

**Report of:** Strategic Director Housing, Health and Community


**To:** Executive Board 3 December 2007

**Item No:**17

**Title of Report :** Flood Emergency – Lessons Learned and Future Options



### Summary and Recommendations

**Purpose of report:** To provide members with a status report on work done since the flood emergency and future actions planned. 

**Decision:** No 

**Portfolio Holder:** Councillor John Goddard , Councillor Jean Fooks,  
Councillor Caroline van Zyl

**Scrutiny Responsibility:** Environment




**Ward(s) affected:** All

**Report Approved by:**

Cllr Goddard

Legal & Democratic Services (Jeremy Thomas)

Finance & Asset Management Business Manager (Sarah Fogden)

**Policy Framework:** To improve the environment where we live and work 

**Recommendation(s):**

Members are asked to note:

1. The actions taken by the Council and other agencies since the flood emergency
2. The 13 priorities that have emerged following consultation with affected residents & the review by Environment Scrutiny
3. Work in progress with actions to deal with the identified priorities & the potential for budget pressure for the City Council in 2008/09.
4. The virement of £50k from one-off unallocated windfalls to Built Environment & City Works to support additional ditch clearing (Wolvercote Common), improved logistics (sandbags etc), purchase of alternatives to sandbags & the purchase of an additional pump.

Members are asked to consider as part of the 2008/09 budget process:

5. Whether a senior officer should be appointed to take sole charge of all flood related issues for the Council
6. Whether revenue and capital funding should be diverted from other priorities to support further work on minimising the risk of flooding and/or improving the Council's response to flooding

## **Introduction.**

1. Exceptional rainfall in Oxfordshire and surrounding counties on 20<sup>th</sup> July resulted in substantial flooding in areas of Oxford. The initial emergency situation was led by the emergency services with support from the City Council & other local agencies.
2. The City Council is responsible for ensuring that drains and ditches on its own land are kept clear and for accepting and dealing with the natural catchment flow from adjoining land. The natural flow of water must not be obstructed without consent. It also has the statutory power to carry out flood protection works on ordinary watercourses, but not main rivers under the Land Drainage Act 1991. Where obstructions occur in ordinary watercourses the City Council also has the power to secure a proper flow by serving notice on the owners or carrying out works in default and recovering the costs.

The Environment Agency has similar powers to carry out drainage works but for main rivers. The statutory obligation to maintain a watercourse remains with the riparian owners. Works on ordinary watercourses also require the prior consent of the Environment Agency. It has a duty to exercise general supervision over ALL matters relating to flood defences. .

3. The review of lessons learned from the emergency and action planning to improve the response to future floods are being led within the Council by the Strategic Director for Housing, Health & Community. The County Council is leading similar reviews countywide. The Strategic Director for Housing, Health & Community is also taking part in a cross-agency review of flooding issues across the county and the South East Region.

The key areas for improvement for the Council can be summarised as follows;

- Communication (Council to residents and residents to Council)
- Use of resources (getting the right people and equipment to right place)
- Working together (across agencies and local authorities)
- Logistics (getting materials to the right place)
- Advanced warnings (better information on flood risks and timing)
- Ditch and Gully clearance (do more)
- Health and Safety advice (provide more)
- Future flood risk (reduce it)

There are also some key learning points that provide a useful context for the rest of this report;

- Early stages of flooding may appear similar, and will (almost) inevitably always affect the same houses. Some will not, because each flood is different, we must be prepared for a significantly flexible response each time
- In Oxford, groundwater flows play a considerable role in flooding. Conventional flood defences cannot combat this type of flooding which often rises from within houses. The more obvious surface flooding will often mask its effects. However, in floods of medium duration, even well protected houses will succumb to the ingress of groundwater unless adapted to slow ingress and provided with pumps to discharge it.
- There is no single approach to reducing flood risk. Whilst considering “permanent” solutions, we should develop “interim” measures to test out proposals in the next flood.
- Ditch and stream clearance does not help in major river flooding events when they simply become part of the flood plain. They can play a role in avoiding rainwater ‘flash flooding’ and in assisting drainage after a river flood.

4. At Executive Board on 8<sup>th</sup> October 2007 Members received a report that outlined the initial financial impact to the City Council on dealing with the flood emergency. The likely impact on the 2007/08 budget was reported as £177k (money not recoverable from insurance or Government schemes).

This report proposes that an additional £50k is allocated to support flood response and prevention work in 2007/08. It is proposed that this funding is vired from the unallocated one-off windfalls, to Built Environment & City Works. It is within the delegated powers of the Business Manager for Finance to approve this virement.

5. At a special Environment Scrutiny on 15<sup>th</sup> October 2007 Members received a report that informed their review of the response to the flood emergency. They also received a briefing note, which included:

- A list of 66 suggestions to reduce flood risk and improve flood management gathered from residents groups and members of the public
- A summary of lessons learned based on feedback from members and officers (appendices 1 and 2)

Verbal updates were provided from;

- Built Environment (on the work of the Oxford Flood Group)
  - Note, this cross agency group chaired by the Business Unit Manager from Built Environment was set up following the 2003 floods and includes representative from the Environment Agency, Thames Water, Network Rail, Vale of White House DC and Oxfordshire County Council. The group holds one public meeting each year and publishes the Oxford Area Flood plan each year. The next update will be published in February 2008.
  - The Environment Agency (on the need for detailed feasibility studies to review long term flood prevention measures)
- City Works (covering potential alternatives to sand bags to provide emergency flood defences for residential properties)
- Environmental Health (on the survey of properties affected by floods)

Residents in the affected areas in West Oxford, South Oxford & Wolvercote, attended a public meeting held by the Oxford Flood Group on 25th October. This meeting endorsed a list of 13 priorities from the list of 66 established through the consultation process at resident meetings, Area Committee Meetings and Member Surgeries.

### **Identified Priorities.**

6. Thirteen priorities were identified following the consultations referred to in paragraph 4. The list below groups the items into broad responsibility and gives an early estimate of cost: (note: item numbers do not imply priority ranking and are used only to identify the suggestion)

#### Oxford City Council Responsibility

- Item 4 – Store sand, polythene & sandbags in the Environment Agency's Osney Island Depot. (£50k to £100k)
- Item 5 – Allow residents to park in the railway or City Centre car park. (theoretical loss of car park income to the Council)
- Item 11 – Provide more pumps. (£20k each)
- Item 12 – A complete survey of the watercourses & culverts affected all "at risk" flood areas. (£tba, depends how many surveys required and internal resource availability)

#### Joint Agency Responsibility

- Item 3 – Install one-way valves on drains. (£1k to £8k per valve)
- Item 6 – Support the development of a local flood plan. (£tba internal resource costs and external costs unknown)

#### Environment Agency Responsibility

- Item 1 - Temporary Flood Barrier for East St & West St. (up to £500k )
- Item 2 – Raise the height of the East St & West St riverbanks. (£500k to £1m)
- Item 7 – Dredge & widen main rivers in the Western corridor. (up to £500k per stream)
- Item 8 – Bund on north side of Botley Rd. (£500k to £1m)
- Item 9 – Reduce the road surface levels at the end of Duke St. (£10k to £50k)
- Item 10 – New culvert between Earl St & King George's playing field. (£100k to £200k)
- Item 33 – Build demountable barrier on east side of Hinksey Lake. (£up to £500k)

It is important at this stage that members and residents recognise that this list of priorities is not fixed and costing are not firm; it is simply the first group of ideas that will be subjected to further analysis and detailed investigation. It is likely that more work on these items will reveal other options and solutions. The Council and partners on the Oxford Flood Group will continue to review other ideas that come forward and will be advised by ongoing feasibility studies being carried out by the Environment Agency and local surveys being carried out by residents groups.

## **Action Plan**

Officers are working on the following list of actions.

### 7. Mapping Watercourses

Additional data from resident's surveys (e.g. Wolvercote Commoners) and additional mapping work has been added to the Oxford District Land Drainage Maps. The CSW Area Committee has agreed to contribute toward an independent report into the condition and function of the watercourses in the Binsey Area.

### 8. Car Park Strategy

Arrangements to allow residents to use City Council car parks or local retail sites to park cars during flood emergencies are being established.

### 9. Reducing Flood Risk

The City Council's budget for maintenance of ordinary watercourses is £115k in this financial year. (This includes one off provision of £50k for repairs to the Thames riverbank at Fiddlers Island being carried out by the County Council)

The following drainage and maintenance work has been carried out this year;

- Willow Walk and King Georges Field ditches £10k
- Barracks Lane ditch £15k
- Reinstatement of collapsed section of Boundary Brook bank £9k
- Court Place Farm ditch £10k
- Monthly clearance of grills to 12 surface water culverts £17k

£4k remains unspent at this stage and is being held as a contingency to deal with request for additional grill clearing or minor drainage works.

Work on regrading of the ditch along north boundary of Wolvercote Common will be brought forward (was original planned for 08/09 financial year). Cost of this work is estimated to be £15k and it is proposed that this is funded from the additional £50k budget.

The Environment Agency Thames Region Board has accepted the 'business case' for providing measures ahead of the Oxford Strategy and a feasibility study has commenced on the 7 priority items where they are the leading organisation. The feasibility study should be complete by July 2008. The Agency hopes that as the study progresses it will become clear that some of the measures that will not adversely affect other areas and can be introduced sooner than July.

Thames Water has cleared both foul and surface water sewers in the Osney Area. They have repaired one pump and replaced the second pump in the Osney Island Station.

### 10. Logistics

Work has begun with local organisations to improve the supply chain of materials such as sand, sand bags and bricks. This includes negotiations to allow supplies to be held locally or to be deployed to local sites in advance of an emergency.

City Works are continuing to investigate the use of alternatives to sandbags. They have now looked at the effectiveness of the water bag. Other products have also been identified, which they are investigating before making final recommendations. It is proposed that £15k is allocated from the additional £50k this year to support work on logistics and alternatives to sandbags.

#### 11. Pumps

Options are being reviewed in order to make additional mobile pumps available at times of flood emergency (through either buying, leasing or hiring equipment). It is proposed that £20k is allocated from the additional £50k this year to allow the purchase of one additional pump.

#### 12. Supporting Flood Fairs

Council staff have supported local residents groups an event held on 15 November to encourage residents to make their homes more resilient to flooding.

#### 13. Community Flood Plans

Area co-ordinators have met with the Environment Agency about community flood plans. In West Oxford they intend to take this forward through the Community Planning Project.

#### 14. Lobbying

A joint letter has been sent by the Leaders of the Oxfordshire local authorities to the Secretary of State for Environment, Food and Rural Affairs. (Appendix 3). This letter has also been used to provide input to the review being carried out by Sir Michael Pitt.

### **Grants**

15. Distribution of the £60k Flood Recovery Grant is complete, - 115 households have been awarded the £250 available (equates to £28750).

16. 54 households also applied for an additional hardship grant and a total of £23335 has been allocated. Householders will be notified week commencing 19 November.

17. Support to Community Groups - £6665 is to be made available to support Community Groups for activities such as surveys of their areas

18. After the expenditure detailed in paragraphs 10-12 there is expected to be a balance of £1250 remaining, it is planned to hold this fund as a contingency to deal with late applications.

### **Other Cross-Agency Action**

19. County Recovery Group – This Group on met 13 November the following issues were progressed.

- The Environment Agency confirmed that three work streams are in progress in Oxford
  - The existing 'Oxford Strategy' which aims to provide a long term solutions which protect 3500 properties currently at risk from '1 in 100 years' flood events. Funding for the study is in place.

- New short-term measures that will require detailed feasibility studies. Funding for these studies is under review.
- Very immediate measures that can be implemented quickly and within current resources (these measures are likely to be ones included in the Council's list of 13 priorities)
- The Environment Agency will be publishing a briefing document regarding the duties of riparian owners to clear ditches and how these duties need to be balance with habitats/conservation requirements.
- A Countywide climate change adaptation seminar for local authorities is being considered. This would be led by the UK Climate Impacts Programme and would look at the longer term flooding lessons and issues.

20. Government Office of the South East (GOSE) Regional Review – This review completed its work at the end of October and the outcomes will also inform the Pitt Enquiry. Key areas of interest for Oxford City were;

- Recognition of the impact on local authority resources
- The complexity of responsibilities across agencies and local authority boundaries
- The need to improve communication to residents
- The need for more measurement of river levels to improve forecasting and flood warning processes
- The need for local intelligence networks involving local communities and residents to help ensure vulnerable people get the support they need
- Recognition that repairs to properties should attempt to build in resilience to flooding

Oxfordshire County Council officers will also be providing oral evidence on behalf of all the Oxfordshire local authorities to the Environment Food and Rural Affairs Select Committee on 21 November. The key points to be raised will include;

- The Oxfordshire had suffered from a combination of river flooding and rainwater 'flash flooding'
- The flash flooding was more random and hard to predict but could be come more of an issue in the future with more intense weather events being forecast
- That preventative measures need to include emphasis on land management, draining, ditch and gully clearance as well as river defences
- That local coordination is important given the number of public bodies involved and the complexity of riparian responsibilities
- That national coordination needs to consider both river and 'flash flooding issues since the Environment Agency only have responsibility for river flooding
- That while mutual cooperation between local authorities had been good they were issues regarding whether statutory responsibilities should be changed

### **Budget Pressure**

21. As reported to EB on 8<sup>th</sup> Oct 2007 details of reimbursement of 07/08 costs incurred under the Bellwin Scheme & the Council's own insurance policy should be finalised in the New Year. The Council's claim to the Bellwin

scheme is likely to be for approximately £114k (£168k less our threshold of £54k) and will be submitted in the next 6 weeks.

22. The budget pressure for 08/09 cannot be estimated at this point and will depend on further analysis of costs associated with the 13 priorities, the level of funding provided to the Environment Agency and the extent and timing of any incremental maintenance work identified through surveys of ordinary watercourses. Further briefings on the potential budget pressures will be provided at later stages of the budget process and members will have to consider whether the Council's priorities need to change to make flooding a higher priority against other calls on the Council's resources. Officers will also be preparing options to provide additional management capacity to coordinate flood activities across the Council and with external agencies. These may include recruitment of additional resources to aid communication with residents and members and additional technical resources to work with external partners. The appointment of a senior officer to take sole charge of all flood related issues will also be considered as part of the management restructure process.

**Recommendation(s):**

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**Background papers:**

None





# Appendix 1 Members' Feedback

## What went well

1. Practical help with sandbags
2. Pumping water away
3. Being seen to be helpful at all times
4. City Works responded very quickly and efficiently to a request for a portaloos in Wolvercote
5. The evacuation to the Kassam Stadium
6. The way people were supported, advised, informed and kept up to date (although the information available was not always accurate, that was not, however, the fault of the City Council).
7. The reaction from Oxford City Homes in the Weirs Lane area was outstanding. Sandbags were delivered in a steady supply and City Homes staff helped people to make their homes safe where necessary and evacuated a few who were elderly or disabled.
8. The ditch clearance work undertaken by the EA to the west of the railway and the clearance of Towles Mill sluice made a big difference to the water flow capacity south of Osney Mead.
9. Many of the City Council staff worked incredibly hard for very long hours
10. The evacuation from Bullstake Close and the subsequent care of the tenants is being well handled on the whole - certainly a lot of attention is being given to it.

## What could be improved

1. More regular and effective ditch and gully clearance.
2. More accurate and definite warning about the likelihood of risk and what the householder can do to reduce that risk
3. Thames Water need to progress their new sewer pipe in Wolvercote and ensure that people can use their toilets during flood conditions.
4. Sand and bags to be kept locally
5. Residential boaters should be remembered, some were trapped aboard for several days and others felt their boats were in danger
6. There seems to be the lack of someone who has overall responsibility for co-ordinating a response, or can be used as a point of reference
7. The support for the LakeSt/Vicarage Road area on the Wednesday was lamentable; few sandbags were brought in until after 10am and many people were told to go to the Duke of Monmouth car park or Redbridge, when the latter was cut off and the Duke was 200 m away - an impossibility for many elderly people or single women.
8. There was confusion when residents decided to build a sandbag wall to prevent the water from Hinksey Lake from entering Lake St - would this make things worse in Vicarage Road and Lane? Who had authority to say yes or no to its construction?
9. There were many drains and sewers and ditches in the area that were clearly blocked or partially blocked. It is absolutely clear that regular cleaning and gully emptying is a crucial factor in Grandpont, where the real threat is from rising ground water not from the river overflowing its banks.

10. The information from the EA about when the water would peak kept changing and they completely failed to relate the river flow pattern to the circumstances of South Oxford, where the flooding is determined by factors such as the capacity of Hinksey Lake not by what is happening on the main river.
11. There was a lack of information and some wrong information; we needed a central point for accurate information.
12. Some of the people answering the Council phone were very inexperienced and not local
13. The sandbag provision seemed chaotic, because of lack of information, conflicting information and communication breakdowns.
14. Binsey Village was forgotten
15. We could have used the Parks Dept tractor
16. There should have been more drop-off points for sandbags
17. We should have given advice on how best to use sandbags, e.g. use plastic sheeting too and cover air vents.
18. Some people wanted clearer guidance on when to switch off gas and electricity, on whether they should try not to use e.g. washing machines in order avoid sending more water into the drains and, in fact, education on how to prepare for floods.
19. Lack of information on things like the health risks of floodwater
20. We could help in facilitating the setting up of a flood warden and deputy flood warden
21. There was a lack of co-ordinated information on the various flood relief funds - this was needed urgently much earlier on.
22. People are desperate to know what is being done to reduce the risk of future flooding.
23. The City Council should ensure that drains and ditches are cleared before and after a flood event.
24. The leaflet on Clearing up after a Flood was produced in a hurry and rather late

# Appendix 2 Managers' Feedback

## What went well

1. Staff commitment and willingness to work unsociable hours
2. Good relationship with local media and use of Council website
3. Clear chain of command from County Emergency team to operational managers
4. Council Emergency Plan implemented in line with procedure
5. Communication with ward members
6. Coordination across Business Units, management and staff working together
7. Coordination with Bus Companies over Park and Ride
8. Links to County Recovery Group
9. Sandbag distribution (24,000 delivered)
10. Support from local businesses to provide temporary sand bag storage (e.g. Duke of Monmouth, PC World)
11. Support from local businesses to provide supplies outside working hours (e.g. Buildbase)
12. Environment Agency Flood risk warnings were clear and accurate
13. Street Warden nighttime patrols provided reassurance
14. Street Wardens have reviewed and updated their standard operating procedures as result of lessons learned
15. Speed of response at Bulstake Close and good support for Council tenants
16. Pumping operation at Wolvercote to prevent water entering properties
17. Comprehensive survey of residents & businesses.
18. Public protection visits to food businesses to permit reopening.

## What could be improved

1. Continuity of sandbag supply (some problems with logistics early in week)
2. Better arrangements for sharing of database of displaced people with County Council (some confusion about names and addresses of people at Kassam, could also potentially link to GIS mapping database)
3. Emergency Plan needs to be more up to date (some phone numbers wrong)
4. Environment Agency predictions of timing of flood peaks was not reliable (led to confusion and rumour)
5. Provision of Council Payment Cards for staff to avoid need to use personal credit cards to cover hotel bookings for emergency temporary accommodation
6. Need more external communication to provide reassurance and provide clear channel for public feedback and requests for information
7. Could have involved Parks team (staff and vehicles) to share the workload taken on by City Works and OCH
8. Lack of consistency of advice from different agencies.
9. Timing of advice to residents at risk.
10. Pumping of stagnant water residues for health reasons.
11. Joined up sampling of residues & water supplies if corrupted.
12. Process for cross agency sharing of lessons.