



Mr Paul Frew MLA  
Chairman  
Agriculture and Rural Development Committee  
Room 243, Parliament Buildings  
Ballymiscaw, Stormont  
Belfast, BT4 3XX

Cc. Stella McArdle, Committee Clerk

18<sup>th</sup> February 2014

Dear Mr Frew

### **Reservoirs Bill**

I am writing on behalf of NILGA to thank the Committee for the invitation to make an oral presentation in relation to the Reservoirs Bill. This Bill is important to councils, since many councils are owners or managers of bodies of water that will be covered by the requirements of the Bill. Councils are also materially involved in community resilience and emergency planning, working closely with DARD and particularly Rivers Agency to prevent flooding, and to protect the public in the event that flooding does occur.

I have been in contact with a number of councils that have ownership or management responsibilities in relation to reservoirs, in the hope that they could assist NILGA in giving evidence in relation to what is an extremely technical Bill. In doing so, I established that the Committee has been in contact with the same councils, and that they will be giving evidence to the Committee on the same day. It is therefore unlikely that NILGA could add much value to the Committee's scrutiny of the Bill from a technical standpoint.

Additionally, given the current constraints on NILGA and heavy prioritisation of our work due to the legislative passage of the Local Government Bill and related subordinate legislation, it is with regret that I must turn down the opportunity offered to NILGA to give evidence on the Reservoirs Bill. There are however, a number of issues that I would highlight to the Committee, and trust that you will take these into consideration during your deliberations.

### **Key Issues**

1. I understand, from conversations with the Committee Clerk, that the Committee is particularly concerned by the lack of information in relation to costs associated with the implementation of this Bill, and this is a concern that would be shared by NILGA. There may be large maintenance and repair bills for reservoirs where an owner cannot be traced or is irresponsible, and it is vital that councils are not a point of last resort for funding of works that need to be carried out in default.

2. NILGA has been requested to provide the Committee with some background information in relation to cost estimates that councils may have developed in relation to maintenance of reservoirs in council control, to assist the Committee in developing a wider cost estimate. We will endeavour to source this information and provide it to the Committee in a timely manner, should it be available.

In the meantime, we would recommend that the Committee refers to the Government's response to the Pitt Review (2008) published in December 2009, which gives an indication of the funding required for this work in England and Wales. This document is available online at:

<http://archive.defra.gov.uk/environment/flooding/documents/risk/pitt-progress091215.pdf>

3. NILGA has discussed the Bill with the Secretary of the Local Government Chief Environmental Health Officers Group and Local Government Emergency Management Group (LGEMG), Mr Barney Heywood (Omagh District Council), and also with Mr Eugene Cunningham who is the Emergency Planning Co-ordination Officer for the Southern Group Environmental Health Committee. Local Government Emergency Management and Planning is performed on a collaborative basis, under the regional auspices of LGEMG. We are particularly keen to ensure that the Committee looks at the Bill within the context of emergency planning, as well as the engineering context. To this end, I have attached a paper, prepared by Mr Cunningham in liaison with Mr Heywood, to outline concerns from an emergency planning and resilience standpoint.

**NILGA would strongly encourage the Committee: a) to consider the repercussions of the attached paper, and b) to propose the development of robust Civil Contingencies legislation appropriate to Northern Ireland as a key recommendation of your forthcoming report.**

The attached paper also contains a substantive list of references to publications that may be of interest to the Committee in its scrutiny work on this Bill. Please feel free to come back to me with any queries you may have in relation to the information provided.

4. NILGA is aware that a more integrated approach to emergency planning, flood prevention and management and adaptation to climate change has been developing in recent years, and that Rivers Agency have been materially involved in this work, alongside councils. Our members are keen to ensure that the recently formed flood forums are all meeting regularly and working effectively, and that they take risks from reservoir failure into account, in addition to coastal and fluvial flooding.

The members and staff of NILGA wish the Committee well in its scrutiny of the Bill, and we will revert to you with any information that is made available to us in relation to costs of reservoir maintenance. Should you require any further information from the Association, please do not hesitate to contact me at the NILGA offices.

Yours sincerely



Karen Smyth  
Head of Policy  
Enc.

# Reservoir Flood Resilience in Conjunction with the Draft Reservoirs Bill

## Introduction

The following discussion offers an emergency planning and resilience viewpoint of managing the risks associated with reservoir safety. In the last 200 years there have been 14 dam failures that have resulted in the deaths of 465 people across the UK. However, there were 10 dam failures and a number of serious incidents since then. Pitt (2008: 303).

Many observers argue that some of the failures leading to such crises and disasters are only 'predictable' with the benefit of hindsight, Wildavsky, (1985, 1988). However, learning from past disasters and accepting that not all risk can be 'hard' engineered out of existence, is a more holistic approach. Thankfully as Hood and Jones, (2001:12) point out '*...it is a normal principle of sound design to incorporate both the lessons of previous failures and forethought about likely future ones*'. Hence emergency planning and resilience should be essential elements of the Reservoirs Bill.

Apart from those engineering works discussed elsewhere within the consultation process, the following key points are recommended regarding the overall risk from flooding and subsequent inundation associated with reservoir failure.

## Flood Planning & Resilience

The management of such structures should include an overall flood plan. The plan should consist of the three main elements consistent with recommendations documented by the Pitt Review (2008) below.

- The plan should include an on-site flood plan detailing the response to a potential breach. This may reduce the impact of any uncontrolled escape of water.
- An inundation map for each reservoir depicting the area potentially affected by an uncontrolled escape of water. This should highlight potential critical infrastructure and domestic households potentially affected by the flooding.
- A communications plan outlining how all stakeholders will communicate with each other. This must involve warning and informing advice to all those potentially affected by the uncontrolled release of water.
- Plans should be formulated and reviewed through respective First Responders Groups.

## Roles & Responsibilities

Although the legislation pertaining to Reservoirs safety in England and Wales; *The Reservoirs Act 1975*, was amended within *The Flood and Water Management Act (2010)* such instruments are not currently applicable in Northern Ireland. Despite this, consideration should be afforded to the wealth of experience and research readily available within.

Some of the terminology and associated roles and responsibilities regarding the overall management of the risks involved, will require agreement and possible amendment to suit existing structures within resilience arrangements in Northern Ireland.

Civil Contingencies functions in Northern Ireland do differ from those in England and Wales and key agencies, pivotal in the management of reservoir safety within the arrangements mentioned do not have the same responsibilities in Northern Ireland. In particular, the roles of Local Resilience Forums in England and Wales are now well established following the passing of the *Civil Contingencies Act 2004*.

The Northern Ireland equivalent, '*The Civil Contingencies Framework 2005*' provides mere enabling powers for many including District Councils, and the resilience groups are voluntary coalitions of like minded agencies. These differences and others have often been seen as barriers to, and at times a hindrance to effective resilience building in NI. Indeed numerous reports such as PEDU OFMDFM (2012: 8, 25, 27, 29) and the report into the Freeze/Thaw crisis (Consumer Council 2011) offer a contemporary analysis of flood resilience and reiterate recommendations for change.

## **Funding**

Much weight has been given to the need to ensure the Draft Reservoirs Bill will equip society to manage the current and possible future challenges associated with flood risk. The timing of the bill and associated arrangements are given added focus due to the obligations contained within the EU Floods Directive (2007). In order to make these and future initiatives realistic and achievable, consideration must be given towards the possible funding needs of any resilience building measures. This should include not only the 'hard' solutions, already discussed within the earlier consultations of this bill, but also all those activities such as community engagement, warning and informing, training and testing of plans and protocols etc necessary to establish and maintain an acceptable and effective standard of resilience. Schemes of funding such as those highlighted by DEFRA (2009: 91) whilst not comprehensive do offer some estimation of some of the costs involved.

## **Conclusion**

The incidence of excessive weather episodes, and unknown future changes to our climate have focused our attention to the real and potential impacts associated with flooding. Since 2007, the only year without a serious flooding event in NI was 2010. The sources of flooding are common knowledge and whether this is from coastal surge, recently experienced in NI, or from swollen river courses in many previous episodes, the impacts are very tangible.

Whilst the likelihood of failure from our water storage structures is low, the potential impacts could prove devastating. This is especially critical when examining those dams and reservoirs located in close proximity to populations and critical infrastructure. The failure of the **Ulley reservoir** in Rotherham in 2007 documented by Pitt (2008: 301) serves as a fairly contemporary reminder that vulnerability exists. Pitt recognised the need to learn from this incident and reminds the emergency planning community of the lack of contingency arrangements of the time. These failings have prompted recommendations regarding hard engineering measures and contingency building initiatives similar to those outlined above and are now included in The Reservoirs (Scotland) Act 2011 as well as contingency measures offered by The British Dams Society (2014). This duality of strategies between hard engineering and the softer measures provides the basis for the more holistic approach called for above.

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## References

### 2014

The British Dams Society (2014): [http://britishdams.org/reservoir\\_safety/#floodplan](http://britishdams.org/reservoir_safety/#floodplan)

Environment Agency (2014) *The Reservoirs Act 1975*

<http://www.environment-agency.gov.uk/business/sectors/118423.aspx>

### 2013

Cabinet Office (2013): Flood Risk Management

<https://www.gov.uk/flood-risk-management-information-for-flood-risk-management-authorities-asset-owners-and-local-authorities>

DARD (2013), Reservoir Safety policy incorporating changes from the public consultation

<http://www.dardni.gov.uk/reservoir-final-reservoir-safety-policy.pdf>

### 2012

OFMDFM- Office of First Minister and Deputy First Minister, (2012) PEDU Review of the Response to Flooding on 27<sup>th</sup> and 28<sup>th</sup> of June 2012

### 2011

Consumer Council for Northern Ireland, (2011) *Left high and dry: A consumer council report on consumers' stories and experiences of the water crisis*. Belfast. Consumer Council.

### 2010

Cabinet Office (2010): The Flood and Water Management Act 2010 (Commencement No. 1 and Transitional Provisions) Order 2010

### 2009

DEFRA (2009) The Governments Response to Sir Michael Pitt's Review of the Summer 2007 Floods, Progress Report online at:

<http://archive.defra.gov.uk/environment/flooding/documents/risk/pitt-progress091215.pdf>

### 2008

Pitt, M. (2008) *Learning lessons from the 2007 floods: An independent review by Sir Michael Pitt*:

[http://webarchive.nationalarchives.gov.uk/20100807034701/http://archive.cabinetoffice.gov.uk/pittreview/\\_media/assets/www.cabinetoffice.gov.uk/flooding\\_review/pitt\\_review\\_full%20pdf.pdf](http://webarchive.nationalarchives.gov.uk/20100807034701/http://archive.cabinetoffice.gov.uk/pittreview/_media/assets/www.cabinetoffice.gov.uk/flooding_review/pitt_review_full%20pdf.pdf)

### 2007

European Parliament, (2007), *DIRECTIVE 2007/60/EC, OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 23 October 2007 on the assessment and management of flood risks*

<http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:288:0027:0034:EN:PDF>

### 2005

OFMDFM- Office of First Minister and Deputy First Minister, (2005) *The Northern Ireland Civil Contingencies Framework 2005*

### 2004

*Civil Contingencies Act 2004*, London: The Stationary Office.

### 2001

Hood, C. and Jones, D. (2001) *Accident and Design*. London Routledge.

### 1985

Wildavsky, A. (1985)'Trial without error: anticipation versus resilience as strategies for risk reduction', Sydney: Centre for Independent Studies.