Oxfordshire Joint Severe Weather Plan

Version: 2.1

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Distribution List

For Action/Information:

Organisation	Appointment
Oxford City Council	Corporate Secretariat Manager
South and Vale District Council	Shared technical and Facilities manager
West Oxfordshire District Council	Emergency Planning Assistant
West Oxfordshire District Council	Principal Community Safety and Licensing Officer
Cherwell District Council	Environmental Health Practitioner
Oxfordshire Fire and Rescue Service	Emergency Response and Resilience Manager
OCC – E&E	County Network Coordinator and Streetworks Manager
OCC – E&E	Area Stewards Manager
OCC – E&E	Area Steward Oxford City
OCC – E&E	County Drainage Engineer
OCC – E&E	Adverse Weather Manager
OCC – E&E	Environment and Climate Change Team
OCC – E&E	Oxfordshire Strategic Flooding Group Coordinator
OCC – E&E / Atkins	Operations Manager
OCC – Integrated Transport Unit	Transport Service Manager
OCC – CYPF	Assistant to Director, CYP&F
OCC – CYPF	Service Manager – Emergency Services
OCC Communications	External Relations Manager
OCC Occupational Health	Team Leader Communications
OCC Customer Services	Operational Improvement Analyst
OCC Customer Services	Customer Service Centre Manager
OCC Customer Services	Business Process Analyst
Oxfordshire	Cabinet Member for Safer and Stronger Communities
OCC Emergency planning Unit	All
OCC Business Continuity Representatives	All
OCC Strategic Flood Group	Via Oxfordshire Strategic Flooding Group Coordinator
Local Authority Energy and Climate Change Working Group	Via Environment and Energy Strategy Team
OCC Climate Resilience Strategy Group	Via Environment and Energy Strategy Team
Oxford Flood Partnership Meeting	(non-public members only – via chair)

For Information:

The Oxfordshire Resilience Group: via ORG Distribution List	
HPA	MOD
SCAS	BFRS
Oxford Airport	Clarendon Centre
EA	Bicester Garrison
Buckinghamshire County Council	Milton Keynes
Reading Council	TVP
SJA	Oxford University Hospitals
BBC	British Waterways
NHS Oxfordshire	HMPS
Red Cross	WRVS

Document Control

Version	Date	Notes
Version 1	26/11/10	Plan issued
Version 2	7/12/10	Priority Salting Routes added
Version 3	7/01/11	Changes to triggers based on Dec 2010 Snow lessons identified
Version 4	4/02/11	Updated telephone numbers
Version 1.1 Dec. 2011	2/12/11	**Entire Plan reviewed including:** Changes to the NSWWS Update to Cherwell and OCC Sandbag policy Update to heat wave actions / distribution of messages RAF Brize Norton Repatriation communication cascade triggers FGS changes incorporated Detail on new OCC 4x4 service Detail on new OCC Snow Desk in E&E Link to new A34 plan Addition of the new cold health alerts Reference to the new TVLRF Adverse Weather Plan
Version 2.1 Jan. 2013	25/1/13	**Entire Plan reviewed including:** New Met office advisor contact Change to Customer Service Centre Contacts Update to 4x4 cell activation and standby procedures Updating of documents links Addition of new TVLRF adverse Weather Plan details Update of flooding procedures New OCC / DC Sandbag Processes Debrief points from Flooding 2012 incorporated

Training and Exercising

Training and Exercise	Date	Notes
Watermark	5/3/11	National Exercise to test response to flooding
Severe Weather Workshop	18/10/11	Multi Agency Workshop / table top to test response of Thames Valley to severe weather incorporating the A34

CAUTION

If a severe weather emergency has been declared, or may be about to occur and you have not read this plan,

DO NOT READ IT NOW

SEE PAGE 8 – ACTIVATION CHART

PLUS – THE APPROPRIATE WEATHER ANNEX – HEAT WAVE, DROUGHT, STORMS AND GALES, WINTER WEATHER, HEAVY RAIN AND FLOODING

PLUS – REFER TO THE OCC EMERGENCY RESPONSE PLAN FOR ROLES AND RESPONSIBILITIES

If you are unclear about your role, seek advice from the person who activated you or the Oxfordshire County Council Emergency Planning Unit.

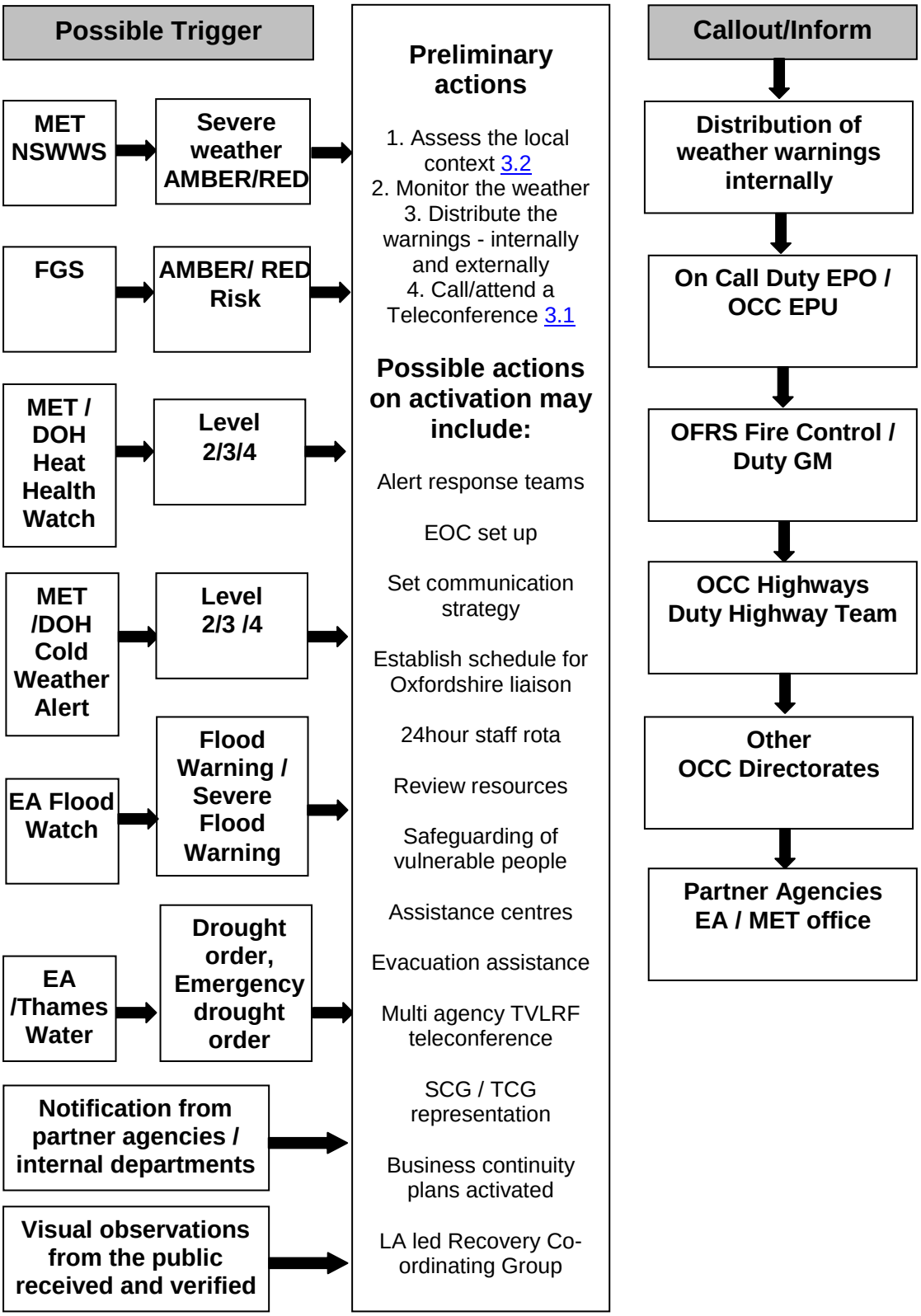
Glossary

Reference should also be made to the Cabinet Office Lexicon the website can be found in Annex H. Below is a list of the most commonly used acronyms in this plan.

CEF	Children Education and Families
CHEMET	Chemical Meteorology Report
CRR	Community Risk Register
DC	District Councils
DEFRA	Department for Environment, Food and Rural Affairs
DOH	Department of Health
EA	Environment Agency
EOC	Emergency Operations Centre
EPU	Emergency Planning Unit
ERA	Extreme Rainfall Alert
FFC	Flood Forecasting Centre
FGS	Flood Guidance Statement
FSA	Food Standards Agency
HPA	Health Protection Agency
LA	Local Authority
LHR	Local Highway Representative
MET	Meteorological Office
MIRS	Major Incident Reporting System
NHS	National Health Service
NSWWS	National Severe Weather Warning Service
OCC	Oxfordshire County Council
RWG	Recovery Working Group
RSPCA	Royal Society for the Protection of Animals
SCG	Strategic Coordinating Group
SCS	Social and Community Services
SUDS	Sustainable Drainage Systems
SEMD 1998	Security and Emergency Measures Direction 1998
TCG	Tactical Coordinating Group
TVLRF	Thames Valley Local Resilience Forum
TVP	Thames Valley Police

Contents

Each organisation will have their own process for receiving triggers. The OCC EPU and Duty EPO will monitor weather alerts and liaise where necessary with OFRS Fire Control and the OFRS Duty Group Manager (Duty GM).



1. Aim of Plan

The aim of this plan is to outline the joint emergency response arrangements across Oxfordshire councils in response to severe weather. This includes a framework of the responsibilities of both County Council and District Councils in terms of activation, allocation and deployment of resources. The plan complements a number of existing Oxfordshire emergency plans and should be read in conjunction with those referenced.

1.1 Objectives of the Plan

1. To outline the actions to be taken in response to a severe weather incident within Oxfordshire, including impacts of weather conditions.
2. To detail the receipt and distribution of weather warnings within OCC.
3. To detail the procedure for activation of the severe weather plan, including alerts, standby and call out arrangements.
4. To set out a framework for the strategic management of severe weather events in Oxfordshire, ensuring a coordinated response within and between the County Council and District Councils.
5. To ensure that lessons identified during previous severe weather incidents, including the floods of 2007 and winter 09/10, have been incorporated into current planning.
6. To detail the provision of specific information to the public on severe weather incidents.

1.2 Introduction

This plan will cover the following severe weather categories:

1. Gales/Storms
2. Winter Weather: Snow/Ice/Fog
3. Heavy Rain/Flooding
4. Heatwave
5. Drought

Within these categories are additional areas of disruption which may arise as a direct or indirect consequence of severe weather including power cuts and poor air quality. Reference therefore will also be made to the emergency response management in such circumstances.

Oxfordshire has suffered from a wide range of different severe weather incidents in the past. Between 1996 and 2009 there were over 350 weather related incidents affecting Oxfordshire County Council, at an estimated cost of £21m[1]

The consequences of such events have been diverse including subsidence caused by drought, schools closures due to flooding and the loss of power to 7,000 homes after a large storm. More recently the severe snow during January and December 2010 and the flooding during 2007 extensively tested the emergency response of councils across Oxfordshire. Further afield, in August 2003, France faced their deadliest natural disaster for a hundred years as a severe heat wave caused 14,000 additional deaths.[1]

The most recent climate projections for the UK (UKCP 2009) indicate that Oxfordshire will see a number of changes in climate over the next 50 years including warmer, drier summers, milder, wetter winters, more frequent extremes of temperature, rainfall and wind, reduced air quality and higher levels of ozone [3].

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[1] Oxfordshire County Council, 2007. *Local Climate Impacts Profile – Findings.* [Online] Oxfordshire County Council. Available at OCC Climate Change Accessed: 25/01/13

[2] UNEP, 2003, *Impacts of Summer 2003 Heat Wave in Europe.* [online] UNEP. Available on the UNEP website. Accessed 25/1/13

[3] OCC, 2010. *Climate Change in Oxfordshire.*

4. UK Climate Change Risk Assessment http://www.defra.gov.uk/environment/climate/government/risk-assessment/ Accessed 25/1/13

According to the UK Climate Change Risk Assessment 2012 (CCRA), [4] the global climate is changing, and warming will continue over the next century. The UK is already vulnerable to extreme weather, and continued action is needed to manage these risks even if additional pressures due to climate change are not taken into account.

1.3 Risk

The UK Climate Change Risk Assessment identifies the South East as especially vulnerable to flooding, with 25% of properties estimated to be at risk of some sort of flooding.

Severe weather has been identified and rated within the Thames Valley Community Risk Register (CRR); flooding and storms being two of the highest risks for Oxfordshire. The register can be found on the Thames Valley Local Resilience Forum (TVLRF) website http://www.thamesvalleylrf.org.uk/useful-links/publications/risk-register.ashx The Oxfordshire CRR also includes severe weather as a series of risks. The table below is taken from the TVLRF CRR.

Ref	Hazard Sub Category	Likelihood	Impact	Risk Rating
H17	Storms and Gales	Medium (3)	Significant (4)	Very High
H18	Low temperatures and Heavy Snow	Medium High (4)	Significant (4)	Very High
HL48	Heat Wave	Medium High (4)	Moderate (3)	High
L60	Drought	Medium (3)	Significant (4)	High
H21	Flooding: Severe inland flooding affecting more than two UK regions. (This is the national picture to provide context for local risk assessment)	Medium (3)	Catastrophic (6)	Very High
HL18	Local / Urban flooding (fluvial or surface run-off)	Medium (3)	Significant (4)	Very High
HL19	Local fluvial flooding	Medium High (4)	Significant (4)	Very High
HL20	Localised, extremely hazardous flash flooding	Low (1)	Minor (2)	Low
H56	Severe space weather	Medium High (4)	Minor (2)	Medium

2. Notification of a Severe Weather Incident

Notification of a severe weather event can originate from many different sources. These include alert systems from partner agencies, information received via the duty Emergency Planning Officer and notification from within Oxfordshire County Council (OCC) or District Council (DC) services. There may also be cases of severe weather occurring with no warning such as a severe storm or tornado, or other natural phenomenon such as earthquakes. As part of its routine function, the OCC Emergency Planning Unit (EPU) conducts horizon scanning activities and remains aware of any national or international events with possible repercussions for Oxfordshire.

2.1 National Severe Weather Warning System (NSWWS)

The NSWWS is a service produced by the Met Office to provide warnings of severe or hazardous weather. The service has recently undergone a number of changes and the system is now based on impact rather than meteorological criteria. Annex M Includes an example of this new format.

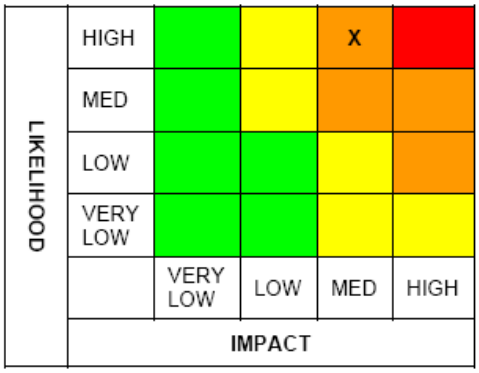
There are two different types of notification

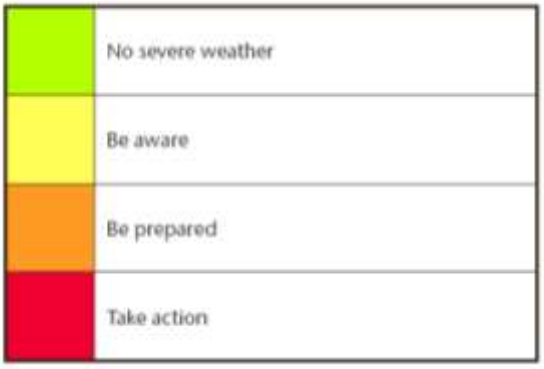
Alerts	Issued more than 24 hours ahead
Warnings	Issued up to 24 hours ahead

The new NSWWS will be used for the following types of weather:

- Rain
- Snow
- Wind
- Fog
- Ice

Each warning or alert will be assigned a warning level based on a combination of likelihood and the impact the conditions may have. The table below sets out this updated matrix. For example a weather event with a medium impact but a high likelihood would be given an amber rating.





Associated with each of the colour ratings are a series of actions seen on the above right hand side. Each weather warning or alert will be accompanied by the Chief Forecasters Assessment which will explain why it has been given the colour it has, as well as indicating where any uncertainties lie. All of this information will be available via the MET office website and be sent through the same methods as the previous NSWWS warnings.

The Met Office has also produced information for the public and emergency responders on the impact level of each of the different warning levels. The generic impacts are listed below, specific information on the impact of each type of severe weather can be found in each of the weather annexes.

Public Impact Table

Impact Level	Very Low	Low	Medium	High
Impact and advice applying to ALL SEVERE WEATHER.	The weather is not expected to have any noticeable impacts but there may be some minor issues e.g. when travelling some extra care may be needed on occasions and there may be some disruption to outdoor events.	**BE AWARE** and ensure you access the latest weather forecast for up to date weather information. Expect some minor delays due to slower traffic. Outdoor events may be disrupted or cancelled.	**BE PREPARED**. Take precautions where possible and ensure you access the latest weather forecast. **BE PREPARED** for some disruption to normal daily routines. Travel only if well prepared and **BE PREPARED** for longer journey times	**TAKE** precautionary **ACTION** and remain extra vigilant. Follow orders and any advice given by authorities under all circumstances. Ensure you access the latest weather forecast. **EXPECT** significant disruption to normal daily routines. Avoid all non-essential journeys. If you must make a journey carry emergency food/ clothing/ blanket etc.

Emergency Responder Impact Table

Impact Level	Very Low	Low	Medium	High
Generic impact levels of ALL SEVERE WEATHER for emergency responder organisations	Nil	Incidents dealt with under "business as usual response" by emergency services e.g. Limited number of Road Traffic Collisions (RTCs).	Short term strain on emergency responder organisations. Risk of injuries with potential danger to life. Potential for short term loss of some utilities. Some disruption to travel with potential for commuters to be stranded for short periods.	Prolonged strain on resources of emergency responders. Potential danger to life. Potential for loss of utilities for lengthy periods (perhaps days). Severe disruption to travel with prolonged delays. Commuters may be stranded for long periods. Mutual aid arrangements may require activation.

2.2 Flood Guidance Statements

The Flood Forecasting Centre (FFC) is a working partnership between the Environment Agency (EA) and the Met Office. Flood Guidance Statements (FGS) are issued on a daily basis by the FFC to Category 1 and 2 responders, government departments, the EA and the Met Office.

Since October 2011 the FGS have been updated to incorporate information from the Extreme Rainfall Alert (ERA) and will now cover all natural sources of flooding with improved surface water flood forecasts.

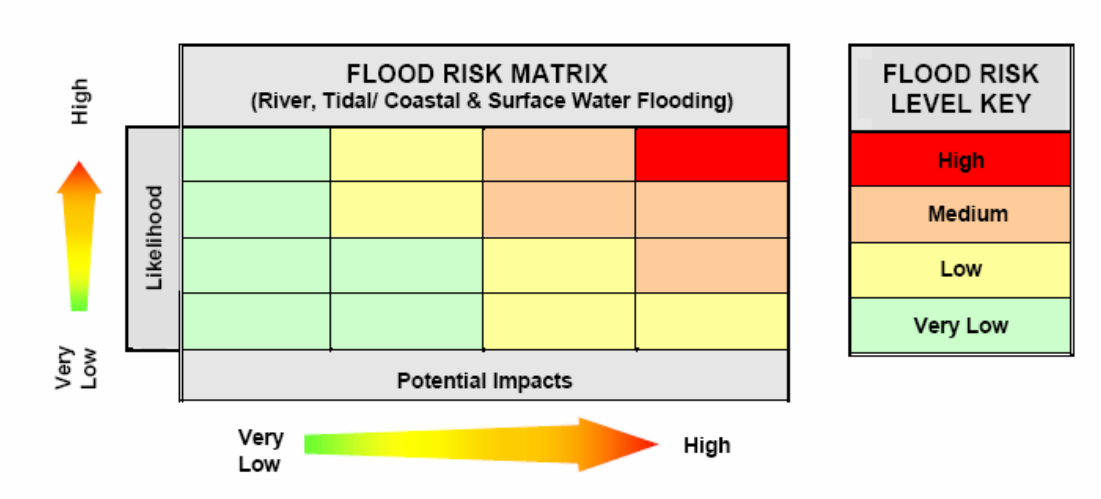
The Flood Guidance Statements now includes:

- New groundwater flood risk assessments
- Surface water, river and coastal risk assessments
- Removal of the ERA reference
- Visual changes to the maps used to improve visibility

The FGS will be issued daily at 10:30am. If the status of alert changes or additional information becomes available an updated FGS will be issued. The FFC will endeavour to do this during working hours but retain the flexibility to issues alerts at any time.

The OCC EPU has elected to receive flood guidance statements for situations of medium risk or higher affecting the following counties: Oxfordshire, Berkshire, Buckinghamshire, Northamptonshire, Gloucestershire and Wiltshire.

The FGS determines the flood risk based on an assessment of the likelihood and potential impact of flooding. This table is supported by a key to the potential impacts and a corresponding public advice section for each level of risk (see table on the next page)



An amber warning (medium risk) in the Flooding Guidance Statement is relevant to organisations within the Thames Valley Local Resilience Forum area as this triggers an EA led teleconference (see section 3.1).

Within Oxfordshire the EA are able to provide groundwater flooding predictions for the following area:

Henley and Assendon area – Turville, Skirmett, Stoner, Middle and Lower Assendon and parts of Henley.

These will be issued as flood alerts only via the Floodline Warning Direct system.

Flood Guidance Statement impact explanation table with corresponding public advice

POTENTIAL IMPACTS KEY				
	Very low	**Low**	**Medium**	**High**
Typical impacts	**Minimal disruption** Generally no impact, however there may still be: isolated and minor flooding of low-lying land and roads Isolated instances of spray/wave overtopping on coastal promenades Little or no disruption to travel although wet road surfaces could lead to difficult driving conditions	**Minor disruption** Localised flooding of land and roads – risk of aquaplaning Localised flooding could affect individual properties Individual properties in coastal locations affected by spray and/or wave overtopping Localised disruption to key sites identified in flood plans (e.g. railways, utilities) Local disruption to travel – longer journey times	**Significant disruption** Flooding affecting properties and parts of communities Damage to buildings/structures is possible Possible danger to life due to fast flowing/deep water/ wave overtopping/ wave inundation Disruption to key sites identified in flood plans (e.g. railways, utilities, hospitals) Disruption to travel is expected. A number of roads are likely to be closed	**Severe disruption** Widespread flooding affecting significant numbers of properties and whole communities Collapse of buildings/structures is possible Danger to life due to fast flowing/ deep water/ wave overtopping/ wave inundation Widespread disruption or loss of infrastructure identified in flood plans (e.g. railways, utilities, hospitals) Large scale evacuation of properties may be required Severe disruption to travel. Risk of motorists becoming stranded

2.3 EA Flood Warnings

The EA will normally issue flood warnings affecting Oxfordshire from the incident room at Wallingford. The table below includes advice issued to the public at each warning stage.

Public Advice Key				
	Very low	**Low**	**Medium**	**High**
Public Advice	**No action required** Keep an eye on the weather	**Flooding is possible - be aware** Remain alert and ensure you access the latest weather forecast for up to date weather information. Be aware of conditions and drive accordingly Check flood warning page Call Floodline 0845 988 1188 for the latest flooding information	**Flooding is expected - be prepared** Remain vigilant and ensure you access the latest weather forecast Consider re-scheduling your journey. Don't drive or walk through flood water Think about preparing for flooding and take precautions where possible Check flood warning page Call Floodline 0845 988 1188 for the latest flooding information	**Significant risk to life - take action** Remain extra vigilant and ensure you access the latest weather forecast Avoid all non-essential travel or postpone journeys if at all possible Follow advice given by authorities under all circumstances, and be prepared for extraordinary measures Check flood warning page Call Floodline 0845 988 1188 for the latest flooding information

The flood warning codes are as follows:

FLOOD ALERT

FLOODING IS POSSIBLE. BE PREPARED.

- **Stay alert**
- **Stay vigilant**
- **Early precautions**

FLOOD WARNING

FLOODING IS EXPECTED. IMMEDIATE ACTION REQUIRED.

- **Flooding expected**
- **Take action**
- **Protect yourselves and your property**

SEVERE FLOOD WARNING

SEVERE FLOODING. DANGER TO LIFE.

- **Significant risk to life**
- **Significant disruption to communities**
- **Protect yourselves**

2.4 Met Office and Department of Health Heat-Health Watch

The Department of Health has produced a Heat wave Plan for England which aims to enhance resilience to heat waves. A copy of the plan can be found via the DOH website.

The Heat-Health Watch system operates in England and Wales each year from 1st June to 15th September in association with the Department of Health and the Welsh Assembly. The system comprises four levels of response based upon thresholds of maximum daytime and minimum night-time temperatures. These thresholds vary by region, the South East area threshold is 31 °C by day and 16 °C overnight.

Green Level 1	**Summer preparedness and long-term planning** Social and healthcare services will ensure that all awareness and background preparedness work is ongoing
Yellow Level 2	**Alert and readiness** Triggered when the risk is 60% or more for threshold temperatures being reached (usually 2-3 days in advance)
Amber Level 3	**Heat wave action** Triggered when the Met Office confirms threshold temperatures for one or more regions have been reached.
Red Level 4	**Emergency** Reached when a heat wave is so severe and/or prolonged that its effects extend outside the health and social care system. At this level, illness and death may occur among the fit and healthy, and not just in high-risk groups

2.5 Met Office and Department of Health Cold Weather Alert Service

The cold weather alert service will operate between the 1st November and the 31st March in association with the Department of Health. The system is based on the Heat Health alert system and originates from the Cold Weather Plan for England. The plan can be found on the Department of Health website.

There are 4 levels of response outlined in the plan which aims to raise public awareness and triggers action in those in contact with those most at risk. The alert levels are based on either of two measures – low temperatures or widespread ice or heavy snow. In the later the alert would be accompanied by a NSWWS warning or alert as appropriate. The plan outlines actions that should be taken at each alert stage by:

- Individuals, families and carers
- Community groups and voluntary sector organisations
- NHS, social care and other community staff
- Health, social care and local authority organisations
- The national level

The decision to issue a level 4 alert at national level is taken in light of a cross-government assessment of weather conditions coordinated by the Civil Contingencies Secretariat.

Blue	**Level 0 – Long-term planning** All year
Green	**Level 1 - Winter preparedness programme** 1st November to 31st March
Yellow	**Level 2 - Severe Weather is forecast – Alert and Readiness** Mean temperature of 2°C and/or widespread ice and heavy snow are predicted within 48 hours, with 60% confidence
Amber	**Level 3 – Severe weather action** Severe winter weather is now occurring: mean temperature of 2°C or less and/or widespread ice and heavy snow
Red	**Level 4 – Major incident** Central Government will declare a Level 4 alert in the event of severe or prolonged cold weather affecting sectors other than health

2.6 Drought Restrictions

There are no official drought warning alerts. Information on drought status would be communicated via Thames Water and the EA directly involving the TVLRF. The EA have a drought plan for the south east and release a monthly situation report on water levels which can be found here http://www.environment-agency.gov.uk/research/library/publications/127606.aspx

There are four stages to a drought each with different restrictions on water use. In the early stages Thames Water and the EA will encourage the public and businesses to conserve water through publicity campaigns and other communication.

1. **Temporary hosepipe ban**: This is a ban which water companies can invoke on their own without authorisation from another body as long as they feel they are experiencing or might experience a water shortage. The EA has the power to restrict or ban agricultural spray irrigation if necessary.
2. **Drought permit**: This must be granted by the EA and allows a company to take water from a specific source or to modify or suspend conditions in their abstraction licences.
3. **Drought orders**: These are granted by the Secretary of State on the application of the EA or water company. A drought order can prohibit or restrict the uses of water.
4. **Emergency drought order**: these are granted by the Secretary of State and allow water companies complete discretion over the use of water and authorises the implementation of standpipes and water tanks.

Drought Stage	Possible restrictions
Temporary hosepipe ban (Thames Water Restriction Level 2)	Using a hose pipe to: • water a garden • clean a private motor-vehicle • water plants on domestic or other non-commercial premises • clean a private leisure boat • draw water for domestic recreational use • fill or maintain a domestic pond • clean walls, or windows, of domestic premises • clean paths or patios • clean other artificial outdoor surfaces And: • filling or maintaining a domestic swimming or paddling pool • filling or maintaining an ornamental fountain
Drought Orders (Thames Water Restriction Level 3)	• Water, by hosepipe, sprinkler or other similar apparatus, gardens (other than market gardens), including lawns, verges, other landscaped areas, allotments, parks, or any natural or artificial surfaces used for sport or recreation • Filling of privately owned swimming pools, other than: pools designed for a programme of medical treatment or where necessary during their construction • filling of ornamental ponds other than fish ponds and wildlife garden ponds • the operation of mechanical vehicle washers, whether automatic or not • the washing of road vehicles, boats, railway rolling stock or aircraft except for safety or hygiene reasons • the cleaning of the exterior of buildings, except windows • the cleaning of windows by hosepipe, sprinkler or similar apparatus • the cleaning of industrial premises or plant except for safety or hygiene reasons • the operation of ornamental fountains or cascades, including those where water is recycled • the operation, in relation to any building or other premises, of any cistern which flushes automatically, during any period when those premises are wholly or substantially unoccupied
Emergency Drought orders (Thames Water Restriction Level 4)	Water companies can restrict water in any way the deem necessary this can include: • Standpipes, water tankers and bowsers - supplies to homes would be shut off and people would have to collect water from standpipes in the street • Rota cuts - supplies to homes and businesses would be cut off at certain times of the day, such as for eight hours at a time

The Thames Water timeline for these measures is displayed below:

Measure	Time to Implement (WEEKS)			
Media Campaign	1			
Hosepipe/sprinkler ban		2		
Non Essential Use drought order / drought permit			10	
Emergency drought order				10
Elapsed time	1	3	13	23

Drought Measures Indicative Timescale for SWOX (Swindon and Oxfordshire)[2]

[2] Thames Water. 2010. *Final Drought Plan.* [Online] Thames Water Utilities Ltd. Available on the Thames Water website Accessed: 28/08/12. page 48.

In terms of Emergency Drought Orders the Thames Water Drought Plan states that "the aim of all preceding supply and demand side measures is to mitigate the need to resort to Level 4 Emergency restrictions. It would only be in the most extreme situation (not yet experienced in the hydrological record from 1920 – 2006) that such extreme actions may be needed".

Thames Water has additional measures to avert a level 4 restriction. The main measures are listed below, additional measures can be found in the Thames Water Drought Plan (pages 77–78).

- Reducing the mains water pressure
- Carrying out further leakage control work
- Restricting supplies to large commercial users

The Thames Water decision process for Drought permits is outlined in the Thames Water Drought Plan – Annex C there is also a separate communication Plan which is Annex H. The location of these documents can be found in Annex H of this plan.

2.7 Oxfordshire County Council Highways

The OCC Highways team receives enhanced weather forecasts via the Met Office 'Open Roads' service between the 1st November and the 31st March to assist in the determining of appropriate highway winter maintenance. These are delivered via a designated website which includes:

By 0900 – Morning update which includes the current situation / previous weather

By 1300 – 24 hour forecast for the day detailed forecast including meteorological changes, air and road surface temperatures, likelihood of precipitation or water on the roads, ice, fog, hoar frost, wind speed and direction, detailed snow forecasts and a 2-5 day forecast

OCC Highways utilises a network of weather sensors (Bix, Chipping Norton, Goosey, Crowmarsh and Middleton Stoney) and the Findlay Irvine Ice-alert system allowing a 24 hour watch to be kept on road conditions. The OCC Adverse Weather Manager or the Highways On Call Duty Officer will assess these forecasts and weather information in order to decide what action, if any, needs to be taken on the roads.

Further information can be found in "Oxfordshire County Council Adverse Weather Operational Plan" which includes priority salting routes. Further information on liaison between OCC EPU and OCC Highways can be found in section 4.6.

2.8 Highways Agency Weather Alerts

The Highways Agency has launched a new weather alert service which will warn of severe weather for high winds or snow. The alerts will be issued by email to stakeholders, the travel news media, freight transport, road haulage associations, caravan clubs, the AA and the RAC. The Highways Agency hopes that encouraging people to change or cancel travel plans and encourage hauliers to look at alternative routes or timings that this will help keep roads open and help people to plan their journeys more effectively in severe weather.

The warnings will be an amber or red alert issued in conjunction with the Met Office forecaster based in the National Traffic Operations Centre during the winter. An example of an alert can be found in Annex N

This warning will be issued at the same time as a NSWWS warning or alert as the Highways Agency Alert are based on the NSWWS. Because of this the Highways Agency alert will not feature in the trigger pages. The TVLRF secretariat and OCC Emergency Planning both receive these alerts.

2.9 Met Office Hazard Management Tool

The hazard management tool is a Met Office system which is available to Cat 1 & 2 providers, for details on how to sign up to this system please see Annex H. During a severe weather incident the hazard manager systems allows for a visual presentation of weather through an interactive map with direct access to FGS, CHEMET (chemical metrological) event maps, weather warnings, infrared satellite, visible satellite, radar rainfall, lightning sites, rainfall accumulation levels, wind speeds and forecasts.

An open access account for CCMT and other users during a severe weather incident has been set up. To access this service go to: www.metoffice.gov.uk/premium/hazardmanager/ and use the following login details:

User name: oxfordshirecc
Password: emergency1

2.10 Highways Agency Winter Reporting Tool

The Highways Agency uses a Winter Reporting tool called WRF1 (Winter Reporting Form 1). All the Highways Agency's Service Providers enter information into this system everyday during the winter (1st October – 30th April). This includes the following information:

- Daily winter treatment plan
- Business Continuity Information
- Severe weather hourly updates (as applicable)
- Confirmation of treatment

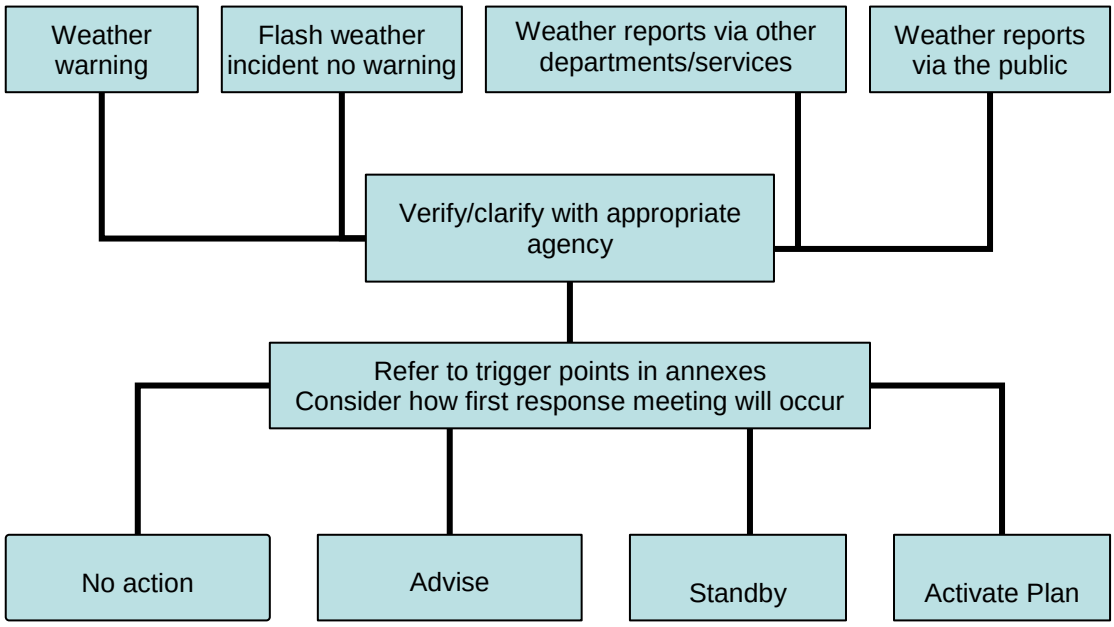
Multi agency stakeholders are now able to access some of this information online and set up automated emails to receive notifications when actions have been carried out in areas which are specified by the user. The EPU has access to this system. To open an account register via http://winter.atkinsglobal.com/winter

3. Activation of the Severe Weather Plan

The trigger points for activation of the severe weather plan can be found in the following weather appendices:

Heat wave	Annex A
Drought	Annex B
Gales/Storms	Annex C
Snow/ice/fog/Blizzards - Winter Weather	Annex D
Heavy rain/Flooding	Annex E

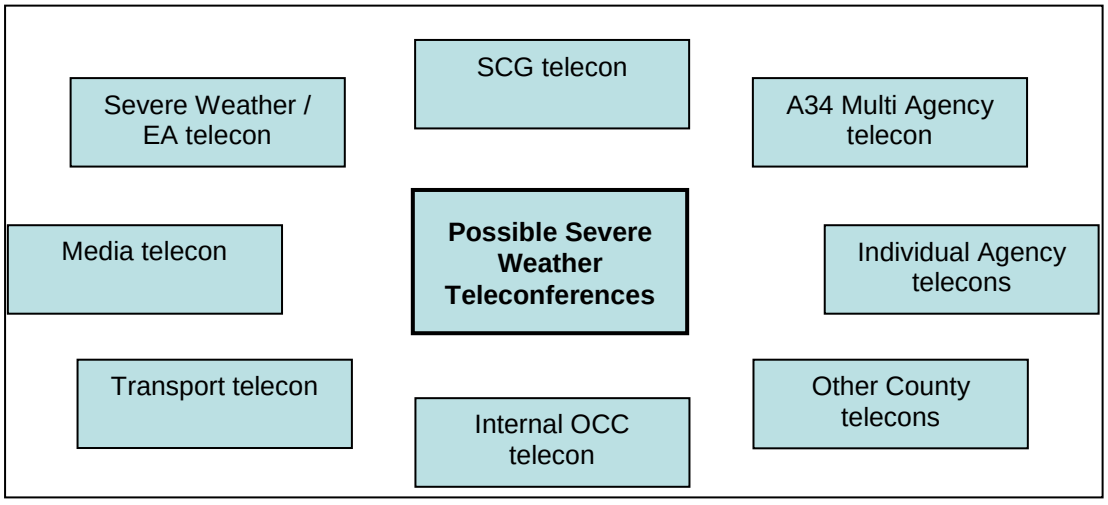
The annexes also include details on public information provision, the EA teleconference and how to sign up for the weather warnings . The following section should be read alongside the OCC Emergency Response Plan.



Activation Process

3.1 Teleconferences

During a severe weather incident there are a number of teleconferences which could be being held – when calling a teleconference the organiser should be mindful of the overall battle rhythm of the incident and the number and timings of the other teleconferences to avoid duplication and stretching resources.



Flooding – EA Flood Advisory Teleconference
In response to an appropriate amber warning (medium risk) in the Flooding Guidance Statement the EA will convene a teleconference. This will be chaired by the EA Area Flood Risk Manager, or if not available the EA Area Base Controller. The current attendees are listed in Annex G. The initial agenda includes:

1. Introduction / welcome / confirm attendees (5mins)
2. Weather update (5mins)
3. Update on warnings, the effected areas & local impacts (5mins)
4. Update and questions from Cat 1 & 2 responders (10mins)
5. Agree next teleconference if required

Severe Weather – TVLRF Adverse Weather Telconference
On receipt of an amber NSWWS warning a multi agency Thames Valley Tactical Coordinating Group teleconference will be held. The purpose of this teleconference is to:

- Talk to the MET office directly
- Exchange information at an EPO level
- Determine whether certain geographical areas are at risk
- Allow TVP to nominate a TCG commander to chair the teleconference and coordinate the response across the Thames Valley

The TVLRF Adverse Weather Plan outlines the triggers and actions on receipt of a NSWWS warning and can be found on the LRF website.

Severe Weather – Oxfordshire Telconference

In addition the OCC EPU, duty EPO or District Council EP can consider convening an Oxfordshire teleconference with OCC and DC representatives. If a District Council EPO wishes to convene a conference call they may call the OCC duty EPO for access to contact numbers if needed. A suggested invite list can be found in Annex G and the email distribution list is saved within the EPU Emergency Operations Email system.

The teleconference number for use in the OCC EPU is 08444 737373. This number can be used remotely by DCs if required and on request.

There are two Polycom conference call units in the OCC EPU the procedure document for which can be found in the OCC EPU communication folder and a laminated instruction card is situated by each phone. The Pin number is 876096. In order to access the teleconference facilities externally call the teleconference number and give the details to the other attendees.

The agenda for this can be found in Annex G. The initial teleconference should also take note of the agenda in the Oxfordshire County Council Emergency Plan to ensure all emergency response processes are considered. (Page 8 – OCC Emergency Response Plan)

The purpose of all teleconferences will be to determine the appropriate action to be taken. The response will be based upon the severity of the forecast, current weather conditions, potential impacts and consequences with reference to predetermined trigger points.

Decisions will be made jointly by DCs and OCC and include the battle rhythm to be adopted and the representatives to be sent to SCG and TCG as appropriate. These can be either DC or OCC representatives as per section 4.1 and 4.2.

3.2 Generic considerations for trigger points
It is important not to view formal warnings in isolation. Before embarking on any evaluation or activation, it is worthwhile considering the context in which the warning has been issued. In assessing the information contained in warnings, one should consider:

1. Does the warning affect, or have the potential to affect Oxfordshire?
   Rain need not necessarily fall on Oxfordshire to create a problem with river flooding.

2. What is the context of the warning?
   Is the ground already wet? Are surface temperatures below zero?
   What is the air temperature and wind chill factor? These have survival implications.

3. When is the event expected?
   Forecasts are generally more accurate the closer they are to the predicted event.
   A problem forecast 5 days ahead may change in timing, geographical area and severity.
   It is important to monitor the changes to warnings over time.
   Is the forecast event short-lived or prolonged?

4. If the weather is as forecast, what will be the likely impact on the community?
   Are there any large public gatherings planned?

5. Are key transport routes already disrupted by engineering works or congestion?

6. If the weather is as forecast what are the implications for the council's business continuity?

7. Does the situation justify multi-agency discussion at the TCG level?

8. Could the weather bring a need for mutual aid?
   Would the weather restrict mutual aid partners?
   Would the council need to provide mutual aid to others?

3.3 No Action
If it is determined that a teleconference is not necessary then a watching brief may be issued. The weather should continue to be monitored via weather warnings and the Met Office hazard management system (section 2.9). The situation can then be re-assessed on the receipt of any further warnings and/or after a number of hours as deemed appropriate. Should the situation develop further then a teleconference can be convened.

3.4 Advice
If necessary the duty EPO will consider distributing the weather warning and/or an update on the current status and response of OCC. Recipients will be advised of the potential/actual weather forecast and should assess what action to be taken. It is assumed that all interested parties (directorates, DCs and district departments) already receive weather warnings directly and therefore the EPU should not be relied upon to advise others of weather warnings. If/when appropriate the duty EPO may disseminate messages to parish councils (see annex F). Annex H lists the mechanisms for signing up to the various weather warnings.

Triggers disseminating advice to the public can also be found in the weather appendices. The communication strategy for severe weather would fall in line with the Thames Valley Police (TVP) media cell if active. Any messages issued would therefore be in consultation with TVP. In cases where the media cell is not in operation OCC will coordinate the local messages.

3.5 Recovery
The OCC Emergency Response Plan outlines the process for recovery including the location and operation of the Recovery Coordinating Group (RCG), the handover from response phase to recovery phase and the importance of a recovery strategy.

4. Strategic Management of Severe Weather

This plan outlines the actions taken during a severe weather incident by both Oxfordshire County Council (OCC) and the District Councils (DCs) – Cherwell, South Oxfordshire and Vale of White Horse, West Oxfordshire and Oxford City Council. This joint response is managed through a strategic framework of coordinated cross boundary working, the key to which is clear and regular communication between DCs and OCC. After the severe weather incident DCs and OCC will debrief together in order to learn lessons and evaluate joint working practices.

The roles and responsibilities of both OCC and DCs have been predetermined and are included within the weather appendices. This supports a shared and transparent response to severe weather across Oxfordshire and helps each council to better understand the actions and approach of each other. It is hoped this will better facilitate the coordination of resources between councils. Reference should be made to the OCC Emergency Response Plan for the role and actions of the OCC CCMT.

4.1 Strategic Coordinating Group (SCG)

The first communication between DCs and OCC occurs during the initial teleconference (see section 3.1). If a SCG is being convened this teleconference will propose which representative will be sent. The immediate arrangements for local authority attendance at an SCG are laid out in the OCC Emergency Response Plan. The purpose of a SCG is to take responsibility for the multi agency management of the emergency and establish the policy and strategic framework to be applied.

The role within the SCG can be performed by either a DC or OCC representative but must be an individual who is empowered with executive authority to make decisions in respect of the council's resources. The SCG rep will also act as the initial chairman of the Recovery Co-ordinating Group (RCG).

4.2 Multi Agency Tactical Coordination Group (TCG)

The initial teleconference will also decide the Silver representative; this role can be fulfilled by either a DC or OCC individual or through joint Silvers. The role of Silver is to undertake tactical coordination of the response to severe weather. This will include:

Determining priorities for allocating resources

Planning and coordinating how and when tasks will be undertaken

Obtaining additional resources

Assessing risks

Ensuring the health and safety of the public and personnel

Where a multi-agency tactical coordination body is required, a multi-agency Tactical Co-ordinating Group (TCG) will be established. The familiar term for this is a "multi-agency silver". For the strategic management of severe weather, information will pass between the TCG and the SCG Local Authority reps in addition to Local Authority TCG rep liaison with both OCC and DC Emergency Operations Centres (EOCs).

4.3 Bronze Role

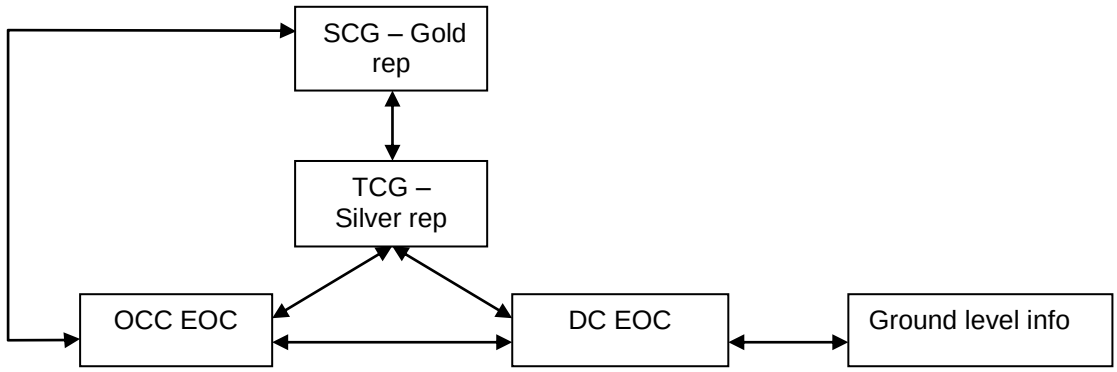
The additional management tier is the operational Bronze level where the coordination of the operational response on the ground occurs.

4.4 Emergency Operation Centres (EOC) Structure

If appropriate OCC will initiate an Emergency Operations Centre (EOC); possible locations can be found in the OCC Emergency Response Plan. This EOC will maintain an overview of information by coordinating and compiling information received from each district EOC in order to brief the SCG on the situation across Oxfordshire. Information fed back from the SCG will then be disseminated by OCC EOC to each district EOC.

The communication link between the OCC EOC and each district EOC is vital and must be facilitated either via a DC rep in the OCC EOC or through timed reports from the each district EOC. The OCC EOC will also liaise directly with the Local Authority Silver.

During a severe weather incident there are likely to be a number of district EOCs depending on severity. It is vital that each EOC is able to gain information from the ground to give an up to date situation report to the OCC EOC. The frequency of these reports will be set by the initial teleconference when the battle rhythm is determined. Any additional issues which a district EOC wishes to raise at a SCG meeting must be sent at least ½ hour beforehand.



Information Flow

4.5 Key Strategic Management Features

Within this structure there are a number of key strategic features which must be maintained in order to facilitate the efficient management of a severe weather incident.

- OCC or any DCs may call the initial teleconference (see section 3.1)
- OCC and all DCs are to provide a representative to the initial Gold meeting if they are able or wish to attend. DCs and OCC will then jointly decide the representative who will act as Gold thereafter.
- The decision of who will attend Silver will be made by both DCs and OCC based on the area affected by severe weather and level of expertise.
- OCC EOC will coordinate the flow of information from each DC EOC and will compile this information to report to the SCG.
- OCC EOC will relay back to the DCs any information from the SCG.
- Each DC EOC will open and maintain a close link to OCC EOC; this can be either through reports at set times or through a liaison officer within the OCC EOC.

On activation of the plan OCC will if necessary:

- coordinate, provide and manage assistance centres
- provide highways and engineering specialists
- support the districts with resources such as sandbags (see annex E)

On activation of the plan DCs will if necessary:

- Set up an EOC
- Provide a public contact centres
- Disseminate / apply resources from OCC to aid the public

4.6 MIRS

Within OCC the MIRS (Major incident reporting system) can be activated to facilitate reports from within the directorates. To activate this system the OCC EPU or duty EPO must contact the duty director for permission and then send an email via Internal Communications. Further information and an example can be found in annex F. The trigger for the discussion to consider the activation of MIRS can be found in the weather appendices and will always precede any weather teleconference.

4.7 Liaison with OCC highways

During working hours the EPU and OCC highways department are able to liaise on weather incidents via a number of different parts of the directorate depending on the information needed. This includes the County Network Coordinator and Streetworks Manager and the Adverse Weather Manager.

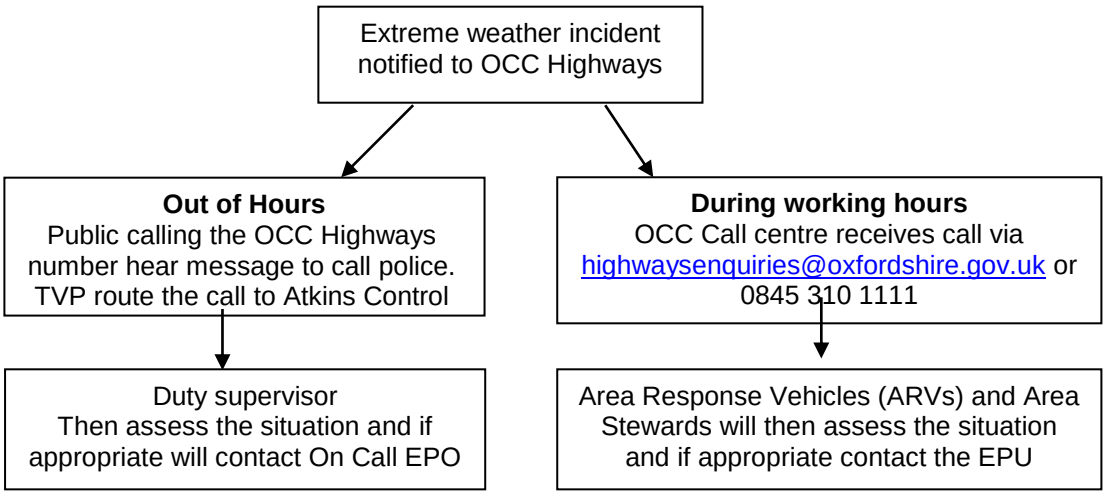
Outside of office hours EPU liaison is via the OCC Highways Duty Officer.

Calls to Highways for out of hours for incidents such as fallen trees, are routed via the contractor Atkins to their control centre in Birmingham. From there the calls are then re-routed to the appropriate local depot via the duty supervisor.

The duty supervisor will contact the on call duty EPO if there is an extreme weather incident such as widespread fallen trees. This will be done following the procedure in the OCC Emergency Response Plan. The duty supervisor will only contact the Duty EPO for extreme weather issues and not for incidents which are of a limited impact or day to day occurrences. The Duty EPO will then respond to the issue as per the normal processes. Extreme weather issues will include:

- Weather related incidents which are outside of normal parameters
- Weather incidents which require additional resources without which Highways cannot fulfil their usual response
- Weather related incidents which are prolonged or are likely to escalate
- Weather related incidents which have a large impact on the normal functionality of the surrounding communities

The diagram below details the way in which the public can notify OCC Highways of an extreme weather incident affecting the OCC transport network and the link to the Emergency Planning Unit.

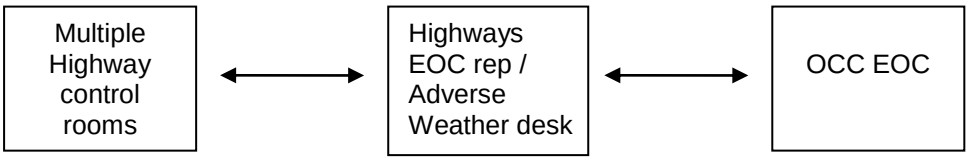


If a severe weather teleconference is held then OCC Highways will be invited (see section 3.1). During office hours the representative for this will be the Adverse Weather Manager and the County Network Coordinator & Streetworks Manager. For out of office hours the Duty Officer (initially) will attend. Their role during a teleconference will be to advise on the potential impacts of the predicted weather on their services, give information on road closures and network issues and to help determine what action should be taken including the activation of this plan.

If an EOC has been set up then the OCC Highways department will, resources permitting, send a representative to EOC with a wide overview on highways issues (such as public transport concerns) and to act as a link into Atkins. If resources are limited this representative will be available via telephone, this is likely to be the Adverse Weather Manager. If an Adverse Weather Desk has been set up then OCC Emergency Planning will (resources permitting) send an EPO to provide liaison between the EOC and the Adverse Weather Desk instead.

During an incident there may be a number of OCC Highway local control rooms depending on the area affected. The communication between the control rooms will be coordinated by the Adverse Weather Desk during winter weather. The information flow between these numerous control rooms and the EOC will be via the highways EOC rep located in the EOC or from the EPO in the Severe Weather Desk.

Highway Coordination will also be informed -highway.coordination@oxfordshire.gov.uk to ensure Traffic Control Systems are aware and web pages reflect the actual incident. Any major weather incident that affects a substantial part of the County will include Network Management as the Strategic lead.



If needed by the EOC, highways can provide access to their specialised road weather forecast. There are also 5 weather stations in the districts which are able to record wind speed and wind temperature. This information is used by the Met office to validate their forecasts and if required can be provided by Highways. For liaison information on sandbags during flooding see annex E and for salting see annex D.

4.8 OCC Winter Preparations

Information on the arrangements in Oxfordshire for dealing with the effects of snow and ice on the highways can be found in the Oxfordshire County Council Adverse Weather Operational Plan produced by OCC Highways. Some of the key features have been repeated below.

- Oxfordshire County Council Highways department has a pre-defined treatment network which covers 43% of the OCC road network. There are 28 salting routes which are covered by the five depots – Chipping Norton, Deddington, Drayton, Milton Common and Woodcote. The OCC website includes a map of the treated network which can be found here http://www.oxfordshire.gov.uk/cms/content/winter-maintenance

- Salt bins for public use on the highways will be filled once before the winter season.

- Parish Councils are offered a 1 ton bag of salt free of charge with the option to purchase further bags to encourage self help and community resilience.

- OCC has a fleet of 27 gritting lorries and 4 reserves held at Deddington and Drayton.

- As a minimum resilience OCC holds enough salt for 6 days during October and April through to 12 days resilience during November to March. For Winter 2012/13 OCC Highways has approximately 12,800 tonnes.

- The salt gritters are set to spread the salt across both lanes of a single carriageway or two lanes of a dual carriageway.

- The OCC Adverse Weather Manager is working with Parish Councils to identify key routes which are untreated and local farmers who may be able to clear those routes in order to meet up with OCC pre-salted routes.

- In exceptional periods of prolonged snow then pre-salting may be restricted to "Priority Route A" roads only.

- Treatment of roads within Oxford City is generally undertaken by Oxford City Council

- The winter decisions are available to the public via http://www.oxfordshire.gov.uk/cms/content/winter-maintenance

4.9 OCC Highways Adverse Weather Desk

Oxfordshire County Council Highways department can run an adverse desk as required. This will generally be held at Cambridge Terrace and ensure continuous monitoring and management of the highways response. Representation at the adverse weather desk will include an emergency planning officer (if available) who may (as resources dictate) also act as the TCG representative at St Aldates if necessary.

The objectives, procedures and process diagram for the adverse desk can be found in the Oxfordshire County Council Adverse Weather Operational Plan.

4.10 OCC 4x4 Response Cell

Oxfordshire County Council will have a coordinated centre for 4x4 requirements within the council during heavy snow. These vehicles will be for emergency use only in cases where business continuity plans have failed. Access to these vehicles will be via management approval only and will have to meet a strict set of criteria.

The 4x4 response cell will be activated in liaison with the Emergency Planning Unit and will be discussed during the initial teleconference. The exception to this is on a Friday when experience had shown that it is better to put the 4x4 cell on standby in case the warning moves to amber closer to the weekend. These procedures are included in the trigger pages.

5. Related Plans and Legislation

The joint Oxfordshire Severe Weather Plan sits within a framework of plans held by the LRF, OCC and the District Councils. Parish Councils are increasingly encouraged to construct flood plans or community emergency plans and during a severe weather incident these plans can be a looked at as an additional source of information for responders. Directly related to this plan are the changes brought about by the new Flood and Water Management Act, the repatriation planning and the A34 Response Plan.

5.1 The Flood and Water Management Act 2010

The Flood and Water Management Act 2010 aims to ensure good management of surface water, ground water and sewerage systems. The features of the new legislation include:

- Providing the Environment Agency of an overview of all flood and coastal erosion risk management.
- Unitary and county councils become the lead in managing the risk of all local floods.
- An improved risk based approach to reservoir safety.
- Encouraging the uptake of sustainable drainage systems (SUDS) by removing the automatic right to connect to sewers and providing for unitary and county councils to adopt SUDS for new developments and redevelopments.
- Widening the list of water uses that can restricted during periods of water shortage by water companies, and enable Government to add to and remove uses from the list.
- Enabling water and sewerage companies to operate concessionary schemes for community groups on surface water drainage charges.
- Reducing 'bad debt' in the water industry by amending the Water Industry Act 1991 to provide a named customer and clarify who is responsible for paying the water bill.
- Making it easier for water and sewerage companies to develop and implement social tariffs where companies consider there is a good cause to do so, and in light of guidance that will be issued by the Secretary of State following a full public consultation.

The Act places a number of new responsibilities on Local Authorities. District and City councils are recognised by the act as risk management authorities. As the lead local flood authority (LLFA) Oxfordshire County Council will have to:

1. Develop, maintain, apply and monitor a strategy for local flood risk. Including a preliminary flood risk assessment
2. Investigate all flooding incidents within their area
3. Maintain a register of structures or features which impact on flood risk in the area
4. Approve each new drainage system, development and redevelopment

The Oxfordshire Strategic Flood Group will be monitoring and communicating to OCC EPU any changes which occur within OCC and district councils due to the Act and any impacts these might have on flood response.

As LLFA Oxfordshire County Council completed and submitted the Preliminary Flood Risk Assessment to the Environment Agency. The results demonstrated the existence of flooding issues which will need to be addressed in a Local Flood Risk Management Strategy. Work is progressing on developing the Strategy and this should be finalised following a formal consultation during 2013.

5.2 Oxfordshire Repatriation Planning

A severe weather contingency plan has been drawn up as part of the event management plan for the military repatriations from RAF Brize Norton. This plan focuses on the communication of weather warnings and options for shelter for the public. Each weather annex includes the trigger point at which (if repatriation has been scheduled) the warning will be distributed to the agencies involved. The only exception to this is in hot weather where the trigger is not based on the heat wave alert system but a temperature threshold. For more information please refer to the Repatriation Event Management Plan.

5.3 A34 Planning

In 2010 traffic on the A34 suffered severe congestion due to the heavy snow over the weekend of the 18th December. A multi agency group was established by OCC to look at the A34 in more detail and determine methods for dealing with incidents. This group has produced an A34 Response Plan (covering the A34 from Bicester to Winchester) which dovetails into this plan by utilising the same triggers to activate the A34 plan in times of severe weather and additional triggers for other incidents. On activation of the A34 plan a multi agency response teleconference will be held hosted by the HA to discuss traffic management options and options for response. In terms of severe weather the A34 teleconference can be triggered on an amber weather alert relevant to the A34.

5.4 TVLRF Adverse Weather Plan

The TVLRF Adverse Weather Plan outlines a multi-agency procedure for responding to severe weather and links in closely to the TVLRF Multi Agency Flood Plan.

The plan includes the following information:

Information on weather warnings
Stages and triggers for multi agency activation
TVLRF adverse weather teleconference
Key messages and media for the public
Separate drought Plan

This plan can be found on the TVLRF website and all the multi agency aspects which impact on or involve Oxfordshire have been incorporated into this plan.

5.5 TVLRF Flood Plan

This plan provides a strategic framework for a multi-agency response to a flood event within the TVLRF area and can be found on the TVLRF Website. For more information on the Flood Plan see section E2.

6. Roles and Responsibilities

The OCC Emergency Response Plan contains an overview of the roles and responsibilities of each County Council Directorate during an emergency, also included is the initial contact numbers for those with a key role to play in responding to emergencies across the authority. The roles and responsibilities of OCC directorates and DCs in response to different types of severe weather can be found in annexes A – E.

Annex A: Heat wave

A1 - Introduction

Heat wave conditions will have a direct impact upon the people and services that both OCC and DCs deliver. The most at risk during a heat wave are vulnerable people who face an increased risk of heat related health threats. In 2003 there were an estimated 2,000 excess deaths in the UK due to heat.

A2 - Related Plans

Within OCC, the Social and Community Services directorate has a heat wave plan which takes account of the advice issued by the Department of Health and is reviewed annually. This plan outlines the requirements of SCS in order to comply with the Department of Health guidelines, the actions taken by SCS at each heat wave level and the links to occupational health advice for staff.

The Department of Health produces the Heat Wave Plan for England the link to the latest version can be found in annex H. NHS Oxfordshire has lead responsibility for Heat wave Planning in Oxfordshire and has established a multi agency group – the Oxfordshire Health Emergency Planning Group which among other responsibilities coordinates heat wave planning for health.

A3 - The effect of a Heat wave

A number of different council services could be affected by a heat wave resulting in varying levels of severity depending on the extent and duration. Considerations in response to a heat wave include:

Effect	Detail	Considerations
Health of vulnerable people	Those affected: Older people (especially women over 75) Babies and young children People with mental health issues People with serious chronic conditions People on certain medications People with high temperatures People who misuse alcohol and/or drugs People with mobility problems Physically active people e.g. manual workers The main causes of death during a heat wave are respiratory and cardiovascular diseases. Heat related illnesses include: Heat cramps, heat rash, heat oedema (fluid retention), dizziness and fainting, heat exhaustion and heatstroke Cold water sitting in pipes means an increased risk of legionnaires disease as it warms During an extreme heat wave additional deaths can occur. Approximately one third of the deaths caused by the heat wave in the UK were caused by poor air quality. In extreme cases local mortuary capacity may be exceeded	Identification and safe guarding of vulnerable people, including care homes and schools Public promotion of keeping cool during a heat wave Children – sun safety in schools, access to water and sun cream, possible school closures. The HPA has issued advice to schools (annex H) During an extreme heat wave (L4) normal fit and healthy people can also be effected Reference to the Mass Fatalities plan

Increased need for public information	Increase in public calls to DC and OCC for situation updates and resource requirements	Staffing levels for calls What information is provided to call takers and how?
Occupational health / health and safety	Staff working outside Period of time staff are outside Temperatures of working environments Occupational health advice to staff	Building temperatures Are staff working safely? Do any activities need to stop or change?
Business Continuity	Weather may prevent/restrict certain OCC and DC activities Computer systems overheating	Which services will be affected? What are the priorities? Activation of services business continuity plans
Urban heat islands	During a heat wave it is likely to be hotter in cities then in the surrounding countryside especially at night. Temperatures rise from the edge of the city, peaking in the centre	People within these areas have an increased vulnerability to heat wave
Transport Issues	Transport disruption may occur due to melting roads. Heated road surfaces can then cause trip hazards, however the surface temperature may not be dependant on the air temperature and melting is therefore more likely as a result of direct sunshine The warping or buckling of railway lines is possible under extreme or prolonged temperatures – staged preventative measures are usually applied once temperatures reach 22°C and extreme measures at 36°C During a heat wave road closures or long delays can cause additional concerns for passengers particularly vulnerable people such as the elderly or young children	Highways response to road deterioration reports Transport issues for vulnerable people – how transported? How is access for care in the home maintained? Identification of statutory/voluntary agencies that can assist in providing support and assistance to people trapped in vehicles Provisions to public stranded in vehicles such as water and health care
Food Safety	Warm food kept at incorrect temperatures More BBQs could mean an increase in cases of food poisoning	Trading standards considerations Liaison with HPA
Power Shortages	Demands for power increases due to air conditioning and fans. In a prolonged and extreme heat wave this could lead to power shortages and cuts In extreme cases rising temperatures could effect the cooling of components in power stations which has occurred in France. Nuclear Power stations can 'trip out' at 40°C	Identification of key services/assets at risk Business Continuity plans activated
Environmental pollution	Poor air quality and high concentrations of traffic can generate pollutants especially an increased level of Ozone which can aggravate respiratory problems.	Additional health concerns for vulnerable people

	Regular updates on air quality is available from: • teletext (page 156) • www.airquality.co.uk which also offers health advice to those who may be particularly sensitive to air pollution • Sky News Air Pollution bulletin (which normally airs in the evening around 18.45) • The free phone Air Pollution Information Service telephone number 0800 55 66 77 A prolonged heat wave may cause odour, dust and vermin problems Prolonged sunshine can cause and increase in algae which effects water supply and disrupt fish and other aquatic life Increase in outdoor events / parties	Monitoring air quality levels within DCs Increased calls from the public. May need to increase rubbish collections Noise complaints rise Need for more health and safety promotion to event organisers
Agriculture problems	Rising temperature will affect harvesting, flowering, pollination and sowing of crops Animal welfare concerns – temperatures rises causing changes in transport, markets and animal stocking densities Transport delays can increase the number of deaths of animals in transit Slaughterhouse output may be affected due to reduced working hours and transport of a lower number of animals Increase in the number of pet fatalities due to irresponsible owners leaving them in restricted enclosures with poor ventilation	Long term concerns on food production Trading standards animal health and welfare considerations Involvement with DEFRA and animal charities i.e. RSPCA
Fire safety	Heat waves can be preceded by long periods of dry, hot weather which leads to an increased fire risk Propping open of fire doors to keep offices cooler	Smoke from fires can cause road closures for Highways Health and safety messages to offices
Water Shortages	See annex B	

A4 - Resources which might be needed

Access to water, Sun protection – sun cream, hats etc., portable air conditioners, fans, Department of Heath Heat Wave Plan for the UK, OCC SCS Heat Wave Plan.

A5 - Alert

Notification of a heat wave will be via the Met office Heat-Health watch system (see section 2.4). This alert can be verified via the Met Office and specifically the local Met Office Weather Advisor who can provide local advice.

Alert	Specific trigger points	Considerations for Emergency Planners	Result
Level 1 - Green Summer Preparedness & long term planning	Minimum state of vigilance		No action taken
Level 2 - Yellow Alert and readiness	Refer to the generic trigger considerations in section 3.2 When was the warning issued? – For example on a Friday send it to parishes where as on a Monday monitor the weather further What is the likelihood of the threshold being met? Would it be useful to have a link on the intranet / Internet front page to hot weather advice?	1. OCC EPU / Duty EPO to advise the following departments: - **SCS** to allow a review of actions in heat wave plan. - **CYPF** for information (if during school time) **- E&E Highways** team to pre-warn of possibility of effects on the road plus the Adverse Weather Manager - **Health and Safety** team who may issue advice to staff - **Internal / External Communications** who may add information to the websites - **Business Continuity Representatives** for information (A set distribution list is held in the Emergency Operations Email system)	Continue to monitor the weather Advise or/and stand by
Level 3 - Amber Heat wave action		As above 2.Consider conversation with Duty Director to activate MIRS 3. Consider teleconference 4. OCC Duty EPO to consider disseminating advice to parishes 5. Consider internal cascade of warning. 6. Consider adding information to website 7. Monitor and ensure any internal and external communications reflect media messages 8. Contact multi-agency partners at TCG level	Activate Plan
Level 4 - Red Emergency		All of the above 9. Multi agency discussion and coordinated action	Activate Plan

The actions below are in addition to the roles and responsibilities listed within the OCC Emergency Response Plan.

	Department /Directorate	**Resources available**	**Actions/responsibilities in preparation for and in response to a heat wave**
OCC	SCS	Leaflets: "a guide to looking after yourself and others in hot weather" "Heatwave – supporting Vulnerable People Before and During a Heatwave – Advice for Health and Social Care Professionals"	Duties under the SCS heat wave plan SCS/CEF Major Incident Plan SCS can initiate daily reporting from providers to ensure safeguarding responsibilities are met. The following categories are applied to those under care. A = must have support. B = can do without support for a limited period/limited family/friend/carer networks C = has a family/friend/carer support network available and can do without contracted support for a longer period.
	CEF	Advice on the impact on schools Advice on school closures	As per OCC Emergency Response Plan and the SCS/CEF Major Incident Plan. This includes the provision of information on the closure of schools and childcare facilities in severe weather. Statutory duty for education provision and safeguarding children. As per the HPA advice to looking after school children in a heat wave
	E&E	Advice on occupational health for staff in hot weather	Health and Safety and Wellbeing team can issue advice. Highways - No specific preparation actions - response only – road deterioration, traffic delays
Oxford City Council	Policy, Culture Communications		No specific actions
	Direct Services		No specific actions for preparation Response actions for road deterioration
	City Development	Air conditioners	No specific actions
	Community Housing		No specific actions
	Environmental Development	Environmental health expertise on air quality and food safety in heat	No specific actions
	City/Parks/Leisure		No specific actions
Cherwell District Council	Environment & Community	Environmental health expertise on air quality and food safety in heat	No specific actions
	Housing/Planning & Economy		No specific actions
	Chief Executive		No specific actions

West Oxfordshire District Council	Emergency Management Team		In the event of a Heat wave, defined as daily minimum temperatures exceeding 32°C and minimum temperatures in excess of 15°C over most of a region for at least 5 consecutive days. Members of the Emergency Management Team will assess the situation. The Council will promulgate any Heat wave Advice to the Community from Central Government, NHS Oxfordshire and OCC.
South Oxfordshire and Vale of White Horse District Council	EP Officer		Communicate with OCC and support where resources allow. The EP officer will consult with senior management team and take action in line with the council emergency plan.

Annex B: Drought

B1 - Introduction

A drought occurs in slow time most commonly when a dry winter is followed by a hot summer. Droughts can be single season – where rainfall is below average for up to nine months causing a short lived sometime severe drought, or multi season where rainfall is below average for over 9 months. The last drought of this extent in the Thames Water region was in 1975/76. In Oxfordshire vulnerability to drought can occur after only one year of low rainfall unlike the lower Thames and the rest of the south east which would need two dry years[3].

B2 - Related Plans

Thames Water Utilities Ltd is the water service provider to Oxfordshire and has produced a Drought Plan which covers the county. The Environment Agency Drought Plan for South East England can be found on the Environment Agency website and sets out:

- the EA drought management structure
- EA drought management decisions, actions and the triggers for these actions
- how the EA monitor and measure the impacts of drought
- how the EA deal with drought permit and drought order applications
- how the EA report on drought
- how the EA communicates with others

B3 - The effect of a Drought

The effects will be worsened if a drought is occurring simultaneously with a heat wave in this case reference should also be made to annex A. For details of drought restrictions see section 2.6.

Effect	Detail	Considerations
Health concerns especially affecting vulnerable people	Increased risk of dehydration to vulnerable and those on certain medication Cross infection likelihood increases in residential care homes etc Decrease in hygiene due to people conserving water. Difficulty of vulnerable to maintain standard of personal care Infectious disease outbreaks more likely due to decrease in hygiene Access to alternative toilet facilities during Emergency drought order 'off' periods which will not be provided by water companies	Identification and safe guarding of vulnerable people, including care homes and schools Public promotion of water conservation during a drought Children – access to water/toilets in schools, who will cover the cost of toilet facilities? Who will manage the toilets?
Increased need for public information	Increase in public calls to DC and OCC for situation update and resource requirements	Staffing levels for calls What information is provided to call takers and how?
Occupational health / health and safety	Will certain staff need additional health and safety training due to water restrictions during a drought? Occupational health messages to all staff	Key communication to staff on what a drought means for different ways of working
Business Continuity	Water restrictions will restrict or prevent certain OCC and DC activities for example cleaning vehicles / buildings	Which services will be affected? What are the priorities? How will restrictions be enforced and monitored?

[3] Thames Water. 2010. *Final Drought Plan.* [Online] Thames Water Utilities Ltd. http://www.thameswater.co.uk/about-us/11092.htm Accessed: 11/9/12

Food safety	Food safety issues increase, less hand washing facilities, conforming to food safety regulations in schools etc. with limited water supply	Trading standards environmental health issues
Environment	Drought will have serious affects on the environment (including the historic environment) causing temporary and permanent effects such as drying of wetlands, loss of fish, destruction of council plants, trees due to heat stress Drought and a dry spell can cause subsistence to areas of clay soils in Oxfordshire	Countryside projects might be affected, loss of tourism and income to areas affected County Archaeologist involvement may be needed Structural engineers may be needed
Agriculture and livestock	Animal welfare issues. Not enough water for farmers with livestock. Increase in disease and deaths due to animals drinking from water sources with increased algae blooms (including domestic pets) Spray irrigation restrictions can seriously disrupt agricultural business	Trading standards animal health and welfare considerations Involvement with DEFRA and animal charities i.e. RSPCA Long term concerns on food production
Liaison with other agencies stakeholders	Some Thames Water drought options may impact on Oxfordshire communities or businesses. For example implementing the Farmoor Drought permit may affect companies extracting from the Thames including Didcot power Station[4].	Close liaison with Thames Water and other stakeholders needed.
Logistical Problems with water supplies	Under SEMD 1998 water companies must provide 10 litres of water per person per day if there are water supply cuts (see water companies responsibilities page 38) Distribution management and security Disposal – environmental responsibility	Where are the distribution points, how are they managed? How will water get to the vulnerable? Once extra water supplies are received to large institutions e.g. schools and care homes where will they be stored and disposed of?
Community cohesion	Sensitive decisions – will all council run swimming pools and outdoor water features close or stay open? What will the community response be? The main water pipes have to remain fully charged, which means properties nearer might not be cut off but those further away and uphill will which may cause a “them and us” perception Water pressure may reduce to a level where there are problems with tall buildings and water supply to higher floors	Negotiations with water companies and the EA Evacuation of vulnerable people

[4] Thames Water. 2010. *Final Drought Plan.* [Online] Thames Water Utilities Ltd. http://www.thameswater.co.uk/about-us/11092.htm Accessed 11/9/12 appendix B, page B14

B4 - Resources which might be needed

Water
Vehicles to distribute water supplies to vulnerable
Identification of distribution points
Additional toilets which are not connected to the mains water supply i.e. portaloos
Extra waste collections for sites with bottled water such as schools

B5 - Thames Water Drought Plans

The Thames Water Drought Plan 2010 outlines the company's plans for drought prevention and management. Oxfordshire falls under SWOX (Swindon and Oxfordshire) Water Resource Zone and the plan includes detail for SWOX including the timeframe surrounding the implementation of drought measures and the measures that will be put in place to avoid enacting an emergency Drought order. These have been replicated in part on page 18.

The plan states that water supply for essential fire fighting will be maintained through particular consideration to the fire Emergency Planning Authorities and Fire and Rescue Services[5].

B6 - Water company responsibilities

Under the Security and Emergency Measures (Water and Sewage Undertakers) Direction 1998[6] water companies must provide no less than 10 litres of drinking water per person per day and create essential water supply plans. The distribution of water through alternative means (for example bowsers, tanks and bottled water) should be distributed as soon as possible and no longer than 24 hours into the incident. This supply must be maintained until the piped supply is restored. Under exceptional circumstances the water companies may apply to the Department of the Secretary of State to extend the deadline to 48 hours. Water company plans should also take account of vulnerable people through liaison with other partners such as local authorities.

B7 - Thames Water Emergency Water Provision Plans

No detail is currently held on the Thames Water provision for Emergency Drinking Water in the case of a disruption to supply.

B8 - Alert

Both Thames Water and the EA monitor for indications of drought. This includes level of rainfall, groundwater levels, river flows and ecological monitoring such as algae levels. During a drought the EA drought teams will then feed into the TVLRF updating on the current situation and key drought messages. Thames Water should then provide a 24 hour contact for partner organisations.

The EA website has a section on the current drought status with briefings, any restrictions in place and monthly situation reports. The development of a drought is however relatively slow and therefore the alert to a drought status would be gradual. Thames Water, through their planned levels of service (described in their Drought Management Plan) intends **never** to enact an Emergency Drought Order (see page 16).

The Water Company and/or the Environment Agency will ensure that the TVLRF is well informed using the mechanisms available through the TVLRF, be this via an Adverse Weather Teleconference or email briefing or posts on the TVLRF, Environment Agency websites.

[5] Thames Water. 2010. *Final Drought Plan.* [Online] Thames Water Utilities Ltd. http://www.thameswater.co.uk/about-us/11092.htm page 67 Accessed 11/09/12
[6] The Security and Emergency Measures (Water and Sewerage Undertakers) Direction 1998 http://dwi.defra.gov.uk/stakeholders/guidance-and-codes-of-practice/SEMD%20DIRECTION%201998.pdf Accessed 26 /09/12

Alert	Specific trigger points	Considerations for Emergency Planners	Result
Hosepipe ban	Thames water must publish the ban in two newspapers	1. OCC Duty EPO to consider disseminating advice to parishes 2. Consider internal cascade of warning 3. Consider adding information to website	Advise
Drought permit	Can take 6 weeks	As above 4. Consider conversation with Duty Director to activate MIRS 5. Consider teleconference 6. Monitor and ensure any internal and external comms reflect media messages	Advise/Standby
Drought order	Can take 10 -12 weeks	All of the above 7. Contact multi-agency partners at TCG level	Standby/Activate Plan
Emergency drought order		All of the above 8. Multi agency discussion and coordinated action	Activate Plan

The actions below are in addition to the roles and responsibilities listed within the OCC Emergency Response Plan.

	Department /Directorate	Resources available	Actions/responsibilities in preparation for and response to a drought
OCC	SCS		As per OCC Emergency Response Plan and SCS/CEF Major Incident Plan SCS can initiate daily reporting from providers to ensure safeguarding responsibilities are met. The following categories are applied to those under care. A = must have support. B = can do without support for a limited period/limited family/friend/carer networks C = has a family/friend/carer support network available and can do without contracted support for a longer period.
	CEF	Advice on the impact on schools Advice on school closures	As per OCC Emergency Response Plan and SCS/CEF Major Incident Plan including provision of information on the closure of schools and childcare facilities in severe weather.

			Statutory duty for education provision and safeguarding children.
	E&E		As per OCC Emergency Response Plan no specific preparation actions
Oxford City Council	Policy, Culture Communications		No specific actions
	Direct Services	Waste collection expertise	No specific actions
	City Development		No specific actions
	Community Housing		No specific actions
	Environmental Development	Advice on food safety with limited hand washing facilities	No specific actions
	City Parks and Leisure		No specific actions
Cherwell District Council	Environment & Community	Advice on food safety with limited hand washing facilities	No specific actions
	Housing Planning & Economy		No specific actions
	Chief Executive		No specific actions
West Oxfordshire District Council	Emergency Management Team		Should a period of low rainfall leading to a shortage of water for people, agriculture, industry or the environment occur then members of the Emergency Management Team will assess the situation. The Council will promulgate advice from the Utility Companies, Central Government, OCC and NHS Oxfordshire
South Oxfordshire / Vale of White Horse District Councils	EP Officer		Communicate with OCC and support where resources allow. The EP officer will consult with senior management team and take action in line with the council emergency plan.

Annex C: Storm and Gales

C1 - Introduction

Damage from storms and gales is the most common cause of weather related disruption in the UK. The majority of damage reports come from domestic buildings caused by the effects of high wind speeds. Listed below are possible impacts of wind at different strengths.

50 mph Gusts	Difficult driving conditions for high sided vehicles
60 mph Gusts	High sided vehicles at risk of overturning Damage to trees
70 mph gusts	High-sided vehicles at risk of being blown over, Some trees uprooted, tiles, slates and chimneys dislodged from some buildings
80 mph Gusts	Cars blown out of lanes on roads Widespread removal of branches from trees many trees uprooted Tiles, slates and chimneys dislodged from many buildings; some structural damage
90 mph Gusts	Collisions whilst driving Widespread uprooting of trees Injury due to flying debris Widespread damage to buildings; some buildings collapse

C2 - Met Office NSWWS Emergency Responder Table

The Met Office have produced the table below to outline to emergency responders the issues which might be faced at each stage of a NSWW for all the different types of weather covered by the service. The table below covers the impacts of wind.

Impact Level	Very Low	Low	Medium	High
Specific impact levels associated with WIND	Debris dislodged and some branches removed. Perhaps some very limited travel disruption. Difficulties on some prone routes e.g. cross winds on exposed or high level roads.	Some branches or trees brought down. Localised travel disruption. Localised problems for high-sided vehicles on prone routes. Risk of isolated power interruptions.	More widespread tree damage and other debris, slates etc dislodged from roofs. Casualties possible as a result of flying debris. Potential closure of known susceptible routes (e.g. some bridges) with travel disruption. Risk of localised interruptions to power. Risk of damage to overhead rail power lines and disruption to ferry services.	Widespread structural damage, e.g. roofs blown off, mobile homes overturned, power lines brought down. Mobile phone masts damaged. Casualties likely with danger to life from flying debris Widespread and potentially prolonged interruptions to power. Roads blocked by fallen trees in many areas. Risk of coastal inundation during high tides. Building cranes/ scaffolding at risk of toppling.

C3 - The effect of storms and gales

A number of different council services could be affected by a storms and gales resulting in varying levels of severity depending on the extent and duration. Considerations in response to high winds include:

Affect	Detail	Considerations
Health of Vulnerable people	Storms and gales cause some vulnerable people to become isolated and frightened Access for the emergency services to those needing aid made problematic Damage to buildings due to storm and/or loss of power/utilities including care homes and schools Danger to all from falling trees and flying debris	Identification and safe guarding of vulnerable people, including care homes and schools Evacuations of people from affected areas/buildings – how will this be done in a storm? What route/method of transport? Reporting and communication of school/other facility closures
Increased need for public information	Increase in public calls to DCs and OCC for situation update and resource requirements Numerous calls for clearing of debris from roads etc	Staffing levels for calls What information is provided to call takers and how?
Occupational health / health and safety	Transport difficulties mean staff are unable get to work School closures mean staff are unable to go to work due to childcare pressures Risk to staff working outside or travelling as part of their role	Safety of staff who need to travel – identification of key services, alternative transport methods and the point at which it becomes unsafe to drive Advice to staff working outside and who travel as part of their role What happens to staff that may be unable to get home?
Business Continuity	Weather will restrict or prevent certain OCC and DC activities Increased number of staff accessing IT systems from home	Which services will be affected? What are the priorities? Business continuity – staff shortages, critical service identification
Transport disruption	Trees / debris on road, railway lines Congestion on roads, delays on public transport Dangerous/poor driving conditions Increased accidents especially for high sided vehicles – danger of overturned lorries Road closures due to debris and damage	Re-routing and prioritising mobile services e.g. social care Cleaning – removal of debris on the roads, maintaining vital access routes Public safety messages

	Isolated communities Signage and signals uprooted from the ground – flying hazards and dangerous to roads left without signage Bridge closures / structural concerns	on driving Signing and maintaining temporary road closures Ensuring replacement signage for roads Make safe any street works underway
Power shortages **Problems with utilities**	Fallen power lines – power cuts/interruptions Storm damage to additional utilities including phone lines, power loss to utility stations affecting water/gas supplies Lightning strikes to power lines, substations and critical infrastructure	Identification of key services/assets at risk Long term power loss causing evacuations Communication without landlines Business Continuity Plans activated
Agriculture	Crop damage from storms, high winds Animal welfare issues	Long term concerns on food production Trading standards Animal health and welfare considerations Involvement with DEFRA and animal charities i.e. RSPCA
Building damage	Structural damage to houses, roof damage etc. Falling trees, structures that are unsound Injuries and deaths due to structures collapsing, falling or flying objects and shattered windows Rubbish bins knocked over in the wind causing rubbish to be deposited on the streets. Upturned bins cause a traffic hazard and landfill sites may have to close for health and safety reasons Possible school or other institution closures such as day centres due to damage and staff shortages through access problems	Damage to council property – which buildings might be vulnerable? Support to the public – how are they communicated with? Evacuation, rest centres Debris clearance, additional collections, safety of workers Structural engineers needed Reporting and coordination of school/facility closures
Heavy rain triggered by thunderstorms	Surface water flooding caused by heavy rain	See annex E

C4 - Resources which might be needed

Machinery/vehicles for debris collection
Building control/structural engineers for storm damage assessments
Shortages of structural safety equipment - tarpaulins

C5 - Alert

Notice of storms and gales would come via the NSWWS from the Met office (see section 2.1) either as a warning or alert depending on the amount of time before the weather is expected to arrive.

NSWWS Warning or Alert	Specific trigger points	Considerations for Emergency Planners	Result
Green		No action	No action
Yellow	Refer to the generic trigger considerations in section 3.2	1. Monitor weather via Hazard manager	Continue to monitor the weather
Amber	When was the warning issued? How much time do you have? For example on a Friday send it to parishes where as on a Monday monitor the weather further	As above 2. OCC to initiate call cascade if a repatriation is planned 3. OCC Duty EPO to consider disseminating advice to parishes 4. Consider internal cascade of warning 5. Consider adding information to website 6. Consider conversation with Duty Director to activate MIRS 7. Consider a teleconference especially if '**Warning'** i.e. a shorter lead time 8. Take part in the LRF tactical teleconference as necessary	Continue to monitor the weather Advise or/and stand by
Red		As above And as appropriate: 9.Monitor and ensure any internal and external comms reflect media messages 10. Contact multi-agency partners at TCG level 11.Multi agency discussion and coordinated action	Continue to monitor the weather Advise / stand by / Activate Plan

The actions below are in addition to the roles and responsibilities listed within the OCC Emergency Response Plan.

	Department /Directorate	Resources available	Actions/responsibilities in preparation for and response to storms/gales
OCC	SCS		As per OCC Emergency Response Plan and SCS/CEF Major Incident Plan SCS can initiate daily reporting from providers to ensure safeguarding responsibilities are met. The following categories are applied to those under care.

			A = must have support. B = can do without support for a limited period/limited family/friend/carer networks C = has a family/friend/carer support network available and can do without contracted support for a longer period.
	CEF	Advice on school closures	As per OCC Emergency Response Plan and SCS/CEF Major Incident Plan including provision of information on the closure of schools and childcare facilities in severe weather. Statutory duty for education provision and safeguarding children.
	E&E		No specific preparation work. Response includes storm damage on road clearance and maintaining road access
Oxford City Council	Policy, Culture, Communications		No specific actions – see section 3 for generic roles
	Direct Services	Signage and road barriers Waste removal	No specific preparation activities Response includes provision of signage and labour, clearance of storm damage on roads – road closure barriers if necessary
	City Development	Expertise on building safety	No specific preparation activities Structural engineer support to damaged buildings
	Community Housing		No specific preparation activities Response – can include relocating people made homeless by storm damaged houses
	Environmental Development		No specific actions
	City Parks and Leisure	Clearing tree damage equipment	No specific actions
Cherwell District Council	Environment & Community	Waste Collections	No specific actions
	Housing Planning & Economy	Building Control & Engineering Services	Dangerous structures
	Chief Executive		No specific actions
West Oxfordshire District Council	Emergency Management Team		Should storm force winds affect most of a region for at least 6 hours with wind speeds in excess of 55 mph with gusts in excess of 85 mph members of the Emergency Management Team will assess the situation. The Council act in accordance with the guidelines within the West Oxon District Council Emergency Plan
South Oxfordshire and Vale of White Horse District Councils	EP Officer		Communicate with OCC and support where resources allow. The EP officer will consult with senior management team and take action in line with the council emergency plan.

Annex D: Winter Weather (including snow)

D1 - Introduction

During the winter months there are a number of different types of weather which can cause disruption these include snow, storms, blizzards, fog, ice, frost, freezing rain and hail. During 2010 there were two very strong bouts of snow in January and December which caused disruption across Oxfordshire. The plan has been reviewed since then to take into account lessons which were identified in an attempt to continue to improve the response across Oxfordshire to severe weather.

D2 - Related Plans

The Department of Health Cold Weather Plan for England was published in October 2012. This plan aims to raise awareness, prepare for and prevent the major avoidable effects of winter on people's health. The plan uses a cold weather alert system based on the NHS heatwave plan.

The Oxfordshire County Council Highways department has in place a plan outlining the arrangements for dealing with the effects of ice and snow conditions upon the highway. It sets out the Council's policies and objectives together with operational arrangements stating how the policies will be implemented and put into practice.

D3 - Met Office NSWWS Emergency Responder Table

The Met Office have produced following tables to outline to emergency responders the issues which might be faced at each stage of a warning for all the different types of weather covered by the service. The tables below cover the impacts of snow, ice and fog.

Impact Level	Very Low	Low	Medium	High
Specific impact levels associated with SNOW	Small amounts of snow lying on roads and pavements. Limited travel disruption. Difficulties mostly confined to a few prone routes.	More widespread snow lying on roads and pavements but road networks open. Some localised travel disruption. Problems mostly confined to usual prone areas.	Widespread snow with a number of road closures, others passable only with care. Potential for some stranded vehicles and passengers. Casualties possible with perhaps danger to life. Possible interruptions to power. Increased demand on health services. School closures possible. Possible effects on organisational staffing levels.	Widespread deep snow with many roads closed or impassable. Potential for large numbers of stranded vehicles and passengers. Casualties likely with danger to life. Widespread and potentially prolonged interruptions to power. Major surge in demand for health services. School closures highly likely. Significant effect on organisational staffing levels.

Impact Level	Very Low	Low	Medium	High
Specific impact levels associated with ICE	Localised icy stretches on some untreated roads and pavements. Limited travel disruption. Any difficulties mostly confined to prone routes.	More widespread icy stretches on untreated roads and pavements but road networks generally open. Care needed with some localised and short lived travel disruption. Some RTCs and an increased number of slips, trips and falls on pavements.	Widespread black ice, some roads passable only with care. Frequent RTCs, large numbers of Slips trips and falls on pavements. Road closures possible. Casualties possible with perhaps risk to life. Possible interruptions to power due to power line icing. Increased demand on health services. Possible effects on organisational staffing levels.	N/A
Specific impact levels associated with FOG	Some localised non-persistent fog affecting limited geographical areas. Risk of some RTCs but no significant impact on responder organisations.	More widespread, locally dense fog affecting significant areas of the country but not persisting beyond 1 – 2 days. Risk of some RTCs and possible short-term closure of airports but no significant impact on responder organisations.	Widespread and dense fog affecting large areas of the country including a number of major airports and/or ports. The fog is persistent and may last for many days in some areas. Increased number of RTCs causing some strain on emergency services and risk of passengers being stranded at airports and/or ferry terminals.	N/A

D4 - The effects of winter weather

A number of different council services could be affected by winter weather resulting in varying levels of severity depending on the extent and duration. If winds are strong (for example in the case of blizzards) annex C includes additional information on storms and gales. Considerations in response to winter weather include:

Effect	Detail	Considerations
Health of vulnerable people	Communities and vulnerable people isolated by heavy snow fall Vulnerable people who cannot attend their usual facility such as a day centre now need alternative arrangements or have become trapped Increased number of injuries cause by slips and falls on icy or snowy surfaces	Identification and safe guarding of vulnerable people, including care homes and schools Reporting and communication of school/other facility closures

	Vulnerability to hypothermia, increased risk of colds and flu Likelihood of school closures caused by access and safety problems Increase in death rates caused by a period of extreme cold – sudden deaths at home means an increased need for post mortems, body storage capacity issues and a backlog in funeral services	Prioritising of school routes for examinations Access to vulnerable for necessary care e.g. social care Refer to the mass fatalities plan if local mortuary capacity is exceeded
Increased need for public information	Increase in public calls to DCs and OCC for situation update and resource requirements	Staffing levels for calls What information is provided to call takers and how?
Occupational health / office working	Transport difficulties mean staff are unable get to work School closures mean staff are unable to go to work due to childcare problems Staff working outside or travelling as part of their role Dangerous driving conditions for staff Increased numbers of staff accessing IT from home	Safety of staff who need to travel – identification of key services, alternative transport methods and point at which it becomes unsafe to drive Advice on 'essential travel' – should staff be encouraged not to travel to work? Advice to staff working outside and who travel as part of their role What happens to staff that may be unable to get home? Business continuity – staff shortages, critical service identification
Business Continuity	Will restrict or prevent certain OCC and DC activities.	Which services will be affected? What are the priorities?
Transport Issues	Many driving routes become impassable and other areas become congested Increased road traffic accidents Snow, ice on pavements lead to difficult and treacherous walking conditions Road closures needed in areas Transport route problems lead to shortages in supplies such as milk, bread and fuel which may lead to panic buying Visibility issues with heavy fog create difficulties with responding to incidents on	Implementation of the Highways winter maintenance scheme to salt priority roads Identification of critical service Information to the public on available routes/safety messages Consider routes taken by those accessing the vulnerable i.e. social care, meals on wheels

	the Highways. Difficult to assess the scale of weather incident if hampered by poor visibility	Provisions to public stranded in vehicles such as water and healthcare Promotion to parishes on self help during winter months, drivers on emergency kits Economic / commercial disruptions Priority of distribution centres, provision of basic supplies to the vulnerable Signing and maintaining of temporary road closures
Provision of salt and salt	Pavements, cycle paths not salted due to resource shortages leading to a number of injuries from public slipping on snow and ice Possibility of salt rationing which means less roads are treated and therefore more communities may become cut off Implementation of a national salt cell – The Salt Cell will be chaired by the Department of Transport. The aim is to identify and ensure best use of the UK salt supplies and to work with the EU and other partners to maximise supplies. More information can be found in the Salt Cell Initiation and Operation Protocols – DfT. Version 2010.1.September	Identification of priority pavements Promotion of self help to local communities to clear their own key areas Salt pre planning, resilience stores, mutual aid agreements between DCs/OCC and other Local authorities. Pre season situation report to GOSE on salt levels. Information to the Salt Cell if in operation (this may be through direct entry to a computer system).
Problems with utilities	Power loss results in a loss of heating – particularly a problem for vulnerable people Snow on telephone lines or tree damage can cause loss of phone lines, this can include damage to mobile phone masts	Identification of key services/assets at risk Long term power loss causing evacuations Communication without landlines Business Continuity plans
Agricultural issues	Trapped farm animals such as cattle	Involvement with DEFRA and animal charities i.e. RSPCA

Building damage	Burst water pipes causing flooding damage to buildings School and other facility closures due to damage	Temporary accommodation may be needed Reporting and communication of school/other facility closures
Refuse	Rubbish collections may become impossible in isolated areas due to access or changes to service priorities	Can rubbish collection be maintained? Can the staff be reassigned to snow clearance or pavement salting? How inform public on changes to services?
Surface water flooding	Caused by melting snow/ice in addition to heavy rain	Annex E

D5 - Salt Management

Each DC and OCC holds a supply of salt. In the event of the severe weather plan being activated OCC will, if resources permit, replenish DC salt supplies. Oxford City will salt all roads within the city boundary – both city and county council.

It is important that communication between OCC EPU and OCC Highways in terms of salt management is had both in preparation for and throughout winter. OCC EPU will liaise with the OCC Adverse Weather Manager which will be particularly important if a National salt Cell is initiated as this individual will be coordinating the information on salt stocks.

D6 - Assistance to emergency services

During severe snow fall, emergency services can if needed contact OCC EOC or the OCC Duty EPO to request assistance with travelling to inaccessible areas for emergency calls or the additional salting of priority areas.

D7 - Resources which might be needed

OCC Highways Plan 2012 / 2013
Salt Cell Initiation and Operation Protocols – DfT. Version 2010.1.September
Provisions to keep warm – extra blankets

D8 - OCC 4x4 provision procedures

Queries on the use of farmers or calls from farmers should be referred to OCC E&E via the Adverse Weather Manager or snow desk if in operation. For information on the OCC 4x4 provision, see section 4.10.

D9 - Information on litigation concerns

There have been cases of concern amongst the public about the possibility of litigation action from clearing snow away from paths – specifically in terms of being sued if someone slips on an area they have cleared. In light of this the government has issued self help advice which can be found at http://www.direct.gov.uk/en/Nl1/Newsroom/DG_191868
The guidance includes the following statement:

Will I be held liable if someone falls on a path I have cleared?
There is no law preventing you from clearing snow and ice on the pavement outside your property, pathways to your property or public spaces. It is very unlikely that you would face any legal liability, as long as you are careful, and use common sense to ensure that you do not make the pavement or pathway clearly more dangerous than before. People using areas affected by snow and ice also have responsibility to be careful themselves.

D10 - Alert

Notice of winter weather would come via the NSWWS from the Met office (see section 2.1) either as a warning or alert depending on the amount of time before the weather is expected to arrive. Alternatively – the Cold Weather alert system is triggered on temperature alone so you may receive a Cold weather alert without a NSWWS alert or warning. The Cold Weather Alert system is also triggered by snow and/or ice so in that case then both a cold Weather Alert may be received along with a NSWWS alert so the Emergency Planner will need to consider which actions to take based on both alerts.

NSWWS Alert or Warning	Specific trigger points	Considerations for Emergency Planners	Result
Green **And Pre Winter preparations**		OCC EPU should begin liaison with the Adverse Weather Manager before winter to reconfirm policy. OCC EPU to attend Highways Agency briefing	OCC EPU will continue liaison with the Adverse Weather Manager throughout winter to be aware of salt stock levels
Yellow	Refer to the generic trigger considerations in section 3.2	1. Monitor weather via Hazard manager **2. IF FRIDAY AM – place 4x4 cell on standby ahead of a change to amber.**	Continue to monitor the weather
Amber	When was the warning issued? How much time do you have – alert or warning? For example on a Friday send it to parishes where as on a Monday monitor the weather further.	As above 3. OCC to initiate call cascade if a repatriation is planned 4. OCC Duty EPO to consider disseminating advice to parishes 5. Consider internal cascade of warning 6. Consider adding information to website 7. Consider conversation with Duty Director to activate MIRS 8. Consider a Teleconference (especially if **Warning** 9. OCC EPU to consider liaison with OCC Highways to determine response activities and EPU representation at the Snow Desk if activated 10. Take part in the TVLRF tactical teleconference as necessary	Continue to monitor the weather Advise or/and stand by Teleconference may activate the Emergency 4x4 Cell Teleconference may activate the OCC Snow desk Ensure that if you are advising others of this warning that you do not duplicate information if it is accompanied by a NSWWS warning or alert. Consider both warnings/alerts before distribution.
Red		As above / as appropriate: 11.Monitor and ensure any internal and external comms. reflect media messages 12.Contact multi-agency partners at TCG level 13.Multi agency discussion and coordinated action	Continue to monitor the weather Advise / stand by / Activate Plan

Notification of cold weather may also be made via the Met Office Cold Weather Alert System (see section 2.5). This alert can be verified via the Met Office and specifically the local Met Office Weather Advisor who can provide local advice.

Alert	Specific trigger points	Considerations for Emergency Planners	Result
Level 1 - Green Long term planning and winter preparedness	1st Nov – 31st March		No action taken
Level 2 - Yellow **Consider at 60% chance**	Refer to the generic trigger considerations in section 3.2 Would it be useful to have a link on the intranet / Internet front page to cold weather advice? (NOTE – A set distribution list is held in the Emergency Operations Email system)	1. OCC EPU / Duty EPO to advise the following departments: - **SCS** to allow a review of actions in Cold Weather plan. - **E&E Highways** team to pre-warn of possibility of effects on the road - **Health and Safety** team who may issue advice to staff - **Internal / External Communications** who may add information to the websites - **Business Continuity Representatives** for information	Continue to monitor the weather Advise or/and stand by Ensure that if you are advising others of this warning that you do not duplicate information if it is accompanied by a NSWWS warning or alert. Consider both warnings/alerts before distribution.
Level 3 - Amber	Ensure that if you are advising others of this warning that you do not duplicate information if it is accompanied by a NSWWS warning or alert. Consider both warnings/alerts before distribution.	**(distribute as above)** **If not accompanied by a NSWWS alert:** 2.Consider conversation with Duty Director to activate MIRS 3. Consider teleconference 4. OCC Duty EPO to consider disseminating advice to parishes 5. Consider internal cascade of warning. 6. Consider adding information to website 7. Monitor and ensure any internal and external communications reflect media messages	Activate Plan

		8. Contact multi-agency partners at TCG level 9. take part in the TVLRF teleconference if called	
Level 4 - Red	Ensure that if you are advising others of this warning that you do not duplicate information if it is accompanied by a NSWWS warning or alert. Consider both warnings/alerts before distribution.	**(distribute as above)** All of the above actions and 10. Multi agency discussion and coordinated action	Activate Plan

The actions below are in addition to the roles and responsibilities listed within the OCC Emergency Response Plan.

	Department /Directorate	**Resources available**	**Actions/responsibilities in preparation for and response to winter weather**
OCC	SCS		As per OCC Emergency Response Plan and SCS/CEF Major Incident Plan SCS can initiate daily reporting from providers to ensure safeguarding responsibilities are met. The following categories are applied to those under care. A = must have support. B = can do without support for a limited period/limited family/friend/carer networks C = has a family/friend/carer support network available and can do without contracted support for a longer period.
	CEF	Advice on school closures	Preparing school buildings for winter via information from Property Services (E&E) on protecting buildings from frost damage. As per OCC Emergency Response Plan and SCS/CEF Major Incident Plan including provision of information on the closure of schools and childcare facilities in severe weather. Statutory duty for education provision and safeguarding children.
	E&E	Salt stockpiles and technical expertise Expertise from Property Services on protection of buildings from frost	As per the Highways Winter Maintenance Plan

Oxford City	Policy, Culture Communications		No specific actions
	Direct Services	Signage and road barriers Salt stockpiles	Monitoring the weather for snow and icy conditions, stockpiling salt for the winter Salting on city and council roads within the city boundary, road closures and clearance.
	City Development	Building control advice on damage buildings Dealing with frost	No specific actions
	Community Housing		No specific actions
	Environmental Development		No specific actions
	City Parks, Leisure		No specific actions
Cherwell City Council	Environment & Community		No specific actions
	Housing Planning & Economy	Building control advice on damage buildings	No specific actions
	Chief Executive		No specific actions
West Oxfordshire District Council	Emergency Management Team		Should snow fall and lie over most of the area for at least one week Members of the Emergency Management Team will assess the situation. If the weather situation is so serious that the WODC Emergency Plan is implemented OCC will be notified. Communications is a key element of this plan.
South Oxfordshire and Vale of White Horse District Councils	EP Officer		All salt bins in car parks, council offices and leisure centres filled during early Winter. OCC to supply salt/salt EP officer will keep waste contractor updated with weather warnings. Website updated with any changes to services. If waste collection suspended then resources will be made available to help clear snow.
	Ground Maintenance		Ground maintenance and facilities staff to clear council buildings Car park inspectors and waste contractor to clear car parks Waste contractor as directed

Annex E: Heavy rain and Flooding

E1 - Introduction

Flooding may be caused by a number of different weather events including heavy rainfall (particularly during a heat wave), melting snow and ice, flooding from a river upstream or a reservoir breach. Heavy rainfall may not always lead to surface water flooding but can still be hazardous. The OCC risk register classes flooding as 'very high risk' for both fluvial (river flooding) and pluvial (caused by rainfall) flooding.

E2 - Related Plans

i. TVLRF Multi Agency Flood Plan

In the event of a flooding incident reference should also be made to the TVLRF multi agency flood plan. This plan provides a strategic framework for a multi-agency response to a flood event within the TVLRF area. It includes:

- Flooding issues and priorities,
- Procedures to help ensure that a multi-agency response is effective
- Operational details such as infrastructure considered to be at risk from flooding.

Overall the document aims to provide a strategic overview of actions, roles and responsibilities specific to flooding and tactical information based on local authority boundaries.

ii. EA Local flood warning plan for Oxfordshire

This plan describes the arrangements in place and system used to issue warnings to locations at risk. Each flood warning area is described in detail with a map and specific information on:

- The area affected and numbers of property at risk,
- The probability of flooding
- How flood warnings are communicated
- The local history of flooding
- The location of flood defences
- The EA operational response
- The contingency warning arrangements.

iii. Oxfordshire Generic Off-site Plan for Reservoir Emergencies

This plan outlines the processes involved in responding to a reservoir breach. In development are a series of annexes with more specific details for each of the reservoirs within Oxfordshire. This plan should be referred to in event of flooding caused by a reservoir breach.

iv. A Guide to Flood Response in Oxford (Environment Agency Plan)

This plan references the flood defences schemes within Oxford and the responding organisations, a list of which can be found in section E5. This plan outlines for each defence:

- its owner
- the flood warning area it is found in
- any applicable EA river and rain gauges
- the type of defence
- the trigger for setting up the defence
- the actions of the owner
- contact numbers
- a diagram of the structure and location

v. Oxford City Council Flood Response Plan for Oxford City (In development)

This plan is currently in development but is an operational plan for the deployment of each of the defences as listed in the Guide to Flood Response in Oxford Plan.

vi. Management Protocol for Closing the A361 North of Banbury due to flooding

This plan outlines the flood management protocol which has been agreed between OCC, Northamptonshire County Council and the EA. It outlines the actions to be taken by each agency when the operation of the Banbury Flood Alleviation scheme makes it necessary to close the A361. More information on the Banbury Flood Alleviation scheme can be found in Annex I.

vii. Community Emergency Plans / Parish Flood Plans

Many Parishes at risk of flooding in the Thames Valley area have completed or are in the process of writing their own Parish Flood Plans based on an Environment Agency template. As part of this the template suggests that parishes identify vulnerable people in their community, which could be used in times of flooding to ensure that vulnerable people either receive assistance from within the community or that extra assistance is arranged externally.

Parishes may also have similar more generic community emergency plans which cover flood risk and include locally identified buildings which could be used as rest centres. The EPU is collating information from these plans to build a parish database which can be used to quickly access the detail from these plans. The on call EPO will have access to this database.

E3 – Types of Flooding

i. Reservoir Flooding

Flooding from a reservoir can result in two different types of flooding depending on how the water escapes from the structure. A reservoir failure may result in either a sudden influx of water (most likely from a breach in the reservoir wall) or a rising tide scenario which may be due to an emergency draw down.

An emergency draw down lowers the level of the reservoir to prevent over topping. This can be done by realising the water into the local watercourse leading to local flooding or if there is no local watercourse into the local area which causes surface water flooding. In such cases areas affected may be those which have not previously suffered any flooding.

This severe weather plan can be implemented for the rising tide local flooding scenario but should not be used for a sudden reservoir failure and in both cases reference should be made to the Oxfordshire Generic Off Site Reservoir Plan.

ii. Surface Water Flooding (Pluvial)

Surface Water flooding is often caused by short heavy downpours of rain. This type of flooding is difficult to prepare for as weather forecasts are unable to provide the level of local detail required. Any house is at risk of surface water flooding and the speed at which water levels can rise from heavy rain can mean flooding can occur very quickly without much or any notice.

There are some areas within the county which are known to be particularly vulnerable or have higher occurrences of surface water flooding. These include:

iii. Groundwater Flooding

Groundwater is when the level of water within the rock or soil that makes up the land surface (known as the water table) rises. When the water table rises and reaches ground level, water starts to emerge on the surface.

There are some key features of flooding from groundwater:

- Flooding will usually occur days or even weeks after heavy or prolonged rainfall
- Flooding may occur for a long time, often lasting several weeks
- The water doesn't always appear where you would expect it to (i.e. valley bottoms), it may also emerge on hillsides
- Water may rise up through floors rather than coming in through doors

Within Oxfordshire there are only a few areas at risk of groundwater flooding these are clustered around the Henley on Thames and Assendon area and include: Turville, Skirmett, Stoner, Middle and Lower Assendon and parts of Henley on Thames.

iv. River Flooding (Fluvial)

River flooding is caused when water from rivers flows out over the top of the river banks. The main rivers within Oxfordshire are displayed below.

E4 - Flooding Warnings

River Levels
The EA monitors river levels on a number of rivers within Oxfordshire and uses remote detection systems to measure rainfall, wind speeds/direction, and water levels/flows, the EA can then issue appropriate flood warnings as necessary. River levels are also now available to the public via the EA website
http://www.environment-agency.gov.uk/homeandleisure/floods/riverlevels/default.aspx

EA Flood Alerts and Warnings
The Environment Agency actual and forecasted impacts for flooding are as follows:

Flood Alert	Used when flooding is expected To raise awareness of the situation Encourage people to be alert, stay vigilant and make early preparations
Flood Warning	Used when flooding is expected People to take action to protect themselves and their property
Severe Flood Warning	Used when flooding poses a significant risk to life or significant disruption to communities Encourage people to take action to protect themselves and follow the advice of the emergency services Used to communicate primary and secondary impacts of flooding Issued for exceptional flooding only and based on judgement

Met Office NSWWS Emergency Responder Table
The Met Office have produced tables to outline to emergency responders the issues which might be faced at each stage of a warning for all the different types of weather covered by the service. The tables below cover the impacts of rain.

Impact Level	Very Low	Low	Medium	High
Specific impact levels associated with RAIN	Isolated flooding of low-lying land and roads – risk of aquaplaning. Minimal disruption to infrastructure and resources. Isolated instances of spray/waves overtopping in coastal locations.	Localised flooding of property and susceptible roads is possible – be aware. Stay vigilant. Water on roads – drive according to the conditions encountered.	Flooding affecting parts of communities. Potential danger to life due to fast flowing/deep water. Potential damage of buildings/ structure. Possible impacts on human health due to contaminated flood water. More widespread disruption to infrastructure and resources. Failure or overtopping of defences affecting small communities/ parts of communities. Localised evacuation may be necessary.	Widespread flooding affecting whole communities. Danger to life due to fast flowing/ deep water. Potential collapse of buildings/ structures. Possible impacts on human health due to contaminated flood water. Prolonged loss of critical infrastructure and resources. Failure or overtopping of defences , affecting large communities. Large scale evacuations may be necessary.

E5 - Demountable flood defences in Oxfordshire

The decision to deploy the defences in the following table follow processes defined by the organisations listed which can be found in 'A guide to flood response in Oxford'.

Location, watercourse and Flood Warning area (FWA)	Owner	Type of defence
South Hinksey Village Hinksey Stream 061WAF23 Oxford	Vale of White Horse DC	Sandbags
Vicarage Lane Hinksey Lakes 061WAF23 Oxford / 061fwf23NwBotley	Environment Agency	Demountable Defence
Old Botley, Oxford Hinksey Stream 061fwf23 NwBotley	Vale of White Horse DC	Sandbags
Kennington Rd, Kennington River Thames 061fwf23Kningtn	Vale of White Horse DC	Demountable Defence
Osney Island, Oxford, River Thames 061FWF23 BnsyOsny	Environment Agency	Demountable Defence
Bullstake Close, Oxford Bullstake Stream 061fwf23NwBotley	Oxford City Council	Demountable Defence and Sandbags
Botley Road, Earl Street and Duke Street 061fwf23NwBotley 061FWF23 BnsyOsny	Oxford City Council	Pumps and various actions

E6 – Fords in Oxfordshire

There are a number of fords in Oxfordshire of different sizes and amounts of water. All fords are listed on the EPU GIS system and will be within the new Targeted Flood Warning software used by the EPU.

Town	Grid Reference	Location
Bainton	SP577268	Bainton Road
Epwell	SP354406	Birds Lane crossing the Sor brook
Middle Barton	SP433255	Fox Lane
Shilton	SP267085	Bridge Street / The Hill
Swinbrook	SP281122	Swin Lane

E7 – Sandbag Procedures

The main features from the DC sandbag policies are replicated below. Reference should also be made to each individual DC Emergency plan and the full sandbag policies.

i. OCC Sandbag Policy

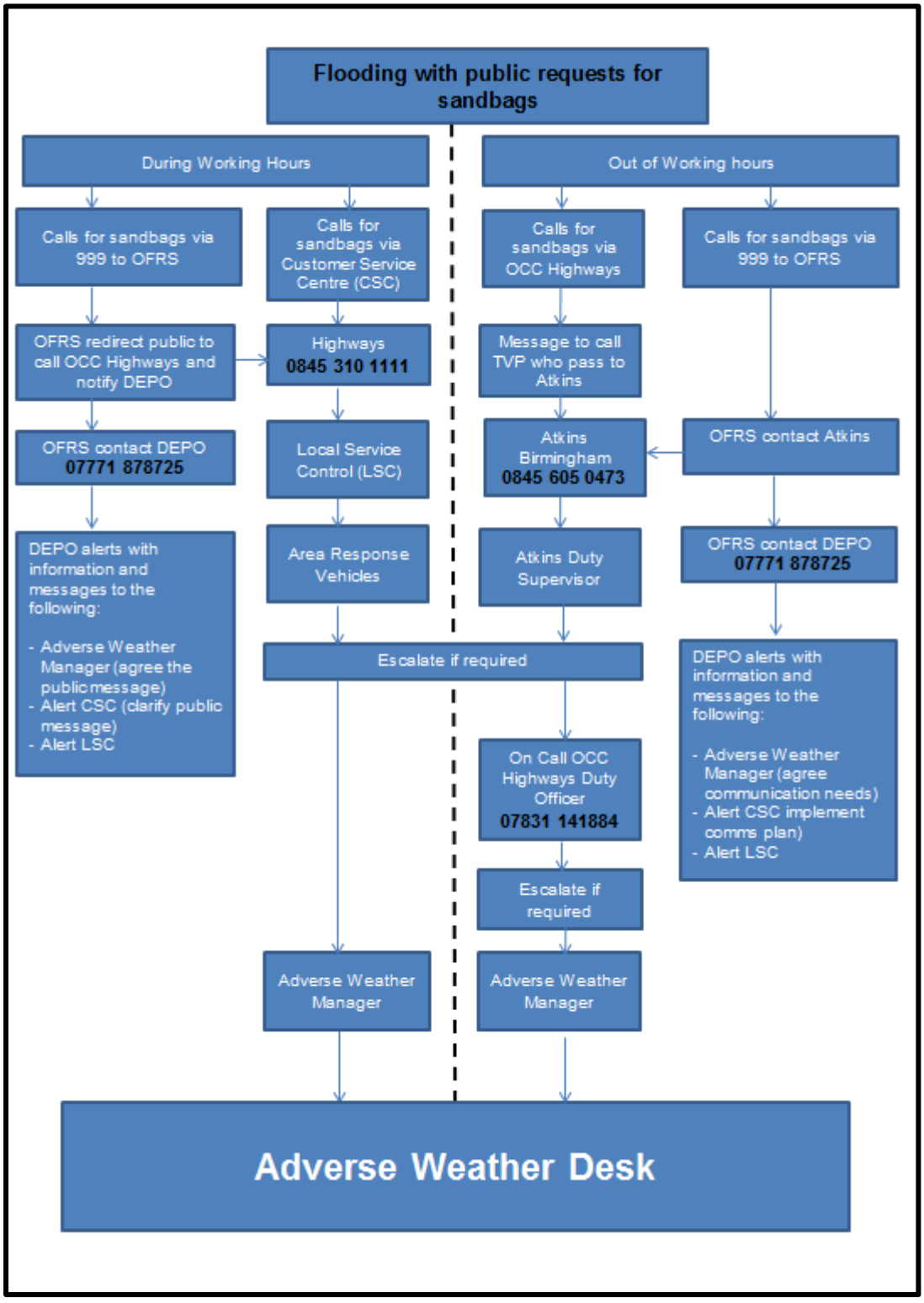
The policy is currently in development

If the severe weather plan is activated the DCs who choose to distribute sandbags to the public can (resource permitting) replenish their stock via OCC.

The EOC may ask DCs to deliver sandbags to locations they would not usually attend, in this case DCs are also able to replenish stock used via OCC.

ii. OCC Sandbag Procedure Diagram

Once a call has been received requesting sandbags or reporting flooding the following procedure is put into place within OCC.



If sandbags are requested the process for delivery is as follows:

- If OFRS receive a 999 call with risk to life they will attend and have limited gell bags on their vehicles. They can call for extra sandbags from OCC via Atkins Birmingham.

- If a member of the public calls OCC for sandbags their area will then be investigated – Highways Staff attending will carry sandbags with them. This is to determine the severity of the flooding and to check if the sandbags are really needed.

- During working hours the OCC drainage team may also be investigating flooding. The drainage team now also carry a limited amount of to help prevent property flooding. They can then request additional deliveries of sandbags if required.

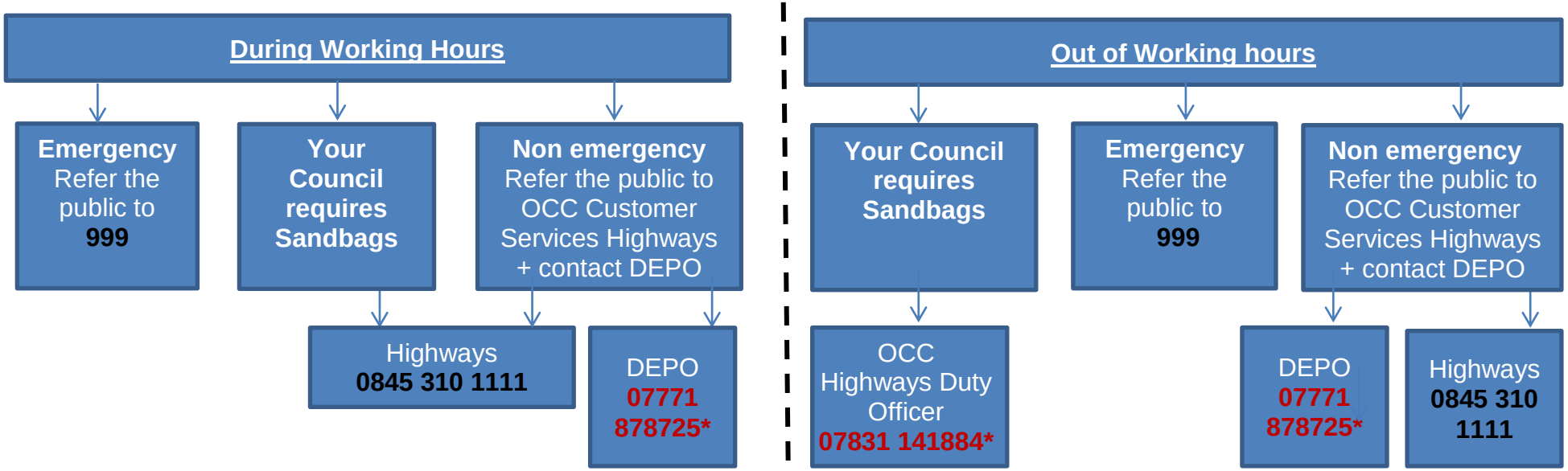
- If the OCC EPU receive a request for sandbags they will pass all details on to the On call highways rep or the Adverse weather desk if in operation. If this call is received during working hours they will be passed through to the Highways Team via 0845 310 1111.

iii. District Council Emergency Requests for Sandbags Procedure

If during an emergency District Councils are unable to provide sandbags they are able to request them via OCC and refer the public directly as per the process **on the following page**.

Likewise Oxfordshire County Council is able to request aid from the District Councils via the usual mutual aid channels.

District Council access to Sandbags via Oxfordshire County Council in an emergency



Key points for District Councils

1. This process is for accessing sandbags in an emergency where you are unable to provide your usual sandbag policy.

2. If you refer the public to the OCC Customer Service number please notify OCC Duty Emergency Planning Officer so we are aware and can ensure messages are coordinated.

3. ***DO NOT** give the OCC Highways Duty Officer number or the Duty Emergency Planning Officer number (those in red/starred) to members of the public

OCC – Oxfordshire County Council
DEPO – Duty Emergency Planning Officer
Numbers in red / marked *– not for publication

iv. OCC Sandbag Stocks and Locations

Kidlington Garages 1 & 2 Marlborough Avenue	350 filled sandbags 450 filled sandbags	
Banbury Garage No 77 Penrhyn Close	320 filled sandbags	
Banbury Garage No 11 Gillett Road / Deacon Way	300 filled sandbags	
OCC Depots	1000 in each depot (filled)	5000 empty across the area.
OFRS	1000 hessian sacks without sand	10,000 water filled sacks across the county
Emergency Planning Department	6000 empty sandbags Sandbag filler	

v. OCC EPU liaison with the OCC Customer Service Centre

In order to ensure that members of the public are receiving the most up to date information when contacting the OCC Customer Contact Centre the sandbag procedures incudes the EPU/ DEPO notifying the Customer Service Centre. As soon as flooding is being reported the OCC DEPO and Adverse Weather Manager will contact the OCC Customer Service Centre with the most up to date information and any agreed messages.

The OCC website can be updated at any time to include messages and information for the public on flooding linking directly to the existing flooding pages. In larger scale flooding messages will be coordinated with the District Council Websites and the TVLRF website to ensure consistency.

E8 - District Council Sandbag Policies

Cherwell
Cherwell District Council does not provide sandbags to the public under any circumstance.

South and Vale
South and Vale District Council will during an emergency support the emergency services by providing filled sandbags to those in imminent danger of flooding.

The councils cannot guarantee the supply of sandbags to any premises, so residents are urged to make their own arrangements, particularly if they live within a flood plain or they know that their property is susceptible to flooding.

South Oxfordshire DC HQ Benson Lane	1000 filled sandbags 2000 empty bags	Note – some filled sandbags may need renewing
Abbey House Oxford	1000 aquasacs	

More information can be found in the South and Vale Sandbag policy which forms part of the South Oxfordshire and Vale of White HorseDistrict Councils Joint operational flood plan. (http://www.southoxon.gov.uk/services-and-advice/environment/severe-weather/flooding/flood-plans-0)

Oxford City

Whilst local authorities have no statutory obligation to provide material for flood protection, Oxford City Council, as a caring authority will supply sandbags as an emergency measure.

However householders are advised not to rely on the Council being able to respond to all needs in an emergency and consider measures that can be taken **now** to prepare for potential flooding in the future.

The priority for deploying sandbags is as follows:

- to save lives or serious injury
- to maintain access for the emergency services
- to protect vital community facilities
- to protect transport routes

When a "Flood Alert" is declared the Emergency Planning Officer (or duty contact officer) will check with City Works that sand and sandbags are in stock.

When a "Flood Warning" is declared we will supply sandbags as requested but will give priority to those areas deemed to be most at risk (based on information from the Environment Agency, on the ground monitoring etc.)

West Oxfordshire

Whilst local authorities have no statutory obligation to provide material for flood protection, West Oxfordshire District Council will supply some sandbags as an emergency measure to vulnerable members of the community where possible.

Sandbags are effective for water up to about 20cm/8" deep. When there is flooding sandbags are given out free of charge.

Requesting sandbags**:** Neighbourhood Sandbag Centres (NSCs) have been set up to ensure sandbags are available and accessible for residents at risk from flooding. The opening of the Centres will be activated by the WODC if necessary or if council operatives cannot access parishes because of flooding. The Council will continue to deliver sandbags to the elderly or disabled at times of need where possible

Burford Clanfield Ascott Under Wychwood Milton Under Wychwood Chipping Norton Charlbury Woodstock	Each NSC has: - At least 10 tonnes of secure sand - Up to 1000 empty bags - Equipment to fast fill	

More information can be found in the West Oxfordshire Emergency Plan.

E9 - The effect of heavy rainfall/flooding

A number of different council services could be affected by flooding resulting in varying levels of severity depending on the extent and duration. Considerations in response to flooding include:

Effect	Detail	Considerations
Health concerns especially affecting the vulnerable	Contaminated water supplies from chemicals stored at commercial, industrial, agricultural and domestic sites Sewage leaking into the flood waters Risk of water born diseases Risk of electrocution Vulnerable people isolated by flood water or evacuated from homes	Identification and safe guarding of vulnerable people, including care homes and schools Reporting and communication of school/other facility closures Prioritising of school

	Restricted access to a clean water supply Possibility of people drowning in fast flowing water Danger of wading through flood water due to unseen obstructions under the surface e.g. drain covers Danger of carbon monoxide poisoning caused by the use of generators and other fuel run equipment brought inside to dry buildings Vulnerability of people who live on house boats or those with boats trapped on the waterways such as narrow boats some of whom may be tourists.	routes for examinations Access to vulnerable for necessary care e.g. social care Coordination of evacuations and rest centres Public advice on safety and carbon monoxide awareness Provisions to individuals living on the waterways, access to facilities for those on the river - clean water will need liaison with EA
Increased need for public information	Increase in public calls to DC and OCC for situation update and resource requirements Numerous calls for sandbags	Staffing levels for calls What information is provided to call takers and how? Coordination, provision and deployment of sandbags by DCs
Occupational health / health and safety	Transport difficulties mean staff are unable get to work School closures mean staff are unable to go to work due to childcare problems Staff working outside or travelling as part of their role Increased numbers of staff accessing IT systems from home	What happens to staff unable to get home? Business continuity – staff shortages, critical service identification Advice to staff working outside and who travel as part of their role
Business Continuity	Will restrict or prevent certain OCC and DC activities.	Which services will be affected? What are the priorities?
Transport problems	Road closures due to flooding Heavy rain causes wet roads with dangerous driving conditions accidents; aquaplaning Congestion caused by increased accidents, road closures and difficult driving conditions Transport infrastructure damaged or disrupted by flooding/rainfall/landslips – train lines flooded, bus routes disrupted Transport route problems lead to shortages in supplies such as milk, bread and fuel which may lead to panic buying	Consider routes taken by those accessing the vulnerable i.e. social care, meals on wheels Public safety messages on driving Signing and maintaining temporary road closures Economic and commercial disruptions – deliveries and service are delayed
Food safety	Issues with contamination of food such as allotments	Advice is issued by the food standards agency

	Public advice on food safety after power losses and contamination by flood water	(see annex F) Advice to the public and businesses, environmental health issues
Power Loss / Problems with utilities	Power loss particularly a problem for vulnerable people Falling power lines, bridge collapses severing telephone lines	Identification of key services/assets at risk i.e. IT systems Long term power causing evacuations and rest centres Business Continuity plans activated
Agriculture	Farm animals become isolated due to fields being flooded Crops damaged by flooding Animal deaths, carcasses washed onto public land	Involvement with DEFRA and animal charities i.e. RSPCA Long term concerns on food production Correct disposal and clearance of animal carcasses
Structural damage	Council buildings may be at risk from flooding Bridges, culverts maintenance/safety issues Damage to houses – council and privately owned People not covered by insurance may mean a cost to the council to make repairs Schools damaged – closures, relocations Natural environment damaged by rain/flooding Tourist sites/historical areas flooded – economic repercussions to area as loss of tourists Pre-planned events are cancelled or disrupted causing economic loss, issues with public safety, transportation etc	Identification of critical services/infrastructure Services may be unavailable due to flooding Reporting and communication of school/other facility closures Can rubbish collection be maintained? Can the staff be reassigned? How are the public made aware of changes to services? Resources stretched – need for engineers and specialists. Importance of a fast response time hampered by transportation problems Promotion of tourist areas unaffected Remember that recovery could take many months or years

Other weather	Heavy rain may be accompanied by thunderstorms and gales. Flooding may be exacerbated by dry ground from a heat wave or drought and caused by melting snow	See appropriate weather appendices

E10 - Resources which might be needed

TVLRF Multi agency flood plan
Oxfordshire Off Site Reservoir Plan
A guide to Flood response in Oxford
Flood defences
Road signage for road closures /flooded roads
Sandbags, Boats,
EA Local flood warning plan for Oxfordshire
High Volume Pumps
Water safety equipment

E11 - Alert

There are a number of alerts for heavy rainfall and flooding which are explained below. Because of the numerous and complex alerting processes the EA teleconference acts as a means of coordinating information and providing a clearer indicator for activation of the severe weather plan.

NSWWS Heavy rainfall alert: issued by the Met office, not designed for surface water flooding, less localised (see section 2.1)

Flood Guidance Statement: issued by the FFC, rates to flooding risk over five days and includes fluvial, coastal, groundwater and surface water flooding (see section 2.2)

Flood Warning service: issued by the Environment Agency featuring a series of flood warning codes (see section 2.3)

Alert	Specific trigger points	Considerations for Emergency Planners	Result
FGS Very Low Risk		No action	No action
NSWWS Green			
FGS Low Risk	Is the forecast for Oxfordshire?	1. Monitor weather via Hazard manager	Continue to monitor the weather
NSWWS Yellow	Note due to recent yellow warnings causing surface water flooding – consider amber actions if concerned - Refer to the generic trigger considerations in section 3.2		
FGS Medium Risk	Refer to the generic trigger considerations in	2. OCC to initiate call cascade if a repatriation is	Advise / Standby

NSWWS Amber	section 3.2 When was the warning issued? – For example on a Friday send it to parishes where as on a Monday monitor the weather further. Information sent should include a link to the EA river level monitoring tool	planned 3.OCC Duty EPO to consider disseminating advice to parishes 4. Consider internal cascade of warning. 5. Consider adding information to website 6. Consider conversation with Duty Director to activate MIRS If appropriate: 7. Take part in EA Teleconference 8. OCC EPU to liaise with OCC Highways to determine response activities 9. Monitor and ensure any internal and external comms reflect media messages	
FGS High Risk **NSWWS** Red		10. If appropriate contact multi-agency partners at TCG level 11. Multi agency discussion and coordinated action	Standby / Advise / Activate

Alert	Specific trigger points	Considerations for Emergency Planners	Result
EA Flood Alert	Refer to the generic trigger considerations in section 3.2 Note due to recent yellow warnings causing flooding – consider amber actions if concerned by generic trigger considerations in section 3.2	1. Monitor weather via Hazard manager 2.OCC Duty EPO to consider disseminating advice to parishes 3. Consider internal cascade of warning. 4. Consider adding information to website	Advise
EA Flood Warning		5. OCC to initiate call cascade if a repatriation is planned 6. Consider conversation with Duty Director to activate MIRS 7.Take part in EA Teleconference 8.OCC EPU to liaise with OCC Highways to determine response activities 9.Monitor and ensure any internal and external comms reflect media messages 10.If appropriate contact multi-agency partners at TCG level	Advise / Stand by / Activate Refer to the TVLRF Multi Agency Flood Plan Refer to the EA local flood warning plan for Oxfordshire
EA Severe flood warning		As above 11. Multi agency discussion and coordinated action	Activate Plan
EA All clear		12. Recovery	Recover actions

The actions below are in addition to the roles and responsibilities listed within the OCC Emergency Response Plan.

	Department /Directorate	Resources available	Actions/responsibilities in preparation for and response to a flooding
OCC	SCS		As per OCC Emergency Response Plan and SCS/CEF Major Incident Plan SCS can initiate daily reporting from providers to ensure safeguarding

			responsibilities are met. The following categories are applied to those under care A = must have support. B = can do without support for a limited period/limited family/friend/carer networks C = has a family/friend/carer support network available and can do without contracted support for a longer period.
	CEF	Advice on school closures	As per OCC Emergency Response Plan and SCS/CEF Major Incident Plan including provision of information on the closure of schools and childcare facilities in severe weather. Statutory duty for education provision and safeguarding children.
	E&E		Sandbag stockpiles and the provision of supplies to District and City Council as required. Technical experts in drainage and engineering.
Oxford City Council	Policy, Culture and Communications		No specific actions
	Direct Services	Road barriers and signs sandbags	Sandbag provision preparation. Assist with construction of demountable flood barriers, clear blocked water courses
	City Development	Building control advice on damage buildings	No specific actions
	Community Housing		No specific preparation activities Response – can include relocating people made homeless by flood damaged houses
	Environmental Development	Public health expertise	Public health advice following a flood – including drinking water and food safety
	City Parks and Leisure		No specific actions
Cherwell District Council	Environment & Community	Public Health expertise	No specific actions
	Housing Planning & Economy	Building control advice on damage buildings Housing Officers	No specific actions will no longer supply sand bags under any circumstances after April 2011. Response – can include help relocating people made homeless by flood damaged houses
	Chief Executive		No specific actions
West Oxfordshire District Council	Emergency Management Team		In the event of severe inland flooding, local and urban flooding, local fluvial flooding and localised extremely hazardous flash flooding the council will convene the Emergency Management Team and consider activating the West Oxfordshire District Council Emergency Plan
South	EP Officer		In the event of severe flooding

Oxfordshire and Vale of White Horse District Council			emergency planning officer will then inform senior management team and consider activating the council Emergency Plan

Annex F: Information to the public

F1 - Information within Oxfordshire

Weather warnings

If deemed appropriate the EPU can distribute weather warnings and updates on the OCC severe weather response to heads of services and DCs via email. This would be done at the same time as informing the parishes. The assumption is made that all OCC directorates are already signed up to weather warnings and so the OCC EPU should not be relied upon to distribute weather warnings (see annex H). Each District Council is registered to receive NSWWS warnings.

Information sent within OCC or to DC could be similar to the information provided to the local parishes (see below) but in some cases the communications may need be more detailed. In order to send these email messages the global address book on the OCC outlook system can be accessed and include the following key lists:

KSM – Key Service Managers
CCMT – County Council Management Team
CCMT PA's – County Council Management Team Personal Assistants

If deemed appropriate an initial teleconference will bring together the key stakeholders to discuss the Oxfordshire response. See section 3.1

MIRS

If necessary the MIRS system (section 4.6) can be activated by the duty EPO in consultation and with clearance from the duty director (For example if in the case it is considered that travel may be significantly disrupted based on a weather forecast). Once activation has been agreed, Internal Communications should be contacted in order to send a message to the MIRS distribution list to explain why the system is being activated, when reporting is due and what is expected. The following was used as an exercise:

In view of the possibility of severe flooding overnight, the duty director has agreed to initiate MIRS reporting for tomorrow Wednesday 3rd August 2010. Services should report by 1100 and directorates by 1200. The MIRS system can be accessed by logging in at: ……..

F2 - Information to local Parishes

If deemed appropriate the EPU can distribute weather warnings and an update on the OCC severe weather response to Parish Councils via email. The distribution lists are available via the Emergency Operations Centre contacts list and are accessible to all EPU staff. Messages sent to Parish Councils should include an appropriate website link and wording to the effect of

"There will be no further updates from emergency planning on this weather event so addressees may wish to monitor the situation on the Met office website".

In the example of flooding the link to the EA site to monitor the river levels should also be included.

F3 - Information to the public

The public are able to access information from OCC and DC via the website or by phone. District Councils' will be able to signpost website users to the OCC website. The OCC website will have one single page devoted to a weather incident with all the OCC service links that might be needed such as school closures, transport and vulnerable people.

Information on the OCC communication policy can be found in the OCC Communication Plan. During an incident the OCC EPU will ensure that the OCC contact centre is kept fully updated to facilitate the information provision to the public. Information on Media liaison can be found in the OCC Emergency Response Plan.

F4 - Weather Specific Information

Heat wave

The Met office publishes public advice on what do to in all forms of severe weather. These can be found online at http://www.metoffice.gov.uk/weather/uk/advice/ . For heat wave the advice is as follows:

Before a heat wave

- Ensure you have plenty of cold fluids available.

During a heat wave

- Try to keep your house cool, closing blinds or curtains can help.
- At night, keep your sleeping area well ventilated. Night cooling is important as it allows the body to recuperate.
- Try to stay cool by taking cool showers or baths and/or sprinkle yourself several times a day with cold water.
- Avoid too much exercise, which can cause heat exhaustion or heat stroke, and can even be fatal. Watch for signs of heat stress — an early sign is fatigue.
- Drink plenty of fluids, but not alcohol, which dehydrates the body.
- Try to eat as you normally would. Not eating properly may exacerbate health-related problems.
- If driving, keep your vehicle well ventilated to avoid drowsiness. Take plenty of water with you and have regular rest breaks.
- If you have vulnerable neighbours who may be at risk during a heat wave, try to visit them daily.
- If you do go out, try and avoid the hottest part of the day (11 a.m. to 3 p.m.) and seek shade where possible. Avoid being in the sun for long stretches.

Before going out in the sun

- Check you have appropriate sun cream for your particular type of skin.

During sunny weather

- The UV index (the strength of the sun) can be high at many times of the year — it doesn't have to be hot. The UV index can be strong through cloud even when the sun isn't directly shining.
- If you go out, wear lightweight, light-coloured clothing, high factor sunscreen and a wide-brimmed hat.
- Avoid being in the sun for long stretches.
- Reapply an appropriate factor sun cream at regular intervals during the day.
- Do not leave children or animals in parked cars. Even on cool days, strong sunshine can make car interiors very hot.

There is in addition more specialist advice including:

- pet owners from the RSPCA,
- those working outside from the HSE
- and guidance for teachers from the HPA

Links to which can be found in annex H.

Severe Gales/Storms

The Met Office has created a series of tables with information for the public to reflect the impact of weather at each stage of the NSWWS alerts. Below is the table associated with wind.

Impact Level	Very Low	Low	Medium	High
Impact and advice associated with WIND	Debris dislodged and some branches removed Perhaps some very limited travel disruption. Difficulties on some prone routes e.g. cross winds on exposed or high level roads.	Some branches or trees brought down. Localised travel disruption. Localised problems for high-sided vehicles on prone routes. Drive with care, especially on exposed routes. **BE AWARE** of possible debris being blown around.	More widespread tree damage and other debris, slates etc dislodged from roofs. Some minor structural damage possible. Risk of injury from flying debris. **BE PREPARED** for some travel disruption e.g. closed bridges. Potential for some localised interruptions to power.	Widespread structural damage, e.g. roofs blown off, mobile homes overturned, power lines brought down. Risk to personal safety from flying debris. Potentially widespread and/ or prolonged interruptions to power. Expect widespread transport disruption due to e.g. roads blocked by fallen trees.

Before the storm

- Secure loose objects such as ladders, garden furniture or anything else that could be blown into windows and other glazing and break them.
- Close and securely fasten doors and windows, particularly those on the windward side of the house, and especially large doors such as those on garages.
- Park vehicles in a garage, if available; otherwise keep them clear of buildings, trees, walls and fences.
- Close and secure loft trapdoors with bolts, particularly if roof pitch is less than 30°.
- If the house is fitted with storm shutters over the windows then ensure that these are closed and fastened.
- If chimney stacks are tall and in poor condition, move beds away from areas directly below them.

During the storm

- Stay indoors as much as possible.
- If you do go out, try not to walk or shelter close to buildings and trees.
- Keep away from the sheltered side of boundary walls and fences — if these structures fail, they will collapse on this side.
- Do not go outside to repair damage while the storm is in progress.
- If possible, enter and leave your house through doors in the sheltered side, closing them behind you.
- Open internal doors only as needed, and close them behind you.
- Take care when driving on exposed routes such as bridges, or high open roads, delay your journey or find alternative routes if possible.

- Slow down and be aware of side winds, particular care should be taken if you are towing or are a high sided vehicle.
- Do not drive unless your journey is really necessary.

After the storm

- Be careful not to touch any electrical/telephone cables that have been blown down or are still hanging.
- Do not walk too close to walls, buildings and trees as they could have been weakened.
- Make sure that any vulnerable neighbours or relatives are safe and help them make arrangements for any repairs.

Before the thunderstorm

- Unplug all non-essential appliances, including the television, as lightning can cause power surges.
- Seek shelter if possible. When you hear thunder you are already within range of where the next ground flash may occur, lightning can strike as far as 10 miles away from the centre of a storm.

During the thunderstorm

- Avoid using the phone — telephone lines can conduct electricity.
- Avoid using taps and sinks — metal pipes can conduct electricity.
- If outside avoid water and find a low-lying open place that is a safe distance from trees, poles or metal objects.
- Avoid activities such as golf, rod fishing or boating on a lake.
- If you find yourself in an exposed location it may be advisable to squat close to the ground, with hands on knees and with head tucked between them. Try to touch as little of the ground with your body as possible, do not lie down on the ground.
- If you feel your hair stand on end, drop to the above position immediately.

After the thunderstorm

- Avoid downed power lines or broken cables.
- If someone is struck by lightning they often suffer severe burns. The strike also affects the heart, so check if they have a pulse.

Drought

The EA website has a section on drought including ways to save water the link to which can be found in annex H.

Winter Weather

The Met Office has created a series of tables with information for the public to reflect the impact of weather at each stage of the NSWWS alerts. Below is the table associated with snow, ice and fog.

Impact and advice associated with ICE	Localised icy stretches on some untreated roads and pavements are possible. Take extra care when walking, cycling or driving in affected areas.	More widespread icy stretches on untreated roads and pavements but road networks generally open. Take extra care when walking, cycling or driving in affected areas. Journeys through affected areas may take longer than usual.	Widespread black ice, some roads passable only with care. Possibility of road collisions and significant increase in slips and falls.	N/A

Impact Level	Very Low	Low	Medium	High
Impact and advice associated with SNOW	Small amounts of snow lying on roads and pavements so some slippery road surfaces possible. Traffic may move generally slower than normal. Take extra care when walking, cycling or driving in affected areas.	More widespread snow lying on roads and pavements but road networks generally open. Care needed with only localised travel disruption. Problems mostly confined to usual prone areas. Take extra care when walking, cycling or driving in affected areas. Journeys through affected areas may take longer than usual.	Widespread snow with a number of road closures, others passable only with care. **BE PREPARED** for some disruption to road, rail and air transport with difficult driving conditions likely and longer journey times.	Widespread deep snow with many roads closed or impassable. Roads likely to become impassable with high risk of drivers becoming stranded. Significant disruption to road, rail and air transport. Risk to personal safety. Expect significant disruption to normal day to day life as a result of transport issues, school closures etc. Avoid making unnecessary journeys.

Impact Level	Very Low	Low	Medium	High
Impact and advice associated with FOG	Some localised non-persistent fog affecting limited geographical areas. Take extra care when driving in affected areas. There may be some very limited impact on road transport.	More widespread, locally dense fog affecting significant areas of the country but not persisting beyond 1 – 2 days. Some airports may close for short periods. Take extra care when driving in affected areas. Journeys through affected areas may take longer than usual.	Widespread and dense fog affecting large areas of the country including a number of major airports and/or ports. The fog is persistent and may last for many days in some areas. **BE PREPARED** for some travel disruption. Take great care if driving and **BE PREPARED** for increased journey times. **BE PREPARED** for delays at affected airports and/or ferry ports.	N/A

Before snow or ice

- If you have to make a journey when snow is forecast, make sure you have warm clothes, food, water, boots, a torch and spade, and let someone know when you expect to arrive and your route. Try to wait until the roads have been salted before travelling.
- Put salt or cat litter on paths and driveways to lessen the risk of slipping on compacted snow.

- Check on vulnerable neighbours.

During snow or ice

- Avoid travel if possible.
- If you must drive check the Highway Code for advice on driving in ice and snowy weather. A summary of the advice is: Take care around gritters. Don't be tempted to overtake. Slow down — it can take 10 times longer to stop in snowy or icy conditions, so allow extra room. Use the highest gear possible to avoid wheel spin. Manoeuvre gently and avoid harsh braking and acceleration. If you start to skid, gently ease off the accelerator and avoid braking. If braking is necessary, pump the brakes don't slam them on. If you get stuck, stay with your car and tie something brightly coloured to your aerial.
- If you go outside wear several layers of clothing and keep dry to prevent loss of body heat. Watch out for signs of hypothermia — uncontrollable shivering, slow/slurred speech, memory lapse and drowsiness and frostbite — loss of feeling in and pale appearance of fingers, toes, nose and ear lobes. Keep moving your arms and legs to help the blood circulate.

After snow and ice

- Be careful when walking or driving on compacted snow — it may have turned to ice.
- Take care when shovelling snow. Cold air makes it harder to work and breathe which adds some extra strain on the body and can be the cause of heart attacks in the vulnerable.

During fog

- Avoid travel if possible.
- Drive very slowly with dipped headlights, full-beam lights reflect off the fog causing a 'white wall' effect.
- Keep an eye on your speed, fog can give the illusion of moving in slow motion.
- Use fog lights, but remember to turn them off when the visibility improves.
- Don't hang on the tail lights of the car in front; rear lights can give a false sense of security.
- Watch out for freezing fog which is made of water droplets that freeze on contact with objects such as the pavement, road, car, etc. It can quickly form a layer of ice

In addition the Highway Code has information and rules on driving in adverse weather conditions, the Highways agency has produced a leaflet for driving safety the links to which can be found in annex H.

Heavy rain/flooding

The Met Office has created a series of tables with information for the public to reflect the impact of weather at each stage of the NSWWS alerts. Below is the table associated with rain.

Impact Level	Very Low	Low	Medium	High
Impact and advice associated with RAIN	Some flooding of low lying fields, recreational land and car parks but little or no disruption to travel. Wet road surfaces and possibility of ponding water leading to difficult driving conditions. Take extra care when driving in affected areas.	Localised flooding of low lying fields, recreational land and car parks. Flooding of a small number of homes and businesses. Wet road surfaces and possibility of ponding water, especially in known trouble spots. Local disruption to travel – longer journey times. Water on roads – drive according to the conditions encountered.	Some flooding of homes, businesses and transport links possible. Disruption to travel likely. Disruption to gas, electricity, water supplies and telecoms. Some evacuations may be required. Be prepared to protect yourself and your property.	Widespread flooding of property. Severe disruption to travel. Loss of gas, electricity, water supplies. Significant disruption to communities. Evacuation expected. Significant risk to life. Take action to protect yourself and follow the advice of the emergency services.

Before the flood

- Move valuable items, including important documents, to high levels.
- Bring indoors items which may cause damage or be damaged.
- Ensure you have bottles of drinking water in case the water supply becomes contaminated.
- Your local council may be able to supply sand bags. Remember that water can enter the house through whatever means it normally leaves the house.

During the flood

- Never try to drive through flood water — 80% of flood deaths occur in vehicles.
- Avoid walking through flood water, streams or rivers in full flow — just six inches of rapidly moving water can knock a person over.
- If you have to evacuate your home or workplace turn off those utilities you can access.
- Avoid driving unless your journey is absolutely necessary.

After the flood

- Check structural damage to buildings.
- If it is dark, use a torch, not candles.
- Throw away all foods, including canned goods, which have come into contact with flood water.

There is in addition information from the EA on preparations which can be made in advance of flooding, food hygiene during and after a flood from the Food Standards agency and specialist information for pet owners from the RSPCA. The links to which can be found in annex H.

Annex G: Teleconference Details

The Environment Agency flooding teleconference invites the following representatives:

Name	Organisation
Duty EPO	Oxfordshire County Council
Head of Building Control & Engineering Services	Cherwell District Council
EPO	Oxford City Council
EPO	South Oxfordshire District Council
Chief Engineer	Vale of the White Horse DC
Head of Community Services	West Oxfordshire District Council
Contingency Planning Officer	Thames Valley Police
Emergency Preparedness Manager	South Central Ambulance Service: Bucks Division
Emergency Response Manager	Oxfordshire Fire and Rescue
TV Emergency Planning Liaison Officer	Oxfordshire Primary Care Trust
Control Room FAO Brigade Support	Royal Berkshire Fire and Rescue Service
Group Manager Emergency Planning	Buckinghamshire Fire and Rescue
FWDO (Flood Warning Duty Officer)	Environment Agency
ABC (Area Base Controller)	Environment Agency
AFWDO (Assistant Flood Warning Duty Officer)	Environment Agency
Public Weather Service Advisor	Met Office
Emergency Planning Officer	Aylesbury Vale District Council
Emergency Planning Manager	Bracknell Forest BC
County Resilience Manager	Buckinghamshire County Council
Emergency Planning Officer	Chiltern District Council
Senior Emergency Planning Officer	Milton Keynes Council
Thames Valley Military Rep	MOD
Emergency Planning & Risk Management Officer	Reading Borough Council
Emergency Planning Officer	Slough Borough Council
Civil Contingencies Manager	West Berks District Council
Duty Officer	Windsor and Maidenhead Royal Borough
Community Resilience Manager	Wokingham Borough Council
Emergency Planning Liaison Officer	Wycombe District Council

Oxfordshire Severe Weather Teleconference

Invitation to attend should include the teleconference number and pin, time and background on the reason for the teleconference. The Met office PWS advisor should be asked for update before the teleconference in order to report on item 2. The electronic distribution list for the invitees can be found in the OCC EPU Emergency Operations Centre email system.

Attendees:

- OCC CEPO
- OCC EPO's
- DC EPO's
- OCC E&E representatives
  - County Network Coordinator and Streetworks Manager (Katherine Powley)
  - Adverse Weather Manager (Paul Wilson)
  - Integrated transport representative (John Pengelly) – during winter weather for 4x4 cell
  - UTMC team (Ruth Anderson or James Duncan)
- OCC Communications representatives
  - External Relations Manager (Paul Smith)
  - Customer Service Centre Representative (Tim White)
- OFRS representative
  - Emergency Response and Resilience Manager (Grahame Mitchell)
- SCS representatives
  - Service Manager (Peter Howe)
- CEF representatives
  - Assistant to the Director for Children, Education & Families (John Mitchell)
- OCC Business Continuity representatives
  - As per list in contacts

Invited to attend:

- TVP representative
  - Contingency Planning Officer (Richard Searle or Sabine Furlong)
- Met office PWS advisor (Mark Rogers)

Copied for information:

- OFRS – Nathan Travis - Assistant Chief Fire Officer

Oxfordshire Severe Weather Teleconference Agenda

(NOTE TO CHAIR – if this is the first teleconference please also refer to the OCC teleconference standing agenda in the OCC Emergency Plan to ensure all emergency response processes are considered)

1. Introduction / welcome / confirm attendees

2. Predicted impact/consequences – local reports

3. Weather update – risk assessment, forecast

4. Activation of (as appropriate):
    a. OCC EOC
    b. OCC Highways Adverse desk
    c. 4x4 response cell

5. Business continuity concerns including (although not an exhaustive list)

    a. Implementation of MIRS
    b. IT scheduled works
    c. messages for intranet / internet
    d. specific directorate/departmental concerns

6. Communication strategy (report from Comms and Customer Service Centre)

7. TV wide considerations

8. Resource review
9. Deployment of resources – SCG/TCG reps
10. Battle rhythm

} As required

11. Actions of each agency

12. Agree next teleconference as required

Annex H: Key resources: Weather warnings and websites

H1 - How to sign up for weather warnings:

NSWWS

- http://www.metoffice.gov.uk/weather/uk/uk_forecast_warnings.html for monitoring no registration necessary.
- For Category 1 and 2 responders (as defined in the Civil Contingencies Act 2004). Weather warnings for specified severe weather events can be sent to responders using fax, email, FTP and SMS text message formats.
- For each organisation this is limited to 12 individual messages. To be considered for the OCC distribution list please contact the Emergency Planning Unit.
- If your District Council has not already registered for this service you may do so via http://www.metoffice.gov.uk/publicsector/nswws/or_index

EA Flood Alerts

- http://www.environment-agency.gov.uk/homeandleisure/floods/31618.aspx for monitoring no registration necessary
- http://www.environment-agency.gov.uk/homeandleisure/floods/riverlevels/default.aspx River levels on the internet, monitoring no registration necessary

FFC

- Register with the FFC in order to receive the flood guidance statements and access to Hazard Manager. This is restricted to Category 1 and 2 responders.
- http://www.ffc-environment-agency.metoffice.gov.uk/services/request.html

Heat wave Alerts

- http://www.metoffice.gov.uk/weather/uk/heathealth/index.html for monitoring no registration necessary.
- Contact the EPU to be considered for the distribution list if you are from OCC or email summer_heat wave_alerts@dh.gsi.gov.uk

Cold Weather Alert

- Contact the EPU to be considered for the distribution list if you are from OCC or contact the Department of Health to be considered for the list.

H2 - Useful website links:

Weather

Met Office for advice on severe weather
http://www.metoffice.gov.uk/weather/uk/advice/

Met Office for NSWWS
http://www.metoffice.gov.uk/weather/uk/uk_forecast_warnings.html

Met Office for Hazard Manager
https://logon.metoffice.gov.uk/opensso/UI/Login?goto=http://www.metoffice.gov.uk/premium/hazardmanager/&gx_charset=UTF-8

Flooding

Environment Agency for flood warnings and information on flooding
http://www.environment-agency.gov.uk/homeandleisure/floods/default.aspx

Environment Agency – am I at risk of flooding? – Postcode search
http://www.environment-agency.gov.uk/homeandleisure/floods/31650.aspx

DEFRA for information on flooding
http://www.defra.gov.uk/environment/flooding/index.htm

FFC
http://www.ffc-environment-agency.metoffice.gov.uk/

RSPCA advice for animal owners on actions to take to prepare animals for floods
http://www.rspca.org.uk/allaboutanimals/helpandadvice/floods

Food Standards Agency advice on eating after flooding
http://www.food.gov.uk/safereating/microbiology/flood

Drought

Environment Agency for information on drought
http://www.environment-agency.gov.uk/homeandleisure/drought/default.aspx

Environment Agency monthly water situation reports
http://www.environment-agency.gov.uk/research/library/publications/127606.aspx

Thames Water Utilities Limited 2010 Drought Plan
http://www.thameswater.co.uk/about-us/11092.htm

Environment Agency Drought Plan – Jan 2012
http://publications.environment-agency.gov.uk/PDF/GESE0112BVYI-E-E.pdf

Heat wave

Department of Health heat wave plan for the UK 2012 and additional heat wave publications
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_134152

Health Protection Agency-Looking after Schoolchildren during Heat waves: Background Information
http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1210577610624

Health Protection Agency – Heat waves: Guidance for Teachers and Other Professionals
http://www.hpa.org.uk/Topics/EmergencyResponse/ExtremeWeatherEventsAndNaturalDisasters/Heatwaves/heatwaves_teachers/

HSE guidance on working outside for employers and employees
http://www.hse.gov.uk/temperature/outdoor.htm

RSPCA advice on keeping pets cool during hot weather
http://www.rspca.org.uk/allaboutanimals/pets/dogs/health/keepdogscool

Winter Weather

Highway code – Driving in adverse weather conditions
http://www.direct.gov.uk/en/TravelAndTransport/Highwaycode/DG_069859

Highways Agency – Driving in severe weather leaflet
http://www.direct.gov.uk/prod_consum_dg/groups/dg_digitalassets/@dg/@en/documents/digitalasset/dg_185829.pdf

OCC road salting routes
http://portal.oxfordshire.gov.uk/content/publicnet/council_services/roads_transport/street_maintenance/salted-roads-in-oxfordshire.pdf

Government guidance on self help during winter
http://www.direct.gov.uk/en/Nl1/Newsroom/DG_191868

Department of Health Cold Weather Plan for England
http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_130564

Misc

Cabinet Office Lexicon
http://www.cabinetoffice.gov.uk/cplexicon

Thames Valley Resilience Forum
http://thamesvalleylrf.org.uk/

Air quality levels
www.airquality.co.uk

OCC www.oxfordshire.gov.uk/	Cherwell www.cherwell-dc.gov.uk	Vale of White Horse www.whitehorsedc.gov.uk
West Oxfordshire lwww.westoxon.gov.uk	South Oxfordshire www.southoxon.gov.uk	Oxford City www.oxford.gov.uk/

Annex I: Cherwell District Council Severe Weather Plan Annex

Activation Steps

1. Assess the local context

Weather	Local trigger	Action
Heat wave	No specific local triggers, reliant on national forecasts and warnings	Service Areas listed are warned and updated
Drought		
Storms and Gales		
Winter Weather		
Heavy Rain and Flooding		

1. Monitoring the weather
The weather is monitored by the District Council EPO in addition to the following individuals. Head of service for Recreation & Health, the Head of service for Building Control & Engineering Services and Communications and Public & Environmental Health Manager.

2. Weather distribution
The District Council EPO will if necessary and depending on the severity notify all departments.

Depending on the weather forecast this will either be by email or in more urgent cases via telephone. Contacts for these services can be found in the Cherwell District Council Emergency Plan. The district council does not warn the Parish Councils or the public directly, information will be made available via the District Council website.

3. Calling a teleconference
See section 3.1 on how to convene a teleconference.

4. District Council Priorities
The main priority would be Business Continuity and ensuring key services are delivered.

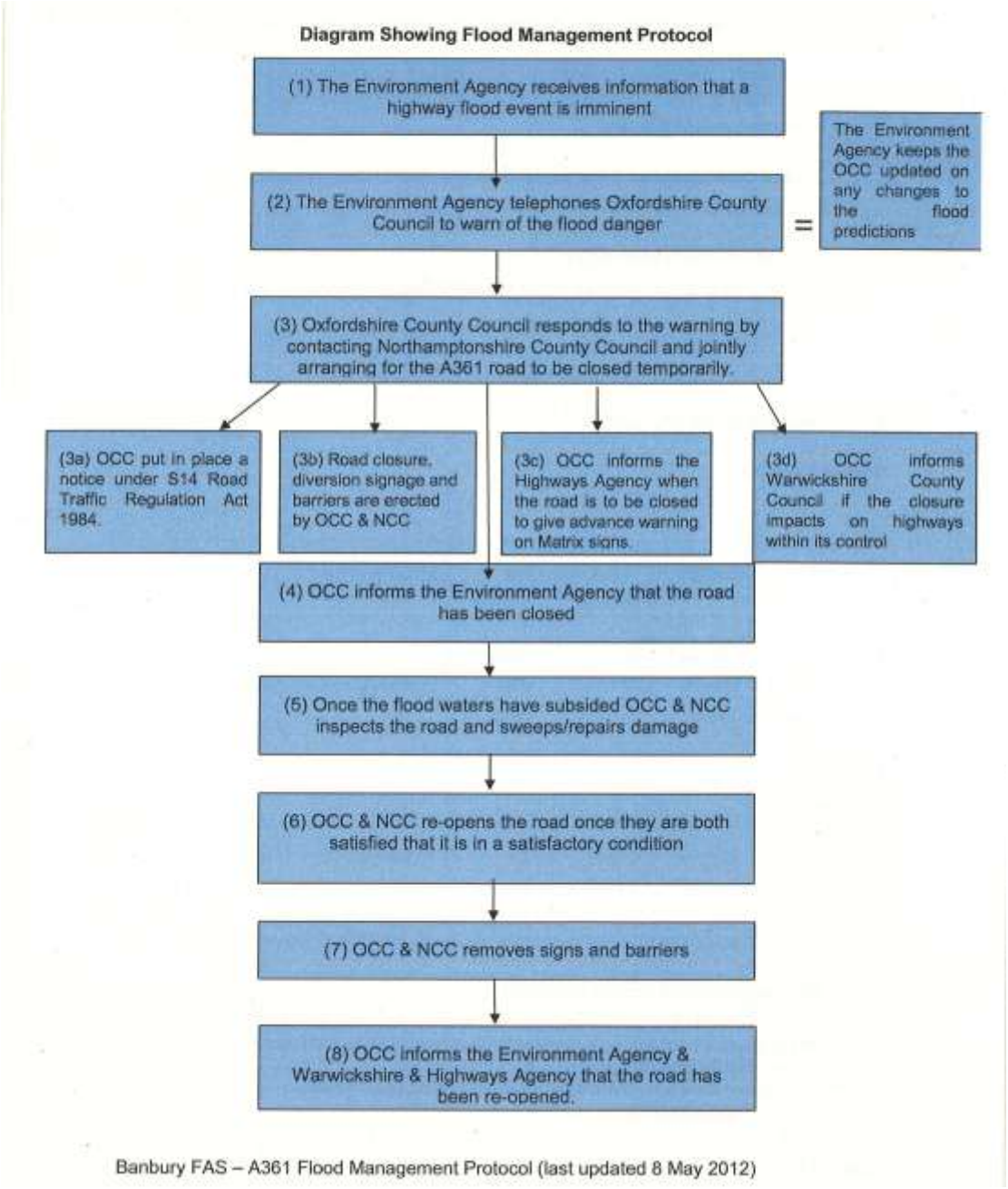
5. Banbury Flood Alleviation Scheme
The flood alleviation scheme involved the construction of a large upstream flood storage facility, together with improvements within three locations in Banbury. Properties that once had a 20 per cent chance of flooding in any one year will see that drop to 0.5 per cent (or a 1 in 200 chance of flooding in any one year). Besides reducing flood risk to homes and businesses, the scheme will protect the town's transport links and water supply.

In essence two flood control structures will hold back flood water as it makes its way downstream towards Banbury. The water will then be released slowly downstream, greatly reducing the risk of flooding this is all performed automatically and does not need staff to

operate. By raising the level of an 850-metre section of the A361 by up to 700mm and installing culverts underneath the frequency of flooding on this stretch of road to the north of the town will be reduced. It will also allow the highways authorities time to close the road if threatened by overspill from the flood storage area.

Flood defences including, low walls and earth embankments, at were also completed at Tramways Industrial Estate (close to Banbury Station), which was badly flooded during the Easter 1998 floods. These will reduce the risk of flooding to industrial units and Banbury United Football Club., an earth embankment was also constructed at Wildmere Industrial Estate to reduce flood risk to low-lying buildings, including the Prodrive complex.

The Flood Management Protocol outlines the procedures involved in the closing of the A361 and the liaison between OCC, Northamptonshire County Council and the EA. The summary of the process is replicated below. For more information refer to the complete protocol.



Banbury FAS – A361 Flood Management Protocol (last updated 8 May 2012)

Annex J: Oxford City Council Severe Weather Plan Annex

For flood response in Oxford see:

- Oxford City Council document 'Oxford Area Flood Information' (Section 3) which gives details of the response of Oxford City Council.
- The Environment Agency's document 'A guide to flood response in Oxford" which provides details of the demountable barriers.

Activation Steps

1. Asses the local context

Weather	Local trigger	Action
Gales/Storms	No specific local triggers, reliant on national forecasts and warnings	Service Areas listed under point 2 are warned and updated
Winter Weather: Snow/Ice/Fog	No specific local triggers, reliant on national forecasts and warnings	Service Areas listed under point 2 are warned and updated
Heavy Rain/Flooding	Water levels are checked at various locations in the city. Flood Watch for Oxford Monitoring of Bullstake Close allotments	Reference should be made to 'A guide to flood response in Oxford' which includes further detail on defences at: Bullstake Close Botley Road
Heat wave	No specific local triggers, reliant on national forecasts and warnings	Service Areas listed under point 2 are warned and updated
Drought	No specific local triggers, reliant on national forecasts and warnings	Service Areas listed under point 2 are warned and updated

1. Monitoring the weather

The Emergency Planning Officer receives warnings and in addition many other service areas receive warning directly. Direct Services monitors the weather closely, and receives detailed forecasts directly, particularly in relation to snow and freezing conditions for salting etc.

2. Weather distribution

The following service areas are sent weather warnings by the EPO – detail on how to send these warnings and contact numbers can be found in the Oxford City Emergency Plan.

Service area	Role/Actions
Policy, Culture and Communications	Media
Direct Services	Providing road barriers and signs Labour (direct or via contractor) Transport and plant (direct or via contractors) Sandbag distribution Assist with construction of demountable barriers (see Annex E) Clear blocked watercourses etc. under Land Drainage Act powers) Clear blocked road channels & gully gratings - street cleaning Sandbag provision Waste collection Assist in the identification of vulnerable people
City Development	Building Control - Advice on dangerous building structures
Community Housing	Assist Council tenants

	Support at Rest Centres Principal responsibilities for homelessness (i.e. helping to re-house vulnerable people made homeless where there is no alternative solution) Assist in the identification of vulnerable people
Environmental Development	Environmental Health - public health advice following a flood (e.g. on drinking water, food safety etc)
City Leisure & Parks	Provision of equipment and resources Provision of facilities for Rest Centres in conjunction with Fusion (contractor)

During office hours these are normally in the form of email unless the nature of the warning requires direct telephone contact. Out of hours urgent warnings are passed on by telephone.

3. Calling a teleconference

See section 3.1 on how to convene a teleconference.

4. District Council Priorities

- Support the emergency services
- Co-ordinate the district response and liaise with other organisations, including provision, if required, of a representative to support Police co-ordination arrangements
- Support emergency care arrangements including feeding accommodation and welfare for evacuates and those affected by flooding but remaining in their homes;
- Provide temporary accommodation for those made homeless
- Support council tenants
- Emergency transport for personnel, equipment, materials such as sandbags and, if necessary, evacuation;
- Provide information to the media on the local authority response and to advise the public, relatives of evacuees etc
- Flood mitigation e.g. unblocking culverts, for dealing with flooded roads and diversions and providing other assistance to the public, such as drying-out facilities, and issuing of sandbags;
- Providing road barriers and signs
- Restoration and maintenance of local authority services
- Labour (direct or via contractor)
- Transport and plant (direct or via contractors)

Flooding

In major flood events, local authorities provide a response in order to care for people affected. The precise nature and extent of the response will depend upon available resources and local arrangements.

General – Both County and District

- Co-ordination of the local authority response and liaison with other organisations, including provision, if required, of a representative to support Police arrangements for co-ordination;
- Emergency care including feeding accommodation and welfare for those who have been evacuated from their homes or those affected by flooding but remaining in their homes;
- Emergency transport for personnel, equipment, materials such as sandbags and, if necessary, evacuation;
- Information services for liaison with the media on the local authority response and for information to the public, relatives of evacuees etc
- Flood alleviation - for flood prevention, e.g. clearance of blocked culverts, for dealing with flooded roads and diversions and may also include other assistance to the public, such as drying-out facilities, and issuing of sandbags;
- Providing road barriers and signs

- Joint agency co-ordination of non-life threatening floods and of the recovery phase following a flooding incident;
- Restoration and maintenance of local authority services
- Control and co-ordination of the various elements of local authority services and other agencies
- Labour (direct or via contractor)
- Transport and plant (direct or via contractors)

County - roles and responsibilities

- 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
- Lead in major civil emergency arrangements
- Maintain safety of road bridges over culverts
- Maintain roads and road drainage (other than Highways Agency and private roads)
- Looking after the elderly, inform and vulnerable.
- Co-ordination of the voluntary response.
- Pass on warnings to districts

District - roles and responsibilities

- Co-ordinating role for the city council area
- Flood warning dissemination
- Emergency assistance
- Clear blocked watercourses etc. (land drainage act powers)
- Blocked road channels & gully gratings - street cleaning
- Sandbag provision
- Waste collection
- Environmental health - Public health advice following a flood (e.g. on drinking water, food safety etc)
- Principal responsibilities for homelessness (i.e. helping to re-house vulnerable people made homeless where there is no alternative)
- Rest Centres – short term/few people (i.e. community centre)
- Advice on dangerous building structures (Building Control)
- Assist council tenants – Oxford Building Solutions

Annex K: South and Vale District Council Severe Weather Plan Annex
Activation Steps

1. Asses the local context

Weather	Local trigger	Action
Heat wave	Would be an ongoing period of high temperatures	Monitor staff well-being especially those staff working outside (HR and all service teams) Communicate guidance to residents (on their well-being) through the website Check contractors risk assessments are implemented
Drought	Hose pipe ban announced	Communicate guidance to residents (welfare issues) through the website Publicise the hose pipe ban and health and safety advice Implement any conditions of the ban on council Check contractors risk assessments are implemented
Storms and Gales	Weather forecasts After heavy storm with damage	Clearance of debris grids on culverts to prevent potential flooding Check contractors risk assessments are implemented Clearance of debris from car parks and council owned paths Check for safety of buildings and trees May have to / Aim to close access to some parks/open spaces and erect signage
Winter Weather	Pre winter Severe Weather warning	Stockpile of salt, refilling of salt bins in car parks. - salting around exterior of council buildings at South and Vale and car parks - putting signs up near rivers and lakes 'danger thin ice', check life saving equipment - Business continuity plan in terms of home working invoked. - Check contractors risk assessments are implemented - prioritising areas for gritting (level one, two, three) which new procedures for contractors Regular contact with waste and ground maintenance contractor in case of: - suspension of waste service - updating residents of the above - resources needed for salting and clearing of snow from contractors Communicate guidance to residents through website
Heavy Rain and Flooding	EA Flood Warning concern for following vulnerable areas: South Hinksey Village Kennington Rd, Kennington Old Botley	Liaise and support emergency services and OCC as per sandbag policy to organise sandbag delivery or dumps. Liaison with local flood groups Locations of debris grids to be kept clear

	St Helens Mill, Abingdon Nuneham Courtenay Chalgrove Brook Benson Didcot, Ladygrove Wheatley Roke and Berrick Salome Clifton Hampden, Watery Lane East hagbourne, Hakka's Brook Horspath Sydenham	Reference should be made to 'A guide to flood response in Oxford' for further information on the following defence locations: • South Hinksey Village • Old Botley • Kennington Road Reference should be made to the South & Vale Flood Plan which has further information on the flood defence emergency procedures above and in addition for St Helen's Mill Abingdon. Check contractors risk assessments are implemented, continuing liaison and communication. Building access and protection maintained if possible/vital

2. Monitoring the weather

The South and Vale Emergency Planning Officer will monitor the weather. Weather warnings will also be received by specialists in drainage and engineering.

Out of Hours arrangements include the following consideration for severe weather response:

By 3pm on Friday, the latest weather reports will be considered and agreement will then be made on which contractors and what equipment will be needed on standby over the weekend.

3. Weather distribution

On receipt of a weather warning the EPO will, as appropriate, pass on the warning to the Communication Team with guidance as to which departments to disseminate to.

4. Calling a teleconference

See section 3.1 on how to convene a teleconference.

5. Post Severe Weather Incident

After each severe weather incident South and Vale District Council will hold a 'wash up' meeting to discuss the way the incident progressed and any lessons learnt. Any changes to the severe weather plan can be fed back after these debriefs.

All actual costs incurred during a severe weather incident (whether during the incident or afterwards in lost work) must be recorded.

An annual review of actions needed to prepare for severe weather will also be performed.

6. District Council Priorities

Flooding - Level of response priority levels:

1. People – action to protect life
2. Houses – action to protect life and property
3. Roads – action to protect life and property
4. Commercial property – possible action to protect property
5. Gardens/Agricultural land/outbuildings – no action

For snow and ice

1. Safe access to council buildings (Abbey House, Abingdon and offices in Benson Lane, Crowmarsh)
2. Salting and clearing snow in council car parks

3. Thames waterfront around Abingdon and ponds in Abbey and marina, Abingdon, Folly park, Farringdon
4. Assisting County Council as required

7. Communications

1. To keep residents informed directly via our website, social media, email alerts (south only), text alerts (for waste disruptions) and the media, as well as via messages cascaded from district councillors, parish councils and community groups (including self-help flood groups)

2. Working with the media to convey key messages to residents and liaising with communications teams in partner organisations to ensure messages are consistent and accurate. Key messages include details of disruption to services and what to do in the meantime; who is responsible for what and contact details as well as where to go for more up-to-date information and advice.

3. Reference should be made to the Flooding Awareness Communication Plan for South and Vale. This includes three phases – awareness and preparation, direct impact and recovery. The action plan includes the trigger point for each set of actions by the communications team.

Annex L: West Oxfordshire District Council Severe Weather Plan Annex

Activation Steps

1. Asses the local context

Weather	Local trigger	Action
Heat wave	No specific local triggers, reliant on national forecasts and warnings In the event of a Heat wave, defined as daily minimum temperatures exceeding 32c and minimum temperatures in excess of 15c over most of a region for at least 5 consecutive days	Members of the Emergency Management Team will assess the situation. The Council will promulgate any Heat wave Advice to the Community from Central Government, the NHS Oxfordshire and OCC
Drought	No specific local triggers, reliant on national forecasts and warnings A period of low rainfall leading to a shortage of water for people, agriculture, industry or the environment. Members of the Emergency Management Team will assess the situation.	The Council will promulgate advice from the Utility Companies, Central Government, OCC and the NHS Oxfordshire.
Storms and Gales	No specific local triggers, reliant on national forecasts and warnings Storm force winds affect most of a region for at least 6 hours with wind speeds in excess of 55 mph with gusts in excess of 85 mph	Members of the Emergency Management Team will assess the situation. The Council act in accordance with the guidelines within the West Oxon District Council Emergency Plan
Winter Weather	Local decision made prompted by visual inspections and local weather conditions Snow falls and lies over most of the area for at least one week	Members of the Emergency Management Team will assess the situation. If the weather situation is so serious that the WODC Emergency Plan is implemented OCC will be notified.
Heavy Rain and Flooding	1.Calls from public 2.Confirmed by local inspection 3. District council unable to deliver sandbags to that area. In the event of severe inland flooding, local and urban flooding, local fluvial flooding, localised extremely hazardous flash flooding	The Council will convene the Emergency Management Team and consider activating the West Oxfordshire District Council Emergency Plan

2. Monitoring the weather

Weather warnings are received by both the Emergency Planning Officer and the Head of the Street Scene Team. The NSWWS is received by the Head of Community Services. Information received from the local MET Public Weather Service Advisor is send to 20 members of WODC which spans all departments.

3. Weather distribution
Details of adverse weather conditions are emailed and faxed to teams within the district council for guidance and action as appropriate.

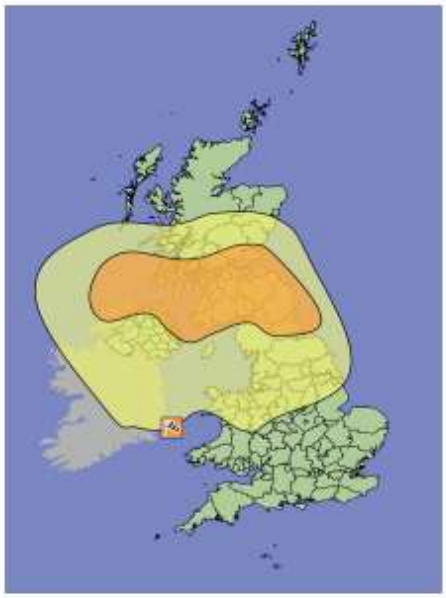
4. Calling a teleconference
See section 3.1 on how to convene a teleconference.

5. District Council Priorities
The District Council's priority during severe weather is to minimise the impact of the emergency on residents within West Oxfordshire, provide as much assistance as possible to manage the emergency and assist the residents return to normal once the emergency has ceased.

Annex M: New Format of NSWWS alerts and warnings

Met Office

National Severe Weather Warning Service



Chief Forecasters Assessment
Hurricance Katia has become an intense mid-latitude depression and is heading towards the UK. The centre of the depression will pass over northern Scotland later on Monday, bringing the strongest winds to the north of Northern Ireland, central and southern Scotland, along with parts of northeast England, where there are likely to be 60-70 mph gusts, with the risk of over 80 mph over coasts, hills and bridges. Powerful gusts will also occur to the east of high ground from mid-Wales northwards with a risk of 70-80 mph gusts for parts of northeast England and southeast Scotland during Monday evening.

Heavy rain will be an additional hazard for western Scotland, with as much as 50-100 mm in places.

The Met Office have issued an **Amber Warning** of **Wind**

Valid from **06:00 on Mon, 12th Sep 2011** until **23:59 on Mon, 12th Sep 2011**

The remains of Hurricane Katia will move eastwards across northern Scotland during Monday, bringing a spell of very windy weather to the UK and also heavy rain to western Scotland. The strongest winds are expected to affect parts of Northern Ireland during the morning, before moving east across central and southern Scotland and into northeast England by evening. However, areas further south will not be immune, with the potential for strong gusts, particularly to the east of high ground. Northern Scotland is now less at risk of strong winds then previously envisaged.

The public should be prepared for the risk of disruption to transport and of the possibility of damage to trees and structures.

For more details please go to:
http://www.metoffice.gov.uk/weather/uk/uk_forecast_warnings.html

Issued by the Met Office at 11:24 on Fri, 09th Sep 2011

For enquiries regarding this warning please contact the Met Office Weather Desk
Phone: 0870 900 0100 Fax: 0870 900 5050 E-mail: enquiries@metoffice.gov.uk

Annex N: New Format Highways Agency Warning

HA Severe Weather Alert - Snow
Status: Amber

Advanced Warning
Issued: 0300 Monday 14th November 2011

Regions affected:	North West				
Start Time:	0900 Monday 14th November	**End Time:**	1700 Monday 14th November.	**Ref:**	SWS (Severe Weather Snow) - 001 (number of alert) - 270611 (date of issuing)

Severe snow fall is expected through today, affecting the North West. With 10cm to 15cm of snow likely.

NORTH WEST REGION - LOCATIONS WITH RISK OF HIGH IMPACT OF SNOW

The Highways Agency, in conjunction with the Met Office are strongly advising that motorists take extra care and avoid, if at all possible, the following sections of road during the Severe Weather Alert.

Location	Known as:	Comment / Additional Advice
M6 J38-J40	Shap	High Altitude
M62 J21-J22	Newhey	High Altitude
M67 J4	Stockport	High Altitude
A56	Between M66 Junction with Edenfield and M65 J8	High Altitude
A66	Between M6 J40 - A1(M) J60	High Altitude and Drifting snow
A69	At Greenhead, Brampton	Steep gradient on exposed high ground

For Traffic Information:

Highways Agency Information Line (HAIL): 0300 1235000

Web: http://www.highways.gov.uk/traffic

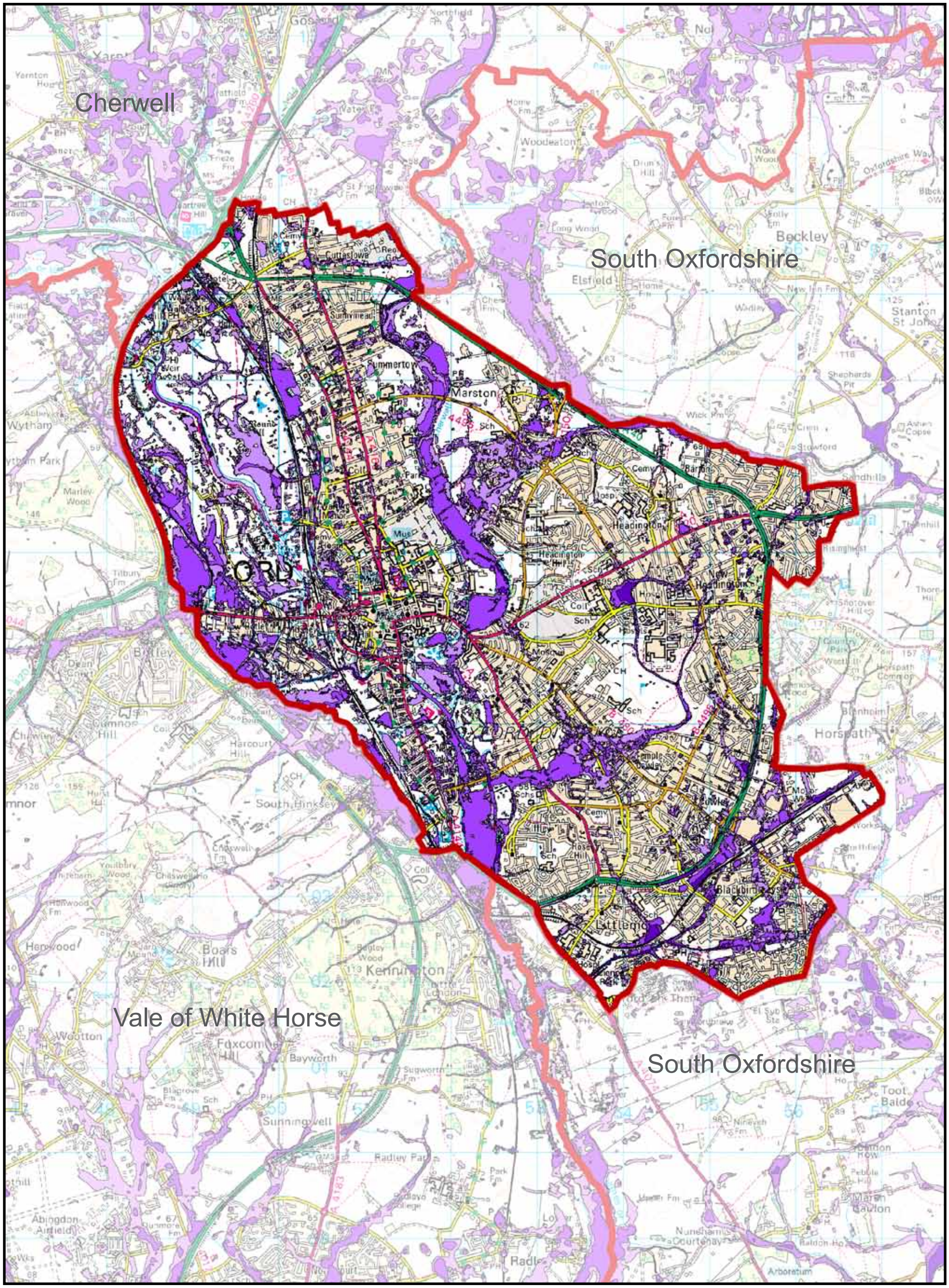
Traffic Radio: http://www.trafficradio.org.uk

AtlasPro: http://atlaspro/tistrafficinfo.com

Annex O: District Council Fluvial Flooding and Surface Water Maps

Oxford City

Surface water flooding risk map - 2013



Key

District Boundary

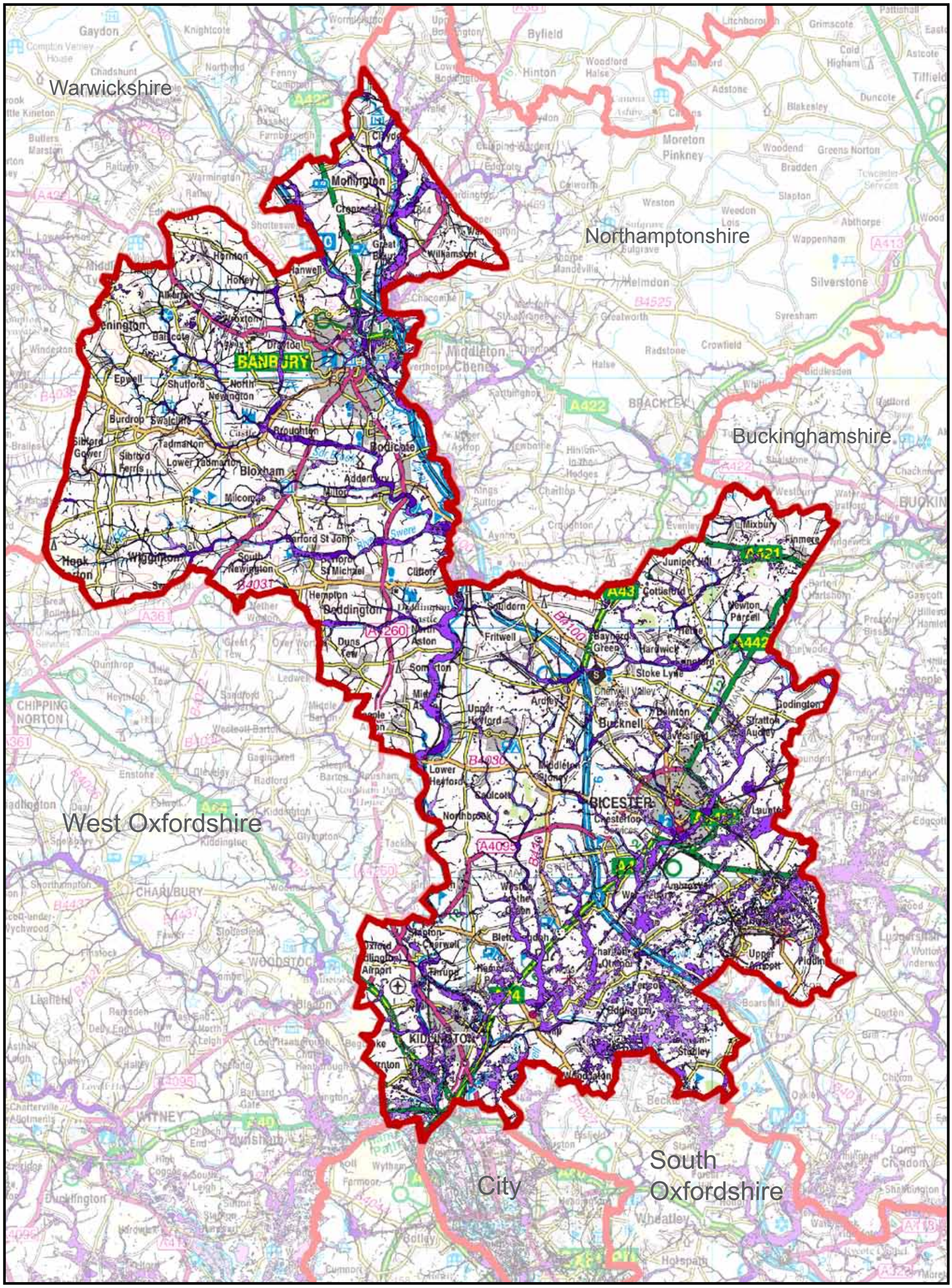
Flooding extent

Less Inter' More

Produced by the Emergency Planning Unit
Oxfordshire County Council
December 2013

Cherwell

Surface water flooding risk map - 2013



Key

District Boundary

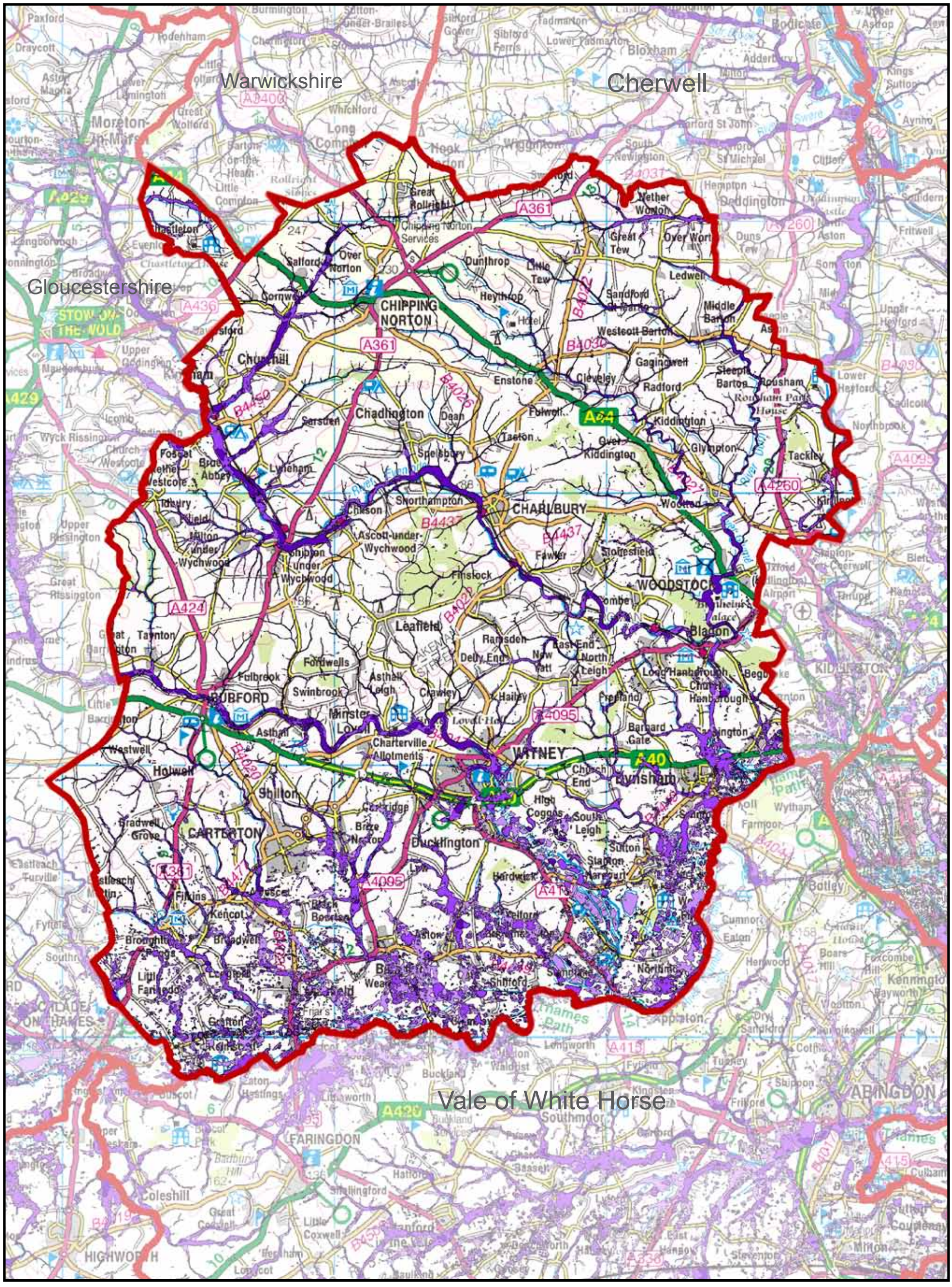
Flooding extent

Less Inter' More

Produced by the Emergency Planning Unit
Oxfordshire County Council
December 2013

West Oxfordshire

Surface water flooding risk map - 2013



Key

District Boundary

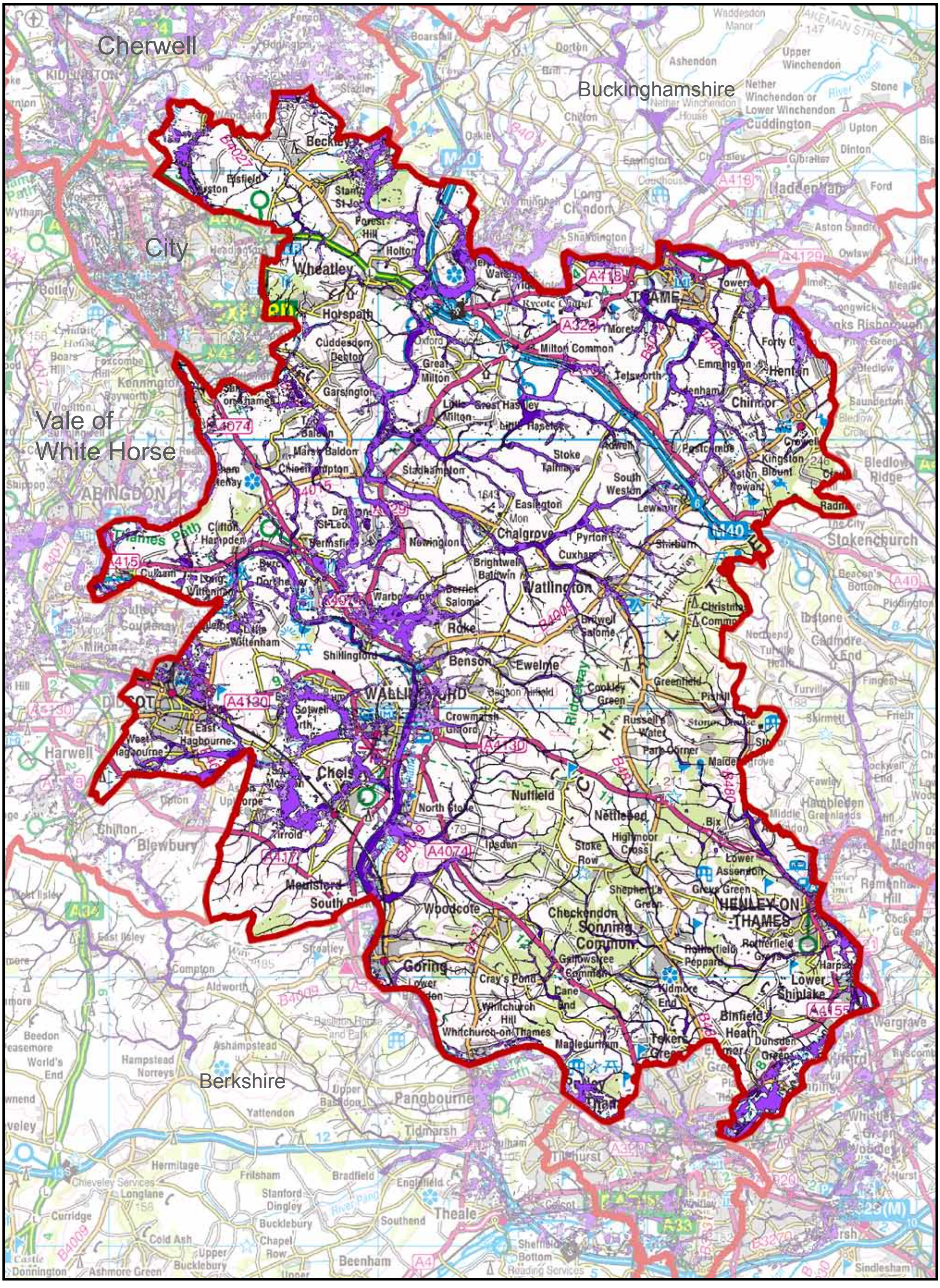
Flooding extent

Less Inter' More

Produced by the Emergency Planning Unit
Oxfordshire County Council
December 2013

South Oxfordshire

Surface water flooding risk map - 2013



Key

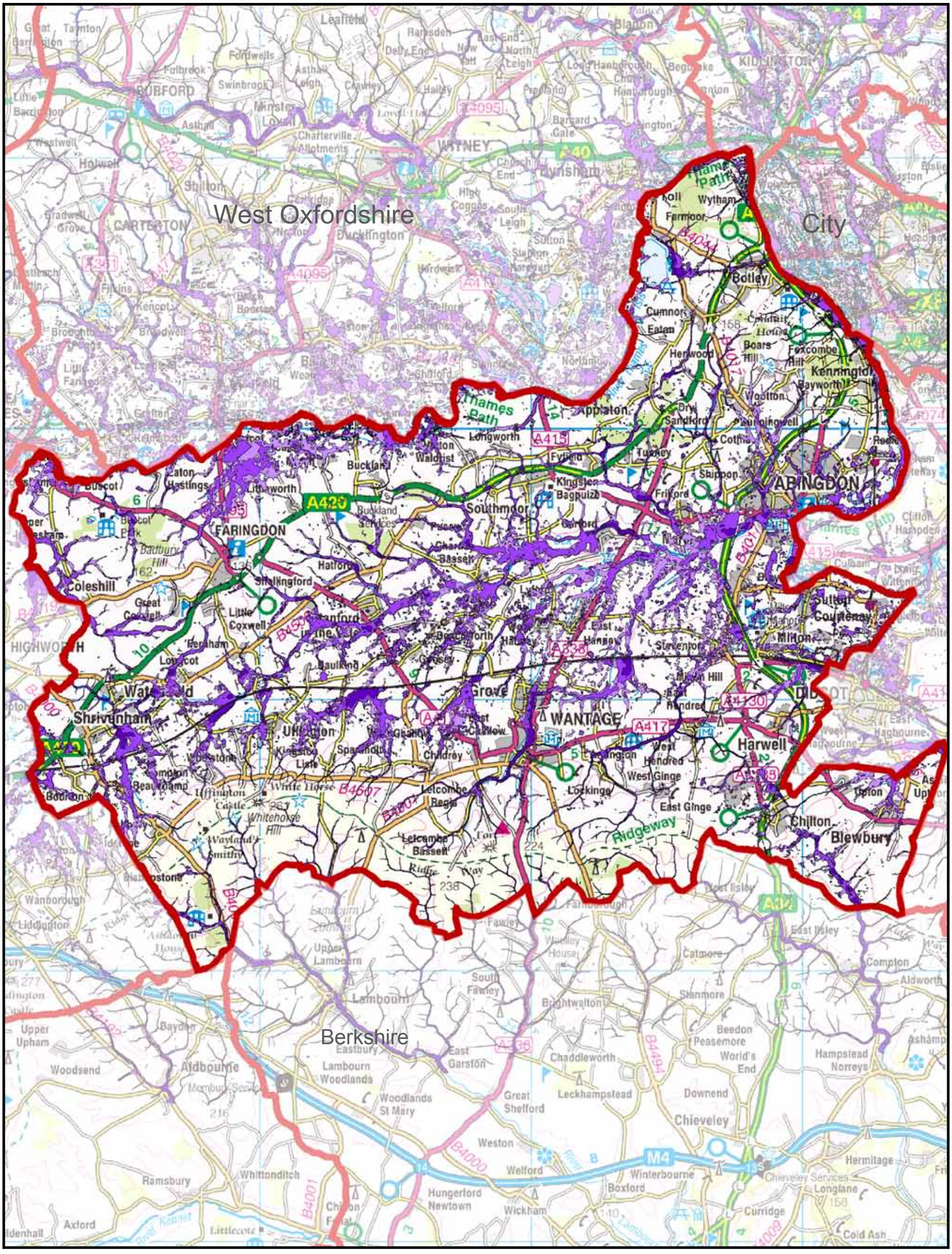
District Boundary

Flooding extent

Less Inter' More

Produced by the Emergency Planning Unit
Oxfordshire County Council
December 2013

Vale of White Horse Surface water flooding risk map - 2013



Key

District Boundary

Flooding extent

Less Inter' More

Produced by the Emergency Planning Unit
Oxfordshire County Council
December 2013