



# Implementation and delivery guide

An independent review by Sir Michael Pitt  
June 2008

# Implementation and delivery guide

This document accompanies the Final Report of the Pitt Review. It covers:

- timescales for delivery – how quickly we can expect to see change;
- cost-benefit indications – the scale of resources that might be required; and
- the relationship between the final recommendations and those proposed in our interim report, including new recommendations.

The 92 recommendations of the Review reflect a lengthy evidence-gathering and consultation process. We have used this work to identify the changes which are necessary, consider options for how those changes might be achieved, and reach decisions about which options to recommend.

The purpose of this Guide is to show how the recommendations might be delivered. It is intended to be of assistance to all those interested in the outcome of the Review, giving government, stakeholders and the public an indication of the pace and scale of change required. Our estimates are challenging but, in our view, achievable.

This Guide is not intended to be definitive. It will be for the organisations leading on the delivery to make specific commitments or decisions about the allocation of resources.

## Delivery

The recommendations in the final report are directed at a wide range of organisations, from the Government to the public. Most will be of interest to Defra, the department responsible for managing flood risk. Many are for Communities and Local Government, who lead on local government, building and planning policy, and recovery, and the Cabinet Office, who lead on emergency response.

Table 1 clarifies which organisations the Review believes should lead for each of our recommendations and those we believe should take a secondary or supportive role. It also sets out an indicative timetable for delivery of the key objectives in each recommendation. However, we expect Government to clarify this in their own action plan.

Our work shows that delivery will not be immediate. There are many recommendations which can be progressed quickly, but there are others which require consultation, further analysis, resource or legislation. **Our view is that the overall programme of change should take around two years or so, with all major initiatives completed by the end of 2010.**

### Cost-benefit analysis

One important part of the recommendation-making process within the Review has been an examination of the costs and benefits of different options. The Review has been clear from the outset that the costs of any recommendations must be outweighed by the benefits. Where there are choices about how outcomes could be delivered, we have been clear that we must consider cost-effectiveness. However, while the costs and benefits work will require further refinement, **the Review considers that the benefits of all recommendations outweigh the costs.**

Table 2 sets out our high level assessment of costs and benefits against each of the recommendations. This assessment should be regarded as indicative.

- Costs are placed into broad bands, based on the annual impact. Costs of less than £1 million a year are described as 'negligible'. Costs of up to £10 million are described as 'low'. Costs of over £10 million as described as 'high'.
- Many of the estimates extrapolate from numbers provided to us by organisations that already carry out the work we recommend.
- We make assumptions about how our recommendations might be delivered, and cost them accordingly. However, there will be other options for delivery which could cause the costs to vary in practice. In some places, we have used a range to reflect this.
- We attach no cost to activity to which the government or other organisations have already committed – there is negligible new burden. But we do attach costs to activities

which are practised in some areas, but are not formally required everywhere.

- We do not believe that the figures in the table are a precise guide to final costs, nor should they be used to settle budgets. Any additional resourcing in the public sector will depend on the financial situation of the organisations in question, the fit with existing practice and wider financial pressures within government. And additional costs to the private sector should be properly considered through formal Impact Assessments by the relevant government departments.

The assessment gives a sense of the order of magnitude of the changes we are proposing. We believe that some changes can be pursued without resources being a limitation on progress, whereas others need significant decisions about prioritisation and willingness to accept new regulatory burdens.

### Status of final recommendations

The interim report set out 92 interim conclusions for consultation. It also contained 15 urgent recommendations which we wanted to see government progress quickly.

Our subsequent analysis has led us to confirm or reformulate our initial ideas. Extensive consultation with stakeholders and the public has resulted in new and adapted recommendations. Some interim conclusions have been lost altogether. Some of the final recommendations were not found in the interim report, many have altered slightly and others have remained unchanged.

Table 3 maps the origin of the final recommendations, setting out whether they are new, altered or unchanged. If they have been altered since the interim report it references the interim conclusion (IC) number. Table 4 sets out the final status of the interim conclusions: mapping those which turned into final conclusions and those which were not carried over. It also charts progress made and final status of the urgent recommendations, and indicates where you can read more about them in the final report.

**Table 1: Delivery Timetable**

Rec No	Final Recommendations	Delivery timetable	Lead organisation	Supporting organisations
1	Given the predicted increase in the range of future extremes of weather, the Government should give priority to both adaptation and mitigation in its programmes to help society cope with climate change.	Beginning immediately	Defra	All government departments
2	The Environment Agency should progressively take on a national overview of all flood risk, including surface water and groundwater flood risk, with immediate effect.	Beginning immediately	Environment Agency	Defra
3	The Met Office should continue to improve its forecasting and predicting methods to a level which meets the needs of emergency responders.	In place by end 2010, subject to computer power	Met Office	Environment Agency, LRF
4	The Environment Agency should further develop its tools and techniques for predicting and modelling river flooding, taking account of extreme and multiple events and depths and velocities of water.	Beginning immediately	Environment Agency	
5	The Environment Agency should work with partners to urgently take forward work to develop tools and techniques to model surface water flooding.	Beginning immediately with tools in place by end 2010	Environment Agency	Met Office, Local authorities and water companies
6	The Environment Agency and the Met Office should work together, through a joint centre, to improve their technical capability to forecast, model and warn against all sources of flooding.	In place by end 2010	Environment Agency & Met Office	
7	There should be a presumption against building in high flood risk areas, in accordance with PPS25, including giving consideration to all sources of flood risk, and ensuring that developers make a full contribution to the costs both of building and maintaining any necessary defences.	Beginning immediately	Local Authorities	CLG and Environment Agency
8	The operation and effectiveness of PPS25 and the Environment Agency's powers to challenge development should be kept under review and strengthened if and when necessary.	Beginning immediately	CLG	LGA, Environment Agency and Defra
9	Householders should no longer be able to lay impermeable surfaces as of right on front gardens and the Government should consult on extending this to back gardens and business premises.	Householders in place by end 2008, business consultation by end 2008, garden consultation by June 2009	CLG	

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Rec No	Final Recommendations	Delivery timetable	Lead organisation	Supporting organisations
10	The automatic right to connect surface water drainage of new developments to the sewerage system should be removed.	In place by end 2010	Defra	
11	Building Regulations should be revised to ensure that all new or refurbished buildings in high flood-risk areas are flood-resistant or resilient.	In place by end 2010	CLG	
12	All local authorities should extend eligibility for home improvement grants and loans to include flood resistance and resilience products for properties in high flood-risk areas.	By end 2008	Local Authorities	
13	Local authorities, in discharging their responsibilities under the Civil Contingencies Act 2004 to promote business continuity, should encourage the take-up of property flood resistance and resilience by businesses.	By end 2008	Local Authorities	
14	Local authorities should lead on the management of local flood risk, with the support of the relevant organisations.	By end 2010	Local Authorities	Defra, Environment Agency, water companies and IDBs
15	Local authorities should positively tackle local problems of flooding by working with all relevant parties, establishing ownership and legal responsibility.	Beginning immediately	Local Authorities	Environment Agency, water companies, IDBs and other owners
16	Local authorities should collate and map the main flood risk management and drainage assets (over and underground), including a record of their ownership and condition.	In place by end 2010	Local Authorities	Environment Agency, water companies, IDBs and other owners
17	All relevant organisations should have a duty to share information and cooperate with local authorities and the Environment Agency to facilitate the management of flood risk.	In place by end 2010	Defra (legislation)	Environment Agency, local authorities, water companies, IDBs and other owners
18	Local Surface Water Management Plans, as set out under PPS25 and coordinated by local authorities, should provide the basis for managing all local flood risk.	Surface Water Management Plans completed – end 2010	Environment Agency & Local Authorities	Water companies
19	Local authorities should assess and, if appropriate, enhance their technical capabilities to deliver a wide range of responsibilities in relation to local flood risk management.	Beginning immediately, completed to support new statutory duties by end 2010	Local Authorities	LGA, CLG, Defra, Environment Agency

Rec No	Final Recommendations	Delivery timetable	Lead organisation	Supporting organisations
20	The Government should resolve the issue of which organisations should be responsible for the ownership and maintenance of sustainable drainage systems.	In place by end 2008, legislation in place by end 2010	Defra	
21	Defra should work with Ofwat and the water industry to explore how appropriate risk-based standards for public sewerage systems can be achieved.	By end 2008	Defra	Ofwat and water companies
22	As part of the forthcoming and subsequent water industry pricing reviews, Ofwat should give appropriate priority to proposals for investment in the existing sewerage network to deal with increasing flood risk.	By end 2009	Ofwat	Defra
23	The Government should commit to a strategic long-term approach to its investment in flood risk management, planning up to 25 years ahead.	By end 2009	Defra	HMT and Environment Agency
24	The Government should develop a scheme which allows and encourages local communities to invest in flood risk management measures.	In place by end 2010	Defra	CLG, HMT and Environment Agency
25	The Environment Agency should maintain its existing risk-based approach to levels of maintenance and this should be supported by published schedules of works for each local authority area.	Beginning immediately	Environment Agency	
26	The Government should develop a single set of guidance for local authorities and the public on the use and usefulness of sandbags and other alternatives, rather than leaving the matter wholly to local discretion.	In place by end 2009	Environment Agency and CLG	Cabinet Office
27	Defra, the Environment Agency and Natural England should work with partners to establish a programme through Catchment Flood Management Plans and Shoreline Management Plans to achieve greater working with natural processes.	Established 2009	Defra, Environment Agency, Natural England	
28	The forthcoming flooding legislation should be a single unifying Act that addresses all sources of flooding, clarifies responsibilities and facilitates flood risk management.	In place by end 2010 (see Rec 58)	Defra	All government departments

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29	The Government and the insurance industry should work together to deliver a public education programme setting out the benefits of insurance in the context of flooding.	In place by June 2009	HMT	Defra and ABI
30	The Government should review and update the guidance Insurance for all: A good practice guide for providers of social housing and disseminate it effectively to support the creation of insurance with rent schemes for low income households.	In place by June 2009	HMT	ABI, Office for Tenants and Social Landlords
31	In flood risk areas, insurance notices should include information on flood risk and the simple steps that can be taken to mitigate the effects.	In place by end 2008	ABI	Insurance industry and Environment Agency
32	The insurance industry should develop and implement industry guidance for flooding events, covering reasonable expectations of the performance of insurers and reasonable actions by customers.	Beginning immediately	Insurance Industry	
33	The Environment Agency should provide a specialised site-specific flood warning service for infrastructure operators, offering longer lead times and greater levels of detail about the velocity and depth of flooding.	In place by end 2008	Environment Agency	
34	The Met Office and the Environment Agency should issue warnings against a lower threshold of probability to increase preparation lead times for emergency responders.	Systems in place by October 2008	Met Office and Environment Agency	Local Resilience Forums
35	The Met Office and the Environment Agency should issue joint warnings and impact information on severe weather and flooding emergencies to responder organisations and the public.	Systems in place by end 2008	Met Office and Environment Agency	Local Resilience Forums
36	The Environment Agency should make relevant flood visualisation data, held in electronic map format, available online to Gold and Silver Commands.	Systems in place by end 2008	Environment Agency	Local Resilience Forums
37	The Environment Agency should work with its partners to progressively develop and bring into use flood visualisation tools that are designed to meet the needs of flood-risk managers, emergency planners and responders.	Tools in place by June 2009	Environment Agency	Local Resilience Forums

Rec No	Final Recommendations	Delivery timetable	Lead organisation	Supporting organisations
38	Local authorities should establish mutual aid agreements in accordance with the guidance currently being prepared by the Local Government Association and the Cabinet Office.	Guidance issued by end 2008	Local authorities and Cabinet Office	LGA
39	The Government should urgently put in place a fully funded national capability for flood rescue, with Fire and Rescue Authorities playing a leading role, underpinned as necessary by a statutory duty.	Fully funded national capability in place by June 2009	CLG and Defra	CFOA, Local Government Association, Cabinet Office, DfT UK SAR Committee and Fire and Rescue Authorities
40	Defra should amend emergency regulations to increase the minimum amount of water to be provided in an emergency, in order to reflect reasonable needs during a longer-term loss of mains supply.	Proposals by end 2008	Defra	DWI, Water UK, CC Water, HPA, Ofwat
41	Upper tier local authorities should be the lead responders in relation to multi-agency planning for severe weather emergencies at the local level and for triggering multi-agency arrangements in response to severe weather warnings and local impact assessments.	By end 2008	Upper Tier Local Authorities	Local Resilience Forums, Regional Resilience Forums, Defra, CLG and Cabinet Office
42	Where a Gold Command is established for severe weather events, the police, unless agreed otherwise locally, should convene and lead the multi-agency response.	Beginning immediately	Local Resilience Forums	Cabinet Office
43	Gold Commands should be established at an early stage on a precautionary basis where there is a risk of serious flooding.	Beginning immediately	Local Resilience Forums	Cabinet Office
44	Category 1 and 2 responders should assess the effectiveness of their emergency response facilities, including flexible accommodation, IT and communications systems, and undertake any necessary improvement works.	Facilities reviewed by end 2008, improvements by June 2009	Local Resilience Forums	Home Office and Cabinet Office
45	The Highways Agency, working through Local Resilience Forums, should further consider the vulnerability of motorways and trunk roads to flooding, the potential for better warnings, strategic road clearance to avoid people becoming stranded and plans to support people who become stranded.	By end 2008	Highways Agency	DfT, Local Resilience Forums, Cabinet Office and voluntary sector

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46	The rail industry, working through Local Resilience Forums, should develop plans to provide emergency welfare support to passengers stranded on the rail network.	Plans in place by end 2008	Network Rail, Association of Train Operating Companies	DfT, Local Resilience Forums, Cabinet Office, Voluntary sector
47	The Ministry of Defence should identify a small number of trained Armed Forces personnel who can be deployed to advise Gold Commands on logistics during wide-area civil emergencies and, working with Cabinet Office, identify a suitable mechanism for deployment.	Arrangements in place by end 2008	Ministry of Defence	Cabinet Office
48	Central government crisis machinery should always be activated if significant wide-area and high-impact flooding is expected or occurs.	Beginning immediately	Cabinet Office and Defra	
49	A national flooding exercise should take place at the earliest opportunity in order to test the new arrangements which central government departments are putting into place to deal with flooding and infrastructure emergencies.	Conducted by June 2009	Defra	CLG and Cabinet Office
50	The Government should urgently begin its systematic programme to reduce the disruption of essential services resulting from natural hazards by publishing a national framework and policy statement setting out the process, timescales and expectations.	Beginning immediately, publication of national framework by end 2008	Cabinet Office	BERR, Defra and DfT
51	Relevant government departments and the Environment Agency should work with infrastructure operators to identify the vulnerability and risk of assets to flooding and a summary of the analysis should be published in Sector Resilience Plans.	Work complete by end 2009, Sector Resilience Plans ongoing	Environment Agency, BERR, DfT, Defra and infrastructure operators	Environment Agency and Cabinet Office
52	In the short-term, the Government and infrastructure operators should work together to build a level of resilience into critical infrastructure assets that ensures continuity during a worst-case flood event.	By June 2009	BERR, DfT, Defra and infrastructure operators	Environment Agency
53	A specific duty should be placed on economic regulators to build resilience in the critical Infrastructure.	Beginning immediately, guidance by 2008	BERR, Defra and DfT	Economic regulators and Cabinet Office and infrastructure operators

<b>Rec No</b>	<b>Final Recommendations</b>	<b>Delivery timetable</b>	<b>Lead organisation</b>	<b>Supporting organisations</b>
<b>54</b>	The Government should extend the duty to undertake business continuity planning to infrastructure operating Category 2 responders to a standard equivalent to BS 25999, and that accountability is ensured through an annual benchmarking exercise within each sector.	Ongoing, completed by end 2010	Cabinet Office	Category 2 infrastructure operators, BERR, DfT and Defra
<b>55</b>	The Government should strengthen and enforce the duty on Category 2 responders to share information on assets, enabling more effective emergency planning within Local Resilience Forums.	By June 2009	Cabinet Office	Local Resilience Forums and Category 2 responders
<b>56</b>	The Government should issue clear guidance on expected levels of Category 2 responders' engagement in planning, exercising and response and consider the case for strengthening enforcement arrangements.	Guidance issued by June 2008	Cabinet Office	Defra, BERR, Local Resilience Forums and Category 2 responders
<b>57</b>	The Government should provide Local Resilience Forums with the inundation maps for both large and small reservoirs to enable them to assess risks and plan for contingency, warning and evacuation and the outline maps be made available to the public online as part of wider flood risk information.	Completed by June 2009	Defra	Environment Agency, CLG, LGA, Local Resilience Forums.
<b>58</b>	The Government should implement the legislative changes proposed in the Environment Agency biennial report on dam and reservoir safety through the forthcoming flooding legislation.	In place by end 2010 (See Rec 28)	Defra	Environment Agency
<b>59</b>	The Risk and Regulation Advisory Council should explore how the public can improve their understanding of community risks, including those associated with flooding, and that the Government should then implement the findings as appropriate.	RRA reviewed by June 2009, Government implementation to follow	Risk and Regulation Advisory Council	Environment Agency
<b>60</b>	The Government should implement a public information campaign which draws on a single definitive set of flood prevention and mitigation advice for householders and businesses, and which can be used by media and the authorities locally and nationally.	Implemented by June 2009	Environment Agency	Department of Health, HPA, Defra, BERR, and CLG

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61	The Environment Agency should work with local responders to raise awareness in flood risk areas and identify a range of mechanisms to warn the public, particularly the vulnerable, in response to flooding.	By end 2008	Environment Agency	Telecoms Industry, Local Resilience Forums, Cabinet Office, Defra, National Steering Committee for Warning and Informing the Public
62	The Environment Agency should work urgently with telecommunications companies to facilitate the roll-out of opt-out telephone flood warning schemes to all homes and businesses liable to flooding, including those with ex-directory numbers.	Arrangements agreed by end 2008, roll-out to follow	Environment Agency	BT, Ofcom, Information Commissioner, Cable & Wireless, Global Crossing, Kingston Communications
63	Flood risk should be made part of the mandatory search requirements when people buy property, and should form part of Home Information Packs.	Review completed by end 2008, legislative arrangements to follow	CLG	Council of Property Search Organisations, Environment Agency, Association of HIP providers
64	Local Resilience Forums should continue to develop plans for door-knocking, coordinated by local authorities, to enhance flood warnings before flooding and to provide information and assess welfare needs once flooding has receded.	Developed by October 2008	Local Resilience Forums	Voluntary sector, Cabinet Office
65	The Met Office and the Environment Agency should urgently complete the production of a sliding scale of options for greater personalisation of public warning information, including costs, benefits and feasibility.	Completed by October 2008	Met Office and Environment Agency	Local Resilience Forums, Cabinet Office, National Steering Committee for Warning and Informing the Public
66	Local authority contact centres should take the lead in dealing with general enquiries from the public during and after major flooding, redirecting calls to other organisations when appropriate.	Arrangements in place by end 2008	Local Authorities	Local Resilience Forums
67	The Cabinet Office should provide advice to ensure that all Local Resilience Forums have effective and linked websites providing public information before, during and after an emergency.	Advice issued by end 2008	Cabinet Office	Local Resilience Forums

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<b>68</b>	Council leaders and chief executives should play a prominent role in public reassurance and advice through the local media during a flooding emergency, as part of a coordinated effort overseen by Gold Commanders.	Beginning immediately, ongoing	Local Authorities	Local Resilience Forums
<b>69</b>	The public should make up a flood kit – including personal documents, insurance policy, emergency contact numbers (including local council, emergency services and FLOODline), torch, battery or wind-up radio, mobile phone, rubber gloves, wet wipes or antibacterial hand gel, first aid kit and blankets.	Beginning immediately, ongoing	Public	Environment Agency
<b>70</b>	The Government should establish a programme to support and encourage individuals and communities to be better prepared and more self-reliant during emergencies, allowing the authorities to focus on those areas and people in greatest need.	Programme established by June 2009	Cabinet Office	Local Resilience Forums, Regional Resilience Forums, voluntary sector
<b>71</b>	The Department of Health and relevant bodies should develop a single set of flood-related health advice for householders and businesses which should be used by all organisations nationally and locally and made available through a wide range of sources.	Health advice developed and available by end 2008	Department of Health	HPA, Cabinet Office, Environment Agency
<b>72</b>	Local response and recovery coordinating groups should ensure that health and wellbeing support is readily available to those affected by flooding based on the advice developed by the Department of Health.	Support available by October 2008	Local Authorities and Local Resilience Forums	CLG, Department of Health, HPA, voluntary sector
<b>73</b>	The Government, the Association of British Insurers and other relevant organisations should work together to explore any technological or process improvements that can be made to speed up the drying out and stabilising process of building recovery after a flood.	Output by June 2009	Defra, ABI	BERR, Construction Industry Council
<b>74</b>	The monitoring of the impact of flooding on the health and wellbeing of people, and actions to mitigate and manage the effects, should form a systematic part of the work of Recovery Coordinating Groups.	Monitoring arrangements by October 2008	Local Authorities	CLG, Local Resilience Forums, Department of Health, HPA, voluntary sector

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75	For emergencies spanning more than a single local authority area, Government Offices should ensure coherence and coordination, if necessary, between recovery operations.	Beginning immediately	CLG and Government Offices	Local Authorities and Regional Resilience Forums
76	Local authorities should coordinate a systematic programme of community engagement in their area during the recovery phase.	Programme developed by end 2008	Local Authorities	CLG and voluntary sector
77	National and local Recovery Coordinating Groups should be established from the outset of major emergencies and in due course there should be formal handover from the crisis machinery.	Beginning immediately	CLG and Local Authorities	Local Resilience Forums and Cabinet Office
78	Aims and objectives for the recovery phase should be agreed at the outset by Recovery Coordinating Groups to provide focus and enable orderly transition into mainstream programmes when multi-agency coordination of recovery is no longer required.	Beginning immediately	Local Authorities	Local Resilience Forums and voluntary sector
79	Government Offices, in conjunction with the Local Government Association, should develop arrangements to provide advice and support from experienced organisations to areas dealing with recovery from severe flooding emergencies.	Arrangements developed by end 2008	CLG, Government Offices and Local Government Association	Local Resilience Forums
80	All central government guidance should be updated to reflect the new arrangements for recovery and Local Resilience Forums should plan, train and exercise on this basis.	Updated guidance by end 2008, implemented by June 2009	Cabinet Office, CLG and Local Resilience Forums	Local Resilience Forums
81	There should be an agreed framework, including definitions and timescales, for local-central recovery reporting.	Framework in place by October 2008	CLG and Cabinet Office	
82	Following major flooding events, the Government should publish monthly summaries of the progress of the recovery phase, including the numbers of households still displaced from all or part of their homes.	Systems in place by end October 2008	CLG	Defra and Environment Agency
83	Local authorities should continue to make arrangements to bear the cost of recovery for all but the most exceptional emergencies, and should revisit their reserves and insurance arrangements in light of last summer's floods.	Arrangements in place by end 2008	Local Authorities	LGA

<b>Rec No</b>	<b>Final Recommendations</b>	<b>Delivery timetable</b>	<b>Lead organisation</b>	<b>Supporting organisations</b>
<b>84</b>	Central government should have pre-planned rather than ad-hoc arrangements to contribute towards the financial burden of recovery from the most exceptional emergencies, on a formula basis.	Beginning immediately, arrangements by June 2009	HMT and OGDs (including DCMS, CLG, DCSF, DWP, BERR)	Cabinet Office
<b>85</b>	Local Recovery Coordination Groups should make early recommendations to elected local authority members about longer-term regeneration and economic development opportunities.	Beginning immediately	Local Authorities	BERR and CLG
<b>86</b>	The Government should publish an action plan to implement the recommendations of this Review, with a Director in Defra overseeing the programme of delivery and issuing regular progress updates.	Published by October 2008	Defra	Cabinet Office
<b>87</b>	The Government should establish a Cabinet Committee with a remit to improve the country's ability to deal with flooding and implement the recommendations of this Review.	Completed by October 2008	Cabinet Office	Defra
<b>88</b>	The Government should establish a National Resilience Forum to facilitate national level multi-agency planning for flooding and other emergencies.	Established end 2008	Cabinet Office	
<b>89</b>	The EFRA Select Committee should review the country's readiness for dealing with flooding emergencies and produce an assessment of progress in implementation of the Review's recommendations after 12 months.	Assessment issued June 2009	EFRA Select Committee	
<b>90</b>	All upper tier local authorities should establish Oversight and Scrutiny Committees to review work by public sector bodies and essential service providers in order to manage flood risk, underpinned by a legal requirement to cooperate and share information.	Established June 2009	Local Authorities and Cabinet Office	
<b>91</b>	Each Oversight and Scrutiny Committee should prepare an annual summary of actions taken locally to manage flood risk and implement this Review, and these reports should be public and reviewed by Government Offices and the Environment Agency.	Implemented June 2009	Local Authorities, Government Offices and Environment Agency	
<b>92</b>	Local Resilience Forums should evaluate and share lessons from both the response and recovery phases to inform their planning for future emergencies.	Beginning immediately	Local Resilience Forums	

**Table 2: Cost Benefit Analysis**

No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
1	Given the predicted increase in the range of future extremes of weather, the Government should give priority to both adaptation and mitigation in its programmes to help society cope with climate change.	This recommendation is about reprioritisation rather than new activity.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	The Stern report stated that if adaptation measures are not taken now then the costs will rise rapidly.
2	The Environment Agency should progressively take on a national overview of all flood risk, including surface water and groundwater flood risk, with immediate effect.	This measure has already been announced by Defra to be included in the Floods & Water Bill. No new additional costs.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Having a joined-up approach will enable the Environment Agency to prioritise areas most at risk and utilise their resources more effectively. It will also ensure a more consistent approach to managing flood risk on the ground.
3	The Met Office should continue to improve its forecasting and predicting methods to a level which meets the needs of emergency responders.	The Met Office is scheduled to commission a new high power computer (HPC) in 2009, with an upgrade in 2011. The 2011 upgrade could be enhanced with additional investment. The capacity could be either increased by 50% (at a cost of £6m per year over the planned spend) or threefold (at a cost of £12m per year over the planned spend).	LOW NEW BURDEN	NEGLIGIBLE NEW BURDEN	Increasing the 2011 capacity by 50% will allow ~2-4 hrs lead time on a city scale and increasing the 2011 capacity threefold will allow ~4-8 hrs lead time on a city scale. The longer the lead time, the more effective the response will be, reducing risk to property and life.
4	The Environment Agency should further develop its tools and techniques for predicting and modelling river flooding, taking account of extreme and multiple events and depths and velocities of water.	Will require some increased data input and processing capacity, but is already ongoing to meet the obligation of the EU Floods Directive.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	More accurate and specific maps and warnings with longer lead-times. This should facilitate better decision-making and response.

No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
5	The Environment Agency should work with partners to urgently take forward work to develop tools and techniques to model surface water flooding.	Will require local data collection, model development and processing capacity. For a simple model used across the country, costs are 3p per head (based on population of 100,000). For more detailed model which might be applied in 'hot spots', costs would be £2-3 per head (based on population of 100,000). Costs reduce as the population covered increases (see 'Evaluation of Modelling Approaches for Urban Flood Risk Assessment' on Pitt Review website).	LOW NEW BURDEN	NEGLIGIBLE NEW BURDEN	More accurate and specific maps and warnings with longer lead-time will enable better preparation and response. Having a basic model of surface water flood risk will allow emergency responders to target their resources more effectively during a flood event. Unpredicted surface water flooding caused up to two-thirds of all damage in the summer floods.
6	The Environment Agency and the Met Office should work together, through a joint centre, to improve their technical capability to forecast, model and warn against all sources of flooding.	The costs for joint working range from £0.1m £1m annually depending upon which option is developed.	LOW NEW BURDEN	NEGLIGIBLE NEW BURDEN	Joint working will allow weather and flood forecasting to be improved significantly. This improvement will lead to more accurate and specific warnings with greater lead-times which will enable better preparation and response.
7	There should be a presumption against building in high flood risk areas, in accordance with PPS25, including giving consideration to all sources of flood risk, and ensuring that developers make a full contribution to the costs both of building and maintaining any necessary defences.	Implementation ongoing.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Should significantly reduce the vulnerability of new properties to flooding.
8	The operation and effectiveness of PPS25 and the Environment Agency's powers to challenge development should be kept under review and strengthened if and when necessary.	Collation of existing data and information. CLG have a monitoring strategy in place.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Early identification of wider policy failure.

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No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
9	Householders should no longer be able to lay impermeable surfaces as of right on front gardens and the Government should consult on extending this to back gardens and business premises.	Currently permeable paving costs around 20% more than similar non-permeable paving, but our assumption is that costs will decrease as usage increases.	NEGLIGIBLE NEW BURDEN	LOW NEW BURDEN	Reduce surface water at source therefore reduced strain on the public sewerage system and drainage network. The result is reduced risk of surface water flooding.
10	The automatic right to connect surface water drainage of new developments to the sewerage system should be removed.	Developers will need to increase liaison with water companies, but there should be no significant infrastructure costs.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Reduce the chance the piped sewer system will fail and therefore reduce surface water flooding.
11	Building Regulations should be revised to ensure that all new or refurbished buildings in high flood-risk areas are flood-resistant or resilient.	Between £0 to £10,000 for an average sized house.	LOW NEW BURDEN	LOW NEW BURDEN	Can significantly reduce the time for recovery and the costs of refurbishment. For the most frequent floods, the benefits from resistance measures outweigh the up-front investment by a factor of between 5-to-1 and 10-to-1. Resilience measures become cost beneficial for properties with a 4% or greater annual chance of flooding.
12	All local authorities should extend eligibility for home improvement grants and loans to include flood resistance and resilience products for properties in high flood-risk areas.	Minor administrative costs	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Promotes resistance and resilience and helps with affordability. See benefits outlined for recommendation 11 above.
13	Local authorities, in discharging their responsibilities under the Civil Contingencies Act 2004 to promote business continuity, should encourage the take-up of property flood resistance and resilience by businesses.	Minor administrative costs	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Encourages businesses to become more resilient to flooding. See benefits outlined for recommendation 11 above.

No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
14	Local authorities should lead on the management of local flood risk, with the support of the relevant organisations.	Already been announced by Defra to be included in the Floods & Water Bill. We are speeding up its implementation. There will be some costs related to production of guidance and building capacity in upper tier authorities. Typical costs for an upper tier local authority with high flood risk might be £1 million annually.	LOW NEW BURDEN	NEGLIGIBLE NEW BURDEN	Giving one organisation the lead for local flood risk management should ensure clear accountabilities, more efficient decision-making, allow a more in depth knowledge of local flood issues to be developed and greater cost-savings through investment prioritisation. In the long-term this should lead to more effective management of local flood risk.
15	Local authorities should positively tackle local problems of flooding by working with all relevant parties, establishing ownership and legal responsibility.	There will be cost implications for local authorities relating to tackling local issues. However, once responsibilities are established these costs are transferred to the appropriate owner under existing regulatory duties.	LOW NEW BURDEN	NEGLIGIBLE NEW BURDEN	See above. This will also ensure that smaller, local flood problems are not overlooked
16	Local authorities should collate and map the main flood risk management and drainage assets (over and underground), including a record of their ownership and condition.	Collating existing information held by organisation should be of minimal cost, subject to compatibility. However, to collect and record new information could be costly. Costs could be minimised by giving prioritisation to collecting information about areas most at risk.	LOW NEW BURDEN	NEGLIGIBLE NEW BURDEN	Understanding the flood risk management and drainage system will enable better decision-making and prioritisation of investment, including in relation to maintenance regimes.
17	All relevant organisations should have a duty to share information and cooperate with local authorities and the Environment Agency to facilitate the management of flood risk.	There should be relatively few costs associated with sharing existing information, costs that may be incurred relate to changing the format of the information to make it compatible with local authority systems. However, there may be significant costs related to collating new information.	NEGLIGIBLE NEW BURDEN	LOW NEW BURDEN	See benefits for recommendation 16.

No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
18	Local Surface Water Management Plans, as set out under PPS25 and coordinated by local authorities, should provide the basis for managing all local flood risk.	Estimates from Defra's IUD pilots and existing SFRA's suggest the cost of developing a SWMP may be around £100,000. The authority that takes the lead in developing SWMPs might incur the lion's share of the cost (perhaps three-quarters). We assume plans should be updated every three years.	LOW NEW BURDEN	NEGLIGIBLE NEW BURDEN	SWMPs will coordinate surface water drainage to help reduce flooding in communities at greatest risk, leading to reduced material damage to properties and infrastructure, lower clean-up costs, and improvements in local water quality. The annual cost from surface water flooding is £270m and rising and analysis suggests that there would only need to be a 1% reduction in flood risk in order for SWMPs to be cost-beneficial.
19	Local authorities should assess and, if appropriate, enhance their technical capabilities to deliver a wide range of responsibilities in relation to local flood risk management.	One FTE senior engineer will cost around £60,000 to £75,000 gross p.a. for each upper tier authority. With other technical experts, this figure could rise to £250,000 per upper tier local authority.	HIGH NEW BURDEN	NEGLIGIBLE NEW BURDEN	In-house 'intelligent customer' function should ensure that best value is delivered in relation to flood risk management services. This engineering capability should also ensure that flood risk management is prioritised appropriately at the local level.
20	The Government should resolve the issue of which organisations should be responsible for the ownership and maintenance of sustainable drainage systems.	Already been announced by Defra to be included in the Floods & Water Bill, but costs will arise for whoever is given responsibility.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	This will resolve a common problem of uncertainty over the responsibility for necessary maintenance of SUDS. The Cambourne project demonstrated a 10-15% saving in capital costs of the sustainable drainage scheme can be achieved compared with 'traditional' systems. This figure is maximised if SUDS are considered at the earliest stage of development.

No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
21	Defra should work with Ofwat and the water industry to explore how appropriate risk-based standards for public sewerage systems can be achieved.	Costs will depend on local circumstances including cost-benefit analysis and willingness to pay. Costs may be passed onto consumers.	NEGLIGIBLE NEW BURDEN	LOW NEW BURDEN	Allows the targeting of investment at the highest risks, leading to a reduction in surface water flooding.
22	As part of the forthcoming and subsequent water industry pricing reviews, Ofwat should give appropriate priority to proposals for investment in the existing sewerage network to deal with increasing flood risk.	Ofwat are already preparing best-practice guidance for companies.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	See benefits for recommendation 21.
23	The Government should commit to a strategic long-term approach to its investment in flood risk management, planning up to 25 years ahead.	The Environment Agency and Defra are already developing such a strategy.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Allows stable strategic planning and investment in flood risk management and should deliver greater efficiencies.
24	The Government should develop a scheme which allows and encourages local communities to invest in flood risk management measures.	Minimal costs will arise from developing and consulting on the new scheme.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Will enable greater investment in flood risk measures, particularly in relation to tackling small scale local flooding that is not usually covered by current prioritisation.
25	The Environment Agency should maintain its existing risk-based approach to levels of maintenance and this should be supported by published schedules of works for each local authority area.	There are only very minor costs associated with this recommendation. Requires the Environment Agency to publicise their maintenance schedules which they could do through their existing website. This may result in increased inquiries to the regional Environment Agency offices.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Targets investment to enable best value for money. Public benefit from increased transparency.
26	The Government should develop a single set of guidance for local authorities and the public on the use and usefulness of sandbags and other alternatives, rather than leaving the matter wholly to local discretion.	Minor administrative costs.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Less resource diverted to ineffective sandbagging during emergencies.

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No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
27	Defra, the Environment Agency and Natural England should work with partners to establish a programme through Catchment Flood Management Plans and Shoreline Management Plans to achieve greater working with natural processes.	Costs of implementation will depend on local circumstances including cost-benefit analysis. Will form part of the normal flood risk management framework.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Environmental and amenity benefits. Reduces costs and increases life span of defences.
28	The forthcoming flooding legislation should be a single unifying Act that addresses all sources of flooding, clarifies responsibilities and facilitates flood risk management.	Administrative costs (up to £350,000 a year).	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Ensures delivery of other recommendations.
29	The Government and the insurance industry should work together to deliver a public education programme setting out the benefits of insurance in the context of flooding.	Costs of communicating to the public.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Fewer households and businesses bearing the full cost of flood damage.
30	The Government should review and update the guidance <i>Insurance for all: A good practice guide</i> for providers of social housing and disseminate it effectively to support the creation of insurance with rent schemes for low income households.	Minor administrative costs.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Fewer low income households bearing the full cost of flood damage with significant social equity benefits.
31	In flood risk areas, insurance notices should include information on flood risk and the simple steps that can be taken to mitigate the effects.	Information is already available. Costs will come from reproducing advice, but offset by reduced payout following flood event. One insurer already provides flood risk information with policies and estimates minimal costs of around 2p per leaflet.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Greater awareness of flood risk and a possible reduction in individual household flood damages.
32	The insurance industry should develop and implement industry guidance for flooding events, covering reasonable expectations of the performance of insurers and reasonable actions by customers.	Minor administrative costs.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Clarifies an industry standard for what customers can expect from their insurer following a flood.

No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
33	The Environment Agency should provide a specialised site-specific flood warning service for infrastructure operators, offering longer lead times and greater levels of detail about the velocity and depth of flooding.	Approximately £1m to develop and test service, including staff costs and training. Lower annual costs thereafter.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Longer lead times for infrastructure operators to deploy defences and take other mitigating action.
34	The Met Office and the Environment Agency should issue warnings against a lower threshold of probability to increase preparation lead times for emergency responders.	This data is already available.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Longer lead times for emergency responders to initiate emergency response plans resulting in more effective emergency response saving lives and property.
35	The Met Office and the Environment Agency should issue joint warnings and impact information on severe weather and flooding emergencies to responder organisations and the public.	Review of emergency responders' needs, development of joint policy and information tools.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Longer lead times for emergency responders to initiate emergency response plans and the public to take mitigating action, so, reducing impacts of flood events.
36	The Environment Agency should make relevant flood visualisation data, held in electronic map format, available online to Gold and Silver Commands.	Potential IT development costs and staff training of relevant staff from the Environment Agency and multi-agency responder organisations in Gold and Silver Commands. Lower annual costs after year one.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Improved understanding for Gold and Silver Commanders of emergency situation and scope for more efficient targeting of resources (personnel and equipment).
37	The Environment Agency should work with its partners to progressively develop and bring into use flood visualisation tools that are designed to meet the needs of flood-risk managers, emergency planners and responders.	Potential IT development costs.	LOW NEW BURDEN	NEGLIGIBLE NEW BURDEN	Improved understanding for emergency planners, Gold and Silver Commanders of emergency situation and scope for more efficient targeting of resources (personnel and equipment).
38	Local authorities should establish mutual aid agreements in accordance with the guidance currently being prepared by the Local Government Association and the Cabinet Office.	Minor administrative costs for LGA and Cabinet Office. Costs to local authorities of revising mutual aid plans.	LOW NEW BURDEN	NEGLIGIBLE NEW BURDEN	Enhanced mutual aid arrangements, leading to a more effective, coordinated multi-agency response and more efficient use of assets nationally.

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No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
39	The Government should urgently put in place a fully funded national capability for flood rescue, with Fire and Rescue Authorities playing a leading role, underpinned as necessary by a statutory duty.	80 rescue boats, each requiring a crew of four and associated equipment (such as personal protective equipment). Up front costs estimated to be £5m and ongoing annual costs of £500,000. Additional further costs may include the costs of drawing up and implementing any statutory duty.	LOW NEW BURDEN	NEGLIGIBLE NEW BURDEN	A national flood rescue capability, which will improve the UK's ability to respond to wide-area flooding emergencies, and minimises loss of life underpinned by the strategic coordination of these assets.
40	Defra should amend emergency regulations to increase the minimum amount of water to be provided in an emergency, in order to reflect reasonable needs during a longer-term loss of mains supply.	Staff time to draw up and implement revised regulations. Water industry time to incorporate guidelines into emergency plans and costs of delivering extra water requirements.	NEGLIGIBLE NEW BURDEN	LOW NEW BURDEN	Improved provision of emergency water supplies to the public, ensuring the needs of individuals, particularly the vulnerable, will be met.
41	Upper tier local authorities should be the lead responders in relation to multi-agency planning for severe weather emergencies at the local level and for triggering multi-agency arrangements in response to severe weather warnings and local impact assessments.	Local authorities to lead on the development of plans.	LOW NEW BURDEN	NEGLIGIBLE NEW BURDEN	Better local emergency response to flooding, saving lives and property.
42	Where a Gold Command is established for severe weather events, the police, unless agreed otherwise locally, should convene and lead the multi-agency response.	This is the current default position.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Clarity of responsibilities of multi-agency responders.
43	Gold Commands should be established at an early stage on a precautionary basis where there is a risk of serious flooding.	Opportunity cost of staff time.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	More rapid initiation of emergency procedures. More efficient and effective responses.
44	Category 1 and 2 responders should assess the effectiveness of their emergency response facilities, including flexible accommodation, IT and communications systems, and undertake any necessary improvement works.	Cost of assessing existing facilities and procuring IT and communications systems. Training costs associated with ensuring that multi-agency responders are familiar with equipment to be used in Gold and Silver commands.	LOW NEW BURDEN	LOW NEW BURDEN	Improved facilities leading to a more efficient response in emergencies.

No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
45	The Highways Agency, working through Local Resilience Forums, should further consider the vulnerability of motorways and trunk roads to flooding, the potential for better warnings, strategic road clearance to avoid people becoming stranded and plans to support people who become stranded.	Staff training plus any costs associated with raising awareness amongst the public.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	The potential for better warnings, strategic road clearance to avoid people becoming stranded and enhanced plans to support people who become stranded, leading to a more effective response and increased levels of satisfaction among the travelling public.
46	The rail industry, working through Local Resilience Forums, should develop plans to provide emergency welfare support to passengers stranded on the rail network.	Time spent to develop plans, staff training costs and costs associated with raising awareness of new arrangements amongst the public	NEGLIGIBLE NEW BURDEN	LOW NEW BURDEN	The public's welfare needs will be met during an emergency.
47	The Ministry of Defence should identify a small number of trained Armed Forces personnel who can be deployed to advise Gold Commands on logistics during wide-area civil emergencies and, working with Cabinet Office, identify a suitable mechanism for deployment.	Possible need for a staff officer capability to oversee work, £50,000 p.a. Training costs per individual of £1,000.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Improved provision of logistics expertise, for example to enhance the provision of supplies to the public in an emergency.
48	Central government crisis machinery should always be activated if significant wide-area and high-impact flooding is expected or occurs.	Opportunity cost of staff time.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	More rapid initiation of emergency procedures. More efficient and effective response.
49	A national flooding exercise should take place at the earliest opportunity in order to test the new arrangements which central government departments are putting into place to deal with flooding and infrastructure emergencies.	Cost of designing, planning and carrying out the exercise, identifying and implementing lessons learned into emergency plans. Opportunity cost of staff time spent in exercise. Typical costs of up to £1m.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Help to improve response to wide-area flooding emergencies through lessons learned as part of the exercise.

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No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
50	The Government should urgently begin its systematic programme to reduce the disruption of essential services resulting from natural hazards by publishing a national framework and policy statement setting out the process, timescales and expectations.	New team of 10 people, £50,000 per person, total annual cost of £500,000.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Provide a focal point within Government and framework to drive progress towards the goal of reducing widescale loss of essential services.
51	Relevant government departments and the Environment Agency should work with infrastructure operators to identify the vulnerability and risk of assets to flooding and a summary of the analysis should be published in Sector Resilience Plans.	Costs to Environment Agency and industry of carrying out vulnerability analysis of each site of approximately 250 critical infrastructure assets. Costs of £15,000 per site for operators.	NEGLIGIBLE NEW BURDEN	LOW NEW BURDEN	Analyses provide the foundation for effective prioritisation of action to reduce risks to infrastructure failure.
52	In the short-term, the Government and infrastructure operators should work together to build a level of resilience into critical infrastructure assets that ensures continuity during a worst-case flood event.	250 assets, protected to 1:200, at £2m per asset (£500m), over life of the asset (50 yr) = £10m yr. – Costs may be passed onto consumers.	NEGLIGIBLE NEW BURDEN	HIGH NEW BURDEN	Resilience of the highest risk assets, including single points of failure, is increased and the risk of widespread disruption to essential services significantly reduced.
53	A specific duty should be placed on economic regulators to build resilience in the critical Infrastructure.	Cost of making the regulatory change.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Not a policy instrument in itself but will guide how economic regulators use the policy instruments at their discretion to deliver other recommendations.
54	The Government should extend the duty to undertake business continuity planning to infrastructure operating Category 2 responders to a standard equivalent to BS 25999, and that accountability is ensured through an annual benchmarking exercise within each sector.	Potential cost of benchmarking, £8,000 per company every three years. Potential BCM cost on 62 Category 2 infrastructure companies of £200,000 p.a. depending on size.	NEGLIGIBLE NEW BURDEN	HIGH NEW BURDEN	Building resilience into essential services providers.

No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
55	The Government should strengthen and enforce the duty on Category 2 responders to share information assets, enabling more effective emergency planning within Local Resilience Forums.	No cost of regulatory change. Potential cost of £2,700 per company pa to the 62 Category 2 infrastructure companies (taken from the original Civil Contingencies Bill RIA).	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Increased resilience in essential services providers.
56	The Government should issue clear guidance on expected levels of Category 2 responders' engagement in planning, exercising and response and consider the case for strengthening enforcement arrangements.	No cost of regulatory change/Potential cost of £2,700 per company p.a. to the 62 Category 2 infrastructure companies (taken from the original Civil Contingencies Bill RIA which proposed full engagement without opt-out).	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Increased awareness and more effective planning, exercising and response
57	The Government should provide Local Resilience Forums with the inundation maps for both large and small reservoirs to enable them to assess risks and plan for contingency, warning and evacuation and the outline maps be made available to the public online as part of wider flood risk information.	Cost of around £1m in providing for LRFs to receive inundation maps for all reservoirs; around £3m for off-site planning.	LOW NEW BURDEN	LOW NEW BURDEN	Improved emergency planning possible for all reservoirs, with improved protection for up to 5m people.
58	The Government should implement the legislative changes proposed in the Environment Agency biennial report on dam and reservoir safety through the forthcoming flooding legislation.	Minor administrative costs.	NEGLIGIBLE NEW BURDEN	LOW NEW BURDEN	See recommendation 28. Improved legal framework for safety of reservoirs.
59	The Risk and Regulation Advisory Council should explore how the public can improve their understanding of community risks, including those associated with flooding, and that the Government should then implement the findings as appropriate.	Cost of carrying out research.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Improved understanding of community risks and greater public resilience.

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No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
60	The Government should implement a public information campaign which draws on a single definitive set of flood prevention and mitigation advice for householders and businesses, and which can be used by media and the authorities locally and nationally.	Refinement of the existing Environment Agency public information campaign and associated material.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Improved flood awareness and greater public and business resilience, leading to quicker recovery after flooding events.
61	The Environment Agency should work with local responders to raise awareness in flood risk areas and identify a range of mechanisms to warn the public, particularly the vulnerable, in response to flooding.	Review of mechanisms to warn the public.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Longer lead times for the public to take mitigating action, ensuring that vulnerable groups are identified and receive tailored warnings.
62	The Environment Agency should work urgently with telecommunications companies to facilitate the roll-out of opt-out telephone flood warning schemes to all homes and businesses liable to flooding, including those with ex-directory numbers.	Cost to facilitate plans, possible supporting legislation and implementation.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Improved flood awareness and increased lead times for public and businesses to put in place measures to mitigate the impact of flooding, thereby reducing financial loss and minimising health and wellbeing impacts on individuals and communities.
63	Flood risk should be made part of the mandatory search requirements when people buy property, and should form part of Home Information Packs.	Additional costs to the price of a HIP, estimated to be in the region of £15. Flood search is already carried out in up to 80% of cases.	NEGLIGIBLE NEW BURDEN	LOW NEW BURDEN	Greater awareness of flood risk and the ability to establish property resilience measures, thereby mitigating the potential impacts of flood events.
64	Local Resilience Forums should continue to develop plans for door-knocking, coordinated by local authorities, to enhance flood warnings before flooding and to provide information and assess welfare needs once flooding has receded.	Staff training and the drawing up of agreements with the voluntary sector and partner organisations to facilitate the process.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Longer lead times for the public to take mitigating action, ensuring that vulnerable groups are identified.

No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
65	The Met Office and the Environment Agency should urgently complete the production of a sliding scale of options for greater personalisation of public warning information, including costs, benefits and feasibility.	Development of options.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Longer lead times for emergency responders to initiate emergency response plans and the public to take mitigating action.
66	Local authority contact centres should take the lead in dealing with general enquiries from the public during and after major flooding, redirecting calls to other organisations when appropriate.	Staff training and the gathering of relevant information. Facilities are already in place.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Provision of information to the public, ensuring they are better informed and can take appropriate mitigating actions. Improved call handling arrangements – by ensuring public are directed to relevant responder organisations – allowing responders to use their time and resources more effectively.
67	The Cabinet Office should provide advice to ensure that all Local Resilience Forums have effective and linked websites providing public information before, during and after an emergency.	Minor administrative costs.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Provision of information to the public, ensuring they are better informed and can take appropriate mitigating actions.
68	Council leaders and chief executives should play a prominent role in public reassurance and advice through the local media during a flooding emergency, as part of a coordinated effort overseen by Gold Commanders.	Opportunity cost of staff time.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Providing reassurance to the public, ensuring that they have the information required to enable them to take appropriate actions.
69	The public should make up a flood kit – including personal documents, insurance policy, emergency contact numbers (including local council, emergency services and Floodline), torch, battery or wind-up radio, mobile phone, rubber gloves, wet wipes or antibacterial hand gel, first aid kit and blankets.	Majority of these items often already exist within most households so the additional cost to homes is considered to be no more than a few pounds.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Improved flood awareness and greater public and business resilience, as public will be better equipped to deal with the potential impacts of flooding events.

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No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
70	The Government should establish a programme to support and encourage individuals and communities to be better prepared and more self-reliant during emergencies, allowing the authorities to focus on those areas and people in greatest need.	Development of programme and costs associated with implementing it.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Improved flood awareness and greater public and business resilience, as public will be better equipped to deal with the potential impacts of flooding events.
71	The Department of Health and relevant bodies should develop a single set of flood-related health advice for householders and businesses which should be used by all organisations nationally and locally and made available through a wide range of sources.	Minor administrative costs.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Provision of information to the public, ensuring they are better informed and can take appropriate mitigating actions.
72	Local response and recovery coordinating groups should ensure that health and wellbeing support is readily available to those affected by flooding based on the advice developed by the Department of Health.	Opportunity cost of staff time.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Health and wellbeing impacts will be reduced leading to quicker recovery after flooding events.
73	The Government, the Association of British Insurers and other relevant organisations should work together to explore any technological or process improvements that can be made to speed up the drying out and stabilising process of building recovery after a flood.	Costs of staff time associated with undertaking the review.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Health and wellbeing impacts will be reduced leading to quicker recovery after flooding events.
74	The monitoring of the impact of flooding on the health and wellbeing of people, and actions to mitigate and manage the effects, should form a systematic part of the work of Recovery Coordinating Groups.	Cost of staff time developing appropriate mechanism for monitoring.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Health and wellbeing impacts will be reduced leading to quicker recovery after flooding events.

No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
75	For emergencies spanning more than a single local authority area, Government Offices should ensure coherence and coordination, if necessary, between recovery operations.	Opportunity cost of staff time.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	More efficient coordination of recovery operations, leading to quicker return to normality after emergency events and better targeting of recovery effort.
76	Local authorities should coordinate a systematic programme of community engagement in their area during the recovery phase.	Development of programme and costs associated with implementing it following emergencies.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Improved community cohesion and reduced impacts on health and wellbeing.
77	National and local Recovery Coordinating Groups should be established from the outset of major emergencies and in due course there should be formal handover from the crisis machinery.	Opportunity cost of staff time during emergencies.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	More emphasis on the recovery phase from the outset of an emergency, leading to more efficient handover from the emergency response phase and quicker return to normality after the events.
78	Aims and objectives for the recovery phase should be agreed at the outset by Recovery Coordinating Groups to provide focus and enable orderly transition into mainstream programmes when multi-agency coordination of recovery is no longer required.	Opportunity cost of staff time.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	More emphasis on the recovery phase from the outset of an emergency, leading to more efficient handover from the emergency response phase and quicker return to normality after the events.
79	Government Offices, in conjunction with the Local Government Association, should develop arrangements to provide advice and support from experienced organisations to areas dealing with recovery from severe flooding emergencies.	Development of programme and costs associated with implementing it.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	More effective recovery operations leading to quicker return to normality after the emergency.
80	All central government guidance should be updated to reflect the new arrangements for recovery and Local Resilience Forums should plan, train and exercise on this basis.	Staff time associated in updating guidance, planning and carrying out exercise.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	More efficient coordination of recovery operations, leading to quicker return to normality after emergency events and better targeting of recovery effort.

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No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
81	There should be an agreed framework, including definitions and timescales, for local-central recovery reporting.	Minor administrative costs.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Better awareness of progress during the recovery phase, leading to a more efficient targeting of resources. Reduced burden on local responders.
82	Following major flooding events, the Government should publish monthly summaries of the progress of the recovery phase, including the numbers of households still displaced from all or part of their homes.	Opportunity cost of staff time in collating data.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Better awareness of progress during the recovery phase, leading to a more efficient targeting of resources.
83	Local authorities should continue to make arrangements to bear the cost of recovery for all but the most exceptional emergencies, and should revisit their reserves and insurance arrangements in light of last summer's floods.	Cost of staff time developing appropriate arrangements.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Certainty of funding arrangements allowing plans to be drawn up in advance of an emergency and resources to be deployed without delay.
84	Central government should have pre-planned rather than ad-hoc arrangements to contribute towards the financial burden of recovery from the most exceptional emergencies, on a formula basis.	Development of appropriate arrangements and costs associated with implementing them.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Greater certainty of funding arrangements allowing plans to be drawn up in advance of an emergency, efficiencies in local insurance decision and lower transaction costs.
85	Local Recovery Coordination Groups should make early recommendations to elected local authority members about longer-term regeneration and economic development opportunities.	Opportunity cost of staff time.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Potential for enhancement of affected communities.

No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
86	The Government should publish an action plan to implement the recommendations of this Review, with a Director in Defra overseeing the programme of delivery and issuing regular progress updates.	Opportunity cost of staff time within Defra.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Ensures delivery of other recommendations.
87	The Government should establish a Cabinet Committee with a remit to improve the country's ability to deal with flooding and implement the recommendations of this Review.	Opportunity cost of staff time within Cabinet Office	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	
88	The Government should establish a National Resilience Forum to facilitate national level multi-agency planning for flooding and other emergencies.	Opportunity cost of staff time within Cabinet Office	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	
89	The EFRA Select Committee should review the country's readiness for dealing with flooding emergencies and produce an assessment of progress in implementation of the Review's recommendations after 12 months.	Opportunity cost of EFRA Select Committee time.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	
90	All upper tier local authorities should establish Oversight and Scrutiny Committees to review work by public sector bodies and essential service providers in order to manage flood risk, underpinned by a legal requirement to cooperate and share information.	£525,000 in year one and £225,000 thereafter, spread across all 150 upper-tier local authorities.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	
91	Each Oversight and Scrutiny Committee should prepare an annual summary of actions taken locally to manage flood risk and implement this Review, and these reports should be public and reviewed by Government Offices and the Environment Agency.		NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	

## Implementation and delivery guide

No	Final Recommendation	Drivers of cost	Public Sector Costs	Private Sector Costs	Benefits
92	Local Resilience Forums should evaluate and share lessons from both the response and recovery phases to inform their planning for future emergencies.	Opportunity cost of staff time.	NEGLIGIBLE NEW BURDEN	NEGLIGIBLE NEW BURDEN	Improved emergency response to major incidents, potentially saving lives and limiting serious damage to property.

**Table 3: Status of Final Recommendations**

<b>Rec No</b>	<b>Final Recommendation</b>	<b>New, altered or unchanged from Interim Conclusion (if altered see original IC number)</b>
1	Given the predicted increase in the range of future extremes of weather, the Government should give priority to both adaptation and mitigation in its programmes to help society cope with climate change.	<b>Altered (IC 1 &amp; 2)</b>
2	The Environment Agency should progressively take on a national overview of all flood risk, including surface water and groundwater flood risk, with immediate effect.	<b>Altered (IC 19)</b>
3	The Met Office should continue to improve its forecasting and predicting methods to a level which meets the needs of emergency responders.	<b>New</b>
4	The Environment Agency should further develop its tools and techniques for predicting and modelling river flooding, taking account of extreme and multiple events and depths and velocities of water.	<b>Altered (IC 3 &amp; 4)</b>
5	The Environment Agency should work with partners to urgently take forward work to develop tools and techniques to model surface water flooding.	<b>Altered (IC 7 &amp; 3)</b>
6	The Environment Agency and the Met Office should work together, through a joint centre, to improve their technical capability to forecast, model and warn against all sources of flooding.	<b>Altered (IC 7)</b>
7	There should be a presumption against building in high flood risk areas, in accordance with PPS25, including giving consideration to all sources of flood risk, and ensuring that developers make a full contribution to the costs both of building and maintaining any necessary defences.	<b>Altered (IC 8)</b>
8	The operation and effectiveness of PPS25 and the Environment Agency's powers to challenge development should be kept under review and strengthened if and when necessary.	<b>Altered (IC 8)</b>
9	Householders should no longer be able to lay impermeable surfaces as of right on front gardens and the Government should consult on extending this to back gardens and business premises.	<b>Altered (IC 9)</b>
10	The automatic right to connect surface water drainage of new developments to the sewerage system should be removed.	<b>Unchanged (IC 10)</b>
11	Building Regulations should be revised to ensure that all new or refurbished buildings in high flood-risk areas are flood-resistant or resilient.	<b>Altered (IC 11, 12 &amp; 13)</b>
12	All local authorities should extend eligibility for home improvement grants and loans to include flood resistance and resilience products for properties in high flood-risk areas.	<b>Altered (IC 15)</b>

Rec No	Final Recommendation	New, altered or unchanged from Interim Conclusion (if altered see original IC number)
13	Local authorities, in discharging their responsibilities under the Civil Contingencies Act 2004 to promote business continuity, should encourage the take-up of property flood resistance and resilience by businesses.	Altered (IC 16)
14	Local authorities should lead on the management of local flood risk, with the support of the relevant organisations.	Altered (IC 17)
15	Local authorities should positively tackle local problems of flooding by working with all relevant parties, establishing ownership and legal responsibility.	Altered (IC 17)
16	Local authorities should collate and map the main flood risk management and drainage assets (over and underground), including a record of their ownership and condition.	Altered (IC 21)
17	All relevant organisations should have a duty to share information and cooperate with local authorities and the Environment Agency to facilitate the management of flood risk.	New
18	Local Surface Water Management Plans, as set out under PPS25 and coordinated by local authorities, should provide the basis for managing all local flood risk.	Altered (IC 20)
19	Local authorities should assess and, if appropriate, enhance their technical capabilities to deliver a wide range of responsibilities in relation to local flood risk management.	Altered (IC 18)
20	The Government should resolve the issue of which organisations should be responsible for the ownership and maintenance of sustainable drainage systems.	Altered (IC 23)
21	Defra should work with Ofwat and the water industry to explore how appropriate risk-based standards for public sewerage systems can be achieved.	Altered (IC 24)
22	As part of the forthcoming and subsequent water industry pricing reviews, Ofwat should give appropriate priority to proposals for investment in the existing sewerage network to deal with increasing flood risk.	Altered (IC 25)
23	The Government should commit to a strategic long-term approach to its investment in flood risk management, planning up to 25 years ahead.	Altered (IC 28)
24	The Government should develop a scheme which allows and encourages local communities to invest in flood risk management measures.	New
25	The Environment Agency should maintain its existing risk-based approach to levels of maintenance and this should be supported by published schedules of works for each local authority area.	New (built on IC 29)
26	The Government should develop a single set of guidance for local authorities and the public on the use and usefulness of sandbags and other alternatives, rather than leaving the matter wholly to local discretion.	Altered (IC 30)

Rec No	Final Recommendation	New, altered or unchanged from Interim Conclusion (if altered see original IC number)
27	Defra, the Environment Agency and Natural England should work with partners to establish a programme through Catchment Flood Management Plans and Shoreline Management Plans to achieve greater working with natural processes.	Altered (IC 31)
28	The forthcoming flooding legislation should be a single unifying Act that addresses all sources of flooding, clarifies responsibilities and facilitates flood risk management.	Altered (IC 33)
29	The Government and the insurance industry should work together to deliver a public education programme setting out the benefits of insurance in the context of flooding.	Altered (IC 34)
30	The Government should review and update the guidance <i>Insurance for all: A good practice guide</i> for providers of social housing and disseminate it effectively to support the creation of insurance with rent schemes for low income households.	Altered (IC 35)
31	In flood risk areas, insurance notices should include information on flood risk and the simple steps that can be taken to mitigate the effects.	Altered (IC 36)
32	The insurance industry should develop and implement industry guidance for flooding events, covering reasonable expectations of the performance of insurers and reasonable actions by customers.	New
33	The Environment Agency should provide a specialised site-specific flood warning service for infrastructure operators, offering longer lead times and greater levels of detail about the velocity and depth of flooding.	New
34	The Met Office and the Environment Agency should issue warnings against a lower threshold of probability to increase preparation lead times for emergency responders.	Altered (IC 37)
35	The Met Office and the Environment Agency should issue joint warnings and impact information on severe weather and flooding emergencies to responder organisations and the public.	New
36	The Environment Agency should make relevant flood visualisation data, held in electronic map format, available online to Gold and Silver Commands.	New
37	The Environment Agency should work with its partners to progressively develop and bring into use flood visualisation tools that are designed to meet the needs of flood-risk managers, emergency planners and responders.	Altered (IC 6)
38	Local authorities should establish mutual aid agreements in accordance with the guidance currently being prepared by the Local Government Association and the Cabinet Office.	Altered (IC 42)
39	The Government should urgently put in place a fully funded national capability for flood rescue, with Fire and Rescue Authorities playing a leading role, underpinned as necessary by a statutory duty.	New

Rec No	Final Recommendation	New, altered or unchanged from Interim Conclusion (if altered see original IC number)
40	Defra should amend emergency regulations to increase the minimum amount of water to be provided in an emergency, in order to reflect reasonable needs during a longer-term loss of mains supply.	Altered (IC 45)
41	Upper tier local authorities should be the lead responders in relation to multi-agency planning for severe weather emergencies at the local level and for triggering multi-agency arrangements in response to severe weather warnings and local impact assessments.	Altered (IC 38)
42	Where a Gold Command is established for severe weather events, the police, unless agreed otherwise locally, should convene and lead the multi-agency response.	Altered (IC 39)
43	Gold Commands should be established at an early stage on a precautionary basis where there is a risk of serious flooding.	Unchanged (IC 40)
44	Category 1 and 2 responders should assess the effectiveness of their emergency response facilities, including flexible accommodation, IT and communications systems, and undertake any necessary improvement works.	Altered (IC 41)
45	The Highways Agency, working through Local Resilience Forums, should further consider the vulnerability of motorways and trunk roads to flooding, the potential for better warnings, strategic road clearance to avoid people becoming stranded and plans to support people who become stranded.	Altered (IC 44)
46	The rail industry, working through Local Resilience Forums, should develop plans to provide emergency welfare support to passengers stranded on the rail network.	New
47	The Ministry of Defence should identify a small number of trained Armed Forces personnel who can be deployed to advise Gold Commands on logistics during wide-area civil emergencies and, working with Cabinet Office, identify a suitable mechanism for deployment.	New
48	Central government crisis machinery should always be activated if significant wide-area and high-impact flooding is expected or occurs.	Altered (IC 46)
49	A national flooding exercise should take place at the earliest opportunity in order to test the new arrangements which central government departments are putting into place to deal with flooding and infrastructure emergencies.	Unchanged (IC 49)
50	The Government should urgently begin its systematic programme to reduce the disruption of essential services resulting from natural hazards by publishing a national framework and policy statement setting out the process, timescales and expectations.	Altered (IC 52)

Rec No	Final Recommendation	New, altered or unchanged from Interim Conclusion (if altered see original IC number)
51	Relevant government departments and the Environment Agency should work with infrastructure operators to identify the vulnerability and risk of assets to flooding and a summary of the analysis should be published in Sector Resilience Plans.	Altered (IC 57)
52	In the short-term, the Government and infrastructure operators should work together to build a level of resilience into critical infrastructure assets that ensures continuity during a worst-case flood event.	Altered (IC53)
53	A specific duty should be placed on economic regulators to build resilience in the critical Infrastructure.	Altered (IC 54)
54	The Government should extend the duty to undertake business continuity planning to infrastructure operating Category 2 responders to a standard equivalent to BS 25999, and that accountability is ensured through an annual benchmarking exercise within each sector.	Altered (IC 55)
55	The Government should strengthen and enforce the duty on Category 2 responders to share information assets, enabling more effective emergency planning within Local Resilience Forums.	Altered (IC 56) built on Urgent Recommendation 10
56	The Government should issue clear guidance on expected levels of Category 2 responders' engagement in planning, exercising and response and consider the case for strengthening enforcement arrangements.	Altered (IC 59)
57	The Government should provide Local Resilience Forums with the inundation maps for both large and small reservoirs to enable them to assess risks and plan for contingency, warning and evacuation and the outline maps be made available to the public online as part of wider flood risk information.	Altered (IC 63)
58	The Government should implement the legislative changes proposed in the Environment Agency biennial report on dam and reservoir safety through the forthcoming flooding legislation.	Altered (IC 62)
59	The Risk and Regulation Advisory Council should explore how the public can improve their understanding of community risks, including those associated with flooding, and that the Government should then implement the findings as appropriate.	New
60	The Government should implement a public information campaign which draws on a single definitive set of flood prevention and mitigation advice for householders and businesses, and which can be used by media and the authorities locally and nationally.	Unchanged (IC 72)
61	The Environment Agency should work with local responders to raise awareness in flood risk areas and identify a range of mechanisms to warn the public, particularly the vulnerable, in response to flooding.	Unchanged (IC 65)

Rec No	Final Recommendation	New, altered or unchanged from Interim Conclusion (if altered see original IC number)
62	The Environment Agency should work urgently with telecommunications companies to facilitate the roll-out of opt-out telephone flood warning schemes to all homes and businesses liable to flooding, including those with ex-directory numbers.	New (built on Urgent Recommendation 11)
63	Flood risk should be made part of the mandatory search requirements when people buy property, and should form part of Home Information Packs.	Unchanged (IC 71)
64	Local Resilience Forums should continue to develop plans for door-knocking, coordinated by local authorities, to enhance flood warnings before flooding and to provide information and assess welfare needs once flooding has receded.	New (built on Urgent Recommendation 12 )
65	The Met Office and the Environment Agency should urgently complete the production of a sliding scale of options for greater personalisation of public warning information, including costs, benefits and feasibility.	Altered (IC 64)
66	Local authority contact centres should take the lead in dealing with general enquiries from the public during and after major flooding, redirecting calls to other organisations when appropriate.	Altered (IC 66)
67	The Cabinet Office should provide advice to ensure that all Local Resilience Forums have effective and linked websites providing public information before, during and after an emergency.	New (built on ICs 67 and 68)
68	Council leaders and chief executives should play a prominent role in public reassurance and advice through the local media during a flooding emergency, as part of a coordinated effort overseen by Gold Commanders.	Unchanged (IC 70)
69	The public should make up a flood kit – including personal documents, insurance policy, emergency contact numbers (including local council, emergency services and Floodline), torch, battery or wind-up radio, mobile phone, rubber gloves, wet wipes or antibacterial hand gel, first aid kit and blankets.	New (built on Urgent Recommendation 14)
70	The Government should establish a programme to support and encourage individuals and communities to be better prepared and more self-reliant during emergencies, allowing the authorities to focus on those areas and people in greatest need.	New
71	The Department of Health and relevant bodies should develop a single set of flood-related health advice for householders and businesses which should be used by all organisations nationally and locally and made available through a wide range of sources.	Altered (IC 69)
72	Local response and recovery coordinating groups should ensure that health and wellbeing support is readily available to those affected by flooding based on the advice developed by the Department of Health.	Altered (IC 73)

Rec No	Final Recommendation	New, altered or unchanged from Interim Conclusion (if altered see original IC number)
73	The Government, the Association of British Insurers and other relevant organisations should work together to explore any technological or process improvements that can be made to speed up the drying out and stabilising process of building recovery after a flood.	New
74	The monitoring of the impact of flooding on the health and wellbeing of people, and actions to mitigate and manage the effects, should form a systematic part of the work of Recovery Coordinating Groups.	Altered (IC 74)
75	For emergencies spanning more than a single local authority area, Government Offices should ensure coherence and coordination, if necessary, between recovery operations.	Altered (IC 83)
76	Local authorities should coordinate a systematic programme of community engagement in their area during the recovery phase.	Unchanged (IC 76)
77	National and local Recovery Coordinating Groups should be established from the outset of major emergencies and in due course there should be formal handover from the crisis machinery.	Altered (IC 77)
78	Aims and objectives for the recovery phase should be agreed at the outset by Recovery Coordinating Groups to provide focus and enable orderly transition into mainstream programmes when multi-agency coordination of recovery is no longer required.	Unchanged (IC 90)
79	Government Offices, in conjunction with the Local Government Association, should develop arrangements to provide advice and support from experienced organisations to areas dealing with recovery from severe flooding emergencies.	Altered (IC 84)
80	All central government guidance should be updated to reflect the new arrangements for recovery and Local Resilience Forums should plan, train and exercise on this basis.	Altered (IC 80)
81	There should be an agreed framework, including definitions and timescales, for local-central recovery reporting.	Unchanged (IC 85)
82	Following major flooding events, the Government should publish monthly summaries of the progress of the recovery phase, including the numbers of households still displaced from all or part of their homes.	New
83	Local authorities should continue to make arrangements to bear the cost of recovery for all but the most exceptional emergencies, and should revisit their reserves and insurance arrangements in light of last summer's floods.	Unchanged (IC 86)
84	Central government should have pre-planned rather than ad-hoc arrangements to contribute towards the financial burden of recovery from the most exceptional emergencies, on a formula basis.	Altered (IC 87)

Rec No	Final Recommendation	New, altered or unchanged from Interim Conclusion (if altered see original IC number)
85	Local Recovery Coordination Groups should make early recommendations to elected local authority members about longer-term regeneration and economic development opportunities.	Altered (IC 91)
86	The Government should publish an action plan to implement the recommendations of this Review, with a Director in Defra overseeing the programme of delivery and issuing regular progress updates.	New
87	The Government should establish a Cabinet Committee with a remit to improve the country's ability to deal with flooding and implement the recommendations of this Review.	New
88	The Government should establish a National Resilience Forum to facilitate national level multi-agency planning for flooding and other emergencies.	New
89	The EFRA Select Committee should review the country's readiness for dealing with flooding emergencies and produce an assessment of progress in implementation of the Review's recommendations after 12 months.	New
90	All upper tier local authorities should establish Oversight and Scrutiny Committees to review work by public sector bodies and essential service providers in order to manage flood risk, underpinned by a legal requirement to cooperate and share information.	New (built on ICs 26 and 60)
91	Each Oversight and Scrutiny Committee should prepare an annual summary of actions taken locally to manage flood risk and implement this Review, and these reports should be public and reviewed by Government Offices and the Environment Agency.	New
92	Local Resilience Forums should evaluate and share lessons from both the response and recovery phases to inform their planning for future emergencies.	New

**Table 4: Status of Interim Conclusions and Urgent Recommendations**

No.	Interim Conclusion/Urgent Recommendation	Final Status
IC 1	The Government takes the lead in making the case for the need for adaptation to climate change and particularly in mitigating the potential impacts on communities.	<b>Altered/Merged (Recommendation 1)</b>
IC 2	The Government develops a clear strategy and action plan to deliver the provisions of the Climate Change Bill to support adaptation to increasing impacts from flooding.	<b>Altered/Merged (Recommendation 1)</b>
IC 3	The Environment Agency further develops its tools and techniques for predicting and modelling river flooding, especially to take account of extreme and multiple events; and takes forward urgently work to develop similar tools and techniques to model surface water flooding.	<b>Altered/Merged (Recommendation 4)</b>
IC 4	The Environment Agency revises its flood maps to identify areas where there is a risk of significant depths and velocity of water, to improve the effectiveness of emergency planning.	<b>Altered/Merged (Recommendation 4)</b>
IC 5	The Environment Agency works more closely with Local Resilience Forums to provide information drawn from flood risk modelling and mapping tools to improve the accuracy and consistency of flood risk information in Community Risk Registers.	<b>Not carried over: covered elsewhere</b>
IC 6	The Environment Agency progressively develops and brings into use flood visualisation tools, designed to meet the needs of flood risk managers, emergency planners and responders.	<b>Altered (Recommendation 37)</b>
IC 7	The Met Office and the Environment Agency produce an early assessment of the costs, benefits and feasibility of techniques which can predict where rain will fall and where surface water flooding will occur.	<b>Altered (Recommendation 5/6)</b>
IC 8	PPS25 should be rigorously applied by local planning authorities, including giving consideration to all sources of flood risk and ensuring that developers make a full contribution to the costs both of building and maintaining any necessary defences.	<b>Altered (Recommendation 7/8)</b>
IC 9	Householders and business owners should no longer be able to lay impermeable surfaces as of right.	<b>Altered (Recommendation 9)</b>
IC 10	The automatic right to connect surface water drainage of new developments to the sewerage system should be removed.	<b>Unchanged (Recommendation 10)</b>
IC 11	No new building should be allowed in a flood risk area that is not flood-resilient, and that the Government should work with organisations such as the Royal Institute of British Architects and the building industry to encourage flood-resilient building and developing design.	<b>Altered (Recommendation 11)</b>
IC 12	The Government should incorporate flood resistance and resilience requirements for new properties in flood risk areas into Building Regulations as part of the current process of revision.	<b>Altered (Recommendation 11)</b>

No.	Interim Conclusion/Urgent Recommendation	Final Status
IC 13	The Government should incorporate requirements for resistant or resilience refurbishment of flooded properties in high flood risk areas into Building Regulations as part of the current process of revision.	<b>Altered (Recommendation 11)</b>
IC 14	Local authorities and housing associations should take a more active role in increasing the uptake of flood resistance and resilience measures, leading by example by repairing their properties with appropriate materials where it is cost-effective.	<b>Not carried over: narrative point – Chapter 5</b>
IC 15	Local authorities in high risk flood areas should extend eligibility for home improvement grants and loans to encompass flood resistance and resilience products.	<b>Altered (Recommendation 12)</b>
IC 16	Local authorities, as they discharge their responsibilities under the Civil Contingencies Act 2004 to promote business continuity, should encourage the uptake of property-level flood resistance and resilience measures. This should be reflected in guidance from the Government.	<b>Altered (Recommendation 13)</b>
IC 17	Local authorities should lead on the management of surface water flooding and drainage at the local level with the support of all responsible organisations including the Environment Agency, water companies and internal drainage boards, the Highways Agency and British Waterways.	<b>Altered (Recommendation 14/15)</b>
IC 18	Local authorities in flood risk areas should assess their capabilities to deliver their wide range of responsibilities in relation to local flood risk management.	<b>Altered (Recommendation 19)</b>
IC 19	The Environment Agency should have a national overview of all flood risk and that, Defra's work on the development of a national overview role for the Agency in relation to surface water flooding should be progressed.	<b>Altered (Recommendation 2)</b>
IC 20	Local Surface Water Management Plans, as set out under PPS25, should provide the basis for managing surface water flood risk. These plans should be coordinated by the local authority and be risk-based, considering all sources of flooding.	<b>Altered (Recommendation 18)</b>
IC 21	A local register of all the main flood risk management and drainage assets (overland and underground) should be compiled by the relevant local authority, including an assessment of their condition and details of the responsible owners.	<b>Altered (Recommendation 16)</b>
IC 22	Defra should issue guidance on how all organisations can be brought together to work with local authorities on surface water flood risk management, sharing information, modelling and expertise on a consistent basis.	<b>Not carried over: linked to Recommendation 17</b>
IC 23	The Government, as part of its Water Strategy, should resolve the issue of which organisations should be responsible for the ownership and maintenance of sustainable drainage systems.	<b>Altered (Recommendation 20)</b>

No.	Interim Conclusion/Urgent Recommendation	Final Status
IC 24	Defra should work with Ofwat and the water industry to explore how appropriate risk-based standards for drainage systems (including pumping stations) can be achieved.	<b>Altered (Recommendation 21)</b>
IC 25	As part of the forthcoming water industry pricing review, the water companies, in conjunction with local authorities and other partners, should develop proposals for investment in the existing drainage network to deal with increasing flood risk.	<b>Altered (Recommendation 22)</b>
IC 26	Local authority scrutiny committees should review SWMPs and other linked plans, such as Local Development Frameworks and Community Risk Registers, to ensure that flood risk is adequately considered and to ensure greater transparency and progress in the management of that risk.	<b>Altered (Recommendation 90)</b>
IC 27	It is appropriate for the Environment Agency and other local organisations to continue to focus investment on areas of highest assessed long-term risk, whether or not they have been recently flooded.	<b>Not carried over: already doing it</b>
IC 28	The Government should commit to a strategic long-term approach to its investment in flood risk management, planning up to 25 years ahead.	<b>Altered (Recommendation 23)</b>
IC 29	The Environment Agency should open dialogue with all those landowners who will be affected by either a withdrawal from or significant reduction in maintenance of rural watercourses.	<b>Altered (Recommendation 25)</b>
IC 30	The Government should develop a single national set of guidance for local authorities and the public on the use and usefulness of sandbags and other alternatives, rather than leaving the matter wholly to local discretion.	<b>Altered (Recommendation 26)</b>
IC 31	Defra, the Environment Agency and Natural England should work with partners to establish a programme and framework to achieve greater working with natural processes, including the identification of appropriate sites and the development of more incentives for creating water storage, restoring the natural course of rivers and establishing green corridors.	<b>Altered (Recommendation 27)</b>
IC 32	The Environment Agency should provide an analysis of the effect that land management practices had or would have had on the impact of flooding during the summer 2007 floods.	<b>Not carried over: technically too difficult and of limited value</b>
IC 33	Flooding legislation should be updated and streamlined under a single unifying Act that among other outcomes addresses all sources of flooding, clarifies responsibilities and facilitates flood risk management.	<b>Altered (Recommendation 28)</b>
IC 34	The Government and the insurance industry should work together to deliver a public education programme setting out the benefits of insurance in the context of flooding.	<b>Unchanged (Recommendation 29)</b>
IC 35	The Government and insurance industry should work together to develop options to improve the availability and uptake of flood risk insurance by low-income households, and assess the costs, benefits and feasibility of these options, before the review's final report.	<b>Altered (Recommendation 30)</b>

No.	Interim Conclusion/Urgent Recommendation	Final Status
IC 36	In flood risk areas, a note on flood risk and the simple steps that could be taken to mitigate it should be included with all insurance renewal notices. Moreover, if Flood Warning Direct is available in a customer's area, one of the conditions of renewal could be sign-up to this service.	Altered (Recommendation 31)
IC 37	The Met Office and the Environment Agency should produce an assessment of the options for issuing warnings against a lower threshold of probability, including costs, benefits and feasibility; this will be considered further in the final report.	Altered (Recommendation 34)
IC 38	Unless agreed otherwise locally, 'upper tier' local authorities should be the lead organisation in relation to multi-agency planning for severe weather emergencies at the local level, and for triggering multi-agency arrangements in response to severe weather warnings.	Altered (Recommendation 41)
IC 39	Where a Gold Command is established, the police, unless agreed otherwise locally, should convene and lead the multi-agency response.	Altered (Recommendation 42)
IC 40	Gold Commands should be established at an early stage on a precautionary basis where there is a risk of serious flooding.	Altered (Recommendation 43)
IC 41	Local Resilience Forums should assess the effectiveness of their Gold facilities, including flexible accommodation, IT and communications systems.	Altered (Recommendation 44)
IC 42	The Local Government Association should consider how best mutual support might be enhanced between local authorities in the event of a future wide-area emergency.	Altered (Recommendation 38)
IC 43	Cabinet Office guidance to local planners should specifically include incidents which leave large numbers of people stranded on motorways and trunk roads.	Not carried over: completed
IC 44	As part of their emergency plans, Local Resilience Forums should consider the vulnerability of motorways and trunk roads to flooding, and consider the potential for earlier, stronger, more specific warnings, and strategic road clearance and closures, to avoid people becoming stranded.	Altered (Recommendation 45)
IC 45	Defra should review the current requirement in emergency regulations for the minimum amount of water to be provided in an emergency, to reflect reasonable needs during a longer-term loss of mains supply.	Altered (Recommendation 40)
IC 46	Central government crisis machinery should always be activated if significant wide-area flooding of whatever nature is expected or occurs.	Altered (Recommendation 48)
IC 47	Defra extends its current departmental programme to share best practice and provide training in emergency response across the organisation.	Not carried over: completed (see final report 13.17)
IC 48	Defra and the Environment Agency work together to establish a single London situation room to coordinate flooding information, to act as a focal point for cross-Defra efforts, and to support Defra ministers.	Not carried over: (see final report at 13.21)

No.	Interim Conclusion/Urgent Recommendation	Final Status
<b>IC 49</b>	A national flooding exercise should take place at the earliest opportunity in order to test the new arrangements which central government departments are pulling into place to deal with flooding and infrastructure emergencies.	<b>Unchanged (Recommendation 49)</b>
<b>IC 50</b>	Financial assistance for local responders in relation to emergency response and recovery should be revised to improve speed, simplicity and certainty.	<b>Not carried over</b>
<b>IC 51</b>	Local Resilience Forums should be made aware of recent Cabinet Office guidance setting out the transition to recovery. Recovery sub-groups should be established from the onset of major emergencies and in due course there should be formal handover from Gold Command to the local Recovery Co-ordinating Groups), normally chaired by the Chief Executive of the affected local authority.	<b>Not carried over</b>
<b>IC 52</b>	The Government should establish a systematic, coordinated, cross-sector campaign to reduce the disruption caused by natural events to critical infrastructure and essential services.	<b>Altered (Recommendation 50/ 52)</b>
<b>IC 53</b>	The Government should develop and issue guidance on consistent and proportionate minimum levels of protection from flooding for critical infrastructure.	<b>Altered (Recommendation 51/ 52)</b>
<b>IC 54</b>	Infrastructure operating companies should present the case for further investment in flood resilience through the appropriate regulatory process.	<b>Altered (Recommendation 53)</b>
<b>IC55</b>	A duty should be introduced on critical infrastructure operators to have business continuity planning to BS25999 in place to more closely reflect the duty on category 1 responders. This should include minimising the loss of service as far as practicable in the event of a serious emergency resulting from flooding.	<b>Altered (Recommendation 54)</b>
<b>IC56</b>	In relation to information-sharing and cooperation, the Civil Contingencies Act and Regulations should be extended to require Category 2 responders to more formally contribute information on critical sites, their vulnerability and the impact of their loss.	<b>Altered (Recommendation 55)</b>
<b>IC57</b>	Single points of failure and the complete loss of assets need to be explicitly considered in the risk assessment and contingency planning undertaken by operators, emergency planners and responders.	<b>Altered (Recommendation 51)</b>
<b>IC 58</b>	Local Resilience Forums should ensure that Community Risk Registers reflect risks to critical infrastructure from flooding and other hazards.	<b>Altered (Recommendation 55)</b>
<b>IC 59</b>	Category 2 responders should be required to participate fully at Gold and Silver Commands and that the Government should deliver this through the Civil Contingencies Act or other regulatory regimes.	<b>Altered (Recommendation 56)</b>
<b>IC 60</b>	The emergency plans and business continuity plans of essential service providers should be reviewed annually by local authority scrutiny committees.	<b>Altered (Recommendation 90)</b>

No.	Interim Conclusion/Urgent Recommendation	Final Status
IC 61	Critical infrastructure planning should become a separate discipline within civil protection at the local level.	<b>Not carried over: National Occupational Standard on plans is sufficient.</b>
IC 62	The Government should implement the legislative changes proposed in the recently published Environment Agency biennial report on dam and reservoir safety.	<b>Altered (Recommendation 58)</b>
IC 63	All reservoir undertakers should be required by Defra to prepare inundation maps and share them with Local Resilience Forums to improve Community Risk Registers and emergency planning.	<b>Altered (Recommendation 57)</b>
IC 64	The Environment Agency should produce a sliding scale of options for greater personalisation of public warning information, including costs, benefits and feasibility, before the Review's final report.	<b>Altered (Recommendation 65)</b>
IC 65	The Environment Agency works with local responders to raise awareness in flood risk areas and identify a range of mechanisms to warn the public, particularly the vulnerable, in response to flooding.	<b>Unchanged (Recommendation 61)</b>
IC 66	Advice by telephone during a flood emergency should come from just two sources – the Environment Agency for flooding information and local authority contact centres for local advice.	<b>Altered (Recommendation 66)</b>
IC 67	Advice disseminated via the internet should be coherent by ensuring integration and consistency between local websites, including that of the Local Resilience Forum and those of all Category 1 responders.	<b>Altered (Recommendation 66)</b>
IC 68	Essential service providers should maintain continuous provision of public information during an emergency, through a website linked to other responders and local authority contact centres.	<b>Altered (Recommendation 69)</b>
IC 69	The Government works towards a single definitive set of flood-related health advice for householders and businesses, which can be used by the media and the authorities both locally and nationally.	<b>Altered (Recommendation 71)</b>
IC 70	Council leaders and chief executives play a prominent role in public reassurance and advice through the local media during a flooding emergency, as part of a coordinated effort overseen by Gold Commanders.	<b>Unchanged (Recommendation 68)</b>
IC 71	Flood risk should be made part of the mandatory search requirements when people buy property and should form part of Home Information Packs.	<b>Unchanged (Recommendation 63)</b>
IC 72	The Government launches a public information campaign which draws on a single definitive set of flood prevention and mitigation advice for householders and businesses, and which can be used by local media and the authorities locally and nationally.	<b>Altered (Recommendation 61)</b>

No.	Interim Conclusion/Urgent Recommendation	Final Status
<b>IC 73</b>	Local recovery coordinating groups should ensure that coherent health and well-being support is readily available to those affected by flooding, using a variety of sources including voluntary and community groups.	<b>Altered (Recommendation 73)</b>
<b>IC 74</b>	The monitoring of impacts on health and well-being, and actions to mitigate and manage the effects, should form a systematic part of recovery work at the local level.	<b>Altered (Recommendation 74)</b>
<b>IC 75</b>	Communication strategies during recovery need to be agreed at the outset by all recovery coordinating groups and focus on reassurance, advice and progress.	<b>Not carried over</b>
<b>IC 76</b>	Local authorities should coordinate a systematic programme of community engagement in their area during the recovery phase.	<b>Unchanged (Recommendation 76)</b>
<b>IC 77</b>	Central government recovery coordinating groups should be established from the outset of major emergencies and in due course there should be formal handover from the crisis machinery to the recovery coordinating group – normally chaired by the minister of the lead government department for recovery.	<b>Altered (Recommendation 77)</b>
<b>IC 78</b>	Communities and Local Government should have lead responsibility within central government for coordinating recovery from wide area flooding emergencies.	<b>Not carried over: completed</b>
<b>IC 79</b>	Roles and objectives of those in central government responsible for recovery should be developed on the basis of the model employed during the recovery from last summer's floods, and that these standing arrangements should be set out in the Concept of Operations (CONOPS) for central government's response to emergencies.	<b>Not carried over: completed/ superseded by IC 81</b>
<b>IC 80</b>	The central government guidance to local responders – Emergency Response and Recovery – should be updated to reflect the new formalised arrangements for recovery.	<b>Altered (Recommendation 80)</b>
<b>IC 81</b>	All Local Resilience Forums should plan, train and exercise on the basis of the recently published National Recovery Guidance.	<b>Not carried over: superseded by IC 81)</b>
<b>IC 82</b>	Local authorities should have a clear plan for harnessing voluntary and community resources during the recovery phase.	<b>Not carried over</b>
<b>IC 83</b>	For recovery from emergencies spanning more than a single local authority area, the Government Offices should enable coherence and coordination, if necessary, between recovery operations in different local authorities.	<b>Unchanged (Recommendation 75)</b>
<b>IC 84</b>	The Local Government Association and Government Offices should develop arrangements to provide advice and support from organisations experienced in recovery to areas dealing with recovery from an emergency.	<b>Altered (Recommendation 79)</b>
<b>IC 85</b>	There needs to be an agreed framework – including definitions and timescales – for local-central recovery reporting, and that this should be included in all relevant government guidance.	<b>Unchanged (Recommendation 81)</b>

No.	Interim Conclusion/Urgent Recommendation	Final Status
IC 86	Local authorities should continue to make arrangements to bear the cost of recovery for all but the most exceptional emergencies, and should revisit their reserves and insurance arrangements in light of last summer's floods.	Unchanged (Recommendation 83)
IC 87	Central government should have pre-planned rather than ad hoc arrangements to contribute towards the financial burden of recovery from the most exceptional emergencies.	Altered (Recommendation 84)
IC 88	Any future model for financial assistance should be designed to minimise unnecessary expenditure and maximise value for money for public finances collectively, rather than singularly for central or local government.	Not carried over
IC 89	The arrangements for distributing any financial assistance during the recovery phase should be transparent and equitable.	Not carried over
IC 90	Aims and objectives for the recovery phase should be agreed at the outset by recovery coordinating groups to provide focus and enable orderly transition into mainstream programmes when multi-agency coordination of recovery is no longer required.	Unchanged (Recommendation 78)
IC 91	Recovery coordinating groups should make early strategic decisions about longer-term regeneration and economic development opportunities during and after recovery.	Altered (Recommendation 85)
IC 92	Recovery coordinating groups should evaluate and share lessons from both the response and recovery phases to inform their planning for future emergencies.	Not carried over
1	More frequent and systematic monitoring of groundwater levels at times of high risk should be undertaken by the Environment Agency, which should begin as soon as possible to predict and mitigate further serious ground water flooding from this winter onwards.	Ongoing, See Chapter 4 (Paragraph 4.54)
2	The Environment Agency, supported by local authorities and water companies, should urgently identify areas at highest risk from surface water flooding where known, inform Local Resilience Forums and take steps to identify remaining high risk areas over the coming months.	Ongoing, See Chapter 4 (Paragraph 4.44)
3	The Review recommends that the Environment Agency should urgently develop and implement a clear policy on the use of temporary and demountable defences.	Completed, See Chapter 7
4	The Review recommends that all Local Resilience Forums urgently review their current local arrangements for water rescue to consider whether they are adequate in light of the summer's events and their local community risk registers.	Completed, See Chapter 11 (Paragraph 11.53)
5	The Review recommends that all Local Resilience Forums should undertake an urgent review of designated rest centres and other major facilities to ensure either that they have the necessary levels of resilience to enable them to be used in the response to flooding and other major emergencies, or that alternative arrangements are put in place.	Completed, See Chapter 12 (Paragraph 12.65)

No.	Interim Conclusion/Urgent Recommendation	Final Status
6	The Cabinet Office, with other departments, should urgently consider the costs, benefits and feasibility of establishing arrangements for the urgent acquisition of supplies during a major emergency, including the use of call-off contracts or the creation of national or regional stockpiles of equipment and consumables.	<b>Completed, See Chapter 11 (Paragraph 11.2)</b>
7	The Department of Health guidance clarifying the role and accountabilities of organisations involved in providing scientific and technical advice during a major incident should be implemented as soon as possible and understood by Gold Commanders.	<b>Completed, See Chapter 13 (Paragraph 13.34)</b>
8	The guidance currently under preparation by Cabinet Office to provide local responders with advice on the definition and identification of vulnerable people and on planning to support them in an emergency should be issued urgently.	<b>Completed, See Chapter 12 (Paragraph 12.55)</b>
9	In order to effectively fulfil its Lead Department role for flood risk management and emergency response, Defra needs to urgently develop and share a national flood emergency framework.	<b>Completed, See Chapter 13 (Paragraph 13.24)</b>
10	Category 1 responders should be urgently provided with a detailed assessment of critical infrastructure in their areas to enable them to assess its vulnerability to flooding.	<b>Insufficient progress, See Chapter 18 (Paragraph 18.6 and Recommendation)</b>
11	The Environment Agency should work urgently with telecommunications companies, consulting the Information Commissioner as necessary to facilitate the roll-out of 'opt-out' telephone flood warning schemes to all homes and businesses liable to flooding, including homes with ex-directory numbers.	<b>Insufficient progress, See Chapter 20 (Paragraph 20.20 &amp; Recommendation)</b>
12	Local Resilience Forums urgently develop plans to enhance flood warnings through 'door-knocking' by local authorities based on an assessment of the post code areas likely to flood.	<b>Insufficient progress, See Chapter 21 (Paragraph 21.17 &amp; Recommendation)</b>
13	Local Resilience Forums urgently make arrangements to involve local media representatives in the local preparedness and response to support their public information role.	<b>Completed, See Chapter 23 (Paragraph 23.6)</b>
14	Members of the public make up a flood kit – including personal documents, insurance policy, emergency contact numbers (including local council, emergency services and Floodline – 0845 988 1188), torch, battery or wind-up radio, mobile phone, rubber gloves, wet wipes or antibacterial hand gel, first aid kit and blankets.	<b>Insufficient progress, See Chapter 24 (Paragraph 24.7 &amp; Recommendation)</b>
15	Members of the public increase their personal state of readiness and resilience to floods by following the Environment Agency's practical advice, where appropriate, as summarised below:	<b>Good progress, See Chapter 24 (Paragraph 24.8)</b>

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