



WEST OXFORDSHIRE
DISTRICT COUNCIL

www.westoxon.gov.uk

Final Report: 2007 Summer Floods



Contents

FOREWORD & SUMMARY	3	8. TERMS OF REFERENCE: 4	28
1 EXECUTIVE SUMMARY	5	THE ROLE OF COUNCIL AS A LANDOWNER	28
The Councils role in the recovery phase	5	Ditch/water course clearance	28
Proactive flood alleviation and mitigation	5	9. TERMS OF REFERENCE: 5	30
The role of the Council as a planning authority	5	COMMUNICATING, LOBBYING AND CONSULTING	30
The role of Council as a landowner	6	Communication after the event	30
Communicating, lobbying and consulting	6	Lobbying activities	31
Funding	7	10. FUNDING	32
Update on the actions outlined in the Council's Interim Flooding Report	8	West Oxfordshire District Council expenditure	32
2 INTRODUCTION	16	Planned funded work for Year 1 (2008/09)	32
Purpose of the report	16	Potential works for Year 2 (2009/10)	33
3. FLOODING - WHO DOES WHAT	18	Proposed major schemes in conjunction with the Environment Agency	36
4. TERMS OF REFERENCE	19	Proposed minor schemes in conjunction with Oxfordshire County Council	40
5. TERMS OF REFERENCE: 1	20	Planned work for Year 1 (2008/09)	40
2 THE COUNCILS ROLE IN THE RECOVERY PHASE	20	Proposed work for Year 2 (2009/10)	40
Distribution of Flood Grants	20	Legal	40
Production of Parish Flood Reports	20	11. GLOSSARY OF TERMS	41
Areas covered by the Parish Flood Reports	24	APPENDIX I: ENVIRONMENT AGENCY MAP; ACTIONS TO REDUCE FLOOD RISKS IN WITNEY	43
6. TERMS OF REFERENCE: 2	25		
PROACTIVE FLOOD ALLEVIATION AND MITIGATION	25		
Ditch/water course clearance	25		
Neighbourhood Sandbag Centres (NSC)	25		
7. TERMS OF REFERENCE: 3	27		
THE ROLE OF THE COUNCIL AS A PLANNING AUTHORITY	27		
The production of a Strategic Flood Risk Assessment	27		

This report has been produced in-house by the Council's communications team and can be made available in a larger print size, electronically or in other formats.

Tel: 01993 861000

Email: communications@westoxon.gov.uk

In January 2008 we presented our “Interim Report - 2007 Summer Floods”.

This report was the initial stage of the Council’s strategic flood review and essentially it looked into why the floods happened in July 2007 and the aftermath. It outlined the emergency response, the recovery, and what is being done to prevent future flooding along with further steps to be implemented.

Since then, this Council has used all the resources available to deliver a platform of Town and Parish based Flood Reports which detail the key issues in each location with regard to the 2007 flooding. The reports have been developed in consultation with local people; those who were directly affected; local landowners; the Town and Parish Councils; Oxfordshire County Council; Thames Water; and last but not least, the Environment Agency.

These reports will now form the basis of a programme of further work to ensure that ditches are maintained, landowners take on their responsibilities, resources are provided locally, self help is encouraged and long term solutions are developed with the appropriate people and organisations to ensure that we are best prepared for the future.

Flooding is an issue in this area. We have a number of rivers that run through the district and the landscape is such that surface water run off under extreme weather conditions is an issue.

Our Final Report is a summary of the actions we have taken to date and most importantly a programme for the future. We have not stopped here, but recognise the ongoing work that is needed to help to protect our homes and businesses in West Oxfordshire.

We look forward to continuing the good working relationships that we have with all the people and organisations that I have mentioned, and we also look for the Government to provide the funding to support the improvements that are much needed.

The work we have carried out over the past 12 months demonstrates that the District Council has acted in a responsible manner to ensure that we have the best possible plans in place to deal with similar events in the future and make sure we

review the lessons learnt from the previous event. The evidence shows that our approach was, for the most part, proportionate, timely and publicly appreciated. But it is not simply the District Council’s responsibility – other agencies, including property owners, must also consider their response and their responsibilities.

We have made sure our inquiry has been rigorous in seeking out the views not only of professional bodies but also comments and opinions from many members of the public too. The Town and Parish Flood Reports have now been completed but we continue to consult those affected and will update the reports as work continues.

While in many ways we performed well, we cannot claim to have been perfect in our response. The lessons learnt will not be ignored but used to refine and enhance the way we respond to emergencies in future. Our reports and findings have been passed on to our local MP, David Cameron, to the Environment Agency and to other relevant public bodies. We will make the changes and improvements we need to and encourage other agencies, people and organisations, including the Government, to do the same.



Barry Norton
Leader of the Council

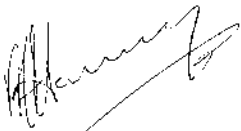
Cabinet Member for the Environment

We welcome this final report which summarises the individual Town and Parish Flood Reports which can be viewed on the District Council's website. These have been produced through hard work, attention to detail and listening to those who had to deal with the flooding in their own homes and businesses. The trauma of these events is something which most of us, fortunately, will never have to experience and which we can only imagine.

I would like to thank all who have contributed to producing the reports, their cooperation in this process has been invaluable and I can assure them that the work does not finish here.

We have made bids through the Environment Agency to tackle some of the key areas in the district and will continue to make those bids in future years and lobby Government and other agencies to provide the much needed funding.

As the Cabinet Member for Environment, I will continue to ensure the officers of this Council deliver and further develop the programmes of work that come from those reports. This will include continuing to reach partnership agreements with the Environment Agency; Thames Water; Oxfordshire County Council; town and parish councils; and private land owners for the benefit of the whole community throughout West Oxfordshire.



4

David Harvey
Cabinet Member for the Environment



Cllr David Harvey with the Council's Ditch Clearing Team at Madley Park, Witney.

I. Executive Summary

The Councils role in the recovery phase

Distribution of flood grants

West Oxfordshire District Council distributed Flood Relief Funding to the owners of flooded properties following the 2007 incident as follows:

- 1137 grants at £250 - £284,250
- 301 hardship grants totalling £155,050

The Council also administered the Red Cross grants for Oxfordshire. A total of £141,000 Red Cross Grant has been paid to 69 West Oxfordshire households. This scheme has now closed.

Production of Parish Flood Reports

The Council has produced reports for each of the Parishes (49 in total) affected in 2007 identifying options for maintenance and or mitigation work. This information is assisting with the prioritisation, co-ordination and monitoring of future flood alleviation projects.

All the Parish Flood reports are available on the Council website via the link below and contain location specific information and supporting evidence.

www.westoxon.gov.uk/floodreports

A substantial investment in flood defence has already been made in our District by the different agencies. West Oxfordshire District Council has taken on the role of co-ordinator to ensure as far as possible the completion of recommended schemes by the other parties' responsible and services such as the confirmation of land ownership, enforcement of riparian owner's responsibilities and surveying.

Proactive flood alleviation and mitigation

Ditch / water course clearance

The ditch clearing process adopted by the Council can be divided into a number of phases:

- Identification of problem areas
- Site surveys and mapping
- Notifying The Environment Agency of proposed clearance works under Section 26 of Land Drainage Act 1991
- Carrying out land searches and / or local enquiries to ascertain ownership of land adjacent to watercourses.
- Contacting and opening dialogue with riparian owners and pursuing maintenance schemes.

Neighbourhood Sandbag Centres (NSC)

In order to make the process of acquiring sandbags in an emergency easier for residents across the District, it is proposed that in future sand and dry bags will be made available locally from Neighbourhood Sandbag Centres (NSC's) and £25,000 has been set aside for their provision.

This will help West Oxfordshire District Council to support communities across the district 'at risk' of flooding and in particular individuals who are elderly and or disabled.

The role of the Council as a planning authority

The production of a Strategic Flood Risk Assessment (SFRA) - 'Cherwell and West Oxfordshire Level 1 Strategic Flood Risk Assessment, including Minerals and Waste Site Allocations'

The SFRA will soon be published as part of the evidence base for the Local Development Framework and will be available on the Council's website. It includes an overview of flood risk in West Oxfordshire (Chapter 9), an initial assessment of potential development pressures in some of the main settlements (Chapter 10), an initial assessment of possible minerals and waste development (Chapter 11), guidance on undertaking site specific flood risk assessments (Chapter 13) and options for flood risk management, including the use of Sustainable Drainage Systems.

Some of the main issues highlighted in the report include:

- In addition to fluvial flooding, the SFRA has looked at flooding from the land (surface water), from groundwater, from sewers and drains, and from manmade or artificial sources.
- Climate change will increase the pressure on existing sewerage systems effectively reducing their capacity, potentially leading to more frequent flooding.
- The use of sustainable drainage systems is becoming more important in addition to the more usual attenuation and infiltration systems, and providing more 'green spaces' within the urban environment. Groundwater Vulnerability data and permeability data has been mapped as part of the study.
- The efficient operation of channels and culverts which requires maintenance by the land owners which include the Environment Agency, Local Authorities and riparian owners.
- Flood defences cannot be built to protect everything in West Oxfordshire. The capacity of the floodplain should be maximised as the floodplain is the best natural defence to combat flooding. There should be managed flooding in some areas and the prevention of development that compromises the capacity of the floodplain to retain water.

The role of council as a landowner

Ditch / water course clearance

The Council has been pro-active over the past 12 months updating records of all water courses in order to ensure adequate maintenance has been and will be undertaken in the future by the appropriate owners.

The Council has reviewed its own maintenance programme and is regularly liaising with local Parish Councils in order to identify the owners of private water courses to establish their own maintenance programmes.

Communicating, lobbying and consulting

Communication after the event

Communications continue to play a key role in keeping the public informed of on-going flood related work, lobbying activities and promoting self help. This has been done as follows:

- A comprehensive flooding information section has been created on the website. There are also useful web links to other websites such as the Environment Agency, Oxfordshire County Council and the Met Office.
- The Council newsletters feature flooding news and self help information.
- Information booklets have been created and distributed to all affected areas and to businesses.
- The Council has hosted two Flood Protection Product Fairs (November 2007 and October 2008) with the National Flood Forum and Environment Agency.
- Four Flood Roadshows were held in community locations during September 2008.
- Meetings have been held with individuals, resident groups, parish councils, Oxfordshire County Council, the Environment Agency, Thames Water and other agencies.
- Councillors and staff have met regularly with Witney MP, David Cameron.
- The Council has lobbied government for support. Hilary Benn MP, the Government Minister for Environment, Food and Rural Affairs visited West Oxfordshire as did Peter Cragg from GOSE.
- The Council contributed to the Pitt Review report and members of the Sir Michael Pitt's team visited West Oxfordshire.
- The media have been kept regularly informed of ongoing activities. Over 130 media enquiries related to flooding have been received and the Communications Team has worked with TV news teams on reports and filming in the District.

Lobbying activities

West Oxfordshire District Council only has limited powers to ensure that the recommendations of the Parish Flood Reports are implemented. Senior Officers have been involved in the lobbying of MP's, Government Bodies and the agencies responsible for flood related issues since the events of July 2007.

West Oxfordshire District Council has been involved in high level meetings including a presentation to the European Parliament Budgeting Committee at Brussels in February 2008; representations to Sir Michael Pitt during the Recovery Team Visit in March 2008 and the Westminster Debate in May 2008.

The Councillors themselves have played a key role in working closely with their local residents to highlight and lobby on key issues such as the increased cost of insurance premiums and policy excesses, resulting in pressure being placed on the ABI (Association of British Insurers) and the Government.

We have also supported the efforts of local 'action' groups by attending their meetings and providing information and assistance as far as possible.

A trial has been started with a small number of local residents in Witney being given access to newly installed river telemetry data. If successful it will be made available to all residents to give them improved warnings of changes in river levels.

Funding

West Oxfordshire District Council expenditure

The proposed expenditure for the years 2008 to 2010 are shown in the table on page 32.

Proposed major schemes in conjunction with the Environment Agency

The Council has recently submitted a bid for DEFRA Funding which is administered by the Environment Agency, the outcomes of which will not be known until the end of the calendar year.

The total value of the bid is £890,000.



Leader of the Council, Cllr Barry Norton meets residents who have been flooded in Kelmescott.

Update on the actions outlined in the Council's Interim Flooding Report

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

Reference	Actions Details	Target date	Pitt Report recommendations
1/TOR I	Review and update the equipment for bronze control, including identifying existing groups of offices where an emergency centre can be readily established.	April 2008	RECOMMENDATION 92: Local Resilience Forums should evaluate and share lessons from both the response and recovery phases to inform their planning for future emergencies.
2/TOR I	Bronze command procedure to be updated to recognise the need for ensuring shift rotas are in place in the early stages of an emergency.	February 2008	
3/TOR I	Develop arrangements with suppliers for the rapid supply of specialist vehicles such as a 4 x 4	February 2008	
4/TOR I	Ensure that residential care establishments have business continuity plans (BCP) that are fit for purpose	April 2008	
5/TOR I	Approaches need to be made to DEFRA and EA with regard to improving their predictive capability. ie. increased telemetry systems	January 2008	
6/TOR I	Consider producing a revised warning system that identifies a higher category of risk that is only issued in exceptional circumstances	Summer 2008	
7/TOR I	Develop self help systems within local communities. This will include having parish emergency plans in place and the provision of local resource centres such as sand bag facilities.	April 2008	RECOMMENDATION 76: Local authorities should coordinate a systematic programme of community engagement in their area during the recovery phase. RECOMMENDATION 77: National and local Recovery Co-ordinating Groups should be established from the outset of major emergencies and in due course there should be formal handover from the crisis machinery.
8/TOR I	Training and development for elected members covering emergencies.	Summer 2008	

Oxfordshire County Council recommendations	Update
<p>Oxfordshire County Council Cabinet are RECOMMENDED to; with its partners, instigate a countywide programme of public education in respect of flooding, including:</p> <ul style="list-style-type: none"> • Riparian owners' rights and responsibilities. • Advising householders and businesses how to make their homes more resilient and flood resistant. • Encourage businesses and householders to have adequate insurance. • Advising businesses to prepare emergency plans, including what to do in the event of flooding. • Information for Parish Councils. • Explanation of the flood warnings system. • Encourage local communities to form flood forums. • Encourage town and parish councils to develop or update their own emergency plans, copies of which should be forwarded to the Emergency Planning Unit. 	<p>The Council's Emergency Plan has been reviewed and now includes the locations of assessment centres and humanitarian assistance centres.</p> <p>Shift rotas have been adopted as part of the Council's Emergency Plan to ensure adequate resources are available.</p> <p>Arrangements have been made with local suppliers to ensure there is a supply of suitable vehicles at short notice.</p> <p>Oxfordshire County Council (OCC) to ensure BCP arrangements are in place.</p> <p>A trial has been set up by the EA using newly installed telemetry systems on the River Evenlode and parts of the River Windrush which give Council Officers and members of WWFAG access to the data.</p>
<ul style="list-style-type: none"> • Cooperate with the Environment Agency, Thames Water and other relevant bodies to build up a register of drainage assets, as recommended in the Pitt Review. • Work in partnership with the district councils, city council and other relevant partners to map surface water systems and distribute copies to parish councils. • Encourage the construction and implementation of Surface Water Management Plans. • Lobby the Government to make Surface Water Management Plans statutory in areas of critical drainage. • Support the Government's proposals to remove the right to connect to the sewerage system. • Support the Government and local planning authorities in promoting the use of permeable materials on all new developments and redevelopments, particularly within the floodplain. • Promote the use of Sustainable Urban Drainage Systems (SUDS) and other permeable materials on all future local authority construction projects. 	<p>A bid has also been made to the EA which if accepted will fund hydrological studies / modelling on key parts of the Windrush. This combined with work programmed for 2009/10 on the upper Thames area will then provide the EA / DEFRA with the data required to install effective telemetry systems.</p> <p>Parish plans have been produced in Ascott under Wychwood and Bampton. Community Sand bag points are located in Bampton and Charlbury.</p> <p>Three villages with key contacts have been established for emergency supply of sand to the village greens, at short notice for self help.</p>
	<p>A joint event with OCC was held on October 7th where elected members were given presentation / training re; emergency planning etc.</p>

Reference	Actions Details	Target date	Pitt Report recommendations
9/TOR 1	The emergency plan specifically addresses the need to keep in regular contact with elected members	February 2008	
10/TOR 1	That the Emergency Plan recognises the role the elected members can play in emergency and recovery situations	February 2008	
11/TOR 1	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.	Ongoing	<p>RECOMMENDATION 41: Upper tier local authorities should be the lead responders in relation to multi-agency planning for severe weather emergencies at the local level and for triggering multi-agency arrangements in response to severe weather warnings and local impact assessments.</p> <p>RECOMMENDATION 75: For emergencies spanning more than a single local authority area, Government Offices should ensure coherence and coordination, if necessary, between recovery operations.</p>
12 TOR 1	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.	April 2008	
1/TOR 2	Create a guide for cleanup operations, which will then form part of the emergency plan for future events and is published on the Council's website	Oct 2008	

Oxfordshire County Council recommendations	Update
Continued from previous page.	<p>The details of elected members are available via the Council's internal network and web site. Reference to this is now contained in the Council's Emergency Plan.</p> <p>Reference to role that elected members can play in emergency and recovery situations is now contained in the Council's Emergency Plan.</p>
<ul style="list-style-type: none"> • Ensure that watercourses that are the responsibility of the local authority are appropriately maintained. • In partnership with the Environment Agency, undertake a survey of all sluice gates in the county to ensure that they are fully functional and that their ownership and any accompanying responsibilities are clarified. • Undertake, in partnership with relevant organisations, the enforcement of riparian owners' responsibilities. 	<p>Details regarding the 'command structure' and how information is shared between the different agencies are contained in Memorandum (Agreement) in OCC Emergency Plan, which is currently being reviewed.</p>
<ul style="list-style-type: none"> • Lobby the Environment Agency and Central Government to make the Flood Warnings Direct Service an opt-out service as opposed to an opt-in service. • Resist, except in exceptional circumstances (PPS25), all development on Oxfordshire's floodplains. • Consider the effects of mineral workings on flooding. • Develop a protocol with the police, district councils and city council for delegating the authority to close roads during flood events. 	<p>A Flood Fair held in November 2007 was well attended by over 1,000 residents. Four Parish Flood Report 'Road-Shows' held in September 2008 aimed at encouraging residents to discuss the reports with the various agencies.</p> <p>Whilst the EA have updated their Flood Alert System, until the work has been completed in the Upper Thames area, large areas of West Oxfordshire are not covered.</p>
<ul style="list-style-type: none"> • Seek the advice of Thames Water and the Environment Agency on all planning applications. • Lobby the Government to provide further funding to rural counties such as Oxfordshire for flood defence schemes. 	<p>The Council and EA have now produced guides that are available on their websites. Discussions with OCC are planned in the future to review the current arrangements as part of review (I I/TOR I)</p>

Reference	Actions Details	Target date	Pitt Report recommendations
2/ TOR 2	Provide clear information to residents and businesses about what type of waste we can collect and how it will be collected.	April 2008	<p>RECOMMENDATION 13: Local authorities, in discharging their responsibilities under the Civil Contingencies Act 2004 to promote business continuity, should encourage the take-up of property flood resistance and resilience by businesses.</p> <p>RECOMMENDATION 85: Local Recovery Coordination Groups should make early recommendations to elected local authority members about longer-term regeneration and economic development opportunities.</p>
3/ TOR 2	Explanations to residents of our need for bulky waste to be placed on the roadside for collection.	February 2008	RECOMMENDATION 78: Aims and objectives for the recovery phase should be agreed at the outset by
4/ TOR 2	Agree a timescale for the cleanup operation that gives people time to have bulky waste removed, to enable the free collection service to be correctly applied.	February 2008	Recovery Coordinating Groups to provide focus and enable orderly transition into mainstream programmes when multi-agency coordination of recovery is no longer required.
5/ TOR 2	Create an Operational Flood Plan	April 2008	<p>RECOMMENDATION 80: All central government guidance should be updated to reflect the new arrangements for recovery and Local Resilience Forums should plan, train and exercise on this basis.</p> <p>RECOMMENDATION 81: There should be an agreed framework, including definitions and timescales, for local central recovery reporting.</p> <p>RECOMMENDATION 83: Local authorities should continue to make arrangements to bear the cost of recovery for all but the most exceptional emergencies, and should revisit their reserves and insurance arrangements in light of last summer's floods.</p>

Oxfordshire County Council recommendations	Update
<ul style="list-style-type: none"> • Require the Oxfordshire County Council representative on the Flooding Long Term Issues Group (FLTI Group) to report to the Environment and Economy Scrutiny Committee on a six monthly basis. • Formalise the Flooding Long Term Issues Group in order to ensure a coordinated approach to flood management in Oxfordshire. • Support the appointment of a dedicated officer to support the Flooding Long Term Issues Group, funded jointly by all the partners represented on the group. • Urge the Government to ensure equitable distribution of compensation from the European Union and honour the pledges that they have made. • Insist when negotiating contracts for care homes that the providers have business continuity plans that address the issue of flooding and make clear where the financial burden lies when residents have to be evacuated. 	<p data-bbox="847 277 1436 920">Information was contained in the Council's A to Z guide to residents and in December 2007 Council publication 'Creating Futures'.</p> <p data-bbox="847 920 1436 1122">Arrangements to collect bulky waste items such as carpets and sofas etc will be made if and when required in the event of future flooding.</p>
<p data-bbox="0 1122 847 1211">Oxfordshire District Councils and the City Council are RECOMMENDED to:</p> <ul style="list-style-type: none"> • Promote the use of Sustainable Urban Drainage Systems (SUDS) and other permeable materials on all future construction projects. • Ensure that watercourses that are the responsibility of the local authority are appropriately maintained. • When concluding a legal agreement for new developments, consider whether Section 106 (S106) monies should be sought to increase drainage capacity. • Undertake, in partnership with relevant organisations, enforcement of riparian owners responsibilities. • Seek the advice of Thames Water and the Environment Agency on all planning applications. • Resist, except in exceptional circumstances (PPS25), all development on Oxfordshire's floodplains. 	<p data-bbox="847 1122 1436 1843">The Council's Emergency Plan updated to take account of operationally related issues including 24/7 call handling and revised approach to sand bag provision across the district.</p>

Reference	Actions Details	Target date	Pitt Report recommendations
1/TOR 3	Update the maintenance plans for ditches and clearing/repairing culverts with specific regard to new mapping information obtained during the parish surveys.	April 2008	RECOMMENDATION 16: Local authorities should collate and map the main flood risk management and drainage assets (over and underground), including a record of their ownership and condition. RECOMMENDATION 25: The Environment Agency should maintain its existing risk based approach to levels of maintenance and this should be supported by published schedules of works for each local authority area.
2/ TOR 3	Create an enforcement policy on land drainage in relation to riparian owners, and deliver a promotional campaign informing them of their responsibilities for maintenance.	Oct 2008	
3/ TOR 3	Provision of a permanent Engineer post to carry out this work	April 2008	RECOMMENDATION 19: Local authorities should assess and, if appropriate, enhance their technical capabilities to deliver a wide range of responsibilities in relation to local flood risk management.
4/ TOR 3	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)	Ongoing	RECOMMENDATION 18: Local Surface Water Management Plans, as set out under PPS25 and coordinated by local authorities, should provide the basis for managing all local flood risk.
5/ TOR 3	Produce the Parish Flood Defence Reports. These reports will identify major work that is required to reduce or alleviate flooding in the future.	Summer 2008	RECOMMENDATION 15: Local authorities should positively tackle local problems of flooding by working with all relevant parties, establishing ownership and legal responsibility.
6/ TOR 3	Identify and signpost householders and landowners to potential sources of capital funding to finance work which is not being carried out by other agencies or private individuals.	Ongoing	RECOMMENDATION 38: Local authorities should establish mutual aid agreements in accordance with the guidance currently being prepared by the Local Government Association and the Cabinet Office.

Oxfordshire County Council recommendations	Update
<p>Oxfordshire Highways are RECOMMENDED to:</p> <ul style="list-style-type: none"> • Instigate a regular inspection of larger culverts and publish a programme for clearing and maintaining them. • Use Oxfordshire County Council’s public website to publish yearly plans of highways cleaning and maintenance. • Ensure that grips and their access points, where appropriate, are kept open to allow surface water to escape into a suitable run-off area. • Wherever possible, delegate responsibility for minor works, such as gully clearing, to parish councils to alleviate flooding. • Review their road building practices to ensure that flood risk is not increased as a result of construction. • Develop a protocol with the police, district councils and the city council for delegating the authority to close roads during flood events. <p>The Environment Agency is RECOMMENDED to:</p> <ul style="list-style-type: none"> • Extend the Flood Warnings Direct Service to all main watercourses in Oxfordshire. • To improve telemetry on tributaries of the River Thames in the county to give an overall picture of water movement and to allow key service providers and residents to be more prepared. • Publicise the criteria they use to decide whether watercourses should or should not be cleared. • Ease the permission regime covering ditch clearance by third parties. • To consider listing on their website, all licences issued for the pumping of water in and out of rivers. 	<p>The location and details of all known ditches are recorded on an IT system. The details include riparian ownership and maintenance requirements. This is being updated regularly as new ditches are identified. The current maintenance programme is being reviewed to ensure Council ditches are kept in good order.</p> <p>An enforcement ‘flow chart’ / process has been established and used by the Council. An informal approach has been developed to run alongside the enforcement process as this will deliver a more cost efficient, sustainable way forward.</p> <p>The Council has assessed its current resources to ensure they are appropriate.</p> <p>The process of locating and mapping private ditches started in January’08. A similar phased approach is being used as with the production of the Parish Flood Defence reports with the worst affected areas being targeted first.</p> <p>Phase 1, 2 and 3 of the reports are completed and are on the website.</p>
<p>Thames Water is RECOMMENDED to:</p> <ul style="list-style-type: none"> • Review the resilience of their installations to flooding and publish their findings and intended actions. • As a matter of priority ensure that combined sewerage systems are replaced by a separate foul and surface water systems. • Ensure that all reported incidents have reference numbers and these are logged in order to create a log of calls and jobs. • Substantially increase their investment in the separation of foul and surface water. • Ensure that full details of sewerage systems are available to local authorities. 	<p>The Parish flood reports identify funding requirements for the options presented, breaking down the amounts for each agency / organisation.</p> <p>The website currently provides some signposting for funding regarding flood related work and this will be updated when new schemes are launched.</p>

2. 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.

Out of a total of 81 Parishes; 65% reported flooded properties.

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.

16

Over 1,600 homes were directly affected along with many businesses, and this was the biggest recorded natural disaster to affect West Oxfordshire. To provide a feel for the extent of the event, the map on page 24 shows how much of the District was affected, and Flood Reports at either phase 1, 2 or 3 have been completed in each of the shaded areas.

Purpose of the report

This report is intended to pull together and summarise the work that has been carried out since 2007 by the District Council, and to give direction to the work that now needs to be taken forward.

In January 2008, the Council published its "Interim Report: Summer 2007 Floods" which highlighted the actions taken by the Council to deal with the flooding immediately following the event, and also the proposals for future work.

That report highlighted the Cabinet decision to commission detailed reports at Town and Parish level to determine what the key issues were, what were the likely causes of flooding in each area, which organisation(s), or which owner(s) would have roles to play, and in many cases, an estimate of costs.

The Council undertook a comprehensive programme of work resulting in the production of Town and Parish Flood Reports - all of which can be found through our website: www.westoxon.gov.uk



St John the Baptist Church, Burford during the floods...



...and after.



Burford Bridge.

3. Flooding - who does what

Department for Environment Food & Rural Affairs (DEFRA)

www.defra.gov.uk

- Planning for national flood emergency
- Funding Environment Agency flood management activities
- Grant aid for land drainage works
- Established a task group to look at the resilience of key infrastructure such as electricity sub stations

Environment Agency (EA)

Enquiries@environment-agency.gov.uk

Enquiries: 0845 9881188

Incident Hotline: 0800 807060 (24 hours)

- Assess Flood Risk
- Maintain and operate flood defences on main river and structures at lock sites on the River Thames
- Monitor water levels and flows
- Issue flood warnings
- Respond to pollution incidents and advise on waste disposal issues
- Clear trash screens on main river culverts and remove obstructions/debris from main river channels
- Keep emergency services and local authorities up to date with local facts
- Provide an emergency response during flooding
- Support joint response

Thames Water (TW)

www.thameswater.co.uk

Enquiries: 0845 9200 800

- Emergency over-pumping at pumping stations
- Clearing blockages in public sewers and outfall grills
- Repairing burst sewage and water pumping mains
- May take action to protect property from flooding by water from the public water mains or discharges from the public sewerage systems

Thames Valley Police

www.thamesvalley.police.uk

18

0845 8 505 505 - non-emergencies

- Report an incident which is not an emergency or give information to Thames Valley Police on this number

999 - emergencies

- It is an emergency if a crime is being committed, there is a risk of injury or a risk of serious damage to property.

Fire Service

www.fireservice.co.uk/safety/flooding.php

In an emergency, always dial 999

Oxfordshire County Council

www.oxfordshire.gov.uk

Enquiries 0845 3101111

- Maintain safe conditions on the roads
- Put flood warning signs on the highway
- Organise road closures and traffic diversions
- Clear blockages on highway drainage systems including watercourses in culverts beneath the highway
- May take action to protect property from flooding by water from the highway where there is a failure of the highway drainage system
- Maintain safety of road bridges over culverts
- Lead in major civil emergency arrangements

West Oxfordshire District Council

www.westoxon.gov.uk/flooding

Enquiries: 01993 861000

- Coordinating role for the district council area
- Activating the council's emergency plan if necessary
- Emergency assistance (Local Government Act 1972, s.138 sandbag provision)
- Clear blocked watercourses etc. (Land Drainage Act 1991 enforcement powers)
- Environmental health issues - pollution
- Blocked road channels - street cleaning
- Emergency planning support groups

Town & Parish Councils

- Assist in identifying riparian owners and passing on information regarding riparian duties in relation to watercourses
- Flood warning dissemination (by local agreement with EA)
- Parish Emergency Plans

Private householders and land owners

- Move to a safe area if life is at risk
- Prevent water from entering property if possible
- Switch off electricity and gas supplies at mains
- Move valuable possessions above areas liable to be flooded

4. Terms of reference

The report has been split into five constituent parts to provide an overview of the main issues and key actions for future improvement, which were included in the interim report:

- i. The Council's role in the recovery and support phases of a flooding event
- ii. Proactive flood alleviation and mitigation measures within West Oxfordshire
- iii. The role of the Council as a planning authority and its engagement with the Environment Agency and local utility companies
- iv. The role of the Council as a landowner and its duties to work independently and with other agencies to identify, assist and enforce on riparian land drainage issues
- v. Communicating, lobbying and consulting with local communities and central government on flooding, planning and land drainage concerns

Review Group

Cath James	Strategic Director (Environment) Emergency Controller and project sponsor
Bill Oddy	Head of Community Services Head of Service for Emergency Planning
Phil Page	Head of Street Scene Joint Project Leader for the Review
Phil Martin	Head of Business Improvement and Customer Services Joint Project Leader for the Review
Alison Leask	Principal Landscape Architect Project Coordinator
Carys Davies	Publicity and Information Officer Communications
Ian Morrow	Head of Planning Development Control and Strategic Flood Risk Assessment
Laurence King	Principal Engineer Emergency Response - real time
Bob Lightfoot	Environmental Operations Manager Emergency Response - real time
Katherine Noble	PA to the Strategic Director
Pat Bliss	Emergency Planning Assistant

5. Terms of reference: I

The Councils role in the recovery phase

Distribution of flood grants

West Oxfordshire District Council has played a key role in the distribution of Flood Relief Funding that it received as a result of pro-actively lobbying National Government.

The District Council recognised that many residents needed immediate financial support and therefore devised and widely publicised a simple grant of £250 per application which all the owners of flooded properties were eligible for.

In addition to the grant of £250 per property, the District Council offered a 'hardship grant' which recognised that some owners faced considerable financial burdens as a result of the flooding.

The District Council paid out a total of:

- 1137 grants at £250 - £284,250
- 301 hardship grants totalling £155,050

The Council also administered the Red Cross grants for Oxfordshire. A total of £141,000 Red Cross Grant has been paid to 69 West Oxfordshire households. This scheme has now closed.

Production of Parish Flood Reports

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. The reports also identify 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.

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

To date the District Council has produced reports for each of the Parishes / Towns (49 in total) affected in 2007. The information contained within the reports is being used by all key organisations and also communities to assist with the prioritisation, co-ordination and monitoring of future flood alleviation projects.

20



The over-grown ditch near Henry Box School, Witney before being cleared...



...The Council's Ditch Clearing Team working on the same ditch.

All the Parish Flood reports are available on the Council website via the link below and contain location specific information and supporting evidence.

www.westoxon.gov.uk/floodreports

A substantial investment in flood defence has already been made in our District by the different agencies. West Oxfordshire District Council has taken on the role of facilitator, working closely

with the other agencies and organisations in order to highlight the local issues and ensure as far as possible the completion of recommended actions, or other action as appropriate, by the other parties responsible.

As techniques and technologies for solving flooding problems are changing rapidly, the recommendations in our reports may be superseded or amended to reflect this.

Phase I - 12 Reports	Cost of all recommended works from Parish Flood Reports (£000)					Publication Date
	Environment Agency	Oxfordshire County Council	Thames Water	West Oxfordshire District Council	Others	
	Note: some work has been completed					
Ascott under Wychwood	675	366	0	0	285	June 2008
Bampton	765	121	0	0	670	June 2008
Brize Norton	20	90	0	52	145	June 2008
Carterton	17	170	15	0	34	June 2008
Clanfield	110	225	3	0.5	122	June 2008
Filkins & Broughton Poggs	245	257	63	0	82	June 2008
Milton under Wychwood	70	157	10	0	58	June 2008
Northmoor	40	6	25	0	505	June 2008
Shipton under Wychwood	260	141	60	0	145	June 2008
Standlake	70	0	430	0	50	June 2008
Stanton Harcourt	1.3M	57	306	0	35	June 2008
Witney	1.1M	1.1M	12	15	252	June 2008
Total Phase I Costs	4.4M	2.7M	924	67.5	2.4M	

Phase 2 - 21 Reports	Cost of all recommended works from Parish Flood Reports (£000)					Publication Date
	Environment Agency	Oxfordshire County Council	Thames Water	West Oxfordshire District Council	Others	
Alvescot	75	55	185	0	125	July 2008
Asthall	10	65	0	0	115	July 2008
Aston, Cote, Shifford & Chimney	20	75	205	0	150	July 2008
Black Bourton	140	325	0	0	30	July 2008
Broadwell & Kencot	550	1.1M	525	0	100	July 2008
Burford	0	40	0	0	30	July 2008
Charlbury	0	15	10	0	70	July 2008
Combe	0	155	10	0	55	July 2008
Crawley	30	0	0	0	5	July 2008
Curbridge & Lew	0	100	0	0	70	July 2008
Eynsham	75	215	0	0	55	July 2008
Grafton & Radcot	20	10	0	0	265	July 2008
Hailey	0	230	5	0	25	July 2008
Kelmscott	100	10	0	0	175	July 2008
Langford	0	45	0	0	265	July 2008
Leafield	0	65	15	0	75	July 2008
North Leigh	55	80	0	0	90	July 2008
Ramsden	0	90	5	0	145	July 2008
Salford	10	145	0	0	170	July 2008
Shilton	5	85	0	0	55	July 2008
Westwell	0	20	0	21*	65	July 2008
Total Phase 2 Costs	1.1M	2.9M	960	21*	2.2M	

* West Oxfordshire District Council to confirm land status.

Phase 3 - 16 Reports	Cost of all recommended works from Parish Flood Reports (£000)					Publication Date
	Environment Agency	Oxfordshire County Council	Thames Water	West Oxfordshire District Council	Others	
Hanborough	0	130	0	0	0	Nov 2008
South Leigh	0	60	0	0	160	Nov 2008
Kingham	10	85	0	0	20	Nov 2008
Taynton	0	30	0	0	60	Nov 2008
Bladon	20	10	20	0	35	Nov 2008
Chadlington	0	40	40	0	40	Nov 2008
Ducklington	50	10	0	0	55	Nov 2008
Fawler	45	5	5	0	0	Nov 2008
Finstock	0	50	25	0	10	Nov 2008
Minster Lovell	0	70	0	0	65	Nov 2008
Swinbrook & Widford	0	15	0	0	55	Nov 2008
Fulbrook	0	65	25	0	165	Nov 2008
Hardwick with Yelford	32	2	0	5	3	Nov 2008
Little Tew	0	37	0	18*	40	Nov 2008
Enstone	0	17	0	0	60	Nov 2008
Cassington	0	40	5	0	110	Nov 2008
Total Phase 3 Costs	157	666	120	23	878	

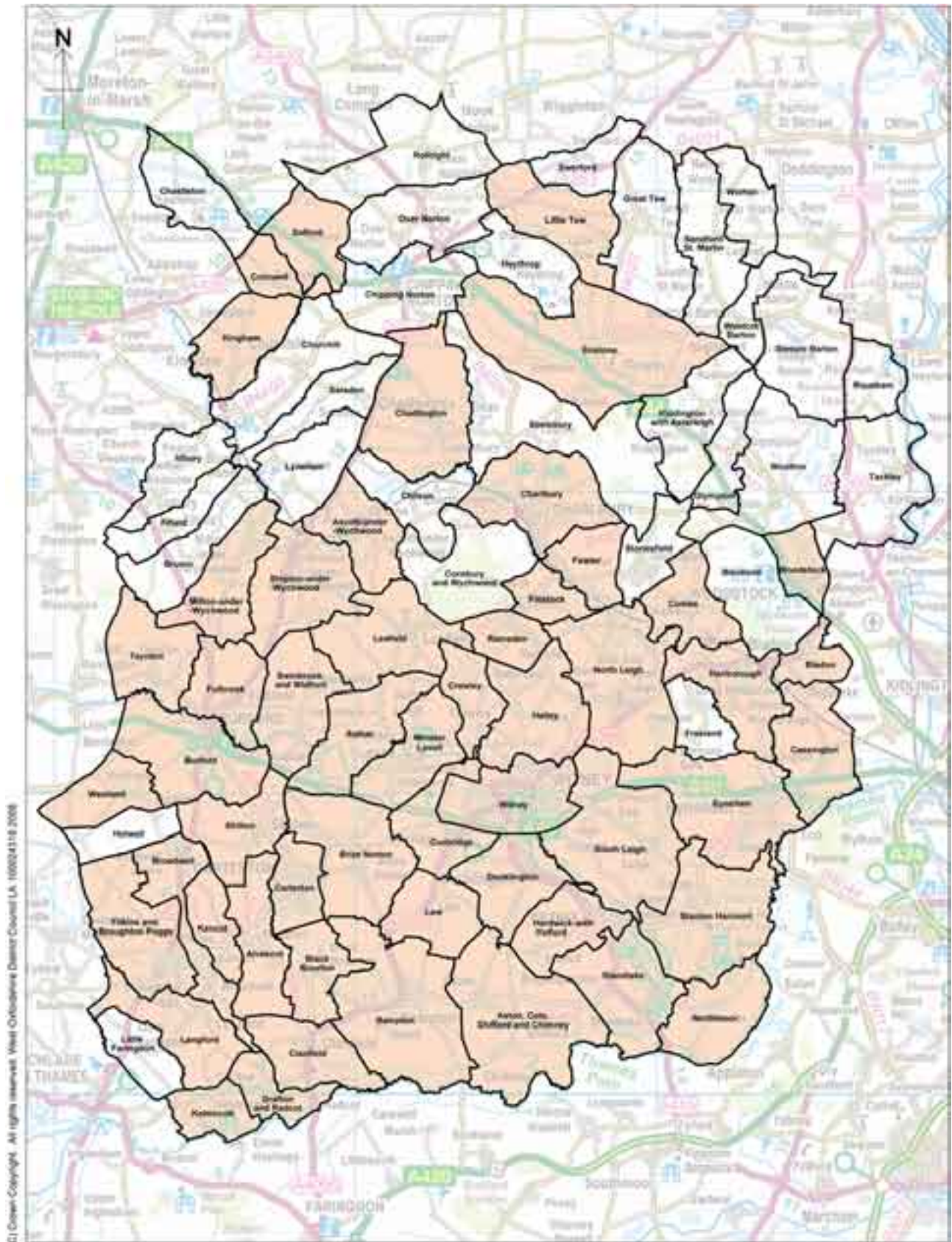
* West Oxfordshire District Council to confirm land status

The key organisations mentioned in the tables 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 the figures presented. Some of the options and associated costs highlighted in the tables above are mutually exclusive, therefore if one option is carried out then another may not be necessary.

The District Council recognises that the majority of the options / recommendations proposed in the Parish Flood Reports may require further investigations / feasibility studies and / or consultation, by the various agencies and organisations before they are carried out. The District does however strongly recommend that the activities identified are progressed accordingly and would welcome the opportunity to discuss how this may be achieved.

Areas covered by the Parish Flood Reports

24



© Crown Copyright. All rights reserved. West Oxfordshire District Council LA 100024118 2008


West Oxfordshire District Council
 Elmfield
 New Yat Road
 Witney
 Oxfordshire
 OX28 1PB
 Tel: 01908 861000
 www.westoxon.gov.uk

Map Title	Parishes included in Flood Reports 
Department	Street Scene
Map No:	PFR1
Date: 22.10.08	Scale: 1:165000

6. Terms of reference: 2

Proactive flood alleviation and mitigation

Ditch / water course clearance

The ditch clearing process adopted by the Council can be divided into a number of phases:

- Identification of problem areas from reports or engineers' own observations.
- Site surveys to ascertain exact location of ditches and extent of work required, and recording of information on mapping system. Notifying The Environment Agency of proposed clearance works under Section 26 of Land Drainage Act 1991.
- Carrying out land searches and / or local enquiries to ascertain ownership of land adjacent to watercourses. If land search / enquiry is unsuccessful, sending of notices under Section 16 of the Local Government Act (Miscellaneous Provisions) Act 1976 to likely landowners to request land ownership details. If there is no response within 21 days of the notice the landowner in question can be prosecuted.
- Once riparian owners are confirmed they are contacted by letter which outlines their responsibilities and asks for a meeting to discuss how to progress the matter. The riparian owner is required to respond within 7 days of receipt of the letter, with the purpose of attending a site meeting within 14 days, where the required work to the relevant ditch / watercourse is specified by the Council. The service of the Council's in-house team is also offered at this time, on a rechargeable basis. If this offer is not taken up and work has not begun within 14 days of the site meeting a further letter is sent to them requesting a start within the next 7 days. If work is still not begun within this timescale and no satisfactory reason has been given, the Council can issue an enforcement notice under Section 25 of the Land Drainage Act 1991 specifying a period to comply. If the notice is appealed or not complied with the case is referred to the Council's legal department. The Council can also in certain circumstances choose to carry out the work themselves on a rechargeable basis as well as prosecuting.

- Within 3 months of clearance riparian owners are reminded of their ongoing maintenance responsibilities. The Council re-inspect within 6-12 months of clearance, depending on the maintenance schedule, to reappraise the situation and advise the riparian owners accordingly.

Neighbourhood Sandbag Centres (NSC)

Sandbags are effective at holding back water up to about 20cm/8" deep. When there is flooding sandbags are given out free of charge by the District Council, however, property owners or occupiers are responsible for disposal of their own sandbags once the risk of flooding has subsided. We do not recommend the re-use of sandbags due to contamination. The sand can be dug into the garden to assist in soil drainage. A system has been designed to support the new approach to sandbag provision, details of which are available on the Council's website.

In order to make the process of acquiring sandbags in an emergency easier for residents across the District, it is proposed that in future sand and dry bags will be made available locally in so called Neighbourhood Sandbag Centres (NSC's).

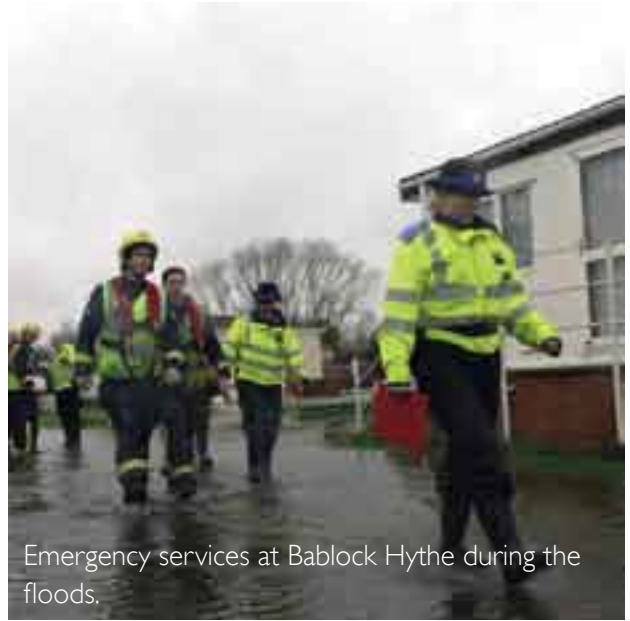
The aim of NSC is to provide communities in West Oxfordshire with equipment to make sandbags and minimise or mitigate the risk of flooding to residential, utility or commercial properties; and to ensure West Oxfordshire District Council can effectively support communities across the district 'at risk' of flooding and in particular individuals who are elderly and/or disabled.

Partnership Working

An example of what has been done in Witney to reduce the risk of flooding across the district can be found in Appendix I.



1 Over-grown ditch - Station Road, Brize Norton.



Emergency services at Bablock Hythe during the floods.



2 Council staff clearing the above ditch.



Bablock Hythe resident, Sharon Woolford with her home which has now been raised.



3 Cleared ditch at Station Road, Brize Norton.



Les Rose from Witney shows his new sandbag store which he built with his flood grant money.

7. Terms of reference: 3

The role of the Council as a planning authority

The production of a Strategic Flood Risk Assessment - 'Cherwell and West Oxfordshire Level 1 Strategic Flood Risk Assessment, including Minerals and Waste Site Allocations'

Each of the Local Development Documents that will make up the Local Development Framework (LDF) for West Oxfordshire need to undergo a Sustainability Appraisal (SA) in order to ensure the strategy and planning policies fulfil the principles of sustainability. A Strategic Flood Risk Assessment (SFRA) is one of the documents to be used as part of this SA process.

The SFRA will soon be published as part of the evidence base for the LDF and will be available on the Council's website. It includes an overview of flood risk in West Oxfordshire (Chapter 9), an initial assessment of potential development pressures in some of the main settlements (Chapter 10), an initial assessment of possible minerals and waste development (Chapter 11), guidance on undertaking site specific flood risk assessments (Chapter 13) and options for flood risk management, including the use of Sustainable Drainage Systems (SuDS). Some of the main issues highlighted in the report include:

- All sources of flooding need to be considered when assessing where to locate new development. In addition to fluvial flooding, the SFRA has looked at flooding from the land (surface water), from groundwater, from sewers and drains, and from manmade or artificial sources.
- Climate change is forecast to result in milder and wetter winters and more summer thunderstorms. This combination will increase the pressure on existing sewer systems, leading to more frequent flooding.
- To attempt to counteract the increase in runoff in local areas, the use of sustainable drainage systems (SuDS) is becoming more important. In addition to the more usual attenuation and infiltration systems, providing more 'green spaces' within the urban environment can also help to reduce runoff and also increase wildlife

habitat. Groundwater Vulnerability data and permeability data has been mapped as part of the study in order to identify areas suitable for each SuDS technique.

- The efficient operation of channels and culverts is paramount if the existing standard of flood defence is to be maintained. This requires maintenance by the land owners which include the Environment Agency, Local Authorities and riparian owners or by the responsible drainage authority where appropriate remedial action does not take place.
- Flood defences cannot be built to protect everything in West Oxfordshire. Thus the capacity of the floodplain should be maximised as the floodplain is the best natural defence to combat flooding. There should be managed flooding in some areas and the prevention of development that compromises the capacity of the floodplain to retain water. In addition there is a need for better flood awareness and flood-preparedness and improved emergency planning and response measures.

In view of the recent flooding experienced, particularly in communities in close proximity to the rivers in the District, further gravel extraction or other major developments beyond existing allocations should not be permitted without the fullest consideration of the potential of that development to either worsen or ameliorate the flooding situation. Any decision on such proposals should be informed by the results of the SFRA and all such applications should be accompanied by a statement identifying the causes of past flooding and incorporate modelling as to how future flooding threats will be impacted by the development.

8. Terms of reference: 4

The role of Council as a landowner

Ditch / water course clearance

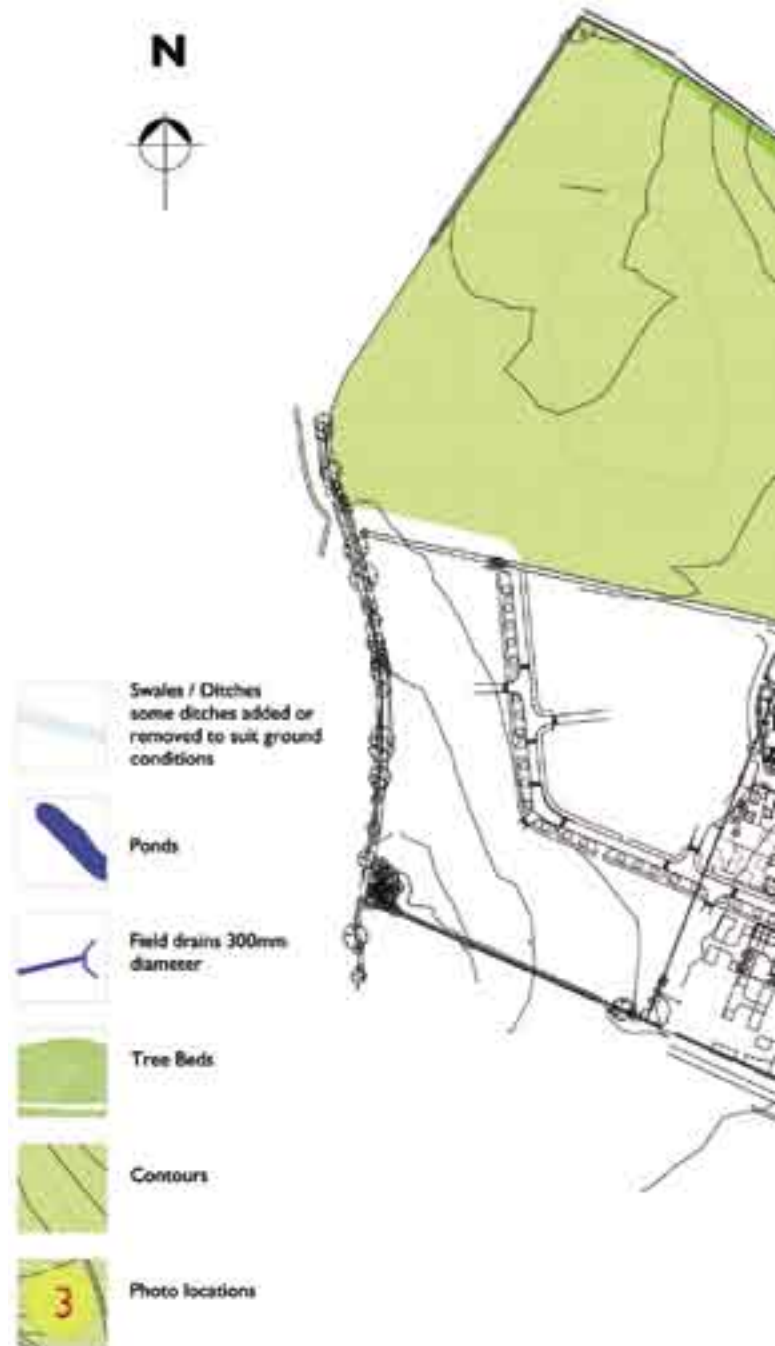
The Council has been pro-active over the past 12 months updating it's records of Council owned water courses and also those owned by private owners in order to ensure adequate maintenance has been and will be undertaken in the future.

To date;

- 2,000 linear metres of Council owned ditches and pipes have been cleared / inspected
- 2,700 linear metres of Privately owned ditches have been cleared
- Overall 4,700 linear metres of ditches and pipes have been cleared / inspected.

The Council has also reviewed and enhanced its own maintenance programme and is regularly liaising with local Parish Councils in order to identify the owners of private water courses who are contacted and encouraged to establish their own maintenance programmes.

28





Photographs of the Sustainable Drainage System at Kilkenny Lane Country Park, Brize Norton.

Kilkenny Lane Country Park - Sustainable Drainage Scheme



9. Terms of reference: 5

Communicating, lobbying and consulting

Communication after the event

Communications continues to play a key role in keeping the public informed of on-going flood related work, lobbying activities and promoting self help. This has been done as follows:

A comprehensive flooding information section has been created on the website. This section consists of 15 web pages of flood-related information, self help case studies and 82 downloadable files including parish flood reports. There are also useful web links to other websites such as the Environment Agency, Oxfordshire County Council and the Met Office.

Since the flooding the Council has published six newsletters and each one has featured flooding news and self help information. Immediately following the flooding information booklets were created and distributed to all affected areas and to businesses.

30

The Council has hosted two Flood Protection Product Fairs (November 2007 & October 2008) with the National Flood Forum and Environment Agency.

Four Flood Roadshows were held in community locations during September 2008. In addition to these events there have been numerous meetings with individuals, resident groups, parish councils, Oxfordshire County Council, the Environment Agency, Thames Water and other agencies.

Councillors and staff have met regularly with Witney MP, David Cameron. The Council has lobbied government for support. Hilary Benn MP, the Government Minister for Environment, Food and Rural Affairs visited West Oxfordshire as did Peter Cragg from GOSE. The Council contributed to the Pitt Review report and members of Sir Michael Pitt's team visited affected communities across West Oxfordshire and met with local residents, farmers, business owners and Councillors.

The media have been kept regularly informed of ongoing activities and this has included issuing 19 press releases, which include two press briefings. Over 130 media enquiries related to flooding have been received and the Communications Team has worked with TV news teams on reports and filming in the District.

Members of staff from across the Council have dealt with hundreds of calls, emails and other enquiries.



Rt Hon David Cameron, MP for Witney with Cllr David Harvey at the Council's Depot seeing where in West Oxfordshire was flooded.



Rt Hon Hilary Benn watches Council workers filling sandbags.



Media film and interview local resident about how the floods affected her.

Lobbying Activities

West Oxfordshire District Council only has limited powers to ensure that the recommendations of the Parish Flood Reports are implemented. In order to ensure that the problems of flooding faced by our residents are high on the priority list at a county and national level, our Senior Officers have been involved in the lobbying of MP's, Government Bodies and the agencies responsible for flood related issues since the events of July 2007.

In addition to regular and ongoing discussions with the Environment Agency, Oxfordshire County Council and Thames Water, West Oxfordshire District Council have been involved in high level meetings including a presentation to the European Parliament Budgeting Committee at Brussels in February 2008, representations to Sir Michael Pitt during the Recovery Team Visit in March 2008 and the Westminster Debate in May 2008. Witney MP, David Cameron, has been closely involved discussing many aspects such as house insurance with constituents and their local Council member.

West Oxfordshire District Council has been involved in a consultation with DEFRA into the provision of surveys for properties at risk of flooding to advise on the appropriate flood protection products that could be used. These surveys could form part of the Home Information Pack (HIP) required by sellers of larger properties.

The Councillors themselves have played a key role in working closely with their local residents to highlight and lobby on key issues such as the increased cost of insurance premiums and policy excesses, resulting in pressure being placed on the ABI (Association of British Insurers) and the Government.

West Oxfordshire District Council has also supported the efforts of local 'action' groups by attending their meetings and providing information and assistance as far as possible. These have included the West Witney Flood Action Group (WWFAG) who are primarily interested in issues surrounding flooding in the West Witney area including Eastfield Road, Hailey Road, West End and Bridge Street.

As a direct result of the Council's work with the Environment Agency and continued support of WWFAG, a trial has been started whereby a small number of local residents in Witney have been given access to newly installed river telemetry data, which if successful will be made available to all residents to give them improved warnings of changes in river levels.

West Oxfordshire District Council Expenditure

Planned funded work for Year 1 (2008/09):

Area/ option	Description of works	Expected outcome	Cost
Brize Norton - Kilkenny Lane Country Park			
Area 1 Option A	<p>Construct swales/ flood bypass channels to the south of Kilkenny Lane within the Country Park.</p> <p>WODC to undertake works and maintain new channels.</p>	<p>Will allow more flood water to be stored/ attenuated in area. Reduction of flooding frequency to Kilkenny Lane. This will also contribute to reducing flood waters reaching Brize Norton village.</p> <p>Increase of flooding to the north side of the Country Park to south of Kilkenny lane.</p>	<p>Capital cost £50K</p> <p>Revenue cost £2K pa</p>
Clanfield - A4095			
Area 1 Option E	<p>Remove obstructions to flow in small drainage ditch running parallel to A4095 Bampton Road.</p> <p>WODC have removed tree located in drainage ditch parallel to A4095. Roots still need to be ground away.</p> <p>Riparian owners to increase size of culvert under driveway access</p>	<p>Upsizing culvert will reduce surcharging of flows and will increase flow to Marsh Lane ditch.</p> <p>Removal of tree will reduce potential for blockage of ditch</p> <p>Reduced flood risk</p>	<p>£500 for tree removal</p>
Witney - Oxford Hill Ditch			
Area 10 Option A	<p>Realignment of ditch WODC-03 and clearing of WODC-04 at Oxford Hill in Witney, was carried out in November 2007.</p> <p>WODC together with other riparian owners are responsible for future maintenance of ditches.</p>	<p>The realignment and ditch clearing has reduced the flood risk but maintenance is required to keep effectiveness.</p>	<p>Capital cost £4K</p> <p>Revenue cost £1K pa</p>

Potential works for Year 2 (2009/10):

Area/ option	Description of works	Expected outcome	Cost
Witney - Henry Box Ditch			
Area 11 Option A	<p>Ditch along Ducklington Lane, D11, and Henry Box Drain, D12, were cleared by OCC and the developers Pye Homes, in November 2007. OCC are responsible for the future maintenance of ditch D11.</p> <p>WODC could adopt drain and maintain.</p>	<p>Pye Homes cleared out Henry Box ditch D12 in November 2007 but it is unlikely that they will take on a long-term maintenance responsibility.</p> <p>Clearing of ditches D11 and D12 has reduced the flood risk.</p> <p>The long-term, maintenance responsibilities and funding sources for Ditch D12 need to be clarified. Clarification of ownership of the surface water system in the Estate is needed.</p>	<p>Capital cost £5K</p> <p>Revenue cost £5K pa</p>
Westwell*			
Area 1 Option A	Ongoing maintenance of the Shill Brook	Will increase channel capacity	Confirmation of responsibility required
Area 3 Option A	<p>WODC to carry out future clearing and provide co-ordination role</p> <p>Riparian owners should continue to trim and clear vegetation from the channel and structures</p>		<p>Capital cost Up to £5K</p> <p>Revenue cost £1K pa</p>
Area 3 Option E	<p>Replace wall between Rectory and the road to the west of the village with a flood resilient wall to ensure no breaching occurs that could overwhelm drainage system</p> <p>WODC to undertake a co-ordination role and to confirm responsibility</p>	Could aid in reducing the occurrence of a breach in the wall and therefore overwhelming of highway drainage	<p>Confirmation of responsibility required</p> <p>Capital cost £5K to £10K</p>
Area 3 Option F	<p>Dredging and maintenance of the village pond</p> <p>WODC to undertake a co-ordination role and to confirm ownership and responsibility of the pond</p>	Will increase the capacity of the pond and store more water sourced from the Rectory area	<p>Confirmation of responsibility required</p> <p>Up to £5K</p>

Area/ option	Description of works	Expected outcome	Cost
Little Tew*			
Area 1 Option 1	<p>Replace 6 metre length of existing 300mm pipes with one 525mm pipe at the entrance to the Manor House.</p> <p>OCC to be approached to confirm previous offer to assist with funding scheme.</p> <p>If area concerned is confirmed as common land WODC to fund work in conjunction with Oxfordshire County Council.</p>	Will considerably reduce the amount of water which floods the highway and in turn Chapel Lane. Downstream system will need to be able to accommodate increased flows.	<p>Capital cost £2 - 5K</p> <p>Revenue Cost £1K pa</p>
Area 1 Option 4	<p>Remove culverted section of watercourse and reinstate open ditch including section in grounds of Croft Cottages.</p> <p>If area concerned is confirmed as common land WODC to fund work in conjunction with OCC.</p>	Will prevent problem of future obstructions causing a problem to flows. A ditch will also convey more water than a culvert. Access problems for maintenance will also be eliminated.	<p>Capital cost £5-10K</p> <p>Revenue Cost 1K pa</p>
Area 3 Option 5	<p>Install new angled metal grating at culvert entrance outside Cherwell House boundary wall and cut out existing vertical grating in boundary wall.</p> <p>If area concerned is confirmed as common land WODC to fund work.</p>	Reduce frequency of blockages and risk to residents who regularly need to unblock existing grating during storm events.	Capital cost £1K
Hardwick with Yelford			
Area 1 Option 3	Install a flood relief culvert at culvert crossing near Claywell Farm land.	Construction would need to include protection against erosion of farm land.	Capital cost Up to £5K

* West Oxfordshire District Council to confirm land status



Road near Charlbury Station during the worst of the flooding...



...The new wall which has been re-built following its destruction by the flood water.

Proposed major schemes in conjunction with the Environment Agency

The Council has recently submitted a multiple bid for DEFRA Funding which is administered by the Environment Agency, the outcomes of which will not be known until the end of the calendar year. In the case of any schemes that are rejected, the Council does have the opportunity to apply to the Regional Flood Defence Committee whose criteria regarding size and scale of schemes is less than the DEFRA Fund which is judged on nationally based criteria. As the DEFRA Fund is a 3 year rolling programme the Council will have the opportunity to bid for funds on an annual basis for as long as the scheme is in place.

Notes:

1. The number of houses presented in the table below represents the number of houses that will be moved out of one flood category into a lower one once the project has been completed. The number may not be the same as those actually flooded in July, as this figure relates to houses that were only affected by Fluvial / river related flooding.
2. The 'number of houses' box has been left blank if the project is purely a feasibility study as this information is needed before a scheme can be designed and the numbers of houses calculated.

Proposed schemes	Approx costs (£000s)			Total (£000s)	Description of the scheme	Delivery schedule			Number of houses affected
	Yr 1	Yr 2	Yr 3			Yr 1	Yr 2	Yr 3	
Highmoor Brook (Brize Norton) and Shill Brook (Shilton / Carterton / Brize Norton) Hydrological and Hydraulic Modelling and Mapping Study	40	40	0	80	Poor quality data on the hydrological and hydraulic mechanisms within the Highmoor Brook and Shill Brook catchment. Data will be used in a future study to investigate flood alleviation options. Actions to improve the availability of EA Flood Warnings.	✓	✓		
Little Stock Brook (Shipston-under-Wychwood) Flood Alleviation Scheme Feasibility Study and Actions.	10	50	50	110	Channel and Structure survey of the Church Road Bridge to assess any flood defence options. Possible solution to create an upstream flood storage area.		✓	✓	30
Milton Under Wychwood Mill Pool Re-creation	10	0	0	10	Survey, model and action the option of excavating the historic Mill Pool to reduce localised fluvial flooding issues.	✓			1

Proposed schemes	Approx costs (£000s)			Total (£000s)	Description of the scheme	Delivery schedule			Number of houses affected
	Yr 1	Yr 2	Yr 3			Yr 1	Yr 2	Yr 3	
Clanfield Flood Alleviation Scheme Feasibility Study and Actions.	10	50	0	60	Survey and model the watercourse to look at various flood alleviation options to reduce property flooding.		✓		20
Brize Norton Flood Alleviation Scheme	10	30	0	40	Survey and model the watercourse to look at various flood alleviation options to reduce property flooding. Possible option to create a flood storage area to the North of Carterton Road.		✓		40
Clanfield Brook and Black Bourton Brook Hydrological and Hydraulic Modelling and Mapping Study	40	40	0	80	Poor quality data on the hydrological and hydraulic mechanisms within the Clanfield Brook and Black Bourton Brook catchment. Data will be used in a future study to investigate flood alleviation options, such as the pre-feasibility for a flood defence wall	✓	✓		
Bampton Flood Alleviation Scheme Feasibility Study and Actions.	30	30	0	60	Survey and model the watercourse to look at various flood alleviation options to reduce property flooding, including New Road, Ampney Orchard, Mill Green and Ham Court.	✓	✓		50
Madley Brook (Witney) Flood Alleviation Scheme	25	0	0	25	Topographic Survey and Upstream flood storage area to reduce property flooding.	✓			20

Proposed schemes	Approx costs (£000s)			Total (£000s)	Description of the scheme	Delivery schedule			Number of houses affected
	Yr 1	Yr 2	Yr 3			Yr 1	Yr 2	Yr 3	
Eynsham: Station Road Flood Alleviation Scheme Feasibility Study and Actions.	0	10	30	40	Survey and model the watercourse to look at various flood alleviation options to reduce property flooding. Possible building of flood storage areas on the Chil Brook.		✓	✓	7
Colwell Brook (Ascott-under-Wychwood) Hydrological and Hydraulic Modelling and Mapping Study	40	40	0	80	Working in Partnership with the EA. Data will be used in a future pre-feasibility study to investigate flood alleviation options. Moderation evidence: Flood Modelling scheme is not on the EA's 3yr programme, but would underpin capital works to reduce flood	✓	✓		
Eynsham: Barnard Gate Flood Alleviation Scheme Feasibility Study and Actions.	0	10	20	30	Survey and model the watercourse to look at various flood alleviation options to reduce property flooding. Possible building of flood storage areas on the Chil Brook.			✓	4
Broadwell and Kencot Flood Alleviation Scheme Feasibility Study	0	50	0	50	Survey and model the watercourse to complete a detailed study on the flood alleviation options to reduce property flooding.		✓		
Asthall Flood Alleviation Scheme Feasibility Study.	0	20	0	20	Survey and model the watercourse to look at various flood alleviation options to reduce property flooding. Possible building of flood storage areas on the River Windrush.		✓		12

Proposed schemes	Approx costs (£000s)			Total (£000s)	Description of the scheme	Delivery schedule			Number of houses affected
	Yr 1	Yr 2	Yr 3			Yr 1	Yr 2	Yr 3	
Kelmscott Flood Alleviation Scheme Feasibility Study and Actions.	0	10	100	110	Pre-feasibility study, and excavation of the storage pond to reduce the risks of property flooding.			✓	13
Asthall Leigh/ Fordwells Flood Alleviation Scheme Feasibility Study.	0	10	0	10	Pre-feasibility study into flood alleviation options to reduce the risk of property flooding, including the possibility of an attenuation pond.		✓		7
Burford Flood Alleviation Scheme Feasibility Study.	0	30	0	30	Survey and model the watercourse to look at various flood alleviation options to reduce property flooding, including the possibility of an upstream flood storage area.		✓		13
Westwell Flood Alleviation Scheme Feasibility Study.	0	5	0	5	Building of a flood defence wall.		✓		6
Ascott Earl Flood Alleviation Scheme Feasibility Study	20	0	0	20	Survey and model the watercourse to determine channel maximum capacity and to look possible requirement for further flood alleviation measures to be constructed in flood plain.	✓			
River Windrush FAS Feasibility Study	30	0	0	30	Survey, Data Collection, Model Review and Feasibility Study, in order to look at future flood alleviation scheme options.	✓			80
Total	265	425	200	890					131

Proposed minor schemes in conjunction with Oxfordshire County Council

Planned work for Year 1 (2008/09):

The sum spent to date, including gully cleaning and grip maintenance is £808,000. This excludes bridge strengthening works carried out at Newbridge, Charlbury and Finstock re-building works, maintenance and repair of wooden bridges throughout the district has also taken place, but has not been financially quantified yet. An additional provisional sum of £92,000 can comfortably be added to the £808,000 stated.

A committed sum remains to be spent in the district on drainage repairs, flood defence improvement schemes and maintenance. The sum agreed is £234,000. This sum excludes any future reactive maintenance costs.

The final figure of OCC expenditure on highway drainage maintenance, improvements and flood defence improvements is therefore a minimum of £1,134,000.

The list of parishes which have received work are:

Ascott-under-Wychwood	Bampton
Barnard Gate	Bladon
Brize Norton	Broughton Poggs
Charlbury	Chilson
Clanfield	Combe
Ducklington	Eynsham
Finstock	Fordwells
Middle Barton	Newbridge
Shipton-under-Wychwood	Signet
Standlake	Westwell
Witney	Woodstock
Yelford	

Areas to receive work are:

Ascott-under-Wychwood	Bampton
Barnard Gate	Bladon
Brize Norton	Broughton Poggs
Chipping Norton	Clanfield
Curbridge	Northleigh (East End)
Over Norton	Signet
Shipton-under-Wychwood	Witney

Proposed work for Year 2 (2009/10):

Oxfordshire County Council have indicated that they are budgeting £200,000 for 2009/10, which will be confirmed as part of their budget setting process, to support specific flood prevention / mitigation activities.

The areas the work will focus on will include:

Alvescot	Asthall
Ascott-under-Wychwood	Aston
Bampton	Black Bourton
Brize Norton	Carterton
Charlbury	Combe
Curbridge	Eynsham
Fordwells	Kencott
Langford	Leafield
Milton-under-Wychwood	Northmoor
Ramsden	Salford
Shilton	Standlake & Sutton
Shipton-under-Wychwood	Westwell
Witney	

The budget allocated will not include gully cleaning, grip maintenance, general highway maintenance, and structural bridge work, which if authorised will be met from other budgets.

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.

11. Glossary of terms

Attenuation: is the loss in intensity of the amount of water that flows through an area and is brought about by various methods such as bunding or pond creation.

Bund: a barrier, often an earth embankment used to prevent or slow flood water flow.

CBA (Cost Benefit Assessment): estimates and totals up the equivalent money value of the benefits and costs to the community of projects to establish whether they are worthwhile.

Critical ordinary watercourse: these are watercourses such as ditches, streams or rivers that are important for the drainage of an area. They have the potential to put large numbers of people or property at risk from flooding and have been identified as watercourses that will be enmained.

Culvert: a closed channel for the passage of water eg. A pipe underneath a road.

Drains: take waste water from a single property or several houses to the main public sewers. The individual house holder usually maintains these.

Enmained: when the classification of a watercourse, which is not a main river, changes to allow the environment agency to legally carry out maintenance if required to prevent flooding.

Environment Agency: the leading public body for protecting and improving the environment in England and Wales.

Flash flooding: a rapid increase in water levels, leading to flooding. Occurs when excessive rain falls over a short period of time.

Flood plain: an area of land where water is expected to flow or be stored during times of flood. The flood plain can extend beyond the edges of a watercourse. Low-lying area adjacent to a watercourse and prone to flooding.

Flood resilience: constructing a building in such a way that although flood water may enter the building its impact is reduced (ie. No permanent damage is caused, structural integrity is maintained and drying and cleaning are facilitated).

Flood resistance: constructing a building in such a way to prevent floodwater entering the building and damaging its fabric.

Flood zones: these are the environment agency's method for showing the extent of flood risk. They outline the probability of flooding from rivers occurring:

Flood zone 1 - little to no risk of flooding, less than 0.1% Risk of flooding in any one year.

Flood zone 2 - low to medium risk, 0.1% Risk of flooding in any one year.

Flood zone 3 - high risk, 1% risk of flooding in any one year.

Flood storage area: part of the flood plain that allows flood waters to be temporarily stored, slowing flood water down, delaying its arrival at a main watercourse.

Fluvial flooding: flooding from river water.

Grip: this is an opening that channels water into a drainage pipe or roadside ditch. A grip can simply be a channel cut through the earth of a road side verge.

Groundwater flooding: occurs as a result of water rising up from the underlying rocks or from water flowing from abnormal springs. This tends to occur after much longer periods of sustained high rainfall. Higher rainfall means more water will infiltrate into the ground and cause the water table to rise above normal levels.

Highway drainage: ditches and drainage channels within land owned by the highway authority which carry water draining from the highway. In Oxfordshire the County Council is the highway authority.

Hydro-brake: a self-activating water flow control device.

Impermeable: not easily penetrated. The property of a material or soil that does not allow, or allows only with great difficulty, the movement or passage of water.

Land drainage scheme: a network of ditches created to drain water from farmland to improve the quality of land available for agriculture.

Main river: a watercourse marked as such on a main river map, and can include any structure or appliance for controlling or regulating the flow of water in, into or out of a main river. The environment agency only has powers to enforce flood defence works on main rivers.

Mitigate: to make less severe, serious, or painful.

OFWAT: the water services regulation authority. OFWAT is the economic regulator of the water and sewerage industry in England and Wales. Their role is to seek value for consumers.

Outfall: the place where a sewer, a drain, or stream discharges

Ordinary watercourse: every watercourse, apart from a public sewer, which is not classified as a main river. Local authorities only have powers to enforce flood defence works on ordinary watercourses.

Permeable: allows infiltration of water because it is either porous (made of a material which itself has pores within it that allow penetration of water) or permeable (made of a material that is itself impervious but by virtue of voids formed in it allows infiltration).

Pluvial flooding: flooding from rain water

Public surface water sewers: surface water sewers that are maintained by the appointed sewerage company for an area. In West Oxfordshire Thames Water is the appointed sewage company.

Roadside ditches: ditches and drainage channels alongside roads which are the responsibility of the adjoining landowner and not the highway authority.

Riparian owner: the riparian owner is responsible for the maintenance of any watercourse within or adjacent to the boundaries of their property. Where a watercourse is sited between two or more property boundaries each owner may be equally responsible.

Riparian ownership: owning shoreline land or land on the boundary of a river or watercourse.

River flooding: occurs when water levels in a channel overwhelms the capacity of the channel. Also known as fluvial flooding.

Section 106 Agreement: can act as the main instrument for placing restrictions on the developers, often requiring them to minimise the impact on the local community and to carry out tasks, which will provide community benefits, eg. building schools, roads etc

Sewer: a drain or pipe, usually underground, used to carry away surface water or sewage.

Sluice: a water channel that is controlled at its head by a gate.

SUDS (Sustainable Drainage Systems): these offer an alternative approach to traditional drainage. SUDS employ a whole range of techniques to effectively manage drainage including dry ditches (swales) and detention/ attenuation ponds, which aim to detain water run-off and release it slowly into watercourses or into the ground in a more sustainable way than conventional systems by better emulating natural processes.

Surcharging: when a drain becomes blocked the waste water often overflows or backs up through gullies or manholes. This is known as surcharging.

Surface water/run-off flooding: when the level of rainfall overwhelms the capacity of the drainage system to cope. Also known as pluvial flooding.

Swales: shallow, trough-like depressions that carry water.

Telemetry: the science and technology of automatic measurement and transmission of data by wire, radio, or other means from remote sources, as from rivers, to receiving stations for recording and analysis.

Trash screen: a grill or grate that is installed on the opening to a culvert to collect debris and prevent blockages.

Unadopted or private sewers: sewers which are not owned by the sewerage undertaker are likely to be unadopted and privately owned.

Watercourse: any natural or artificial channel through which water flows, such as a river, brook, beck, or a mill stream.

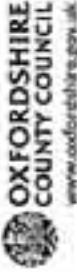
Water table: the water table is the level of ground below which the rocks are saturated with water.

Well point: a perforated tube driven into the ground to collect water from the surrounding area.

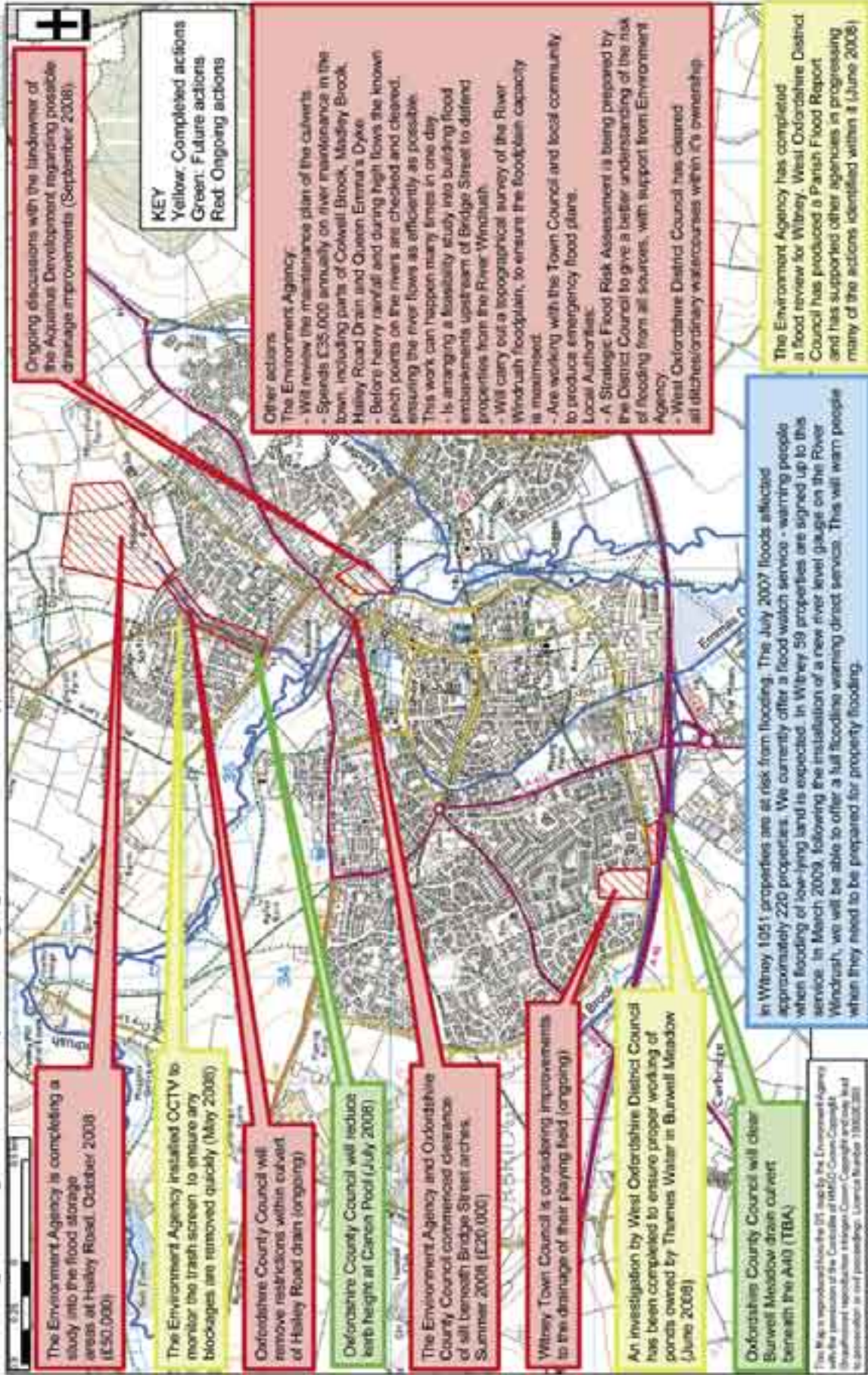
Actions to reduce flood risk in Witney

The Environment Agency is the lead agency for providing flood risk protection and warning of flooding from main rivers (these are highlighted in blue on the map)

Legend



WEST OXFORDSHIRE DISTRICT COUNCIL
www.oxfordshire.gov.uk



West Oxfordshire District Council

Woodgreen

Witney

Oxon OX28 1NB

Tel: 01993 861000

Email: enquiries@westoxon.gov.uk

www.westoxon.gov.uk