



WEST OXFORDSHIRE
DISTRICT COUNCIL

www.westoxon.gov.uk

Parish Flood Report: Swinbrook and Widford

November 2008



Contents

1.0	INTRODUCTION	3
2.0	THE DISTRICT COUNCIL'S ACHIEVEMENTS OVER THE PAST 12 MONTHS.....	6
3.0	SURVEY.....	8
4.0	PROBLEMS AND CAUSES	10
5.0	OPTIONS.....	12
6.0	CONCLUSIONS AND RECOMMENDATIONS.....	16
	Appendix 1: Photographs.....	18
	Appendix 2 :Maps.....	24
	Appendix 2:Glossary.....	27

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 organisations 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 powers¹ 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 riparian² land owner, and permissive powers¹ 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 has recently held a series of ‘road shows’ in the Parish areas, where representatives from all the relevant areas were available to answer any questions local residents had 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

1.5 Legal

For the avoidance of doubt it should be noted that no part of this report is to be reproduced, copied or used by any third party without the prior express written consent of WODC in its absolute discretion. All those reading this report acknowledge that any conditions, warranties or other terms implied by statute or common law are excluded to the fullest extent permitted by law. Without limiting the scope of the foregoing, West Oxfordshire District Council does not give any warranty, representation or undertaking as to the efficacy or usefulness of the information contained within this report, nor that any advice contained within this report will produce satisfactory results if followed. West Oxfordshire District Council hereby excludes liability to the fullest extent permitted by law for any reliance placed in this report by third parties.

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

Flood Grants

- WODC Flood Grants totalling **£284,250** given out in West Oxfordshire.

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 the Emergency Plan recognises the role the elected members can play in emergency and recovery situations
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 a 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
Continue to liaise with EA to ensure that procedures relating to planning consultations are robust.
Progress the Strategic Flood Risk Assessment
Consider producing a revised warning system that identifies a higher category of risk that is only issued in exceptional circumstances
Approaches to be made to the EA and Meteorological Office with regard to improving their predictive capability
WODC continues to act in a coordination capacity with key external agencies
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
Bid to EA for £1 million (over 3 years for river surveying, modelling and improvements)
Final West Oxfordshire District Council strategic report to be published in November 2008
Flood Products Fair held in Witney 9 th October 2008

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 the village of Swinbrook and Widford and has been prepared by the Council's Engineering team. It pulls together information from external agencies and individual property owners. It identifies the causes of flooding in Swinbrook and Widford during July 2007 and potential mitigating solutions.

The report itself is broken down into a number of sections and will include;

- An overview of flooding history in Swinbrook and Widford and flood related issues raised by residents
- A presentation of the problems and causes of flooding in Swinbrook and Widford during July 2007.
- A summary of all the flooding issues and potential mitigation options.
- A breakdown of the recommendations for immediate, mid-term and long term actions including the responsible agency based on the options identified.

The summary below lists the main sources of flooding in Swinbrook and Widford that have been identified by the residents. More detail is provided regarding the specific locations and the causes in section 5 of the report.

Sources of flooding

- Surface water runoff from fields on north side of Swinbrook to Astall Leigh road in vicinity of Swin Lane.
- Surface water runoff from fields collecting in dip in road to Asthall
- Surface water from Swinbrook to Shipton under Wychwood road not draining into adjacent watercourse due to blocked highway pipework through drystone wall
- Surcharging of the watercourse onto the Swinbrook to Shipton under Wychwood road through pipework intended to keep the highway clear

4.0 SURVEY

4.1 Description of area

The Parish of Swinbrook and Widford is approximately 934 Hectares (2308 acres) in size. It is located 2 miles east of Burford.

A map of the parish is shown in figure 1. The areas affected by flooding have been identified as (1), (2) and (3)

2 Survey approach

A visual walk-over survey has been undertaken. Photographs of some of the flood affected areas are in Appendix I.

4.3 Meetings

Details of meetings attended by District Council representatives about the flooding of Fulbrook in July 2007 are given in Table below;

Date	Main participants and Venue	Description
17.7.08	WODC and Allan Tomkins – various locations	Information gathering exercise on problem areas for flooding
4.11.08	WODC and Linda Baillie, clerk to P.C.	Identification of a further flooded area within the parish

4.3.1 Application for Grant Aid

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

- Emergency Flood Relief Grant Aid of £250 per applicant

To date the owner of 1 residential property in the Parish of Swinbrook and Widford has received Emergency Flood Relief Grant Aid, however it is acknowledged that this may not be the total number of properties affected as some owners may have been reluctant to claim.

5.0 PROBLEMS AND CAUSES

5.1 Plans

Appendix 2 contains 2 maps:-

1. Fig 1 – Areas affected by flooding within Swinbrook and Widford Parish

2. Fig.2 – Environment Agency plan showing:-

- Swinbrook and Widford parish boundary
- Main rivers and enmained water courses in the area
- Flood Zone 2, January 2008 - 0.1% annual probability of flooding occurring or low to medium risk. Previously referred to as 1:1,000 year flooding
- Flood Zone 3, January 2008 - 1% annual probability of flooding occurring or high risk. Previously referred to as 1:100 year flooding

Note – this EA map has been updated to reflect the events of July 2007. All references to flood zones in this report refer to the previous EA flood zone map i.e. pre July 2007.

5.2 Area 1 – From Swinbrook Farm land on Swinbrook to Asthall Leigh road, southwards to River Windrush

One property applied for the flooding grant after July 2007. However, properties may have been affected that did not apply for a grant.

The cause of flooding is ascertained to be:

- 5.21** Runoff from farmland to east of Swin Lane, owned by Fettiplace Charity
- 5.22** Runoff from farmland to east of Swin Lane, owned by Swinbrook Farm
- 5.23** Blocked sections of ditch which are part of the watercourse. Although lengths of ditch and verge grips have recently been cleared there are still stretches that need attending to in order for the water to flow unobstructed down to the River Windrush
- 5.24** Lack of surface water drainage system in the area (financially impractical to provide considering number of properties affected)
- 5.25** Embankment opposite Swan Inn and culvert / bridge obstructions cause area of ponding at bridge

5.3 Area 2 – At dip in Swinbrook to Asthall road

No properties applied for a flooding grant after July 2007.

The cause of flooding is ascertained to be:

- 5.31** Runoff from farmland on both sides of road
- 5.32** The dip in the road is a natural collection point for the surface water. Grips have been cut to drain the water back into the field, but as the fields are higher than the road they may actually shed water onto the highway
- 5.33** Lack of surface water drainage system in the area (financially impractical to provide considering no properties affected)

5.4 Area 3 – Swinbrook to Shipton under Wychwood road, north of Fulbrook road

No properties applied for a flooding grant after July 2007.

The cause of flooding is ascertained to be:

- 5.4.1** Surface water from highway not draining into adjacent watercourse due to blocked / inadequate highway drainage
- 5.4.2** Excessive surface water runoff from fields causing surcharging of adjacent watercourse through pipework intended to drain highway

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.

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 can 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, and can use enforcement powers under the Land Drainage Act 1991 to ensure they carry out their duties if necessary.

**Area I - From Swinbrook Farm land on Swinbrook to Asthall Leigh road, southwards
to River Windrush**

Area		I			
Flooded Properties & Causes		<p>I property applied for flooding grant, although others may also have been affected. Estimated frequency once a year</p> <p><u>Primary causes</u> – (i) Runoff from farmland to east of Swin Lane, owned by Fettiplace Charity, (ii) Runoff from farmland to east of Swin Lane, owned by Swinbrook Farms, (iii) Blocked ditches along the route of the watercourse, (iv) Embankment opposite Swan Inn and culvert obstructions cause area of ponding at bridge</p>			
Options		1	2	3	4
Description of options					
Responsible Agencies	EA For queries Tel: 08708 506506				
	OCC For queries Tel: 08453 101111			OCC to make financial contribution	OCC to cut grips through embankment to drain surface water into ditch leading to Windrush and clear arches / culverts under road by Swan Inn.
	Thames Water For queries Tel: 08459 200800				
	WODC For queries Tel: 01993 861000	WODC to co-ordinate	WODC to co-ordinate	WODC to co-ordinate	
	Private/Other Organisations	Land owner to provide land drainage within field	Land owner to provide land drainage within field	Riparian owners to clear ditches and culvert entrances	Riparian owner to fund embankment works
Effectiveness/ Effects on adjacent land		Will help to prevent flooding of road and properties	Will help to prevent flooding of road and properties	Will help to prevent flooding of road and properties	Will help to prevent flooding of road and properties
Cost		£10K - £20K	£10K - £20K	£5K – £10K	Up to £5K

Area 2 – Along Swinbrook to Asthall road

Area		2	
Flooded Properties & Causes		No properties were affected,. Estimated frequency once a year. <u>Primary cause</u> – (i) Runoff from farmland on both sides of road, (ii) The dip in the road collecting water / grips falling in wrong direction	
Options		1	2
Description of options			
Responsible Agencies	EA For queries Tel: 08708 506506		
	OCC For queries Tel: 08453 101111	OCC to provide ditches on grass verge on both sides of road to drain highway	OCC to recut grips
	Thames Water For queries Tel: 08459 200800		
	WODC For queries Tel: 01993 861000		
	Private/Other Organisations	Landowners to contribute to cost as ditches will also take field runoff	
Effectiveness/ Effects on adjacent land		Will help to prevent flooding and consequential closure of road	
Cost		£5K - £10K	Up to £5K

Area 3 – Swinbrook to Shipton under Wychwood road, north of Fulbrook road

Area		I			
Flooded Properties & Causes		No properties applied for a flooding grant. Estimated frequency once a year <u>Primary causes</u> – (i) Surface water from highway not draining into adjacent watercourse due to blocked / inadequate highway drainage, (ii) Excessive surface water runoff from fields causing surcharging of adjacent watercourse through pipework intended to drain highway			
Options		1	2	3	4
Description of options		Pipework from highway to watercourse to be cleared on more regular basis / additional pipes to be provided through drystone wall	Pipework from highway to watercourse to be provided with non-return valves, to help prevent watercourse surcharges flooding highway	Watercourse either side of road to kept clear of obstructions	Culvert under road to be kept clear
Responsible Agencies	EA For queries Tel: 08708 506506				
	OCC For queries Tel: 08453 101111	OCC to arrange cleaning and contact landowner re additional pipes	OCC to arrange		OCC to arrange
	Thames Water For queries Tel: 08459 200800				
	WODC For queries Tel: 01993 861000			WODC to co-ordinate	
	Private/Other Organisations			Riparian owners to keep clear	
Effectiveness/ Effects on adjacent land		Will help to prevent flooding of road	Will help to prevent flooding of road	Will help to prevent flooding of road	Will help to prevent flooding of road
Cost		Up to £5K	Up to £5K	£5K – £10K	Up to £5K

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Area 1 - From Swinbrook Farm land on Swinbrook to Asthall Leigh road, southwards to River Windrush

7.1.1 Maintenance

The following on-going maintenance is recommended:

- Action 3 – OCC / riparian owners to keep ditches and culvert entrances clear on regular basis.
- Action 4 – EA to keep arches under road at Swan Inn clear of obstructions
- Action 4 - OCC to keep culverts clear under road by Swan Inn

7.1.2 Flood defence improvement schemes

The following flood defence improvement schemes are recommended:

Immediate (Under 1 year)

- Action 3 – OCC / riparian owners to clear ditches and culvert entrances
- Action 4 – OCC to cut grips through embankment and clear culverts under road by Swan Inn.
- Action 4 - EA to ensure arches under road at Swan Inn are clear of obstructions

Mid-Term (under 1 -2 years)

- Action 1 – Fettiplace Charity to provide land drainage on farmland
- Action 2 - Swinbrook Farm to provide land drainage on farmland

7.2 Area 2 – Along Swinbrook to Asthall road

7.2.1 Maintenance

The following on-going maintenance is recommended:-

- Action 1 – OCC and riparian owner to keep new ditches clear
- Action 2 – OCC to maintain verge grips

7.2.2 Flood defence improvement schemes

The following flood defence improvement schemes are recommended:

Immediate (Under 1 year)

- Action 1 – OCC to provide ditches on grass verge on both sides of road

- Action 2 – OCC to recut grips so they fall towards fields

7.3 Area 3 – Swinbrook to Shipton under Wychwood road, north of Fulbrook road

7.3.1 Maintenance

The following on-going maintenance is recommended:-

- Action 1 - Pipework from highway to watercourse to be cleared on more regular basis
- Action 3 - Watercourse either side of road to kept clear of obstructions
- Action 4 – Culvert under highway to be kept clear

7.3.2 Flood defence improvement schemes

The following flood defence improvement schemes are recommended:

Immediate (Under 1 year)

- Action 1 - Additional pipes to be provided through drystone wall
- Action 2 - Pipework from highway to watercourse to be provided with non-return valves

Appendix I: Photographs



Area I –field accesses to north - east of Swin Lane



Area I – newly cleared grips and ditches to south - east of Swin Lane



Area 1 – Blocked ditches along route of watercourse, in contrast to newly cleared grips and ditches



Area I – collapsed wall in ditch opposite The Old Farm



Area I – culvert outlet to ditch opposite the Swan Inn



Area I – embankment and ditch opposite the Swan Inn



Area I – junction of watercourse with River Windrush



Area 2 – Dip in Asthall road before verge grips dug



Area 2 – location of new verge grips in Asthall road



Area 2 – Asthall road, showing verge grips falling towards road



Area 3 – watercourse on west side of road to Shipton under Wychwood



Area 3 – one of the culverts directing surface water from the highway into the watercourse



Area 3 – culvert carrying watercourse under the highway