

**The ongoing experience of recovery for households in Hull
– response to the Pitt Review Interim Report *Learning the lessons from the
2007 floods, Chapter 9 of the Pitt Review Interim Report***

Rebecca Sims¹, Will Medd¹, Elham Kashefi¹, Maggie Mort¹, Nigel Watson¹, Gordon Walker¹, Clare Twigger-Ross².

¹Lancaster University

²Collingwood Environmental Planning

31st March 2008

Correspondence

Will Medd (w.medd@lancaster.ac.uk)

Rebecca Sims (r.sims@lancaster.ac.uk)

This response is based on preliminary findings from the study “Flood, vulnerability and urban resilience: a real-time study of local recovery following the floods of June 2007 in Hull” funded by Economic and Social Research Council, the Engineering and Physical Science Research Council, and Environment Agency (October 2007-September 2009).

Further project details:

http://www.lec.lancs.ac.uk/cswm/Hull%20Floods%20Project/HFP_home.php

1. Introduction

We welcome the government's decision to broaden the scope of the Pitt Review to include the process of recovery. In particular, recognition that "recovery does not have a clear beginning or end" (Chapter 9, The Pitt Review Interim Report, p.2 paragraph 9.5) is an important step forward in attempts to understand and improve the ways in which we build resilience for flood recovery in the UK. This paper is a response to Chapter 9 of The Pitt Review's Interim Report. By outlining some preliminary findings from our ongoing research in Hull, we comment on the themes and conclusions highlighted in the recovery chapter and suggest some additional issues for consideration in the final report.

By way of summary:

We support the Pitt Review's interim conclusions on recovery (Chapter 9):

- Highlighting the impacts on health and well-being as a significant factor during the flood recovery process;
- Seeking to ensure that those affected have access to the various forms of support available at the local level; monitoring of the impacts on health and well-being, and actions to mitigate and manage the effects, as a systematic part of recovery work at the local level (IC 74);
- That effective, coordinated communication is a key element of the recovery process, and that a systematic programme of community engagement, as demonstrated by Hull's Flood Advice Service and the work of the community wardens, is helpful (Interim Conclusions 75 and 76).
- That the arrangements for distributing financial assistance during the recovery should be transparent and equitable (Interim Conclusion 89):

However we argue that the following issues should also be taken into account:

- In relation to IC 73, even though support may be available, diarists involved in our study are not always sure about what support is available for them by the public and voluntary sectors.
- In addition to voluntary and community groups (IC 73), it is important to acknowledge the role that family, friends and social activities can play in providing emotional and practical support during flood recovery.
- In response to IC 74, certain people may be particularly at risk in ways that may not be immediately obvious. First, the burden of recovery falls unevenly on different people, particularly on women but effects also on children, carers, and front line workers. Second, there is an important issue about who is, and what counts as a frontline worker – often roles of blurred and hidden from official structures.
- The difficulties of promoting effective public communication and engagement are exacerbated by a fragmentation of responsibilities between the different agencies involved in the recovery process. Consequently, it is not just communication from these agencies to the resident that is a problem – it is also communication and coordination between these agencies that creates difficulties.
- Swift settlement of claims by the insurance industry is essential to enable people to make progress with their recovery.
- While it is essential to ensure that people are able to recover from flooding as quickly as possible (Chapter 9 9.45), attempts to improve the recovery process should also focus on the ways in which we can build resilience for the future.

- If the recovery process is to be improved, adaptability of wider policy initiatives to the unusual circumstances could be vital in some cases, for example the case of accelerating the implementation programme for the Decent Homes initiative to repair flooding homes more quickly.
- Indicators of insurance industry performance, such as calls to complaint lines, will be a poor indicator of quality of service because people are struggling with getting back to normality let alone following official channels for complaint.
- It is vital to understand the role that tenure can play in the degree to which a household is able to recover from flood, and that the agencies charged with coordinating the recovery should take the effect of tenure into account when formulating their plans.

2. Understanding recovery

The aim of this project, *Flood, vulnerability and urban resilience: a real-time study of local recovery following the floods of June 2007 in Hull*, is to undertake a real-time longitudinal study using an action research model to document and understand the everyday experiences of individuals following the floods of June 2007 in interaction with networks of other actors and organisations, strategies of institutional support and investment in the built environment and critical infrastructure. Focusing in Hull, the project design adopts a tried and tested action research methodology previously used to investigate recovery following the 2001 Foot and Mouth Disease disaster (Bailey et al. 2004, Convery et al. 2005, Mort et al. 2005, Convery et al. 2007). The research therefore involves a longitudinal qualitative diary-based method developed to capture peoples' everyday experiences as they move through the drawn out process of recovery.

A growing body of work has sought to better understand the social, economic and health impacts of flooding and the relationship between social and physical parameters of community resilience and preparedness (Twigger-Ross 2006, Thrush et al. 2005, Tapsell et al. 2005, Kirschenbaum 2002, Gordon 2004). However, there is a dearth of empirically-based understanding about the processes people go through in recovering from flood disasters in the UK and the role of institutional support and investment in the built environment within that. Existing 'post-flood' studies (e.g. Tapsell et al. 2003, RPA/FHRC et al. 2004, Werrity et al. 2007) have struggled to adequately capture the extended, systemic and interactive nature of social, economic and health impacts in real time, as well as the interaction between different institutional and engineering responses. Furthermore, there is a need to increase understanding about publics perception of engineering and technological solutions in relation to flooding, for example how the built environment contributes to flooding as well as the possibilities of mitigation for effective management (Brown and Damery 2002).

Like the experiences of those in Carlisle (Carroll et al. 2006),, where some people have still to return to their homes it is clear that the recovery process from the June 2007 floods will be drawn out, both in terms of emotional recovery, re-establishing the routines of everyday life and the physical repair and investment. Studies on flood recovery indicate the importance of key agencies in providing social support and in rebuilding damaged physical structures (including homes and infrastructure networks) as they are crucial to how people adapt to changed circumstances (Tapsell et al. 2002). In Carlisle it was noted how immediate demonstrations of community solidarity as the crisis unfolded were followed by the re-traumatising effects of often poor workmanship and execution of rebuilding the infrastructure (Carroll et al. 2006). Just as Erikson showed in his classic flood recovery study (1976) the Carlisle experience revealed the intrinsically affective nature of people's relationship with

their material/built environment. There is also often a failure of integration between professional groups. Bosher et al. (2007), for example, emphasise the need for better integration between those responsible for design changes to the built environment and critical infrastructures and the emergency planning community (see also Herten et al. 2003). Policy concerns for flood management have increasingly emphasised the need for development of both social and physical strategies in building resilience to live with flood (Defra 2005, Environment Agency 2005, National Audit Office 2001) but which strategies are the most appropriate and how these strategies should be balanced, resourced and implemented remains deeply problematic.

The emphasis of the project is therefore on the “what, how and when” of people’s everyday adaptation during the flood recovery process, captured over time. The project started in October 2007 and will continue until September 2009.

2.1 Details of participants taking part in the study

To date, we have completed 48 interviews, comprising 43 residents and 11 frontline workers¹ (these figures add up to more than 48 because categories of frontline workers and residents were not mutually exclusive).

Participants have been recruited from all areas of the city with a particular focus on West Hull, as this was the area most severely affected by the flooding. The following statistics provide a profile of our participants by age, tenure type and additional considerations.

Tenure

Of the 43 residents interviewed: 31 owner occupiers, 7 council tenants, 2 private rented, 3 housing association.

Age

Age profile of the 48 interviewees:

20s	30s	40s	50s	60s	70s	80s	90s
4	13	9	7	8	3	2	1

Disability

Number of interviewees with a disability in the family: 11

Gender

34 women, 14 men.

Young families

14 participants have children under 10.

Insurance

7 participants were uninsured.

¹ Defined as those who may not have been flooded themselves but who have been working with flood victims as part of their employment. The 11 frontline workers we have interviewed comprise 2 teachers, 3 caretakers/community centre managers, 2 community wardens, 5 council/voluntary sector employees and 1 journalist.

In addition to undertaking initial in-depth interviews, the panel have been recruited to keep diaries over a 12 to 18 month period. The diaries are not structured leaving it up to the diarist to decide what they feel is important to record. Participants will also be brought together during the course of the project to discuss collectively issues affecting the recovery process as they emerge during the research project.

3. Response to key themes

This section is structured in response to the key themes outlined in Chapter 9 of the Pitt Review Interim Report. The emphasis of our study is on understanding flood recovery from the perspective of those involved in the process. We therefore use extracts from interviews and diaries of householders involved in our study to illustrate the points made. All names are pseudonyms to protect the anonymity of the participants.

3.1 Health and well-being

Householders' accounts of recovery support the Pitt review statement that people are concerned about their health and well being.

Participants report experiencing increased levels of stress, anxiety and depression and a loss of interest in everyday activities:

Some days I just felt like jumping off Humber Bridge. It's been that low, it's been that bad, except I'm not brave enough to do it. But the state of mind you've been in – some days I've just sat in here and just sobbed and sobbed and sobbed. (Leanne, interview)

Feelings of anxiety can continue to be experienced long after repairs have been completed and the person has returned to their home. Periods of bad weather, in particular, can be particularly stressful, as people fear a return of the flooding and are reminded of the emotions and hardships that they faced at the time:

When I go home, the first thing I do if it's been raining or is raining, is stop and check the level of the drain. The last thing before I leave is check the level of the drain just to make sure that I'm aware of its current state... There is a lot of anxiety if the weather is going to be bad. As we move more into winter... the anxiety, I think, will rise and it's affecting people. I think the main one is sleep patterns because a lot of us have said we are not sleeping through it and a lot of us are waking up and we've dreamt it's been raining through the night because that's on our mind all the time. (Amy, interview)

When it rains I suppose, yes, I feel quite depressed ... it maybe just triggers something in my brain. Yesterday it rained quite bad and I was coming in and the drain at the front is blocked and that was starting to fill and do you know, when you think - I just walk away and I don't know what I'd do, I'd rather just set fire to the house, walk away and just never come back I think. I couldn't do it again. (Abby, interview)

Householders also describe the strain on their family relationships, for example with an increase in arguments. In some cases, the stresses on relationships can be amplified by the type of accommodation used during the recovery process. Those living in caravans or

moving in with relatives while their home is being repaired often describe their stress and irritability as a result of having no personal space. However, relationships can also struggle in cases where the temporary accommodation is more adequate as people struggle to deal with their feelings of anger, tiredness and frustration.

You get very fraught marriage-wise. We've had lots of arguments and lots of discussions and lots of "I'm leaving you when this is all done!" and "That's it, the house is going up for sale!". Because there's nobody to help you – if my husband is working away during the week and he comes home on a weekend and we are in here, and it's like all the stress I've had in the week goes straight on him, and all the stress he's had in the week goes onto me... (Debbie, interview)

Diarists also note concerns about their physical health. For example, some with long-term health problems, such as angina and arthritis, say that the flooding has made it harder for them to manage their condition, while other participants report suffering from coughs, colds, flu, stomach upsets and increased blood pressure in addition to more generalised feelings of malaise:

I seem to be very run down and lethargic all the time (Kate, diary)

Some people state that the stresses and strains of the flooding have led to them drinking more alcohol as a coping strategy, while other participants report that difficult living conditions during the recovery process, such as cramped conditions and a lack of cooking facilities, can make it harder to adhere to more usual practices of healthy eating and exercise.

I don't know if it was tiredness, stress and everything else, run down, not eating properly because we've been living in a caravan. And even though we've moved into the kitchen and we are sleeping upstairs now because it's so cold in there, we are still not eating properly yet... we've just had it for six months constantly, getting up early. Because we've worked really hard as well. With getting the builders in, you are making them tea or coffee all day and then you are coming in and scrubbing the mess away again and then you get into bed late and you are absolutely shattered. And I think it really has caught up with us. (Abby, interview)

Children can become particularly anxious and unsettled as a result of having to live in a different, temporary, place and attend a different school, as one of our participants described:

When we told Edward it would be six more weeks and then we could move back home he started to pack his toys away! I don't think anybody realised how much the floods and the move affected Edward. He still gets upset and very protective of me every time it rains. He has just started cubs so it means he can see his friends more like he used to, because we lived so close to all his friends he is isolated in the rented house and spends a lot of time on his computers or watching the TV. (Melanie, diary)

Our research also suggests that, where couples are concerned, the stresses of managing the recovery process often falls upon women, many of whom end up taking on the responsibility of project managing the repairs to the house. In some cases this is because they work part-time or are at home looking after children and, as a result, they are expected to be available to supervise workmen, receive deliveries and make phone calls to the insurance company. However, project management demands new knowledge and specialised skills and this

project management role is often experienced as an additional burden on top of their existing tasks of managing the household, looking after children and, often, the responsibility of a full or part-time job:

It was really stressful and it really took us to have a gigantic argument because he didn't come to the house - he came four times in six months, my husband... He couldn't face it so I faced it all on my own... I have to do it all on my own, he doesn't do it because he can't cope with the stress. (Karen, interview)

The health effects of the flooding are not restricted to those who were flooded. Our research shows that flooding can impact upon the well-being of the wider community in a variety of ways. For example, one of our participants experienced considerable stress despite not being flooded herself because her elderly mother-in-law, who had been flooded, had to live with her for six months while her home was repaired. The resulting emotional and financial stress on this diarist, as she tried to look after her mother-in-law, continue with her job and keep the family together, was considerable. However, because she was not classed as a flood victim herself, she was told she was not entitled to any help or support available from her local authority.

There are also health effects for workers who are charged with helping and supporting flooded residents, both in the initial emergency response phase and the longer-term recovery process. Interviews with these workers showed that many worked long hours in difficult and dangerous conditions and dealt with people experiencing considerable feelings of anger and distress, despite receiving very little training or support to help them in their role. Due to the scale of the flooding in Hull, many of these 'frontline workers' had to do their jobs while also dealing with flooding at their own house.

Obviously I needed to let somebody know that I was out on the second day, so I walked up to my colleagues in the Customer Service Centre and I just walked in there and cried because it was the first sort of contact I'd had with people without having to be strong for other people. I just walked in and it was just like, "Oh my God, what's happening?" And they were saying, "Don't cry, don't cry" I said, "I can't help it". I think me, Alice and Emily were just in tears – the three of us – it was like "get a grip – we need to be strong and do things for people really. (Karen, interview)

The Pitt Review is right to highlight the impacts on health and well-being as a significant factor during the flood recovery process and we agree with interim conclusion 73, which seeks to ensure that those affected have access to the various forms of support available at the local level. In accordance with interim conclusion 74, we also agree that monitoring of the 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. Such monitoring should be careful to include qualitative accounts of people's experience, collected over time..

A number of additional factors should be taken into account:

- In relation to IC 73, even though support may be available, diarists are not always clear what support is available for them by the public and voluntary sectors. Small-scale local initiatives, such as 'pamper days', shopping trips and half-term excursions for children, seem to have made a significance difference to householders' mood and quality of life, yet there often appears to be confusion about what is available from whom.

- In addition to voluntary and community groups (IC 73), it is important to acknowledge the role that family, friends and social activities can play in providing emotional and practical support during flood recovery. Being able to continue with everyday social activities appears to inject a much-needed element of “normality” into life in the wake of the floods. Strategies ought to include support for such networks.
- In response to IC 74, certain people may be particularly at risk in ways that may not be immediately obvious. First, the burden of recovery falls unevenly on different people, particularly on women but effects also on children, carers, and front line workers. Second, there is an important issues about who is, and what counts as a frontline worker – often roles of blurred and hidden from official structures.
- The use of qualitative indicators of health and well being will be important for future monitoring.

3.2 Public communication and engagement

The research suggests residents, even at the time of submitting this report, are still feeling confused or anxious as a result of mixed or conflicting advice and sources of advice. During the recovery process, flood victims come into contact with a wide range of agencies, from the local authority through to insurance companies, building contractors, cleaning companies, waste companies, loss adjusters and utility companies. For one diarist we counted around 15 different agencies involved in the recovery process. Residents describe receiving mixed, and sometimes conflicting and contradictory, messages, which are often different to those received by their neighbours:

We lost the fridge and the freezer and the cooker in the kitchen but the scary thing was we were actually still using them – nobody condemned them or even suggested that they were contaminated in any way, shape or form until we moved out. And then they said, “Oh you shouldn’t have been using them”... The thing is as well, you find out different things from different people. Just by talking to your neighbours – they’d been told a completely different story to what you are getting told by their insurance company. (Melanie, interview)

Melanie’s testimony is not unique. Another interviewee, who was a council tenant, said that she had been instructed to throw out everything that the water had touched, because it would be contaminated. However, when the contractors came to strip out her kitchen, they left the kitchen units in place, despite the fact that these had been completely under water.

Our research shows that flood victims go to considerable lengths to try to get information from the various agencies involved in the recovery process and a lack of information – or contradictory information – can cause them considerable distress. Trying to get in contact with loss adjusters, builders and insurance companies becomes a major operation, and the outcome of such phone calls can have a strong impact on a person’s peace of mind.

It was hell to get hold of her again; I just kept ringing her on her mobile. We had to try and keep this sort of level of not being a nuisance to everybody but not letting things go that we should be doing. (Emily, interview)

Left another message [with loss adjustor] – no response. If he would just call me back – it's so frustrating. This seems to be taking up my whole life – God, what did I do before the flood? (Rachel, diary)

We agree with the Pitt Review's conclusion that effective, coordinated communication is a key element of the recovery process, and that a systematic programme of community engagement, as demonstrated by Hull's Flood Advice Service and the work of the community wardens, is helpful (Interim Conclusions 75 and 76). However the following should also be taken into account:

- The difficulties of promoting effective public communication and engagement are exacerbated by a fragmentation of responsibilities between the different agencies involved in the recovery process. Consequently, it is not just communication from these agencies to the resident that is a problem – it is also communication and coordination between these agencies that creates difficulties. Attempts to promote 'systematic public engagement' (IC 76) during the recovery process must also look for ways in which the various stages of the process can be better coordinated, perhaps through the use of a dedicated case workers to each household acting as an intermediary between different agencies.

3.3 Funding for recovery

Participants in our study have expressed some confusion about how funding is allocated for recovery and how priorities are made, as well as concern over who gets what. Some expressed concern about how the timing of repair work is scheduled, while others were concerned that they were penalised for having insurance:

The money, which people were donating - where's that money gone? We are not entitled because we were insured and he [caseworker] said it would go to the non-insured people, they need it more than us. So what's the point of us paying insurance? (Emma, interview)

Even among those with insurance, participants have reported bad feelings as a result of perceived differences in terms of the losses that have been claimed for, with some people feeling that their neighbours have over-exaggerated their claims.

However, for those with insurance, it is also important to consider the timing with which the funding is delivered. The evidence from people's diaries shows that, despite having insurance, many of our participants have been experiencing significant financial stress as a result of insurance companies being slow to pay up for expenses incurred in the early days of the flooding.

A number of participants have expressed anger at individuals and companies that they perceive to be profiting from the floods. For example, one respondent described her experiences of dealing with estate agents as she tried to find a rented property to live in during the repairs to her home.

I was very relieved to move out of our home so that the drying could start, but I'm convinced that our insurance company and ourselves are being ripped off by being charged £850 a month for it. Prior to the floods, there's no way they'd have got that high amount of rent. (Caroline, diary)

Perceptions of unfairness are important because the stress experienced can be compounded by feelings that others have profited from their misfortune. Such experiences are also likely to weaken their trust in the agencies responsible for the recovery process.

We agree that the arrangements for distributing financial assistance during the recovery should be transparent and equitable (Interim Conclusion 89), and would add:

- Swift settlement of claims by the insurance industry is essential to enable people to make progress with their recovery.

3.3 Normalisation and regeneration

In common with many disaster recovery templates, the Pitt Review places a strong emphasis on the importance of achieving a swift “return to normality” for flood victims. While we agree with the principle of these sentiments, our research in Hull leads us to question the assumptions behind them. In particular, we are concerned that, in the haste to ‘get things back to normal’, many of the factors which may make people vulnerable to flooding are being reproduced. For example, the experiences of research respondents in our study suggest that, while it is possible to make some changes to the fabric of a building in order to make it more resilient to flooding, few flood victims have been making these changes during repairs to their home because their insurance companies will not fund them. We have been told that this is because making such changes would be classed as “improvements”, and that this is not covered by insurance policy. Therefore, residents are having their houses returned to their previous condition, thus reproducing their vulnerability to future flood.

- While it is essential to ensure that people are able to recover from flooding as quickly as possible, attempts to improve the recovery process should also focus on the ways in which we can build resilience for the future. Care should be taken not to reproduce people’s vulnerability to subsequent flood events.

4. Additional factors for consideration

In addition to the responses to key themes identified in Chapter 9 of the Pitt Review Interim Report, we want to highlight the following themes that are emerging in our research:

1) *The importance of adaptability of other areas of policy.* We have already highlighted the need for coordination between the many different agencies involved in flood recovery and the importance of building resilience during the recovery process. For example, council houses are currently undergoing a process of refurbishment under the Decent Homes initiative. Properties affected by flood were therefore brought forward in the programme to ensure their homes are refitted to this standard and should all be fitted by March 2008. For some householders, however, this actually felt like a delay to the time at which they can get back to a normal functioning household.

2) *The culture of the insurance industry.* Although some participants have enjoyed good relationships with their insurance companies and loss adjustors, those experiences are, unfortunately, in the minority. Respondents have suffered huge amounts of stress, including financial hardship, as a result of difficulties with their insurance claim. Problems of communication with loss adjustors and insurers have already been discussed (see above). Here we want to highlight the experiences people have had in managing their insurance claims. One resident, who is currently dealing with his ninth loss adjustor, described the experience:

The incompetence of the loss adjusters is soul destroying because it happens once and then you relive it, and you relive it again. Every loss adjuster, you've got to start at the beginning again and they've lost the file and they've lost the papers. So every time you copy everything again and take it again. They must have so many papers from me, it's unbelievable. (James, interview)

Others talk about the lengthy process of trying to get approval for a claim and describe feeling as if they are being criminalised for trying to get compensation for their losses:

I feel like a criminal trying to get blood out of a stone to get any money from building insurance. (Leanne, diary)

Each time we've had to go to them as though we are begging for something we are entitled to and I don't like that .. (Barry, interview)

The stress of dealing with insurance companies and having to go through a cumbersome system of approval adds to people's discomfort and anxiety at a time when they are already in a very distressed condition. We would therefore argue that any discussion of the recovery process should address the culture by which the insurance industry operates to consider the ways in which the financial and emotional stresses acting on flood victims can be reduced. Indicators of insurance industry performance, such as calls to complaint lines, will be a poor measure of quality because claimants are struggling with everyday necessities rather than following official channels and protocols for complaint.

3) *The importance of tenure.* Like other studies of flood recovery, our research indicates that a person's tenure status can have a major impact on the ways in which he or she experiences the recovery process. For owner occupiers a key problem appears to be frustration of dealing with insurers. While this can be the case for others too, council tenants, private renters and those renting from a housing association often experience additional kinds of issues. For example, one young family taking part in our study were renting in the private sector. However, because their rented house was devastated by the floods, they made the decision to seek alternative accommodation elsewhere in the city. They have subsequently experienced considerable financial hardship because the price of rented housing across Hull has increased dramatically since the floods. Availability is also problematic for those renting privately as thousands of owner occupiers are staying in rented accommodation (paid for by their insurance companies) while their own homes are repaired, thus limiting the number of properties available to existing tenants. Equally, council tenants are not permitted to find their own builders to repair their homes and, as a result, they must wait for the council's contractors before any work can be done (though arguably this has often been done more speedily than insured private homes). For people who are in rented homes that were flooding, they have little influence on their landlords in getting repairs done. For example, a single parent was living upstairs in a damp house and was worried if she complained to the landlord she might get thrown out. It is vital to understand the role that tenure can play in the degree to which a household is able to recover from flood, and that the agencies charged with coordinating the recovery should take the effect of tenure into account when formulating their plans.

4) *The delayed experience of flood* A notable, and arguably distinctive, feature of the flooding in Hull has been the extended timescale involved in the discovery of flood impacts. Due to the nature of the flooding which took place in the city, many people who thought they had escaped the events of June 25th have subsequently experienced problems such as rising damp, mouldy carpets and the deformation of walls and floors. This occurred as a result of

water entering houses beneath the level of the floorboards and, although this caused no apparent damage on the day of the floods, the longer-term effects of this water ingress have become apparent in the weeks and months following the floods. For example, one of our participants only discovered that his house had been affected in February 2008 – a full six months after the event. The discovery of such ‘hidden’ flood damage has been very upsetting for residents – not only because they thought their homes had survived the floods unscathed, but also because their houses must now go through the same process of stripping out, drying and reinstatement, as those whose homes suffered severe and visible water ingress on June 25th:

It [the floodwater] was at the level of the doorstep... but it hadn't actually gone in. And the next day it was all gone... so we thought it was fine.... But what happened - the downstairs toilet, the door started to stick and it never stuck before – I got my brother-in-law to come and he shaved a little bit off the bottom because we thought maybe it had just dropped. But it did it again – it was sticking again – and then my next-door neighbour's fireplace fell off the wall... and she was saying, 'You must get your house checked' because obviously we were all in the same position. And eventually I got them [the surveyors] down. I think in my mind I was saying 'well, I didn't get any water in so everything must be OK'. But, of course, when they came and they tested the walls, the walls were damp. It's amazing that – it's exactly the same amount of devastation, as we would have had a foot of water in the house... you know, plaster off the wall, floors up, internal walls coming down. All the block paving on my drive and round my patio area at the back has all sunk. Doors are rotting... (Rachel, interview)

The hidden nature of these delayed flood impacts affects the recovery process in a number of ways. Firstly, there is the anxiety and distress caused to residents. Many people living in Hull are now feeling like they are sitting on a time-bomb and wondering if their house has also been damaged in ways that may not yet be apparent. Secondly, there are the practical issues to contend with. People like Rachel, who have had to move out of their homes at a later date so that repairs can take place, have often struggled to find alternative accommodation, simply because any spare capacity that exists has already been taken up by those who were affected immediately on the 25th. Thirdly, for the insurance industry and those managing the recovery process, there are logistical problems of trying to provide help and support for flood victims whose experiences do not fall into the expected time patterns. For example, Hull City Council had to extend the work of its Flood Advice Service and reschedule the deadline for applications for its £250 flood relief cheques.

4) *Building future resilience.* We have already noted that while there is an emphasis on getting back to normal, enhancing resilience to future flood is often neglected. The interaction between social and physical factors shaping vulnerability and resilience is likely to be key to identifying different pathways in the recovery process (c.f. Burton et al. 1993). Resilience can take different forms across different settings and scale (householders, communities, cities, regions); for example resilience may take the form of resistance, the ability to recover, or the ability to adapt (Medd and Marvin 2005). An important part of our study will be examining the extent to which new forms of resilience are emerging, not just at the level of the individual household, but also in relation to the modes of institutional support and the management of infrastructure and built environment.

References

Bailey et al. (2004) Narratives of trauma and ongoing recovery: the 2001 foot and mouth disease epidemic, *Auto/Biography*, 11: 37-46

Bosher, L., P. Carrillo, et al. (2007). "Realising a resilient and sustainable built environment: towards a strategic agenda for the United Kingdom." *Disasters* 31(3): 236-255

Brown, J. D. and S. L. Damery (2002). Managing flood risk in the UK: towards an integration of social and technical perspectives. *Transactions of the Institute for British Geographers*, Vol. 27, No. 4, pp. 412-426

Carroll, B., Morbey, H., Balogh, R., Araoz, G. (2006). *Living in fear: health and the social impacts of the floods in Carlisle 2005*. Carlisle, Centre for Health Research and Practice Development, St. Martins College

Convery et al. (2005) Death in the Wrong Place? Emotional geographies of the 2001 foot and mouth disease epidemic, *Journal of Rural Studies*, 21, 99-109

Convery I., Mort M., Bailey C., and Baxter J, (2007) Role Stress in Front Line Workers during the 2001 Foot and Mouth Disease Epidemic: the value of therapeutic spaces. *Australasian Journal of Disaster and Trauma Studies*.

Defra (2005). *Making Space for Water: Developing a new Government Strategy for flood and coastal erosion risk management in England: a delivery plan*. DEFRA: London

Environment Agency (2005) Directing the Flow, EA's Flood Risk Management Strategy, Making Space for Water, EA January

Erikson, K. (1976) *In the Wake of the Flood*. George Unwin and Allen, London, UK.

Gordon R (2004) The social system as a site of disaster impact and resource for recovery, *Australian Journal of Emergency Management* 19, 16-22

Hertin, J., F. Berkhout, et al. (2003). "Climate change and the UK house building sector: perceptions, impacts and adaptive capacity." *Building Research & Information*, 31(3): 278 - 290.

Medd, W. and Marvin, S. (2005) 'From the Politics of Urgency to the Governance of Preparedness: A Research Agenda on Urban Vulnerability' *Journal of Contingencies and Crisis Management* 13 (2), 44-49.

Meth, P. (2003) Entries and Omissions: using solicited diaries in geographical research *Area* (35) 2 195- 205.

Mort et al. (2005) Psychosocial effects of the 2001 UK foot and mouth disease epidemic in a rural population: qualitative diary based study, *British Medical Journal*, 26 Nov, Vol 331, No 7527

National Audit Office (2001) *Inland Flood Defence*, HMSO: London

RPA/FHRC et al. 2004. *The Appraisal of Human-Related Intangible Impacts of Flooding. Report to Defra/Environment Agency*. R&D Project FD2002. London: Defra (Available for downloading from the Defra website – www.defra.gov.uk)

Tapsell et al. (2002), 'Vulnerability to flooding: health and social dimensions', *Philosophical Transactions of the Royal Society*, 360 (1796): 1511-25

Tapsell, S., Burton, R., Oakes, S., and Parker, D. J. (2005) *The Social Performance of Flood Warning Communications Technologies* (No. TR W5C-016): Environment Agency

Tapsell S., Tunstall S. M., and Wilson T. (2003) *Banbury and Kidlington four years after the flood: an examination of the long-term health effects of flooding*, Bristol: Environment Agency

Thrush D, Burningham K and Fielding J, (2005) *Exploring flood-related vulnerability: a qualitative study*. R&D Report W5C-018/3. Bristol: Environment Agency.

Twigger-Ross C (2006) Managing the social aspects of flooding: synthesis report,
Environment Agency R&D Technical Report SC040033/SR6

Werritty A., Houston D., Ball T., Tavendale A. and Black A. (2007) *Exploring the Social Impacts of Flood Risk and Flooding in Scotland*, Scottish Executive