

## **Crichton Response to SEPA Consultation dated June 2011**

### **Flood Risk Management Act**

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#### ***Response from David Crichton***

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During the ten years from 1990 to the end of 1999, insurers paid out £1.5bn in UK flood claims. In the subsequent ten years this rose to more than £4.5bn.<sup>1</sup> Britain has now had serious flooding events every year since 1997. Scotland alone has had 18 big flood events since 1990.

Scotland has a lower flood risk than England in at least 40 significant ways, but that is no justification for complacency.<sup>2</sup> The most remarkable aspect of this consultation paper is the omission of so many of the most important factors affecting flood risk management in Scotland and how they could be strengthened to reduce flood risk still further. In particular there is the issue of the planned insurance withdrawal in 2013 (see annexe).

Here is a selection of 13 serious omissions from the consultation paper.

1. The **Dundee Tables** are not mentioned.<sup>3</sup> These are produced from the National Flood Insurance Claims Database, the biggest flood damages database in the world, held at Dundee University. The database is many orders of magnitude bigger and more detailed than the one held at Middlesex University used as the basis for the “multi coloured manual” and referred to in the consultation and unlike Middlesex, is based on actual loss data rather than small samples of estimates. As such it is used by the Audit Commission to measure the benefits from flood defences. The Dundee Tables are also used by the insurance industry in setting premium and reinsurance levels. It seems inappropriate to ignore them altogether and this suggests insufficient research or a refusal to talk to the insurance industry.

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<sup>1</sup> Press release 58/10. Association of British Insurers. The figures relate only to those reported by ABI members. If all insurers are included, totals would be much higher.

<sup>2</sup> Crichton, D, in press. “*Flood Risk Management North and South.*” TCPA Journal.

<sup>3</sup> Black, A., Werritty, A., and Paine, J., October 2006. “*Financial costs of property damages due to flooding; the Halifax Dundee Flood Loss Tables 2005.*” University of Dundee, sponsored by Halifax General Insurance Services. This is the largest database in the world on the costs of flooding and is used by insurers for pricing decisions.

2. It seems incredible that **insurance** is not mentioned at all. The 50 year old flood insurance commitment is due to expire in 2013 (see annexe). The availability and affordability of flood insurance has been taken for granted since 1961. It is quite likely that insurers will start to withdraw cover in 2013 in selected high risk areas due to the expiry of the insurance commitment and the implementation of the Solvency II Directive which takes effect in 2014. A recent change in the law <sup>4</sup> has enabled Insurers to impose substantial flood excesses, often to levels exceeding £10,000. They are also raising premiums by an average of 70 per cent per year in flood hazard areas.<sup>5</sup> In the meantime, SEPA seem to be attempting to invent modelling techniques perfected by the insurance industry years ago. The only mention of insurance seems to be on SEPA's web site where they state that insurers are not allowed to use SEPA's flood maps for commercial purposes. In England, the Environment Agency worked with the insurance industry from the outset when publishing their maps. The EA were concerned about possible liability for premium increases and loss of property values, but working with insurers a solution was found. Similar advice was offered to SEPA by insurers but SEPA turned it down. One gains the impression that when SEPA are not ignoring insurers altogether, they regard them not as potential allies but as threats. It is to be hoped that this attitude will not become confrontational as this would be regrettable and short sighted. Insurance is generally recognised in other countries as an essential component of sustainable flood management<sup>6</sup> and was highlighted as such by Gilbert White, the 'father of flood plain management'.<sup>7</sup> The author has worked closely with SEPA in the

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<sup>4</sup> Board of Trustees of the Tate Gallery v Duffy Construction Ltd and another [2007] EWHC 361

<sup>5</sup> Bell, A, "Morpeth Flood Action Group Insurance Survey Results and Analysis" January 2011 Morpeth Flood Action Group  
<http://www.voicesoftheflood.org/attachments/download/45/Morpeth%20Flood%20Action%20Group%20Insurance%20Survey.pdf> Accessed 25.1. 2011

<sup>6</sup> Crichton, D 2011. "International Historical, Political, Economic, Social, and Engineering Responses to Flood Risk." Chapter 12 of "Flood Hazards: Impacts and responses for the built environment" pp155-176. Lamond et al (editors). CRC Press, Boca Raton, FL, USA. ISBN 978 1 4398 2625 6

<sup>7</sup> White, G. 1942. "Human Adjustment to Floods" Chicago: University of Chicago Department of Geography, Research Paper No. 29, 1942, published 1945.

past to mutual benefit and it would be unfortunate if this were to stop simply due to personnel changes.

3. It is even more surprising that **Flood Liaison and Advice Groups (FLAGs)** are not mentioned. Nineteen of these groups have been established, as required by Scottish Planning Policy SPP7. They cover 94 per cent of the population, from Shetland to the Borders, each with representation from the insurance industry and SEPA. These groups have arguably achieved more than any other single initiative in producing a change in the attitude of local planning authorities to flood risk, by informing them about the gravity of the situation when flood insurance is withdrawn in 2013 and the inevitability of blight and loss of property values. The only planning authorities which have refused to establish FLAGs with insurance representation are East Lothian, Moray, Orkney, Western Isles and National Parks. Of these, only Moray has a major flood problem. An unintended consequence of each of the 19 FLAGs being attended by the same insurance representative was that he was able to spread best practice, advise local authorities of the latest national and international flood and insurance research, and recommend action based on approaches elsewhere. In this way, FLAGs were able to ensure a consistent approach across the country and avoid the risk of property developers playing one local authority off against another. In addition, the insurance representative was able to champion the case of individual residents having problems in obtaining flood insurance, by raising these problems with relevant officials in the insurance industry. The author is aware that very recently, SEPA has written to FLAGs to suggest the local authorities should now consider acting in defiance of planning policy SPP7 <sup>8</sup>and discontinue FLAGs altogether.<sup>9</sup> One wonders if this act of defiance has been agreed with the Scottish Government? SEPA suggest replacing FLAGs with “local advisory groups”. The essence of FLAGs success has been the insurance representation. This is not proposed for these “local advisory groups” and it is

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<sup>8</sup> Scottish Executive. *Scottish Planning Policy 7: Planning and Flooding (SPP 7)*. . Edinburgh : <http://www.scotland.gov.uk/library5/planning/spp7-01.asp>, 2004.

<sup>9</sup>“ Flood Liaison and Advice Groups briefing – 3 August 2011.” SEPA, Stirling.

hard to see what benefits there will be from advisory groups which do not take insurance affordability or availability into account.

4. The **Insurance Template** has not been mentioned.<sup>10</sup> This is another surprise; it has been used by local planning authorities since 1995 to act as a benchmark for what levels of risk may be acceptable to insurance companies at normal terms and therefore acceptable for planning consent. It is not a market agreement, simply mathematics. The advantage of the insurance template is that it takes vulnerability into account as well as insurability. Elements of this template were adopted into SPP7 and in the Welsh planning guidelines.
5. The effects of **flood blight** have not been mentioned. Once insurance becomes unavailable or unaffordable for high hazard areas, then property values will collapse and blight will spread rapidly.<sup>11</sup> This does not seem to concern the authors of the report.
6. **The Risk Triangle**.<sup>12</sup> This outlines a methodology which is used by insurance companies for catastrophe modelling. It illustrates the point that 'risk' consists of three elements, hazard, exposure and vulnerability. Each of these needs to be separately assessed. Each of them is subject to varying frequency and severity. The consultation paper correctly identifies the three elements, but fails to make the crucial point that these elements are changing not only due to climate change but can change from day to day and hour to hour. A good example is the Boltby dam collapse in 2005. 12 hours before the collapse, there were 10,000 inebriated people sleeping in a camp site on the riverbank downstream of the dam following a motorcycle rally. Fortunately they had woken up and moved by the time the dam collapsed, although six stewards

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<sup>10</sup> Crichton, D, 1998. "Flood appraisal groups, NPPG 7, and insurance." *Proceedings of the "Flood Issues in Scotland" seminar held in Perth in December 1998*. Stirling: Scottish Environment Protection Agency. p 37-40

<sup>11</sup> Pryce, Gwilym , Chen, Yu and Galster, George(2011) '*The Impact of Floods on House Prices: An Imperfect Information Approach with Myopia and Amnesia*', *Housing Studies*, 26: 2, 259 — 279.

<sup>12</sup> Crichton, D. "*The Risk Triangle*", *Natural Disaster Management*, Ingleton, J., (ed), Tudor Rose London, 1999.

were washed away while picking up litter. That was a case where exposure had reduced from 10,000 to six in only a few hours. It is important that exposure and vulnerability are monitored as well as hazard, especially when it comes to catastrophic situations such as dam break.

7. **Rural Development Grants** are not mentioned. These grants have made a significant contribution to reducing flood risk by encouraging land managers to store flood water in order to reduce flooding downstream. These grants end in 2013, - just in time for the withdrawal of flood insurance. Why is this important point not mentioned?
  
8. **Reservoirs and dams** are not mentioned, despite the changes in legislation in 2011, the fact that reservoirs are in more danger of failing due to climate change,<sup>13</sup> and the fact that dam break inundation maps are due to enter the public domain after being treated as top secret. The public will become even more alarmed when secret reports on the condition of Scotland's dams and failure incidents become public for the first time, and they learn, for example about the location of dams which are in a dangerous condition and threaten the safety of thousands of people. This author and many emergency planning officers are well aware of many of these but have kept the information quiet to avoid public panic. All of this will no doubt add to the difficulties property owners will face in obtaining affordable flood insurance after 2013. This was recognised by the Scottish Parliament in 2011, but key recommendations by Parliament were ignored by Government in subsequent legislation.<sup>14</sup> These recommendations could have significantly improved reservoir safety at no cost to the taxpayer. They could have also reduced the inevitable blight which will be caused when insurance in dam break areas becomes unavailable.<sup>15</sup>

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<sup>13</sup> "*Climate Change Impacts on the Safety of British Reservoirs.*" Bابتie Group and the Centre for Ecology and Hydrology, for the Department for Environment, Food and Rural Affairs, 2002

<sup>14</sup> "*Stage 1 of the Reservoirs (Scotland) Bill.*" First Report, 2011 (Session 3). Rural Affairs and Environment Committee of the Scottish Parliament, Jan. 2011. [www.scottish.parliament.uk/s3/committees/rae/reports-11/rur11-01.htm](http://www.scottish.parliament.uk/s3/committees/rae/reports-11/rur11-01.htm).

<sup>15</sup> Crichton, D, 2011. "*The Reservoirs (Scotland) Bill.*" Scottish Planning and Environmental Law Journal, SPEL vol 144 pp 31-33, Glasgow.

9. **Building Regulations** are not mentioned. Scottish building regulations make a major contribution to reducing flood risk for new buildings by reducing vulnerability.<sup>16</sup> Primary legislation was drafted in such a way as to allow current regulations to be made retrospective after flood or storm damage, but this has never been implemented.<sup>17</sup> If it was to be implemented, insurers would be allowed to introduce resilient reinstatement which over time would reduce vulnerability in existing building stock at no cost to the taxpayer. Insurers have already been briefed on this and have indicated that they would be very happy with such a change, which would not need new legislation simply a minister's signature. The only thing preventing it is procrastination by the government.<sup>18</sup>
10. While **public health** is mentioned several times there seems to be little understanding of the issues. For example the special vulnerability during a flood of the old, the young, the infirm, or people on kidney dialysis. Nor is there any mention of the particular problems relating to water borne pathogens, especially cryptosporidium and e coli. Also there is no mention of the problems facing people who for medical reasons are dependent on electricity for survival, nor the need for special evacuation assistance to be given to vulnerable groups.
11. **Low income families** are not mentioned despite the fact that they can be particularly vulnerable to flooding. There has been much research into this in

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<sup>16</sup> Roaf, S. Crichton, D., and Nicol, F. , 2009. *Adapting Buildings and Cities for Climate Change.* (Second edition) 384pp. Architectural Press, Oxford. ISBN 978 1 85617 720 7

<sup>17</sup> Building (Scotland) Act 2003 Available from <http://www.scotland-legislation.hms.gov.uk/legislation/scotland/acts2003/20030008.htm>.

<sup>18</sup> Clark, M, Priest, S J, Treby, E J, Crichton, D., 2002 *Insurance and UK Floods: a strategic reassessment.* University of Southampton.

Scotland.<sup>19</sup> It is recognised that insurance has an important part to play in helping to improve resilience to flooding.<sup>20</sup>

12. There is no mention of **mortgage rationing** or the particular plight of elderly retired people who have paid off their mortgages. Such people no longer have to have home insurance and often let it lapse. They also are likely to retire to single storey housing near rivers or the sea where they are more exposed and vulnerable to flood hazard.

13. While there is a brief reference to utility infrastructure on page 19, there does not seem to be a full appreciation of how vulnerable power stations are to flooding.<sup>21</sup> Again this is an indication that SEPA have not been prepared to listen to insurers. There seem to be little understanding of the wider economic and social costs which are so apparent to the insurance industry due to their experience with **consequential loss insurance** from flood events. Nor is there any mention of the Civil Contingencies Act or the important role of insurers in providing consequential loss insurance or contingency planning advice to small businesses. Thus for example, the impacts of a flood on Grangemouth and Longannet are considered only in terms of local vulnerability. The fact that Longannet provides 25 per cent of Scotland's electricity and Grangemouth supplies 40 per cent of the UK's oil does not seem to register with SEPA in terms of the effects on the national economy of national power cuts, or shortages of fuel and petrochemicals for the whole of Scotland and the North of England for a prolonged period. Nor has any attempt been made to assess the impact of such a flood on the overseas reputation of Scotland, or indeed the UK, as being a safe place to

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<sup>19</sup> Werritty, A., Houston, D., Ball, T., Tavendale, A., and Black, A. "Exploring The Social Impacts Of Flood Risk and Flooding In Scotland". Edinburgh : Scottish Executive Environment Group Research Findings No.32/2007, 2007.

<sup>20</sup> Paolo Vestri, 2007, "Exploring The Take-Up Of Home Contents Insurance", Hexagon Research and Consulting, Scottish Executive Social Research. (web only publication available at [www.scotland.gov.uk/socialresearch](http://www.scotland.gov.uk/socialresearch) )

<sup>21</sup> Urban, F, and Mitchell, T, 2011. 'Climate change, disasters and electricity generation' Institute of Development Studies, Birmingham, England. <http://community.eldis.org/.59d5ba58/LatestClimate%20change%20disasters%20and%20electricity%20generation.pdf> accessed 8.6.11



invest. It is surely essential that a national strategic approach be adopted when dealing with critical infrastructure, but SEPA does not seem to think in this way.

Turning to the limited areas covered by the questions in the consultation.

*1 Do you support the setting of a significance threshold that will capture the majority of flood impacts and subsequent action in a comprehensive planning system (i.e. based around the 'Medium' risk level)?*

Comment. Provided it is kept simple. What is wrong with the insurance template or SPP 7 risk matrix currently in use? Why is it not mentioned at all?

*2 Are there areas identified as Potentially Vulnerable Areas following this assessment that you believe should not be designated as at significant risk of flooding?*

Comment. This should be assessed by the local FLAGs. They have the local knowledge and experience and cover 94% of the population.

*3 Are there areas NOT identified as Potentially Vulnerable Areas following this assessment that you believe should be designated as at significant risk of flooding?*

Comment. This should be assessed by the local FLAGs. They have the local knowledge and experience and cover 94% of the population.

*4. Do you agree that the amendments made to the boundaries of the Local Plan Districts are an appropriate response to the consultation exercise held in 2010? If not, what changes would you suggest and why?*

Comment. This should be assessed by the local FLAGs. They have the local knowledge and experience and cover 94% of the population.

*5. Do you agree with the broad remit, membership and procedure of the local advisory groups?*

Comment. What is wrong with the remit of existing FLAGs? This has worked well in the past. I note that the proposals for local advisory groups do not include insurance representation. Presumably insurance withdrawal in 2013 is not seen as a problem. It will be interesting to see whether the approach of ignoring insurance will be politically sustainable when the Solvency II Directive takes effect in 2014, by which time widespread areas of the country could be suffering blight and a collapse in property values.

*6. Do you support the use of the Area Advisory Group boundaries established under the Water Framework Directive as the basis for establishing local advisory groups as required in section 50 of the Flood Act? If not, what alternative arrangements would you suggest and why?*

Comment. The existing FLAGs were set up in the mid 1990s and grew organically to suit local needs and relationships rather than using arbitrary political or even catchment boundaries. This organic growth has worked well and there seems no merit in changing it now just for the sake of change. The arrangements in figure 5 have some merit, but may be hard to adopt in practice. For example, why is the whole of Highland and Argyll proposed as a single group? This is a huge area with many different types of flooding problems and is likely to be cumbersome to manage. Current FLAGs cover 94% of the population including all the areas most at risk of flood except for Moray.

## **General Comments**

Clearly a lot of work has gone into this paper, and the serious omissions mentioned above are puzzling. One is inevitably drawn to the conclusion that these omissions could only arise from a deliberate policy to exclude such factors and in particular to exclude the insurance industry from any dialogue. This will not stop Insurers from acting according to their own commercial interests (see annexe).

After 2013, insurers will be released from their obligations to provide insurance cover and this will result in the true risk of flooding in every part of Scotland being properly measured and priced for the first time, using the National Flood Insurance Claims Database.

The possibility of a collapse in property prices and widespread and contagious property blight will make SEPA's desire to continue to ignore insurers and make their own calculations based on relatively limited expertise and data – especially on consequential loss risks- look increasingly strange when insurers have proved so willing to assist in the past.

## **Annexe**

### **Ten scenarios for 2013.**

What will insurers do when the 50 year old commitment to provide flood insurance expires in 2013? This is still not known, but here are various possibilities:

1. Business as usual, that is, continue to subsidise flood plain development by overcharging in low risk zones in order to keep premiums low in high risk zones. This is unfair to those local authorities which have taken action to reduce flood risk, and is unsustainable in a free market.
2. Increase the flood excess substantially, especially after a flood claim. If the excess exceeds £2,500 the insurance can no longer be used as security for a mortgage and this will result in foreclosure and blight.

3. Discontinue the subsidy from property in low hazard areas and charge the full price for high hazard properties.
4. For a substantial increase in premium, introduce a 'total loss' option in high flood hazard areas, whereby if the flood exceeds a set depth, the insurer buys the property at market value and then demolishes it.
5. Make concerted efforts by insurers to litigate against local authorities, SEPA, planners, architects, and developers to recover claims outlays. Scottish law will enable this to be increasingly used, especially if the Scottish Government fulfil their promise to allow 'class actions'.
6. Decline to issue any property damage cover to homes or businesses in the highest hazard areas.
7. Exclude flood cover for commercial property risks and seek authority from the financial Services Authority to exclude flood cover from personal property risks.
8. Discontinue underwriting policies in the highest hazard areas on an indemnity basis. Instead offer a 'first loss' policy where the insurer would pay up to the sum insured or the extent of the loss, whichever is less. This would encourage the policyholder to move property out of the way of the flood and to deploy demountable defences.
9. Issue cover in high hazard zones on a benefit basis similar to personal accident insurance. Again the policyholder would choose what level of cover was required in advance. Say the policyholder chooses a benefit of £10,000. In the event of a flood to a specified depth, proved by photographs or tide marks or an Environment Agency report, the insurer would pay out a flat sum of £10,000 right away which the policyholder could spend any way they wished, perhaps put it towards resilient reinstatement, or alternative accommodation. The sum might be more than the cost of the damage or it might be less. This would enable speedy claims settlement and encourage the policyholder to move property away from the flood in time, or to deploy demountable defences.
10. Those in flood hazard areas may have no alternative but to arrange a gaming contract with a bookmaker if the probability of loss is too high for an insurance company. This would operate in a similar way to a benefit policy.

