



WEST OXFORDSHIRE
DISTRICT COUNCIL

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Parish Flood Report: **Shipton-Under-Wychwood**

May 2008



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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 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 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

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

2.1 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

2.2 Flood Grants

- 1137 WODC Flood Grants totalling £284,250 given out overall
 - 29 (£7,250) for Shipton under Wychwood
- 40 Red Cross Flood Grants totalling £80,929 administered by WODC overall
 - 1 (£5,810) for Shipton under Wychwood
- 301 Hardship Grants totalling £155,050 given out overall

2.3 Reports

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

2.4 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 early in 2008 to progress this
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 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 Shipton-under-Wychwood 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 Shipton-under-Wychwood during July 2007 and potential mitigating solutions.

Shipton-under-Wychwood is a rural parish located approximately 8 miles to the north west of Witney and 6 miles south of Chipping Norton in the heart of the Cotswolds. The parish sits in the catchment of the River Evenlode which flows through the village. The Little Stock Brook, a tributary to the River Evenlode flows to its confluence with the River Evenlode to the north of the village. A smaller, spring fed brook (Trots Brook) joins the Evenlode through Kelbrook House on Church Street.

Visual walkover surveys have been undertaken of the flooded areas and properties. Meetings have been held with affected residents and the District Councillor. The River Evenlode has been walked by engineers, EA and the District Councillor between Shipton-Under-Wychwood and Ascott-Under-Wychwood. The number of applications for Grant Aid has also been investigated.

Flooding experienced in Shipton-under-Wychwood has been assessed in four separate areas (see Section 5.1) comprising Little Brook Meadow (Area 1), Station Road (A361 at the Garage) through to High Street/Red Horse Corner including the Prebendal Drive (Area 2), Church Street/Kelbrook (Area 3) and Blenheim Cottages (Area 4).

Little Brook Meadow (Area 1) suffered flood damage to 9 properties, with WODC showing records of 7 claims for a flood relief grant. Flooding was noted as originating from three sources

- overland flow due to a blockage of the Little Stock Brook
- overloading of the local surface water drainage system
- inundation from the River Evenlode. There is concern that there is a possible restriction of flow at high water, due to the footbridges constructed across Little Stock Brook.

A further 7 properties claimed flood relief to the east of Meadow Lane including Reynolds Close and Little Stocks . These properties were flooded from the River Evenlode and Little Stock Brook.

Station Road (A361 at the Garage) to High Street/Red Horse Corner including Prebendal Drive to Church Street (Area 2) suffered wide scale flood damage during the July 2007 flood event caused by the River Evenlode and overloading of the Thames Water pumping station at Shipton Bridge.

Parish records show that 8 houses (5 evacuated by boat), 20 flats at Prebendal Court, 16 flats at the Prebendal and 21 nursing residents at Prebendal House were flooded and evacuated to the Beaconsfield Hall.

Lower Church Street (Area 3) – This area flooded in July 2007 from a combination of sources including;

- surface water flooding and sewer flooding due to inadequate road drainage
- overloading of the Thames Water pumping station at Shipton Bridge
- flooding from the River Evenlode.

A further contributing factor was a blockage to the lower course of Trots Brook. The culvert under the pathway of the Old Rectory through to 'Kelbrook' was blocked.

There has been one claim for flood grant on Church Street, 2 properties flooded.

Blenheim Cottages (Area 4) are located to the south of the village on Shipton Road. Three properties flooded due to overland flow from surrounding farmland and inadequate road drainage.

Flooding also occurred at 1 house in Coombes Close and 2 in Court Close due to surface water runoff.

Flooding problems and how each public and private body is affected, effectiveness of each solution, affects on adjacent land and cost, are included in Section 5. and 6.

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

4.0 SURVEY

4.1 Description of Area

The village of Shipton-under-Wychwood lies in 'the Wychwoods', which also include Milton-under-Wychwood and Ascott-under-Wychwood. It is located approximately 8 miles to the north west of Witney and 6 miles south of Chipping Norton in the heart of the Cotswolds

The parish is rural in nature, forming part of the catchment area for the River Evenlode. The village contains two watercourses; the first is located to the north of the village flowing due east to its confluence with the River Evenlode. This watercourse is known as the Little Stock Brook.

The River Evenlode meanders through Shipton-Under-Wychwood in a general north south - direction crossing Station Road to the east of the village before flowing past the Prebendal and turning easterly flowing towards Ascott-Under-Wychwood. A smaller, spring fed brook (Trots Brook) originates in the south of the village and joins the Evenlode through Kelbrook House on Church Street.

The contributing catchment area of the Little Stock Brook upstream of the Little Brook Meadow residential development is approximately 16.25km². This catchment includes the Mill Brook watercourse.

Using the Flood Estimation Handbook (FEH) the catchment of the River Evenlode at Shipton-Under-Wychwood is calculated to be 179.6km² and includes Moreton-in-Marsh and Chipping Norton.

4.2 Survey Method

A visual walk-over survey of properties affected by the July 2007 flooding has been undertaken including Little Brook Meadow, The Prebendal, Prebendal Drive, Church Street and Blenheim Cottages. A visual inspection of the Little Stock Brook, the drainage ditch at the rear of Little Brook Meadow and the River Evenlode below Shipton Bridge has also been made.

See Appendix I – Photographs.

4.3 Meetings

A summary of meetings about Shipton-under-Wychwood flooding in July 2007 are given in Table 1.

Table 1: Summary of meetings and flooding descriptions

Date	Location	Description
14.04.08	WODC Witney	<ul style="list-style-type: none">To discuss flooding in Shipton/Ascott-under-Wychwood and data that can be provided by WODC
14.04.08	Properties at 'Little Brook Meadow'	<ul style="list-style-type: none">Meeting with Laurence King to discuss flooding at 'Little Brook Meadow'.7 Properties flooded by surface and river water.A fallen tree obstructed the Little Stock Brook upstream of development and caused water to spill over fields to Little Brook Meadow.The field drainage ditch on farmland between Little Stock Brook and little Brook Meadow was overgrown.The surface water drainage system in Little Brook Meadow was overloaded causing flooding of properties.A lack of gullies was also noted.

		<ul style="list-style-type: none"> • Footbridges over the Littlestock Brook restrict flow at times of high water level. • 7 properties located to the east of Meadow Lane were also flooded. This was attributed to the River Evenlode.
14.04.08	Station Road Garage to High Street/Red Horse Corner including Prebendal Drive and Church Path	<ul style="list-style-type: none"> • Meeting with Laurence King and Prebendal resident. • The Prebendal was flooded due to the River Evenlode surcharging at Shipton Bridge, where flood water spilled onto its floodplain. • Water flowed over the flood plain and down Meadow Lane before flowing over the Bridge parapets of Shipton Bridge. The Prebendal care home was flooded directly from the Evenlode running through its grounds. • Properties also suffered from sewer flooding due to failure of the TW pumping station. • Mr Stephens, a local resident states that during less extreme floods, the right bank floodplain acts as a water meadow and floods first.
14.04.08	Lower Church Street	<ul style="list-style-type: none"> • Site visit with Laurence King • WODC state that Lower Church Street suffers flooding from blocked highway gullies and overloading of TW pumping station.
14.03.08	Blenheim Cottages	<ul style="list-style-type: none"> • Site visit with Laurence King • WODC state that Blenheim cottages have experienced flooding due to inadequate highway drainage and overland flow.
24.04.08	Shipton-Under-Wychwood	<ul style="list-style-type: none"> • Meeting with Hilary Biles District Councillor for Shipton-Under-Wychwood to discuss flooding of Summer 07.

4.4 Stakeholder communication and actions

WODC has liaised with the Environment Agency, Oxfordshire County Council and Thames Water.

Details of conversations and actions between October 2007 and February 2008 are included in Table 2.

Table 2: Summary of telephone calls/emails/correspondence made with EA, TW and OCC.

Company	Comments
EA	<p>The EA have recommended/completed the following:</p> <ul style="list-style-type: none"> • November 2007, EA removed fallen tree from Littlestock Brook in the open fields above Little Brook Meadow • EA removed overhanging slumping willow tree from Littlestock Brook to rear of Reynolds Close • Further investigation into assessing current maintenance programme for River Evenlode in order to improve flow rates in order to reduce future flooding. • A new telemetry gauging station (a method of recording river levels) at Shipton Bridge
OCC	<ul style="list-style-type: none"> • OCC have confirmed highway works will be carried out to raise the kerbs at Blenheim Cottages and the potential to increase the number of gullies at Little Brook meadow will be investigated.
WODC	<ul style="list-style-type: none"> • WODC felt that flooding to rear of 'Kelbrook' grounds due to insufficient culvert capacity at Cedar Lodge access track – caretaker of Cedar Lodge agreed to ensure future dredging of Trots Brook running through grounds. WODC to investigate claims of rubbish and effluent in upstream length of small stream.
TW	<ul style="list-style-type: none"> • Thames Water provided sewer plans for Church Street / Kelbrook area • TW state that all Wychwoods drain to Milton under Wychwood treatment works.

	<ul style="list-style-type: none"> • TW state there are issues in area with surface and river water entering foul sewer system via public and private covers and misconnections to the foul network. They also claim that many residents in area have connected roof/patio drainage to foul-only designed system. This causes the sewer system to respond to storm events • TW confirm that repairs to flooded Shipton-under-Wychwood sewage pumping station have been carried out. • TW fitted a new rising main at Shipton-under-Wychwood in 2005 • Modifications to sewage pumping station also undertaken. Pump stop/start levels adjusted, sump enlarged to allow more overflow into storm tank and another alarm was installed.
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4.5 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

In the Parish of Shipton-Under-Wychwood, WODC have record of 30 individual properties each claiming the Emergency Flood Relief Grant Aid. One of these properties is the Prebendal which includes a large number of residents. Therefore, the total number of residents affected by flooding throughout the village may be as high as 87.

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 ([Appendix 2](#))

Figure 1 (in Appendix 2) shows areas in Shipton-Under-Wychwood where flood damage occurred during 2007. The flooding can be broadly split into four areas being:

Area 1: Littlebrook Meadow

Area 2: Station Road (A361 at the Garage) through to High Street/Red Horse Corner incorporating Prebendal Drive

Area 3: Lower Church Street

Area 4: Blenheim Cottages

Further maps and plans are included in Appendix 2 as described below:

- **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% annual 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 of flooding – Flood Zone 2 (previously referred to as 1 in 1000 year flooding)**

A plan showing the 2008 Environment Agency 0.1% annual 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.

5.2 Area 1 – Little Brook Meadow

Area 1 identified as Little Brook Meadow has for the purposes of this report been split into two areas, being affected by different flood mechanisms. These are:

i/ Little Brook Meadow

ii/ Reynolds Close and Little Stocks

In 2007, 7 properties located in Little Brook Meadow claimed flood damage grants, parish records indicate that 9 properties flooded in Little Brook Meadow. A further 7 properties located to the east of Meadow Lane including Reynolds Close claimed flood damage grants.

All properties located in Little Brook Meadow reside in the 2007 Environment Agency 0.1% probability of flooding (1 in 1000 year Flood Zone) associated with the Little Stock Brook and its confluence with the River Evenlode.

Little Stocks Farm located on the northern bank of the Little Stock Brook is located in the 2007 Environment Agency 1% probability of flooding zone (1 in 100 year Flood Zone) associated with the Little Stock Brook and its confluence with the River Evenlode. All remaining properties to the east of Meadow Lane are located in the 2007 Environment Agency 0.1% probability of flooding (1 in 1000 year Flood Zone) associated with the River Evenlode.

The Little Stock Brook collects runoff from a largely rural upstream catchment of approximately 16.25km². This includes the Mill Brook catchment and covers Fifield and Milton-under-Wychwood villages. The watershed for the entire catchment extends to the A424.

The River Evenlode collects runoff from a large catchment of 179.6km² (calculated using the Flood Estimation Handbook). The catchment is mainly rural but includes some larger towns including Moreton-on-Marsh and Chipping Norton.

The causes of flooding in July 2007 at Little Brook Meadow are the following:

5.2.1 Blockage of Little Stock Brook

A tree had fallen into the Little Stock Brook in the fields above Little Brook Meadow, this obstructed flow and caused water to spill onto the surrounding farmland where it followed natural contours directing flow towards Little Brook Meadow where flooding occurred. Footbridges crossing Little Stock Brook in residents gardens potentially restricting flow during times of high flow.

5.2.2 Lack of maintenance of Drainage Ditch

Farmland to the west of Little Brook Meadow contains a series of land drains connected to the Little Stock Brook, one of which runs along the western boundary of Little Brook Meadow. This drainage ditch was not maintained contributing to flooding of Little Brook Meadow.

5.2.3 Inadequate surface water drainage

A lack of road gullies in Little Brook Meadow meant that surface water could not drain away.

Surface water drainage from Little Brook Meadow outfalls directly to Littlestock Brook. Flood levels in the Little Stock Brook prevented surface water from out falling to the watercourse which then backed up and caused surface water flooding in Little Brook Meadow.

5.2.4 River Evenlode

Properties located to the East of Meadow Lane in Reynolds Close are located in the floodplain of the River Evenlode and were flooded directly from the River Evenlode as part of this extreme flood event.

5.3 Area 2 – Station Road (A361 at the Garage) through to High Street/Red Horse Corner incorporating Prebendal Drive

Flooding in this area has primarily been attributed to the River Evenlode. The Prebendal care home is partially sited in the Environment Agency 1% probability of flooding zone (1 in 100 year Flood Zone) and was flooded in July 2007. Properties on Prebendal Drive, Station Road and Church Way were also flooded from both surface and foul water. Properties on Church Path also flooded from The River Evenlode as water came through gardens from Prebendal Drive.

The River Evenlode collects runoff from a large catchment of 179.6km² (calculated using FEH) which is mainly rural but includes some larger towns including Moreton-on-Marsh and Chipping Norton.

The cause of flooding at Station Road to Church Street is:

5.3.1 Direct flooding from Evenlode

Flood water from the River Evenlode gradually rose across the natural floodplain and extended from the petrol station in the east to the public house on the corner of High Street to the west.

Water flooded over the Shipton bridge parapets entering The Prebendal directly from the east and flowed around the stone wall located along Station Road entering the Prebendal via Prebendal Drive.

5.3.2 Sewer Flooding

The Thames Water pumping station located on the Shipton Bridge is unable to cope with peak volumes of surface water arriving from the village during peak storm periods. This leads to foul water flooding of some properties in Station Road to Church Street.

5.4 Area 3 – Lower Church Street

One property at the end of lower Church Street has claimed a flood damage grant although two properties were flooded.

The property is located in the Environment Agency 0.1% probability of flooding (1 in 1000 year flood Zone).

WODC are aware that other properties on lower Church Street have experienced surface water flooding. The cause of flooding at this location is due to a combination of the following:

5.4.1 Inadequate surface water drainage

Flooding was caused by excess surface water running down Church Street due to a lack of surface water gullies. At the end of Church Street is a stone wall boundary of the Prebendal. Surface water collected at this point unable to drain down a gully in the road outside Kelbrook causing surface water to back up in the road and flow in through the driveway of properties.

5.4.2 Sewer flooding

The Thames Water pumping station located opposite The Prebendal is unable to cope with large surface water volumes caused by surface water entering the foul sewer network during peak storm periods.

Sewage containing surface and foul water backed up and burst the private foul drain which links Kelbrook to the main foul sewer. The elevated surface water levels in lower Church Street transferred this wave of sewage into properties on Church Lane in a second flood event.

5.4.3 Culvert surcharging on Trots Brook

Trots brook is a small stream running along the rear of the Church Lane. The watercourse is culverted directly upstream of Kelbrook, at the Cedar Lodge driveway. The culvert became surcharged and water bypassed the culvert, flowing down Cedar Lodge drive to Church Lane.

5.4.4 River Evenlode

The Prebendal end of Church Street was flooded directly from flood waters associated with the River Evenlode.

5.5 Area 4 – Blenheim Cottages, Shipton Road

Three properties at Blenheim Cottages claimed flood damage grants. These are located outside of the Environment Agency Flood Zones.

The cause of flooding at these properties was:

5.5.1 Inadequate surface water drainage

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 I. 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										
Shipton Under Wychwood										
Version 1 – May 2008										
Option ref	Flood Overview	Description of work required					Key issues			Comments
		Options	Environment Agency For queries Tel 08708 506 506 Or email enquiries@environment-agency.gov.uk	Oxfordshire County Council Highways: 0845 310111 Or e-mail online@oxfordshire.gov.uk	Thames Water Enquiries: 08459 200 800	WODC Switchboard: 01993 861000 District Councillor: Hilary Biles: 01993 831 822	Private / Other Parish Council Chairman: Alan Vickers: 01993 830102	Effectiveness	Affects on adjacent land	
Area 1 – Little Brook Meadow										
	Blockage of Little Stock Brook through inadequate maintenance. Flows routed across fields behind Little Brook Meadow entering properties from west.									
A	Maintain Little Stock Brook, coppice willows to prevent debris from blocking the channel.	EA has removed fallen tree from Little Stock Brook above Little Brook Meadow EA to carry out future channel maintenance			WODC to provide a co-ordination role		Future maintenance will ensure maximum channel capacity	Reduced flood flow entering surrounding farm land	Up to £5,000	
B	Flood- resilient measures on properties.					Homeowners to provide protection against flooding to their properties e.g. flood boards, flood proofing of exterior walls, sand bags.	Only effective if flood boards are put in place before water levels rise.	None	Up to £5,000	Sand bags are still evident at Little Brook Meadow Homeowners have not been approached regarding further resilience measures
	Lack of maintenance of field drainage ditch running along the western boundary of Little Brook Meadow									
C	Clear out and maintain land drainage ditch locate to the west of Little Brook Meadow				WODC to provide a co-ordination role	Riparian owner has cleared ditch Continued maintenance of ditch required.	Reduction in flood risk from overland flow.	Improved land drainage to surrounding farmland	Up to £5,000	
	Surface water drainage system blocked due to high water levels in stream at drain outfall point, causing surface water flooding from road areas									
D	Increase number of surface water gullies at Little Brook Meadow to aid drainage during flood events, especially in side cul-de-sac where there are none in place. Fit flapped outfall to prevent backing up of water from Little Stock Brook.		OCC highways department to sink new gullies in Little Brook Meadow and investigate fitting a flapped outfall to Little Stock Brook.		WODC to provide a co-ordination role		Will prevent backflow of river water into local surface water drainage network New gullies allow drainage of street	None	£5,000 to £10,000	OCC have agreed to provide new gullies at Little Brook Meadow.

Parish Flood Options										
Shipton Under Wychwood										
Version 1 – May 2008										
Option ref	Flood Overview	Description of work required					Key issues			Comments
	Options	Environment Agency For queries Tel 08708 506 506 Or email enquiries@environment- agency.gov.uk	Oxfordshire County Council Highways: 0845 310111 Or e-mail online@oxfordshire.go v.uk	Thames Water Enquiries: 08459 200 800	WODC Switchboard: 01993 861000 District Councillor: Hilary Biles: 01993 831 822	Private / Other Parish Council Chairman: Alan Vickers: 01993 830102	Effectiveness	Affects on adjacent land	Cost	
Area 1 – Little Brook Meadow (cont...)										
	Direct flooding of properties to the east of Meadow Lane due to flooding of The River Evenlode.									
E	Maintain channel and banks	EA to carry out essential channel maintenance			WODC to provide a co-ordination role		Will reduce channel roughness, improve flow rate and reduce water levels during lower order flood events	None	£5,000 to £20,000	EA have agreed to upgrade the River Evenlode to "High" priority on their maintenance schedule
F	Flood- resilient measures on properties.				WODC to provide a co-ordination role where required	Homeowners to provide protection against flooding to their properties e.g. flood boards, flood proofing of exterior walls, sand bags/ aquasacs	Only effective if flood boards are put in place before water levels rise.	None	up to £5,000	Homeowners have not been approached regarding flood resilience measures
G	Construct private owner bund	EA to advise on private flood bund location/ land drainage consent/ flood compensation				Private owners to fund own flood defence	Will prevent floods inundating property	Flood compensation may be required	£5,000 feasibility £50,000 construction	Homeowners/EA have not been approached regarding flood resilience measures
H	Improve flood warnings to residents	EA to improve flood warning dissemination / raise awareness of flood warning scheme			WODC to provide a co-ordination role where required		Improve sign up to EA automated flood warning system Advanced flood warning reduces damage to property/risk to life	None	£5,000 to £20,000	EA are aware that they need to raise awareness of flood warning measures locally and nationally
Area 2 – Station Road (A361 at the Garage) through to High Street/Red Horse Corner incorporating Prebendal Drive										
	Direct flooding of property in Station Road to Church Street including the Prebendal care home located on floodplain of the River Evenlode									
A	EA to maintain River Evenlode channel downstream of Shipton Bridge.	EA to carry out essential channel maintenance on the River Evenlode downstream of Shipton Bridge	The A361 on Shipton Bridge needs re-surfacing as flood water has permeated the surface and the road is cracked. Scarping on the foundations of the bridge also need work.		WODC to provide a co-ordination role where required		Will reduce channel roughness, improve flow rate and reduce water levels during lower order flood events		£5,000 to £20,000	EA are planning desilting works of River Evenlode at Shipton in Summer 2008 (EA flood review doc)
B	Improve flood warnings to residents	EA to improve flood warning dissemination / raise awareness of flood warning scheme			WODC to provide a co-ordination role where required		Improve sign up to EA automated flood warning system Advanced flood warning reduces damage to property/risk to life	None	£5,000 to £20,000	EA are aware that they need to raise awareness of flood warning measures locally and nationally

Parish Flood Options										
Shipton Under Wychwood										
Version 1 – May 2008										
Option ref	Flood Overview	Description of work required					Key issues			Comments
Options		Environment Agency For queries Tel 08708 506 506 Or email enquiries@environment- agency.gov.uk	Oxfordshire County Council Highways: 0845 310111 Or e-mail online@oxfordshire.go v.uk	Thames Water Enquiries: 08459 200 800	WODC Switchboard: 01993 861000 District Councillor: Hilary Biles: 01993 831 822	Private / Other Parish Council Chairman: Alan Vickers: 01993 830102	Effectiveness	Affects on adjacent land	Cost	
Area 2 – Station Road (A361 at the Garage) through to High Street/Red Horse Corner incorporating Prebendal Drive (cont...)										
C	Improve operation of flood arches downstream of Station road bridge by re-grading the right bank to channel flows away from The Prebendal	EA to re-profile right bank downstream of flood arches					Will channel right bank floodplain flows downstream of bridge away from Prebendal - during lower return period events	Will reduce flooding of Prebendal grounds as flood water will be directed back to main river channel	£5,000 to £20,000	EA are aware that they need to raise awareness of flood warning measures locally and nationally
D	Flood- resilient measures on properties.				WODC to provide a co-ordination role where required	Homeowners to provide protection against flooding to their properties e.g. flood boards, flood proofing of exterior walls, sand bags.	Only effective if flood boards are put in place before water levels rise.	None	Up to £50,000	Properties in Area 2 are investigating the use of flood resilient measures including a flood gate on Prebendal Drive.
	Failure of Thames Water pumping station Storm water from properties in Shipton-under-wychwood are connected to the pumping station located on Shipton Bridge. During times of flood the pumping station fails causing flooding of foul water of the Shipton Road and the Prebendal									
E	Investigate potential of upgrading pumping station and existing network connections.			TW to investigate potential of upgrading pump to larger capacity Modelling to assess feasible improvement in system capacity/pipe upsizing	WODC to provide a co-ordination role		Larger pump could discharge more flow to STW Large diameter pipes able to transfer more flow	None	£5,000 to £20,000 feasibility	TW have raised pumping station but have not provided comment on the capacity.
F	Investigate the potential of building a bund to protect the Prebendal and houses on Prebendal Drive	EA to provide design advice for bund.			WODC to provide a co-ordination role		Incorporation of a bund as proposed at Ascott Under Wychwood would protect property from flooding	Increased flood risk to adjacent property	Up to £50,000	EA are not keen on this idea due to risk to residents if the bund were to fail.

Parish Flood Options										
Shipton Under Wychwood										
Version 1 – May 2008										
Option ref	Flood Overview	Description of work required					Key issues			Comments
	Options	Environment Agency For queries Tel 08708 506 506 Or email enquiries@environment-agency.gov.uk	Oxfordshire County Council Highways: 0845 310111 Or e-mail online@oxfordshire.gov.uk	Thames Water Enquiries: 08459 200 800	WODC Switchboard: 01993 861000 Parish Council Chairman: Alan Vickers: 01993 830102 District Councillor: Hilary Biles: 01993 831 822	Private	Effectiveness	Affects on adjacent land	Cost	
Area 3 – Lower Church Street										
	Surface water flooding down Church Street from Shipton road area, water levels rise at cul-de-sac end due to damming effect of stone wall.									
A	Improve surface water drainage on Church Street		OCC highways department to increase surface water gullies.		WODC to provide a co-ordination role		Will prevent surface water flooding of properties on Church Street. Maintenance strategy must be agreed with OCC.	None	£5,000 to £20,000	
B	Investigate outfall from gulley located at end of Church Street and clear it out if required.		OCC to investigate outfall and condition of drain located at the end of Church Street				Would prevent build up of surface water at bottom of Church Street as per July 2007		Up to £5,000	
Failure of sewage pump station caused backflow of sewage to flood properties										
C	Investigate foul/storm water misconnections connections			TW to investigate misconnections in area			Prevent overloading of Church Street foul sewer	none	£5,000 to £10,000	TW not currently planning any work at this location
D	Individual properties to fit anti-backflow valves on to foul drains					Kelbrook residents fitted non-return valve to private foul	Prevent sewage ingress to properties		Up to £5,000	
Area 4 – Blenheim Cottages										
	Surface run-off from fields on Shipton Down flows down Shipton Road and enters properties at dropped kerbs.									
A	Replace dropped kerbs with full kerbs – fit with concrete ramps		OCC highways department to investigate options						£5,000 to £20,000	OCC have budget to raise kerbs at Blenheim Cottages
B	Flood- resilient measures on properties.				WODC to provide a co-ordination role where required	Homeowners to provide protection against flooding to their properties e.g. flood boards, flood proofing of exterior walls, sand bags.	Only effective if flood boards are put in place before water levels rise.	None	Up to £5,000	Homeowners have not been approached regarding further resilience measures

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 Area 1 – Little Brook Meadow

7.1.1 Maintenance

The following on-going maintenance is recommended:

- Little Stock Brook watercourse running behind the properties is highlighted by the EA as main river. Therefore, the EA need to regularly maintain the watercourse to prevent future obstructions and retain optimum flow capacity (Option A).
- The drainage ditch behind Little Brook Meadow requires ongoing maintenance by the riparian owner (Option C).
- EA to carry out essential channel maintenance on River Evenlode at Shipton-under-Wychwood. EA are planning de-silting works of the Evenlode in summer 2008 (Option E).

7.1.2 Flood defence improvement schemes

The following flood defence improvement schemes are recommended:

Immediate (under 1 year)

- Option B/F – Flood proofing of individual properties by residents

Mid-Term (under 1-2 years)

- Option D – OCC to increase surface water drainage in Little Brook Meadow and investigate the fitting of a flapped valve to existing highway drainage outfall to Little Stock Brook.
- Option G – Residents to fund/construct private flood defence bund
- Option H - EA to improve flood warning dissemination and to install a flood gauge at Moreton in Marsh to improve forecasting ability.

7.2 Area 2 – Station Road (A361 at the Garage) through to High Street/Red Horse Corner incorporating Prebendal Drive

7.2.1 Maintenance

The following on-going maintenance is recommended:

- EA to maintain River Evenlode downstream of Shipton Bridge. The EA are planning de-silting works of the River Evenlode at Shipton to remove vegetation and build up of gravel in summer 2008. Future maintenance should ensure maximum channel capacity (Option A)

7.2.2 Flood defence improvement scheme

Immediate (under 1 year)

- Option D – Flood resilience. Home owners are to provide protection against flooding to their properties.

Mid-Term (under 1-2 years)

- Option C – EA to improve operation of flood arches downstream of bridge by re-grading of right bank to guide low-order flood flows away from The Prebendal.
- Option B – EA to improve/provide flood warning service to community, focus on vulnerable groups. EA are to provide a new river level gauge at Moreton-in-Marsh to improve flood forecasting ability for Shipton-under-Wychwood.

- Option E – TW to investigate potential of upgrading pumping station to larger capacity and upgrading the existing network connections and sewer capacity. The pumping station should also be flood proofed.
- Option F – EA to investigate the incorporation of a bund to protect the Prebendal and houses on Prebendal Drive.

7.3 Area 3 – Lower Church Street

7.3.1 Maintenance

The following on-going maintenance is recommended:

- Surface water drainage should be regularly cleared and maintained by OCC highways (Option A)

7.3.2 Flood defence improvement scheme

Immediate (under 1 year)

- Option D – Church Street residents to fit anti-backflow valves to private foul drain links

Mid-Term (under 1-2 years)

- Option A – OCC to improve surface water drainage along Church Street to include investigation of outfall and condition of drain located at the end of Church Street.
- Option B – OCC to investigate outfall from gully located at end of Church Street and jet if required.
- Option C - TW to investigate misconnections in foul network

7.4 Area 4 – Blenheim Cottages

7.4.2 Maintenance

The following on-going maintenance is recommended:

- Surface water drainage should be regularly cleared and maintained by OCC highways.

Immediate (under 1 year)

- Option B – Blenheim Cottage residents to adopt individual flood protection measures to prevent surface water ingress into properties

Mid-Term (under 1-2 years)

- Option A – OCC highways to raise kerbs and investigate improvements to surface water drainage on Sipton Road.

Appendix I: Photographs

Area I Little Brook Meadow



Little Stock
Brook

Cleared ditch behind Little Brook Meadow looking towards Little Stock Brook. Water flowed across this farm land and into properties due to a fallen tree blocking the Little Stock Brook.



Cleared ditch behind Little Brook Meadow

Area I Little Brook Meadow (cont...)



Properties at Little Brook Meadow adjacent to Little Stock Brook looking upstream from Meadow Lane Bridge.



Photo taken from the Meadow Lane bridge illustrates lack of stream maintenance and coppicing of willows which may have led to the blockage of the Little Stock Brook a few hundred metres upstream.

Area 2 Station Road (A361 at the Garage) through to High Street/Red Horse Corner incorporating Prebendal Drive



Thames Water Pumping Station

The pumping station is located on the northern side of Station road adjacent to the River Evenlode.

Flood relief culverts



River Evenlode looking upstream to Station Road Bridge. This photo shows the main channel and two flood relief culverts.

**Area 2 Station Road (A361 at the Garage) through to High Street/Red Horse Corner
incorporating Prebendal Drive (cont...)**



Damage to Station Road Bridge caused by flood waters from the River Evenlode



Damage caused to Station Road Bridge by floodwaters from the River Evenlode

Area 3 Lower Church Street



Gully located at end of Church Street at Prebendal Wall. Outfall location to be defined.



Looking away from Prebendal Wall back up Church Street

Area 4 Blenheim Cottages



Dropped
kerbs to
be raised