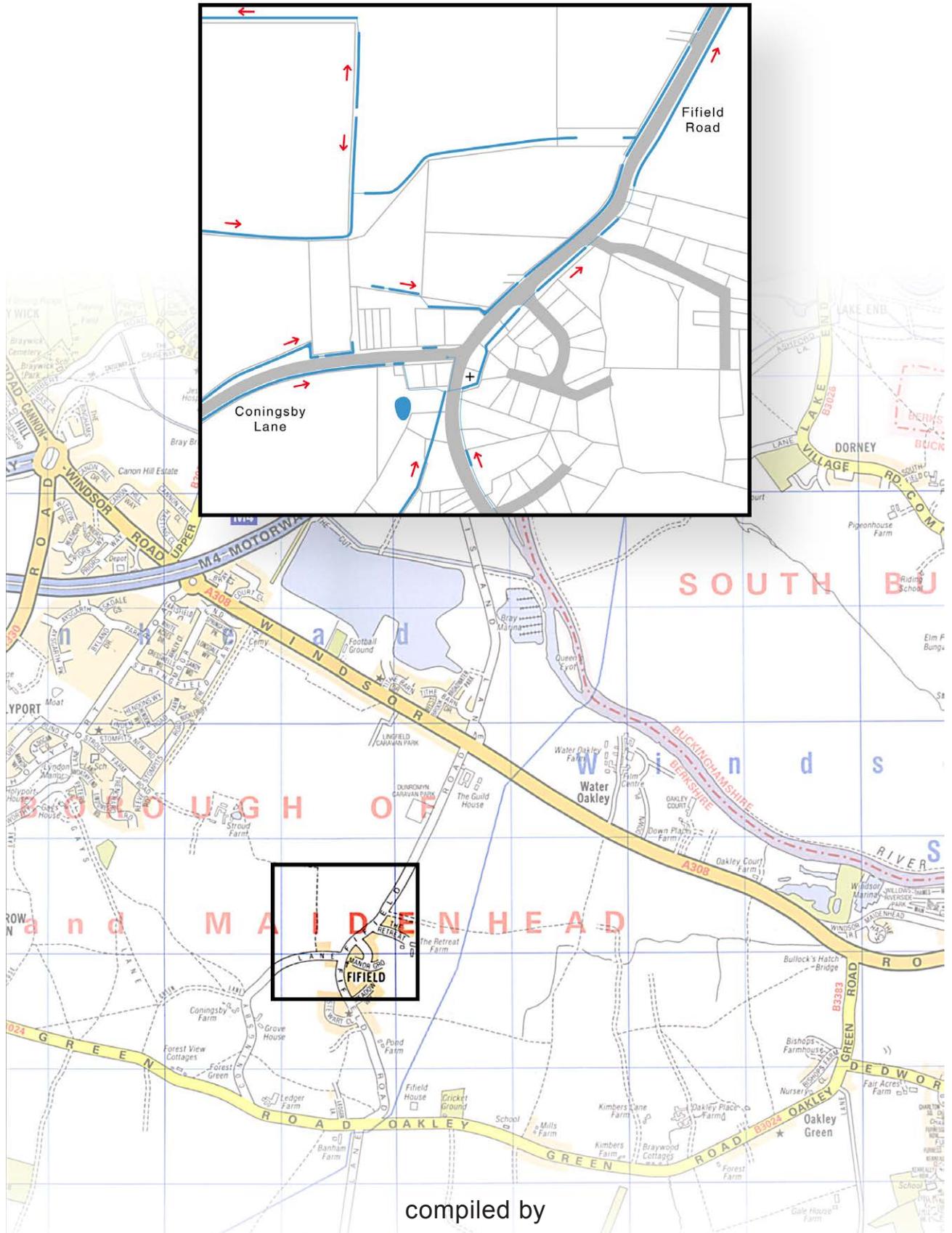


# the problem of flooding in **CONINGSBY LANE**



compiled by  
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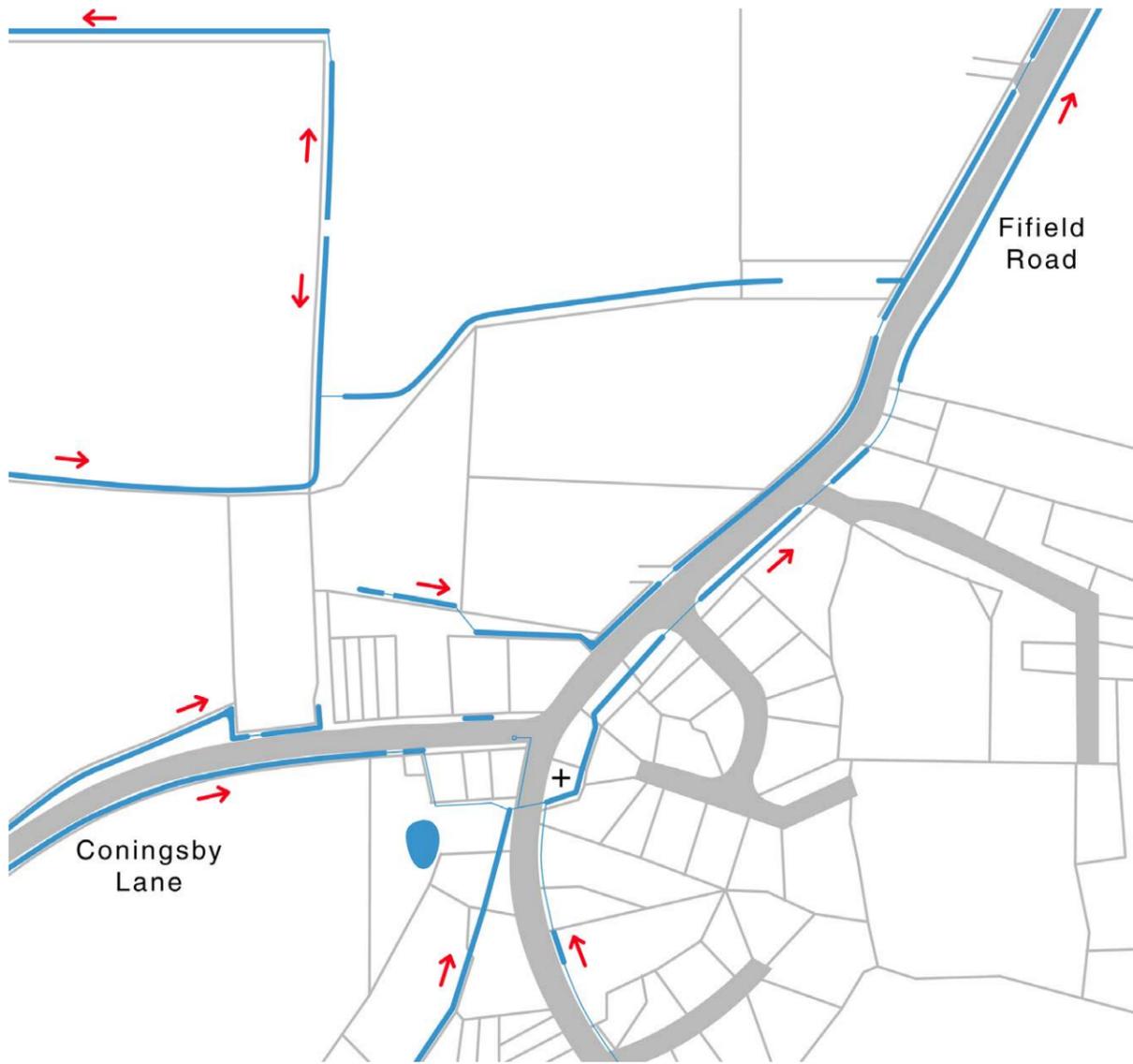
## **The problem of flooding in CONINGSBY LANE**

At the end of October 2000 heavy rainfall resulted in flooding throughout the UK. Apparently 115mm fell in just 12 hours. Fifield was certainly not alone in suffering as a result, and compared to the hardship experienced all over the country the problems in Fifield might justifiably be considered to be relatively slight.

However it doesn't require these extreme weather conditions for problems to develop in Fifield. We have been extremely fortunate so far this winter, but we can't afford to be complacent. One thing we can be sure of is that sometime it will happen again. Over recent years it has been happening more and more frequently even as a result of what would be considered normal rainfall conditions.

The causes are fairly obvious and measures to mitigate some of them should be relatively easy with the co-operation of two local farmers and the council. No doubt local residents would be prepared to help themselves and contribute if necessary towards what should be a modest expenditure.

Although there are flooding problems at both ends of Coningsby Lane we need to start somewhere, so this document deals only with the situation at the junction of Coningsby Lane and Fifield Road.



## The existing situation

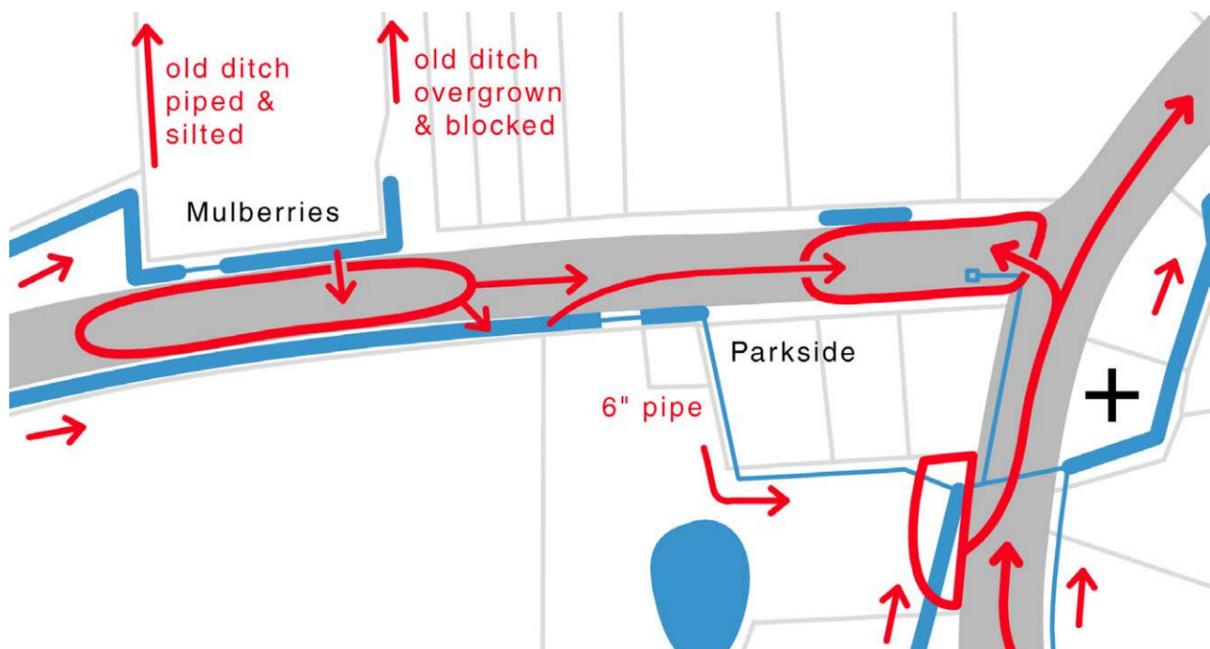
Ditches on both sides of the lane carry water eastward towards the Fifiel Road.

On the north side water can only accumulate along the hedge of “The Mulberries” as there is no route for it from there. Apparently a ditch running north inside the “Mulberries” boundary line was piped some time ago, but this is obviously no longer functioning. There was obviously once a ditch running down the eastern side of the “Mulberries” beside the footpath access to the fields behind, but this was overgrown and hard to find as long ago as 1984. The only route currently available is out onto the road where it forms a large shallow lake. Eventually some of it finds its way into the ditch on the south side and some runs down the road to contribute to a lake that forms at the road junction.

The ditch on the south side, now joined by water from the north side via the road, arrives at a 6-inch diameter pipe which takes it south round “Parkside” to join large quantities of water flowing north. This all now has to pass through a culvert under the Fifiel Road. At this point it is joined by yet more flow heading north. This is arriving via pipe running up the eastern side of the Fifiel Road through the village. It exits briefly into a ditch in front of the “Hare and Hounds” garden before again trying to get through a pipe to join the main flow of water round the back of the Chapel, and thence by a convoluted route eventually to a large ditch flowing north towards the A308 along the eastern side of the Fifiel road.

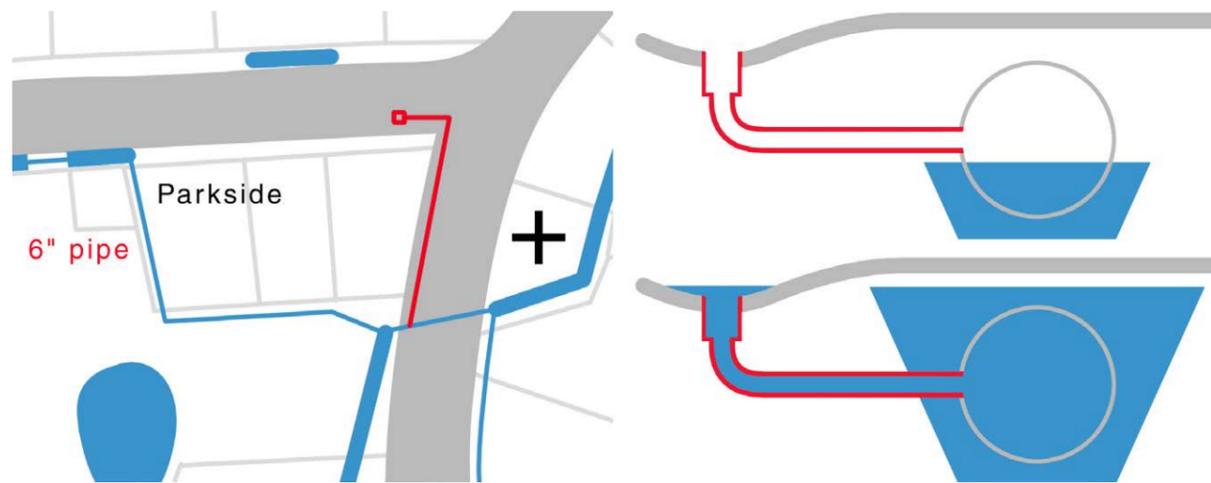
It doesn't take very much extra flow for the level of water trying to get under the Fifiel Road to rise above the 6” pipe from Coningsby Lane, and continue rising. The culvert begins to act like a flow-reduction valve, or a sluice gate in a dam. There comes a point where in-flow exceeds out-flow and a second sluice gate needs to be brought into play or the dam will overflow. This principle applies to both the culvert under the Fifiel Road and the 6” pipe from Coningsby Lane. Unfortunately there are no second sluice gates.

The dam with the smallest sluice gate (just a 6” diameter hole !) is the first to go. Water backing up in the Coningsby Lane ditch eventually runs out of sump volume and flows out onto the road and thence in a stream down the road to enlarge the lake at the junction. Water building up to get through the Fifiel Road Culvert also eventually flows onto the road where it joins water overflowing the “Hare and Hounds” ditch. At this point Fifiel road becomes a wide shallow river flowing north looking for exits from the road.



The first of these is of course into the lake already at the junction of Coningsby Lane. Once this is equalised it looks for roadside ditches...or houses...or the sewage system. The sewers back up and the ground water level rises beyond what is at the best of times only 20” or so below the surface. The first ditch capable of taking this flow is north of the Nursing Home, but there is more water flowing onto the road near here off the field and through the gate just south of the Biffa site.





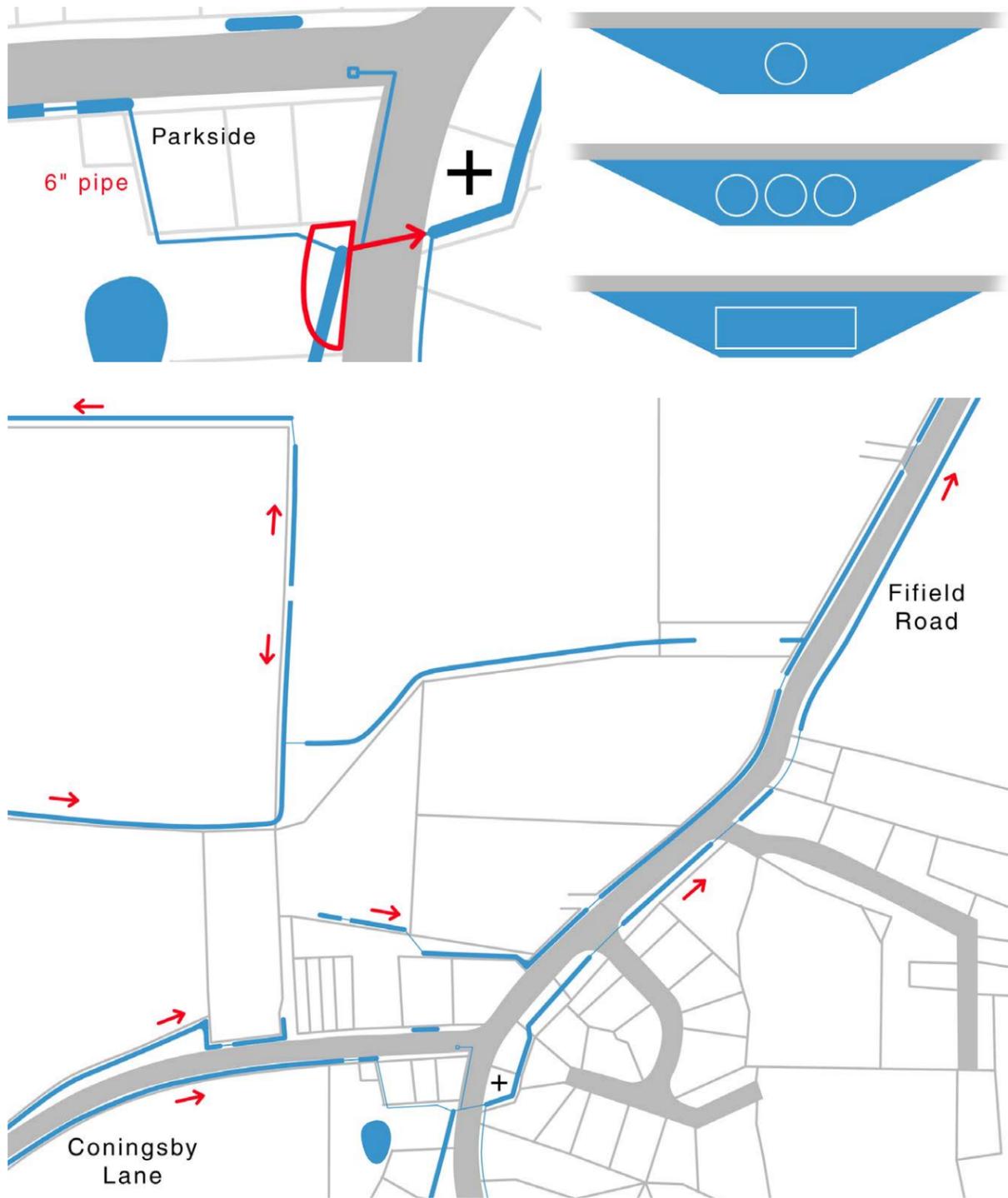
## What has been done ?

In the not too distant past attempts have been made to improve the drainage at the low point in Coningsby Lane at its junction with Fifield Road. This seems to amount to a gully in the road with a pipe leading to the culvert under Fifield Road. This works admirably in allowing the lake to drain away after the deluge is over and general levels subside.

Unfortunately in the early stages it contributes to the problem. As soon as demands begin to increase and levels start to rise this forms just another exit from the culvert. When the culvert is at full capacity it acts as a very efficient pressure release and water wells up to add to the first flow down the lane. Perhaps if some sort of simple valve or one-way flap had been incorporated this could have been avoided. Perhaps at some point it could still be done.

More recently attention has focused on clearing culverts and ditches. This is admirable and obviously essential. Under normal low rainfall conditions this will appear to work perfectly and where routes were actually blocked or partially blocked some problems will appear to go away.

BUT...the more you improve the flow BEFORE a dam the faster the level of the dam lake will rise...and however much you improve the route AFTER a dam the flow can only ever be what is allowed through the sluice gate. When the point is reached that in-flow exceeds out-flow you have an expanding and rising lake, and eventually it will flow over the dam wall.



## What could be done ?

The most significant bottleneck struggling to deal with the largest flow of water is clearly the culvert under the Fifield Road to the Chapel. It is obviously not practical to replace this with a pipe of twice or three times the diameter because of the vertical dimensions involved. But the sluice gate could be doubled or trebled by laying 2 or 3 pipes of the same diameter side-by-side or by using a rectangular section passage - in effect a short bridge. Apparently there was once a small bridge at this spot.

While this would obviously reduce the tendency to flood at this point it would probably have little effect on what happens in Coningsby Lane itself. There would still be only a 6-inch sluice gate for that particular dam and it would seem impractical (or at least prohibitively expensive) to expect the householder in "Parkside" to excavate the route in order to improve its capacity. In any case the falls are so slight that inevitably large water flows and rising levels at the outlet of this route would still cause back-up in Coningsby Lane.

So if we cannot increase the out-flow the alternative must be to decrease the in-flow, or at least to provide a viable alternative route in times of overload. There is existing land drainage north of Coningsby Lane. At present it seems to act mostly as a sump because its original route to the river was destroyed by the mounding of the Biffa Land fill site.

At first glance the temptation is to see a possible exit north beside the footpath to the culvert and west towards Stroud Farm. There are drawbacks to this. In the northward ditch there is water at either end suggesting that the land rises slightly to the gate access half way along the footpath and falls again to the northern end. The standing water at the corner leaves only 3 or 4 inches of clear pipe, and is there because it cannot flow westward until the levels are considerably higher. This pipe forms yet another sluice gate. But the main objection to this route would be delivering even more water to the pond at Stroud Farm which should be avoided at all costs because it is already stretched beyond its capacity at times of heavy demand.

The only alternative is that all this water needs to end up flowing north beside Fifield Road and under the A308 to the river. Its current route to join the ditch on the west side of Fifield Road rises slightly just before reaching it. This is the route that used to take the pumped water from the Biffa gravel excavations away into the Fifield Road ditch. As there is water in this system almost all year it would seem sensible to work backwards, establishing each

flow in turn so that water from each new clearance has somewhere to go.

## The proposed scheme

**1.** The old route out into the Fifield Road is currently blocked, partly because the ground rises slightly, but also simply from silting and general debris, including an old bath ! Comparative levels would need to be surveyed, but the dip is wide at this point and it should be possible to clear and excavate a central channel that at least is capable of allowing the top 2 or 3 inches of water an exit into the Fifield Road ditch. It might be necessary to support the sides to get sufficient depth, but an open ditch route would be far preferable to yet another pipe.

Once this is done we need to work backwards to re-establish a route for the Coningsby Lane water to reach this exit.

**2.** The existing pipe under the footpath would need to be cleared or replaced with multiple pipes or a railway sleeper "bridge".

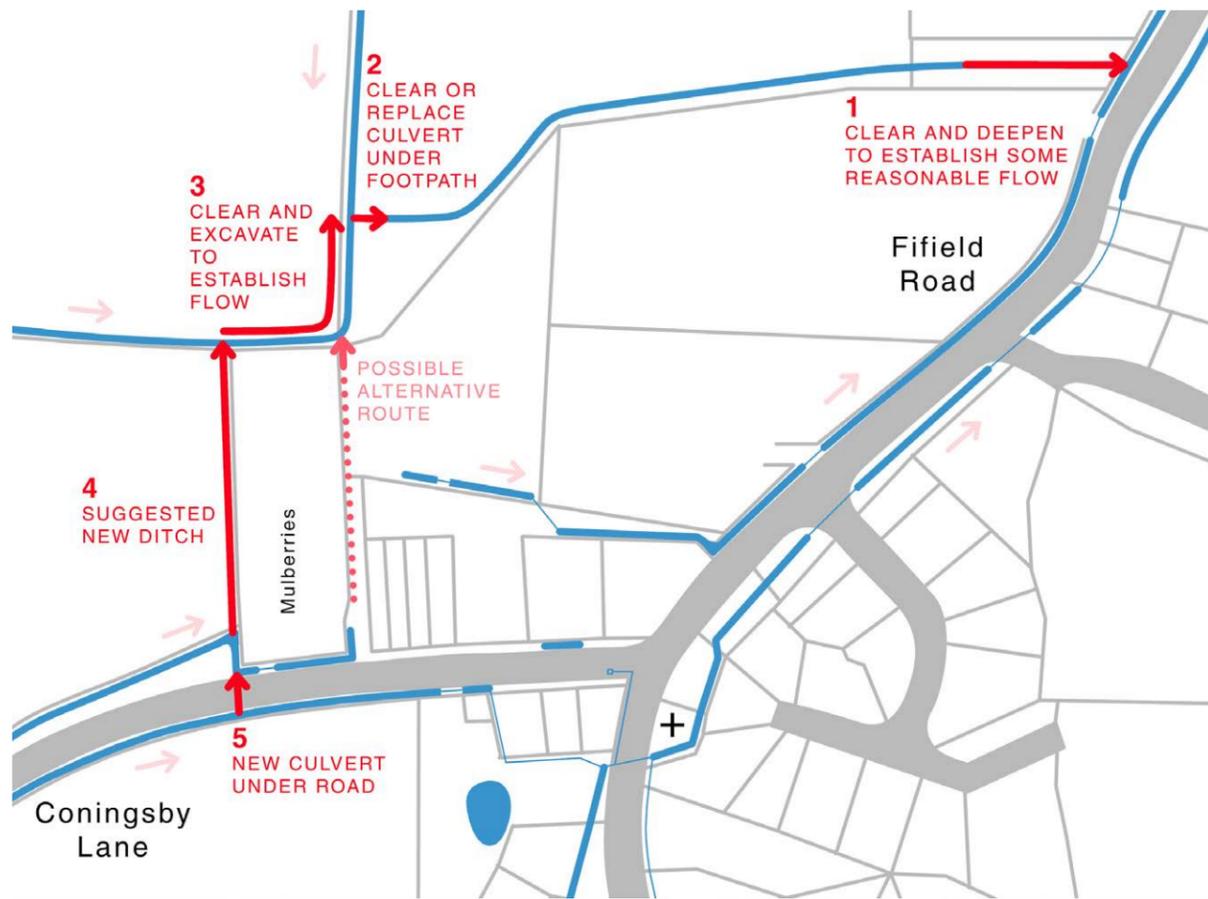
**3.** The ditch on the northern boundary of the "Mulberries" would need to be cleared and excavated to re-establish a proper flow round to the footpath culvert.

**4.** We now need to get the Coningsby Lane water into this route. One option would be to reinstate the old defunct ditch beside the footpath east of the "Mulberries". Although it is possible to still see signs of this ditch it has been blocked for many years and a considerable amount of foliage is well established. Clearing and excavating this would entail a considerable amount of work, disruption and expense, and result in a rather stark aspect to this little lane. The ground seems to rise slightly to a point north of the main entrance to the "Mulberries", so excavation would need to be quite deep. A culvert would also need to be introduced under the main entrance to the "Mulberries", and if there is one under the other entrance that would need also to be cleared.. This would introduce yet another two potential bottlenecks which would have to be constantly maintained.

There is another possibility that would entail much less disruption, and probably work more effectively because it could be achieved with a simple open ditch along the edge of a field with no need for piping.

A sort of pond forms where the northern ditch in Coningsby Lane meets the western boundary of the "Mulberries". A new ditch could be taken from this point north to join the existing ditch running at the rear of the "Mulberries". The occupants of the "Mulberries" are worried that this would exacerbate the already serious problem with flooding they have along their northern boundary, so it would be important to be sure that the flow established between here and Fifield Road was sufficient not to back up. Hopefully the overall route would improve their situation rather than make it worse. It would certainly reduce the flooding in the south west corner of their land.

**5.** There would now be a route for the water on the north side of the Lane that currently has none at all. But there would still be large volumes of water flowing down the south side. It would be ideal if we could allow an exit north from this ditch by the route just described above. This would require taking a pipe (or rather 2 or even 3 pipes because of the small vertical dimensions involved) under Coningsby Lane.



## Getting the work done

Any work done on Fifield Road itself would obviously have to be commissioned and organised by the Council. But the work described above to ease the problem in Coningsby Lane would need the co-operation of 2 local Farmers as well as the Council...and if necessary the local residents themselves.

### 1, 2 and 3

#### **The Rinder family, Stroud Farm, Holyport**

Clearing a route to establish at least a nominal flow into the ditch on the western side of Fifield Road - clearing the clogged pipe under the footpath or replacing to increase the capacity - clearing and excavating the ditch along the back of the "Mulberries", round the corner and along the hedge to the pipe. These are all on land operated by the Rinder family of Stroud Farm and obviously their involvement, or at least their agreement, would be essential. They could either be funded to undertake the work themselves, or if they preferred, give permission for an independent contractor to carry it out. The Rinders would obviously have legitimate concerns and need to be reassured that the scheme would not result in yet more water arriving at either their pond or in their field near Gay's Lane and the Holyport recreation ground.

### 4

#### **Mr Derek Potter, Orchard Farm, Coningsby Lane**

A new ditch from Coningsby Lane along the western Boundary of the "Mulberries" would be on the edge of a field operated by Mr Derek Potter. Similarly, if his agreement were forthcoming, he could either be commissioned to carry out the work with his own employees and equipment or give permission for an independent contractor to do it.

### 5

#### **The Council**

The pipe or pipes under Coningsby Lane would presumably need at least the permission of the Council. The ditches on either side would need to be excavated a bit more so that the pipes would not be at ditch bottom to avoid early silting, and some reinforcement of the ditch banks and road edges either side would probably be needed. Again, either the Council could undertake this themselves, or allow permission for an independent contractor to do it.

#### **The Local Residents**

Some local residents have expressed willingness to contribute to physical labour if useful. From a practical point of view their involvement would probably be confined to contributing to the costs involved if the Council were unable or unwilling to allocate a budget to the proposed scheme. If this turns out to be the case then a representative of the residents would need to draw up specs to their satisfaction, request the agreement of the farmers, obtain quotations from them and independent contractors, liaise with them, present the options to the residents and ascertain the level of budget they were willing and able to support.

## Summary

Twelve households are involved at the Fifield Road end of Coningsby Lane, and many more if we include those in the immediate vicinity along the Fifield Road.

The proposed scheme seems to be the only practical way to reduce the load on existing drainage routes which from time to time leads to considerable inconvenience and expense for significant numbers.

The drainage system north of Coningsby Lane may still end up as basically a sump, but as long as there is some degree of outflow into the western ditch up Fifield Road then this is preferable to this volume of water collecting instead at the junction of Coningsby Lane and Fifield Road, or flowing along Fifield Road itself.