WEST OXFORDSHIRE
DISTRICT COUNCIL

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Parish Flood Report:
Langford

July 2008

Version 1 – This report may be revised in the future to incorporate ongoing consultation results

Contents

1.0 INTRODUCTION

On the 20th July 2007 large parts of the South of England were subjected to intensive storms. The scale and speed of the rainfall was unprecedented and took most communities by surprise causing widespread flooding of highways and property. On this occasion, unlike previous storms / flooding experienced, this impacted on many properties that had never been affected before, due to much of the flooding coming in the form of rain water run off from land.

A swathe of the district was particularly badly affected by the massive storms, which commenced in the morning and subsided in the evening. During the following days further disruption occurred due to rising river levels. At RAF Brize Norton, the records show that over 125 mm (5 inches) of rain fell in 12 hours, and this is a record going back over 100 years. Not only that, but the period from May to July had been the wettest on record since 1903 and meant that the ground was saturated and unable to absorb any more water.

On the 10th October 2007, the District Council's Cabinet considered a report of the Head of Street Scene and approved additional resources in order that a review of the affected areas could be carried out and further reports be prepared for the Council's considerations.

1.1 Purpose of the report

In response to requests from both the Parish and Town Councils and the general public West Oxfordshire District Council has produced a number of reports that identify each individual cause of flooding within the Parish / Town, what work is being carried out by external agencies (EA, Thames water etc); what the potential options are for future mitigation - and who might be best placed to fund such schemes. The reports themselves reflect the series of water systems that all played a part in the flooding experienced in July 2007 and will help all the organisations involved understand the need to sequence their activities.

This report has been prepared by a qualified Engineer in consultation with the key external agencies and seeks to explore the main reason behind why the floods happened in July 2007 and give an overview of the event itself. It will also provide an understanding of the different roles and levels of responsibility for the agencies involved.

This report should be used to make sure that all the agencies involved with flood prevention – like the Environment Agency, Thames Water, Oxfordshire County Council, Town / Parish Councils and private land owners – work in true partnership for the good of everyone in the local community.

A key outcome of the reports is that residents are given a broad overview of the complex linkages between the different organisations involved and also the range of options available.

1.2 Roles and responsibilities

One of West Oxfordshire District Councils key ongoing roles is to continue to lobby National agencies / Government on behalf of the residents and businesses of the district to secure funding and/or additional resources to assist with flood prevention and other relevant activities. The Council will also work closely with other agencies and organisation in order to highlight the local issues and actions identified in the report.

The legal responsibility for dealing with flooding lies with different agencies and is complex, so below is a simplified summary.

Environment Agency (EA) – permissive powers[1] for main rivers

Oxfordshire County Council (OCC) –Responsible for adopted highways and highway drainage.

Thames Water (TW) – Responsible for adopted foul and surface water sewers.

West Oxfordshire District Council (WODC) – duties as a riparian[2] land owner, and permissive powers[1] under Land Drainage Act 1991, Public Health Act 1936, Highways Act 1980 and Environmental Protection Act 1990.

Private land owners - duties as a riparian land owner.

1.3 Consultation and consent

The key organisations mentioned above are currently carrying out their own investigations, but operate independently of each other, have different methods of prioritisation and different funding criteria. The District Council has consulted with these agencies together with Parish Councils, Town Councils and individual property owners in order to prepare this report.

It is recognised that the majority of the options proposed in this report require further investigations / feasibility studies and / or consultation before they are carried out. Therefore these options may not be appropriate in every case when full costings, environmental, landscaping, biodiversity, built environment and historic factors are fully considered.

When considering protection against future flooding, it must be emphasised that the risk and impact of flooding can be mitigated against but in some cases not fully removed.

1.4 Response to this report

The options section of this report highlights the potential areas of work / activities under the responsible agency, for example the Environment Agency, West Oxfordshire District Council etc. If you have any specific questions relating to these activities please contact the relevant agency using the contact details provided at the top of the chart.

If you have any general questions please contact your Parish / Town Council who have been a key contributor to the production of the report and have agreed to act as the first point of contact.

The Council is also planning to hold a series of road shows in the Parish areas where representatives from all the relevant areas will be available to answer any questions local residents have as well as provide more information on ways residents may help themselves.

[1] Permissive powers are when an organisation may choose whether or not to exercise their powers. I.e. they are NOT under a duty. In making this choice account must be taken of any factors required by the legislation, plus for example how urgent, how necessary they are, cost, likely result, etc

[2] Riparian owners are responsible for the maintenance of any watercourse within or adjacent to the boundaries of their property.

1.5 Legal

2.0 THE DISTRICT COUNCIL'S ACHIEVEMENTS OVER THE PAST 12 MONTHS

Ditch Clearance

- 1731 Linear metres WODC owned ditches cleared overall
- 1923 Linear metres Privately owned ditches cleared overall
- Overall 2.27 miles of ditches have been cleared and ditch clearance is continuing on riparian owned ditches

Flood Grants

- 1137 WODC Flood Grants totalling £284,250 given out overall
- 112 Red Cross Flood Grants totalling £211,590 administered by WODC overall
- 301 Hardship Grants totalling £155,050 given out overall

Reports

- Interim Flooding Report published October 2007
- 12 Parish Flood Reports completed by June 2008, 1 report for Langford

Actions from the Council's Interim Report published in January 2008

- The table below provides a summary of some of the completed actions identified in the report

Bronze command procedure to be updated to recognise the need for ensuring shift rotas are in place in the early stages of an emergency
Consider producing a revised warning system that identifies a higher category of risk that is only issued in exceptional circumstances
The emergency plan specifically addresses the need to keep in regular contact with elected members
That in future emergency situations District Councils ensure that they have a representative present at Silver Command from the start of the emergency to act as a conduit for information between Silver Command and the District Councils
The council should encourage all residents residing in the flood plain and in areas at risk of flooding to sign up to the EA Flood Alert system.
Provide clear information to residents and businesses about what type of waste we can collect and how it will be collected
Explanations to residents of our need for bulky waste to be placed on the roadside for collection
Commence a review of the mapping of the many thousands of privately owned ditches and culverts, and ensure they are kept clear and well maintained in accordance with the new policy (2 TOR 3)
Lobby central government for a single agency to take control of all land drainage issues
WODC continues to act in a coordination capacity with key external agencies
Continue to liaise with EA to ensure that procedures relating to planning consultations are robust. Seminar being arranged to take place during 2008 to progress this
Progress the Strategic Flood Risk Assessment
Approaches to be made to the EA and Metrological Office with regard to improving their predictive capability
During emergency events, have an external media person (BBC) in Bronze Command
Purchase digital TVs to assist with reviewing weather, local and national news to assist emergency management

3.0 EXECUTIVE SUMMARY

Following the flooding events of July 2007, West Oxfordshire District Council (WODC) has responded to requests from both Town and Parish Councils to aid the coordination of all the agencies and bodies that were undertaking their own investigations into the floods through the production of Parish Flood Reports.

This document is the Parish Flood Report for Langford and has been prepared by the Council's Engineering team. It pulls together information from external agencies and individual property owners and seeks to identify the causes of flooding in Langford during July 2007 and potential mitigating solutions.

Langford is a rural parish located approximately 3.5 miles to the south west of Carterton. The parish occupies an essentially flat landscape setting between the limestone wolds to the north and the expansive Thames floodplain to the south. The geology underlying Langford is dominated by Oxford Clay, with overlying deposits of alluvium and terrace gravels.

Visual walkover surveys have been undertaken of the flooded areas and properties. Meetings have been held with the affected residents, who have been in discussion with OCC, WODC and the EA. WODC have record of 12 applications for Grant Aid in Langford – all located towards the centre of the village.

Flooding experienced in Langford was reported from two main sources, being surface water run-off from surrounding agricultural land and also from the overtopping of Broadwell Brook. Highway drainage was insufficient to deal with the run-off volumes generated. The areas affected have been defined as Area 1 (Filkins Road) and Area 2 (Church Row).

Conclusions and recommendations, including maintenance and flood defence improvement measures and a programme, are shown in Section 7.

This report also includes Appendix 1 detailing the Options Summary, Appendix 2 showing Photographs and Appendix 3 Maps.

4.0 SURVEY

4.1 Description of Area

The village of Langford is situated in fairly flat, open farmland between the Cotswold Hills to the north and the wider expanses of the Thames floodplain to the south. The parish sits in the catchment of the River Thames and contains two watercourses, the Langford Brook and Broadwell Brook – which flows to the east of the village. The parish is also drained by a local network of field drains. The underlying geology is dominated by Oxford Clay, with localised gravel and alluvium deposits.

The Langford Brook rises in springs located in the North West corner of the parish, close to Broughton Copse, it then flows in a south easterly direction along the southern border of the parish to join a series of drains before flowing into Kelmscott Brook, Radcot Brook and eventually the Thames. Broadwell Brook rises in a series of springs located in farmland to the north east of the village.

The approximate catchment size of Broadwell Brook from FEH shows the area upstream of the village is around 12km^2. Langford village sits to the east of the of Langford Brook catchment and will not be directly affected by flows from this watercourse.

4.2 Survey Method

A visual walk-over survey of the area affected by the July 2007 flooding has been undertaken, including Filkins Lane, Broadwell Road and Lechlade Road.

See Appendix 2 – Photographs.

4.2 Meetings

Table 1: Summary of meetings and flooding descriptions

Date	Location	Description
07.09.07	Ramsden Village	• Meeting for villagers to discuss July 2007 flooding. Present – Jeff Mason (WODC) Local Villagers • 12 Properties flooded, mainly attributed to flooding from fields surrounding village and subsequent overwhelming of drainage system. • Problems caused by water inundating village from hill slopes, neighbouring agricultural land and inadequate drainage system within village • Damage to property, some sewage flooding to properties also reported
18.06.08	Langford Village Hall	• Site visit and meeting with WODC and villagers to discuss flooding problems

4.3 Stakeholder Communications and actions

Table 2: Stakeholder Communications and actions

Stakeholder	Description
TW	• TW (Ngaire Kingsbury) contacted in July 2008 regarding 2005/06 groundwater levels monitoring study in village • TW stated that this was done under auspices of Section 101 industry legislation to assess impact of high groundwater levels on septic tanks and pollution risk • TW issued questionnaires to residents to establish demand for new mains sewerage – feedback low • TW attended meeting with villagers. Message conveyed to TW was that demand for mains sewerage was still low. Some villagers had already installed private treatment facilities. Investigation was abandoned due to cost effectiveness reasons • TW in conjunction with WODC need to establish reasons why villagers' responded this way – recent meetings suggest residents may have had concern over potential 'connection costs'. • TW Langford Study - report available from TW customer contact
WODC	• WODC (Kevin Jack) have been identified as riparian owner of land off The Elms and have cleared the length of ditch running through this area in 2008 • WODC also visited landowner in Lower Farm regarding maintenance of blocked field ditch. WODC will be requesting ditch to be cleared under Land Drainage Act 1991
OCC	• OCC investigated highway drainage in the vicinity of Church Row in 2008. They found that the whole system discharges to an outfall in an open ditch to the east of Filkins Road and eventually into Broadwell Brook. They stated that the whole system hinges on the riparian owner keeping the outfall clear of obstruction . • OCC (Wayne Barker) contacted landowner at Lower Farm regarding riparian drainage causing impedance of surface water drainage. Ditch found to be in need of maintenance, riparian owner to be instructed to clear ditch
EA	• EA (Chris Blackler) contacted July 2008 to discuss maintenance of Broadwell Brook. EA not planning any maintenance here as watercourse is deemed low priority. However, EA have agreed that riparian owners can conduct bank side maintenance of vegetation. Any physical 'in-channel works' would need consultation with EA • EA felt that flooding in Langford was dominated by run-off from agricultural land and Broadwell Brook presented low risk as flooding from overtopping was highly localised. Water surcharging low bridge at Broadwell Lane will be prevented from reaching village due to local topography

4.4 Application for Grant Aid

The District Council has distributed a range of financial support to the residents of district in the form of;

- Emergency Flood Relief Grant Aid of £250
- 'Hardship' Grants
- Red Cross Grants

To date the owners of 12 residential properties in Langford have received Emergency Flood Relief Grant Aid, however it is acknowledge this is not the total number of properties affected in the Parish as some owners have not claimed

Whilst the Emergency Flood Relief Grant Aid was not paid to industrial and commercial properties, the Council did provide advice and support to local business affected by the flooding on funding available from Business Link and other organisations.

5.0 PROBLEMS AND CAUSES

5.1 Plans

Figure 1 in Appendix 2 shows areas in Langford where properties flooded in July 2007 and where owners have made claims for grant assistance. The flooding can be broadly split into two areas being:

Area 1 - Filkins Road
Area 2 - Church Row

A map detailing the following is shown in Appendix 2:

- 1% annual probability of flooding - Flood Zone 3 (previously referred to as 1 in 100 year flooding)
  A plan showing the 2008 Environment Agency 1% probability Flood Zone, this is the area defined by the EA as the extent of a flood with a 1 per cent chance happening in any year. This is the high probability risk zone.

- 0.1% annual probability flooding – Flood Zone 2 (previously referred to as 1 in 1000 year flooding)
  A plan showing the 2008 Environment Agency 0.1% probability Flood Zone, this is the area defined by the EA as the extent of a flood with a 0.1 per cent chance happening in any year. This is the medium probability risk zone

  Following the site visit and discussions with villagers on 18th June 2008, the issues were identified as follows

5.2 Area 1 – Filkins Road

5.2.1 Direct overland flow onto Lechlade Road

During July 2007, properties flooded along Filkins Road and Kemps Yard side road, particularly from overland flow from adjoining agricultural land. Direct overland flow occurs when the ground either becomes fully saturated, preventing any percolation into the upper layers of soil, or where the rainfall intensity and rate is greater than the percolation rate of the receiving ground. Both result in sheet runoff, or water flowing directly off the surface of the land.

The land either side of Lechlade Road is above road level, the land is also open, with an even profile and few hedgerows or ditches. Overland flow will be quickly transferred to the field boundaries and ditches running adjacent to Lechlade Road, which is heavily overgrown at this point. Aerial images also show the field is ploughed at right angles to Lechlade Road., which will also increase overland flow rates. All the above conditions mean that during a severe storm event, field run-off is easily transferred onto Lechlade Road and down into the village.

5.2.2 Highway Drainage on Filkins Road

The existing highway drainage throughout the village was unable to cope with the extra volume of water, there is also evidence from a site visit that the carrier pipes running through the village are partially blocked or may even have collapsed.

5.3 Area 2 – Church Row

5.3.1 Direct overland flow from behind Church Row

Flooding is reported to come from land to the east of the Church Row cottages. This was overland flow generated from the open, unbroken land. Another factor is that the field drain serving this area of land links to an extremely undersized carrier pipe in the vicinity of The Bell public house. This appears to runs eastwards into an open field drain, which ultimately flows into Broadwell Brook. Due to the small size of the carrier pipe, the ditch in the vicinity of The Bell is effectively disconnected from the outfall point on the opposite side of the road. A site visit found the ditch upstream of the pipe inflow was heavily overgrown and inaccessible.

Residents have suggested that a new ditch needs to be constructed behind the houses of Church Row to collect run-off, this would then link northwards to the existing pipe at The Bell. As mentioned above, this pipe is a pinch point and installation of a ditch alone will increase flooding at Church Row. This option needs careful consideration and supporting by other physical measures.

Run-off rates will have been magnified due to high groundwater levels and impermeable, clay dominated geology; this will have further exacerbated the situation.

5.3.2 Excess Highway run-off

Highway flooding at Church Row would have been from two main sources.

Land to the east of Church Row is significantly higher than the road surface, acting as a dam to any run-off generated from fields to the west. As mentioned previously, the highway gullies and carrier pipes are suspected to be in poor condition, this would have combined with the flat road gradient to give deep ponding.

Run-off would have also been delivered from further north in the village along Filkins Road to the Church Row area, further increasing the depth of flooding. The cottages also suffered from 'wash' – passing vehicles moving through deep flood water, frequently causing mini-flood waves to enter the properties – this was made more severe due to low kerb heights.

5.4 Foul Sewage

The issue of foul sewage ingress into the surface water drainage system has been raised by the villagers. Thames Water have confirmed that the village is served by private septic tanks and that some villagers have grouped together and have installed small sewage treatment units. Sewage could well be discharging to the surface water system through misconnections or leakage from damaged/faulty septic tanks and treatment equipment. Also, septic tanks are designed with overflows, so the contents may well have found their way into neighbouring properties and watercourses.

6.0 OPTIONS

The following table shows the possible options available for flood alleviation schemes throughout the Parish, and their potential effectiveness, as assessed by the District Council Engineers. The areas affected by flooding within the Parish have been given unique area numbers, i.e. Area 1. Several options for flood alleviation projects are identified for each area as "Actions" or "Options".

Many of these options will require further detailed investigation along with the agreement of the responsible landowner, identification of budget and a cost benefit analysis to be carried out before they could be implemented.

Some of the options shown are also mutually exclusive, that is if one option is carried out then another will not be necessary, to find if this is the case for an option, please look at the detailed description in the Conclusions and Recommendations Section (7.0).

If you require further information regarding a particular option, please contact the agency that would be responsible for implementation of the proposal, where this has been shown, using the contact information at the top of the column. If no contact details are shown, there may be a private landowner responsible. If this is the case the District Council will ensure that private landowners are made aware of their responsibilities.

Parish Flood Options

Langford

Version 1 – July 2008

Option ref	Flood Overview Options	Description of work required Environment Agency	Oxfordshire County Council	Thames Water	WODC	Private	Key issues Effectiveness	Affects on adjacent land	Cost	Comments
		For queries Tel 08708 506 506 Or email enquiries@environment-agency.gov.uk	Main switchboard: 0845 310 1111 Or e-mail: online@oxfordshire.gov.uk	Enquiries: 0845 200 800	Switchboard: 01993 861 000					
Area 1 – Filkins Road										
	Overland flow from fields adjacent to Lechlade Road running into village									
A	Establish ownership of ditch running adjacent to Lechlade Road and clear				WODC to identify ownership of ditch and co-ordinate accordingly	Riparian owner responsible	Will improve capacity of ditch		£500 to £5,000	
B	Break up large open field area to north of Lechlade Road with ditches. Link these to new attenuation pond – construct with controlled outflow	EA to assist in design			WODC to co-ordinate	Riparian owner permission needed to construct ditches and pond	Will reduce overland flow onto road	Land take for flood storage	£20,000 to £50,000 feasibility & construction	Source of funding to be decided
C	Re-profile land to east of cricket pitch to create swales and water holding topography such as dry ponds, terraces / wash lands and artificial ridges.	EA to assist in design			WODC to co-ordinate	Riparian owner permission needed to construct swales	Will hold more water on land	Land take for flood storage	£500 to £5,000 feasibility £5,000 to £20,000 construction	Source of funding to be decided
D	Construct holding bund around perimeter of fields to west of Ansells Farm with controlled outflow to highway drainage ditch				WODC to co-ordinate	Riparian owner permission needed to construct bund	Will prevent overland flow reaching road		£20,000 to £50,000 construction	
E	Inspect highway drainage on Lechlade Road – jet out		OCC to jet out highway drains				Will improve operation of surface water drains		£500 to £5,000	
F	Arrange for CCTV inspection of Filkins Road carrier drain – suspect blockage / collapsed drain, may need repair		OCC to arrange CCTV survey and repair surface water sewer if needed				Will improve operation of surface water drains		£500 to £5,000 CCTV £5000 to £20,000 costs	
G	Change agricultural practices – contour ploughing and re-plant hedgerows, re-create drainage network				WODC to seek advice from NFU	Riparian landowners to change land management	Will reduce agricultural run-off	Loss of agricultural land		
H	Fit demountable flood defences to properties					Residents to purchase flood resilience products	Will protect individual properties		£500 to £5,000	
I	Clear Broadwell Brook of bankside vegetation	EA to advise / be consulted			WODC to co-ordinate	Villagers to arrange work party	Will improve flood capacity at lower flows		£500 to £5,000	Additional consent can be obtained from EA if work is needed on river bed

Option ref	Flood Overview	Description of work required					Key issues			Comments
	Options	**Environment Agency**	**Oxfordshire County Council**	**Thames Water**	**WODC**	**Private**	**Effectiveness**	**Affects on adjacent land**	**Cost**	
		For queries Tel 08708 506 506 Or email enquiries@environment-agency.gov.uk	Main switchboard: 0845 310 1111 Or e-mail: online@oxfordshire.gov.uk	Enquiries: 0845 200 800	Switchboard: 01993 861 000					
Area 2 – Church Row										
	Flooding from fields at rear of Church Row									
A	Dig flood transfer ditch to divert flood flow around the small pipe at The Bell. Transfer ditch will divert flow to the open drain situated east of Lower Farm cottages				WODC to liaise on construction		Will alleviate flooding due to undersized pipe		£500 to £5,000 feasibility £5,000 to £20,000 construction	Funding TBA
B	Dig interceptor ditch at rear of Church Row, dig attenuation pond and link to new ditch				WODC to liaise on construction		Overland flow will be stored on land above cottages		£500 to £5,000 feasibility £20,000 to £50,000 construction	Funding TBA
C	Construct private flood bund at rear of Church Row to intercept run-off				WODC to liaise on construction	Riparian owners to allow construction of private flood defence bund	Overland flow will be stored behind bund		£5,000 to £20,000 inc feasibility	Funding TBA
D	Change profile of land behind cottages to provide swales, dry ponds and flow interrupting topography – such as terraced land / ridges. Possibility of re-instating old pond				WODC to liaise on construction	Riparian owners to allow re-profiling of land for flood storage /run-off interruption	Overland flow will be stored on land above cottages		£20,000 to £50,000 construction	Funding TBA
E	Riparian owner to keep outfall of drainage system clear. Outfall located in fields to E of Filkins Road		OCC to jet Filkins Road carrier drains and gullies				Will remove any blockages		£500 to £5,000	
F	Replace low kerb at Church Row with high kerb		OCC to install raised kerbing at low points		WODC to provide consent if work is in conservation area		Will lessen impact of vehicle wash		£500 to £5,000	
G	Fit demountable flood defences					Individual residents to investigate installation of demountable flood defences	Will protect individual properties		£500 to £5,000	
H	Remove portion of wall on RH of Filkins Road opposite Church Row and dig ditch to allow water to flow across towards Broadwell Brook				WODC to liaise on construction	Riparian owner would need to agree construction of ditch through land			£20,000 to £50,000 construction	
	Sewage smell in surface water drains									
	Inspect misconnections from private sewerage using CCTV		OCC to CCTV carrier drain through village for misconnections				Will help confirm source of sewage leaks		£500 to £5,000	

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Area 1 – Filkins Road

7.1.1 Maintenance

- Option E - OCC to jet gullies which link to drainage adjacent to Lechlade Road
- Option I – Private work party to clear Broadwell Brook of bankside vegetation, co-ordination from WODC and liaison with EA

7.1.2 Flood defence improvement schemes

Immediate (under 1 year)

- Option A - Establish ownership of ditch adjacent to Lechlade Road and clear
- Option F - OCC arrange for CCTV inspection of Filkins Road carrier drain
- Option G - Change in agricultural land management practices – contour ploughing and re-plant hedgerows, re-create drainage network
- Option H - Fit demountable flood defences to properties

Mid-Term (under 1 -2 years)

- Option B – Break up large open field area to north of Lechlade Road with ditches. Link these to new attenuation pond – construct with controlled outflow
- Option C - Re-profile land to east of cricket pitch to give swales and water holding topography – such as land terraces and ridges
- Option D - Change profile of land behind cottages to provide swale / flow interrupting topography as per option C. There is also the possibility of re-instating old pond for extra flood storage.

7.2 Area 2 – Church Row

7.2.1 Maintenance

- Option E – Riparian owner to ensure Filkins Road surface water drainage outfall point is maintained and kept free from blockage

7.1.2 Flood defence improvement schemes

Immediate (under 1 year)

- Option F - OCC arrange for CCTV inspection of Filkins Road carrier drain
- Option G - Fit demountable flood defences

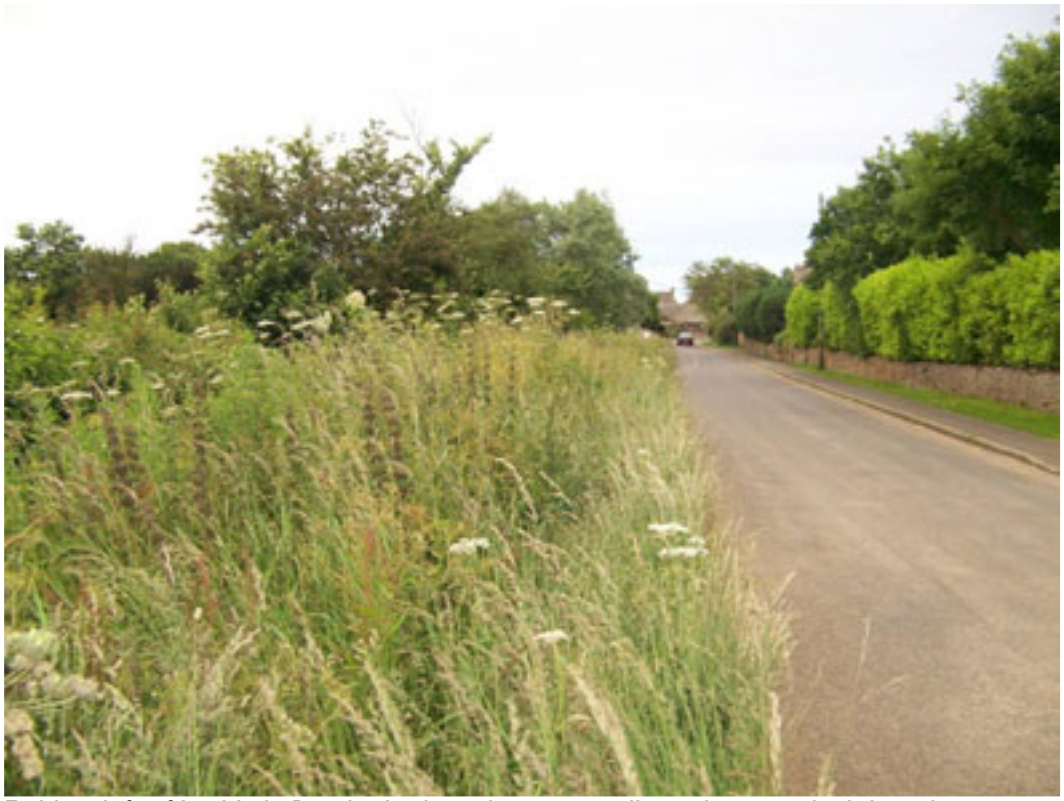
Mid-Term (under 1 -2 years)

- Option A - Dig flood transfer ditch from above pinch point of small pipe at The Bell to the open ditch east of Lower Farm cottages
- Option B – Dig interceptor ditch at rear of Church Row, dig attenuation pond and link to new ditch
- Option C - Re-profile land to east of cricket pitch to give swales and water holding topography
- Option D - Change profile of land behind cottages to provide swale / flow interrupting topography- Possibility of re-instating old pond
- Option H - Remove portion of wall on RH of Filkins Road opposite Church Row and dig ditch to allow ponding on road to flow across to open fields

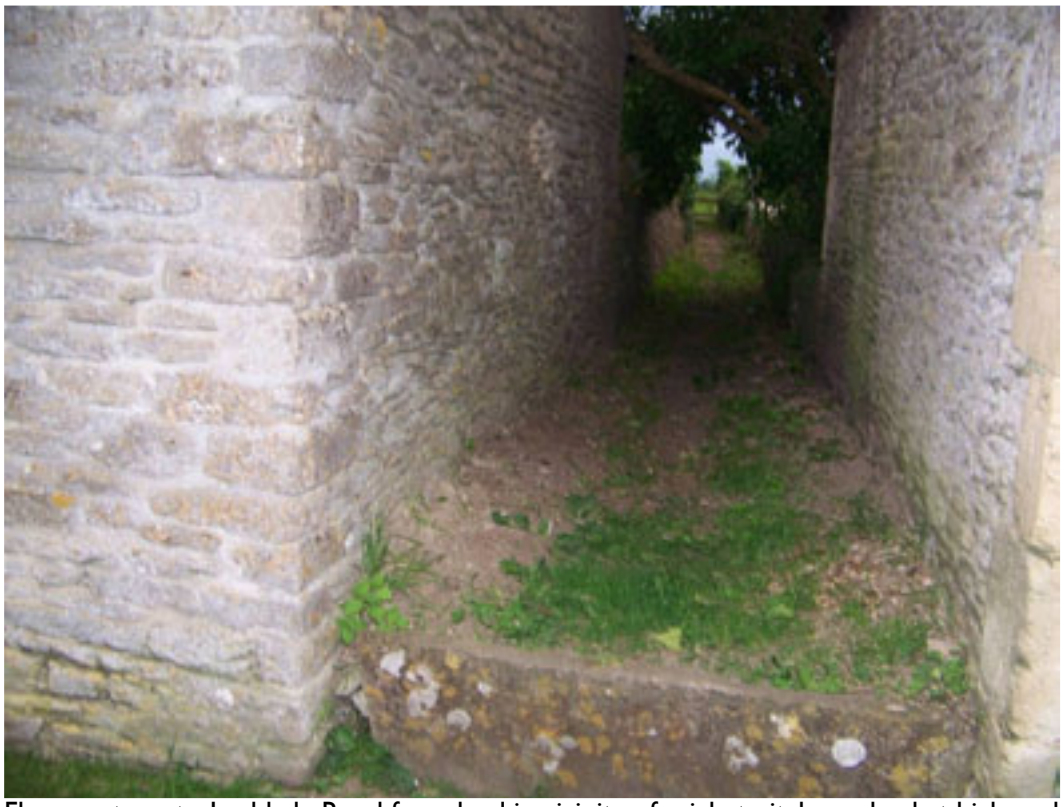
Appendix 1: Photographs

Area 1 – Filkins Road

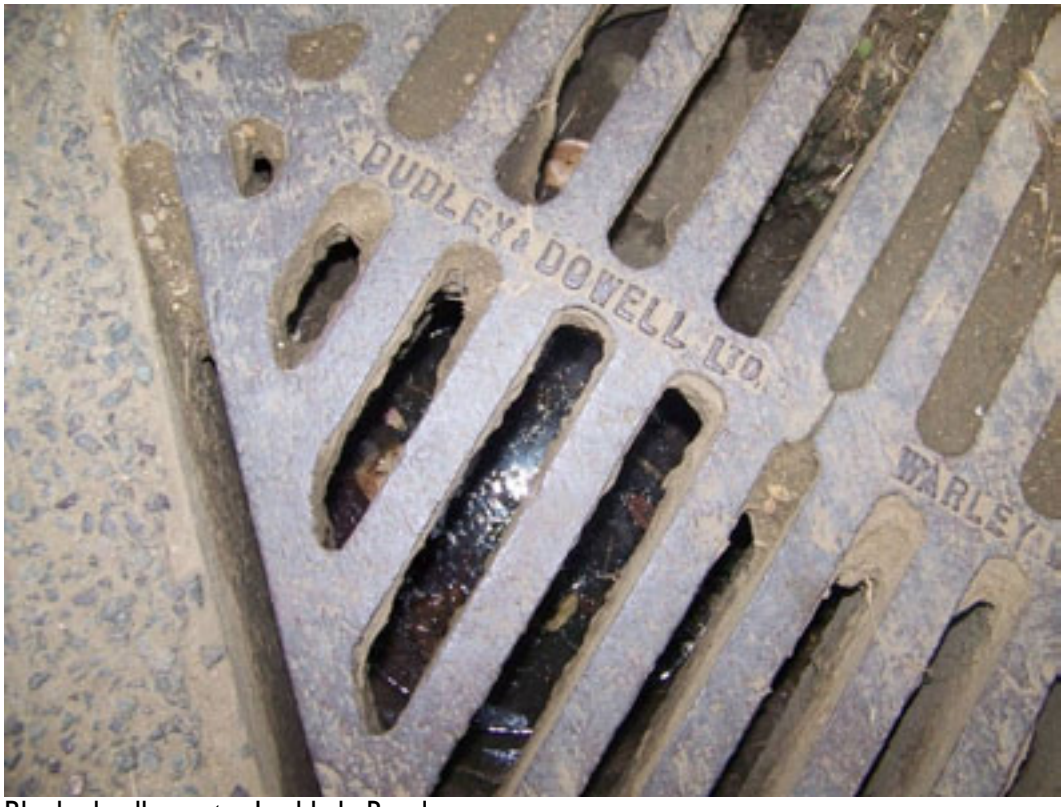
Field to left of Lechlade Road – source of run-off into village and overgrown ditch in foreground



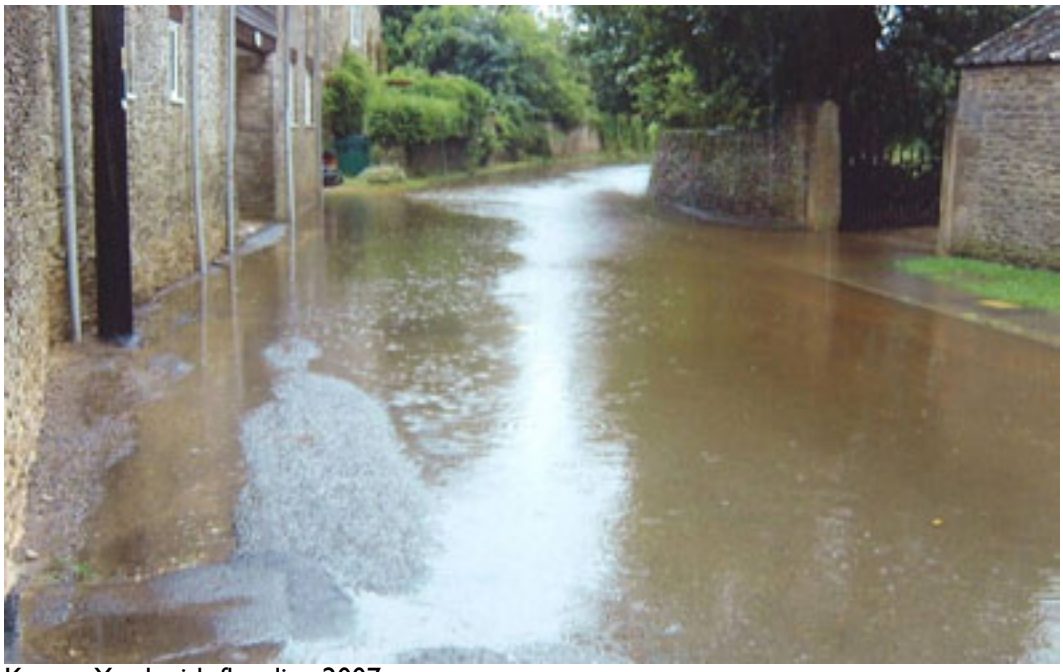
Field to left of Lechlade Road – looking down into village, drainage ditch heavily overgrown



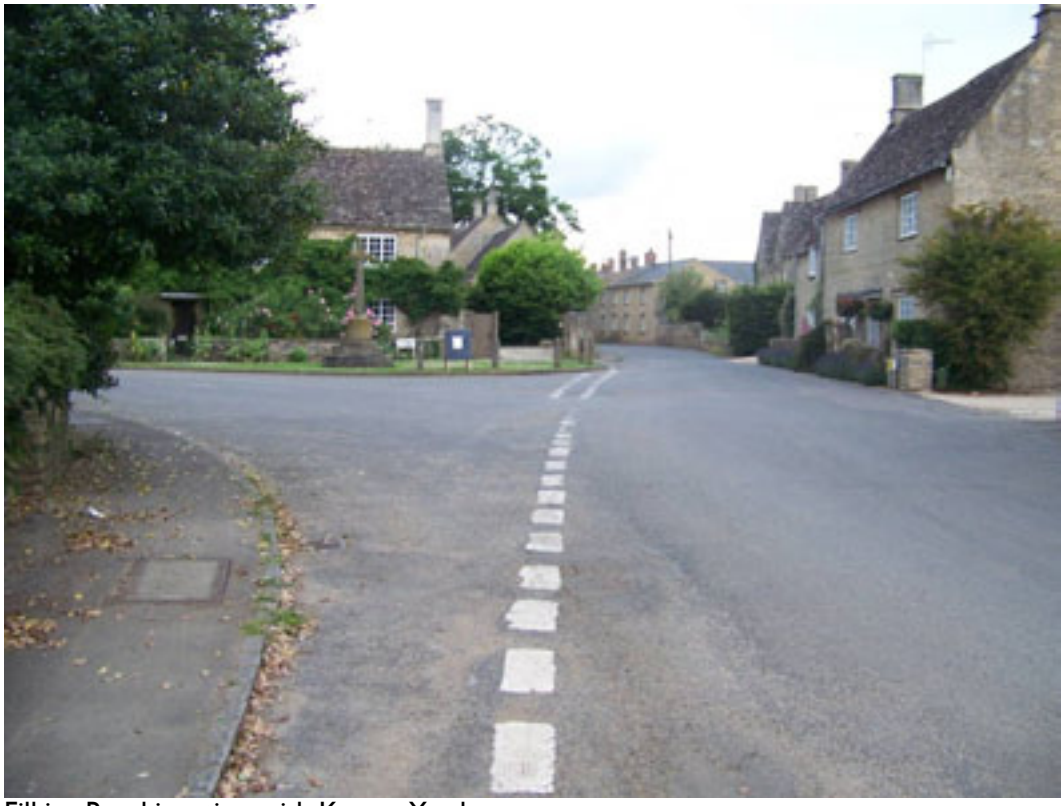
Flow route onto Lechlade Road from land in vicinity of cricket pitches – land at higher elevation



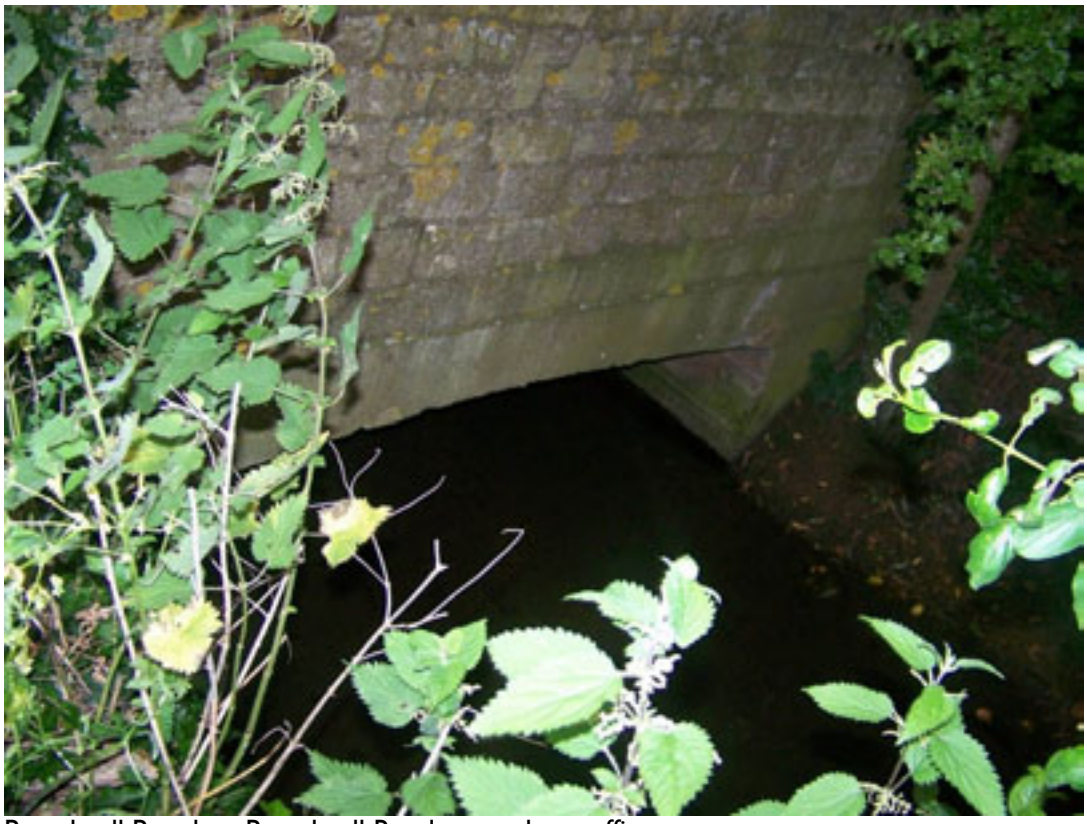
Blocked gulley pot – Lechlade Road



Kemps Yard with flooding 2007

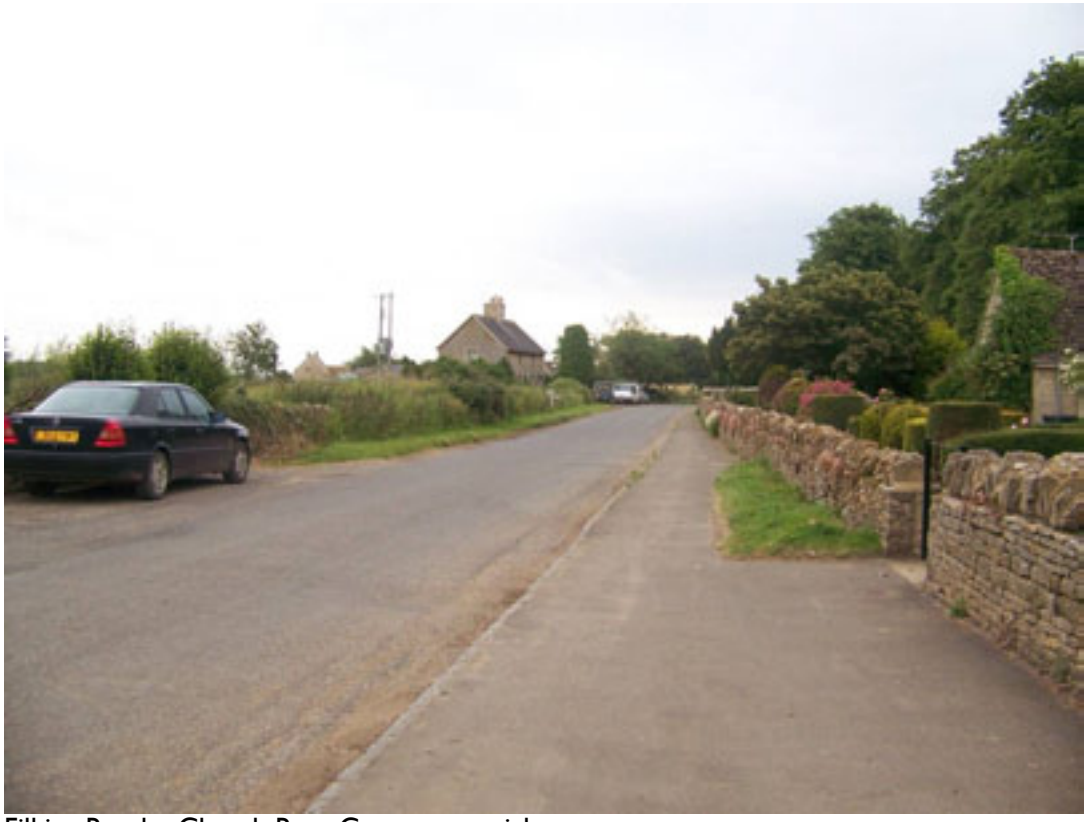


Filkins Road junction with Kemps Yard

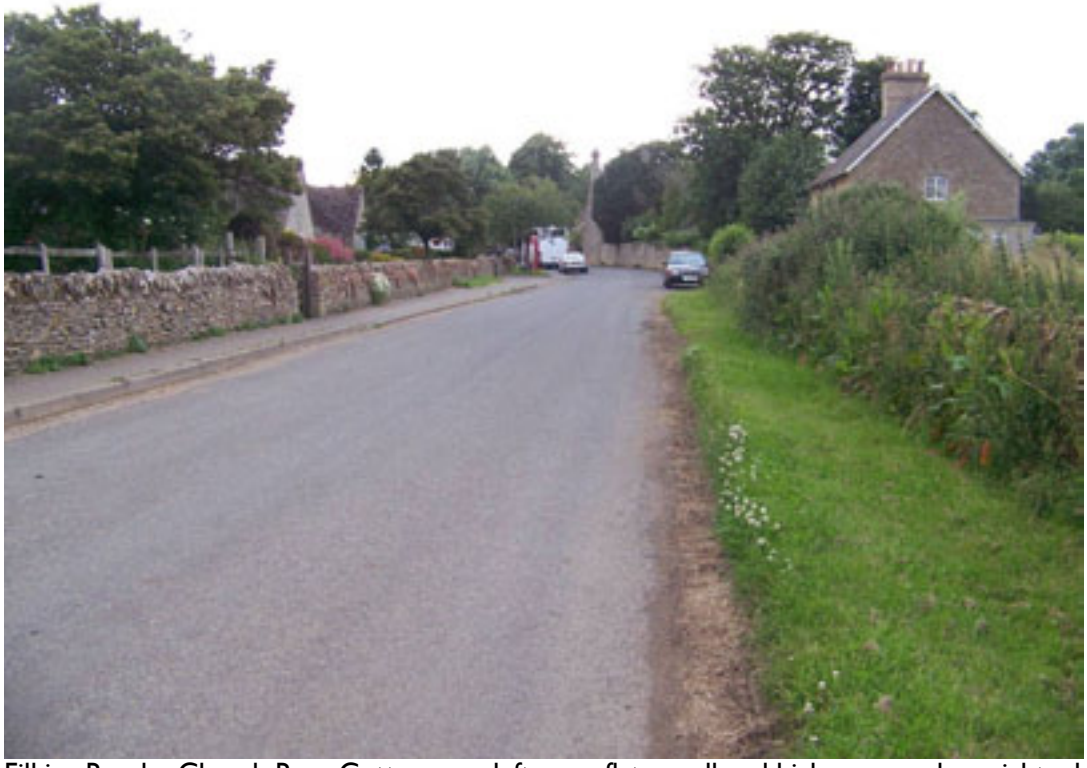


Broadwell Brook at Broadwell Road – very low soffit

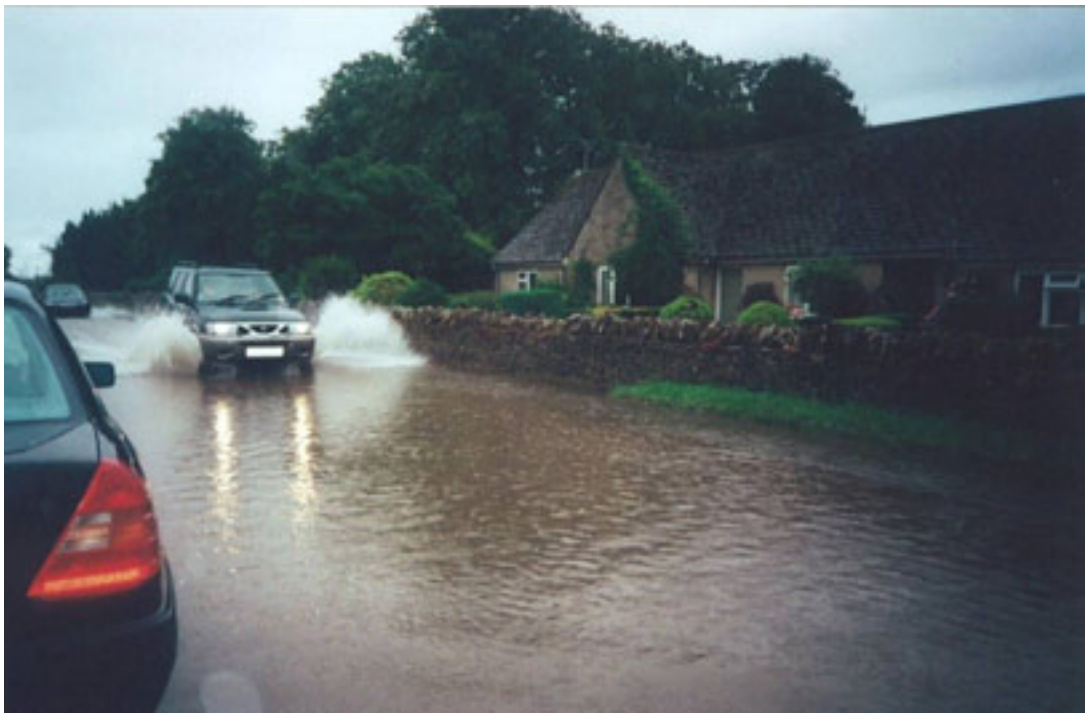
Area 2 – Church Row



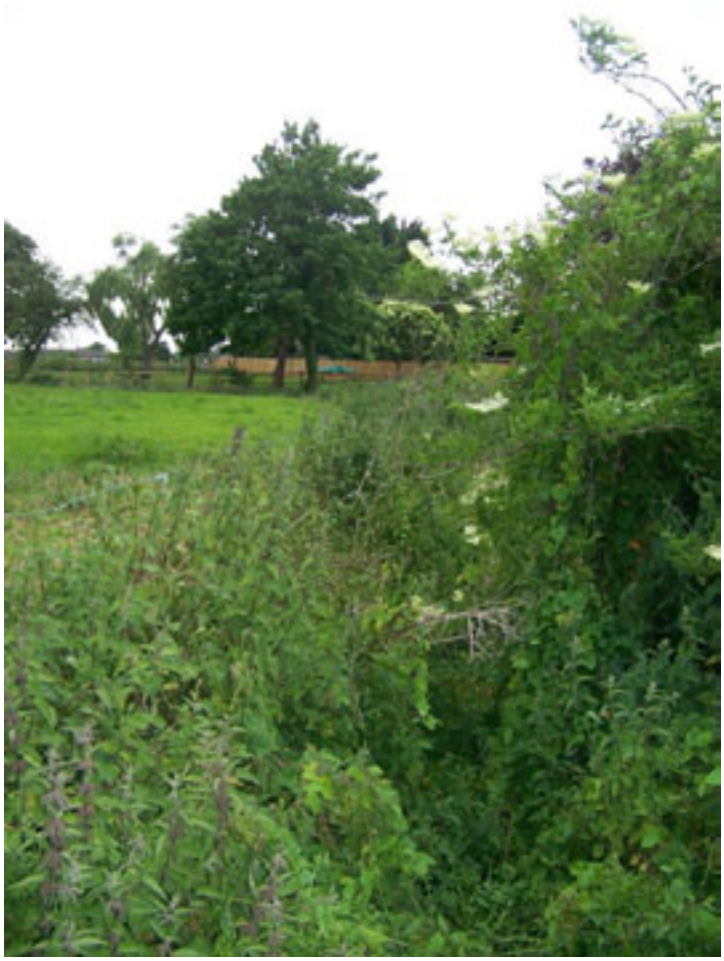
Filkins Road – Church Row Cottages on right



Filkins Road – Church Row Cottages on left, very flat – wall and higher ground on right which traps water



Church Row flooding 2007



Drain behind The Bell Public House