

22 February 2007

EN85-03

- MEMORANDUM -

TO: All Mayors/Chairs
All Chief Executives

FROM: Ian Buchanan, Chair, Regional Affairs Flood Management Sub-committee

SUBJECT: **Flood Risk Management Update**

1. Purpose

To update all Councils on the work being undertaken by the Regional Affairs Committee (RAC) and its Flood Management Sub-committee on flood risk management.

To advise you of our intention to provide a copy of the Flood Management Paper prepared by the Sub-committee to relevant Ministers and central government officials

To advise you that the Sub-committee is intending to proceed with the development of a New Zealand Standard based on the draft *Managing Flood Risk Protocol*

2. Introduction

3.

This memorandum follows on from the one I sent you in September 2006 to update you all on the work being undertaken by the RAC and its Flood Management Sub-committee on flood management. A copy of the memorandum and background papers can be found on the *Local Government New Zealand* website (www.lgnz.co.nz) in the 'Current Projects' section.

Background

Following the floods in the period 2004-06 central government agreed to the Ministry for the Environment (MfE) undertaking a review of flood risk management. Cabinet has agreed a work programme scheduled to be completed mid to late 2007.

Meanwhile, local government responded to the floods by preparing the *Managing Flood Risk Draft New Zealand Protocol*. The RAC created a Flood Management Sub-committee to oversee both strands of work, consisting of:

- Ian Buchanan, Chair, Greater Wellington Regional Council

- Stephen Cairns, Chair, Otago Regional Council
- Meng Foon, Mayor, Gisborne District Council
- Basil Morrison, President, *Local Government New Zealand*
- Clive Geddes, Mayor of Queenstown Lakes District Council
- Ian McKelvie, Mayor of Manawatu District Council

Supported by a group of chief executives:

- Graeme Martin, Otago Regional Council
- Michael McCartney, Horizons Regional Council
- Steve Ruru, Thames-Coromandel District Council
- Bill Bayfield, Environment Bay of Plenty
- Clive Manley, Far North District Council
- Rod Titcombe Manawatu District Council

3. Central Local Government Forum Discussion on Flood Management

A joint paper on flood management from MfE and *Local Government New Zealand* was put to the Central/Local Government Forum in December 2006. The paper outlined progress to date on the MfE Review of Flood Management, key Cabinet decisions to date and future directions for the Review, plus the central and local government sets of principles to guide the Review.

At the Forum I suggested the establishment of a joint central/local government political governance group and a joint executive working group including officials from central and local government to work together on the various aspects of the flood management work, including work on adapting to climate change. The government is to come back to us on the suggestion. In the meantime I have forwarded a letter to the Minister formally requesting that the joint groups be established and seeking a meeting to discuss flood matters by the end of February. Government showed a strong interest at the Forum in items on sustainability, climate change adaptation, flood and sustainable land management.

4. Update on RAC Flood Management Sub-committee Work

(a) Development of the draft Managing Flood Risk Protocol into a NZ Standard

The Sub-committee has agreed to the development of the draft protocol into a NZ Standard under the Standards Act. The Standard will be flexible, process orientated, and allow for local decision making. Standards New Zealand has been contracted to develop the Standard. A workshop comprising local authorities, central government and Standards NZ was held in December to scope the potential Standard. It covered the purpose, need and users of a Standard on managing flood risk, the value of a Standard, inclusions, exclusions, issues and risks. Indications are that it is worth pursuing the development of a Standard.

Issues discussed have included the impact of such a Standard on communities with less ability to pay, the desirability to involve the insurance industry in the development of the protocol and the requirement to highlight the residual risk from any flood management proposal (identifying what events the proposed works will not protect the community from). One issue being further researched is whether the Standard could have status in the National Policy Statement on Flood Management.

(b) Local Government Perspective on Management of Flood Risk in New Zealand

A consultant has been engaged to develop a local government perspective on the management of flood risk in New Zealand. The document is attached as Annex 1. It is positive, identifies issues, aspirations and how we get there.

We are intending to provide the document to relevant Ministers and central government officials, as an input into the flood risk management work being undertaken by central government. The Cabinet is considering an officials report on flooding in March. In order to have our work considered by Ministers we need to provide them with copies of the paper next week.

Please review the report and if you have any issues with it, send them to Susan Edwards (susan.edwards@lgnz.co.nz) by close of business on Monday 26 February.

The document includes:

- The aim of local government in relation to flood management
- Available tools
- Solutions and barriers (institutional capacity, flood hazard assessment, residual risk, inappropriate RMA outcomes, de facto national standards, repeat events, affordability, inappropriate structures)
- Existing work streams

The paper has enabled the Sub-committee to identify the following matters which could be included in a non-prescriptive process orientated NPS on flood management:

- Making flood management a matter of national importance
- Facilitate holistic catchment management that integrates flooding from all sources and the impacts of catchment land use
- Require community scale assessments of flood hazard risks to be undertaken in a nationally consistent manner, with appropriate avoidance and mitigation strategies being developed by Local Government for each community of interest
- Include impacts of climate change in flood hazard risks assessments

- Require disclosure of residual risk to communities
- Proactively plan for and manage residual risk and its consequences
- Overtly consider the merits of relocation or staged retreat as opposed to the reestablishment of infrastructure, buildings and other assets
- Require preference to be given to flood hazard avoidance in RMA documents
- Balance private property rights with public interest matters in high flood risk areas
- Remove presumption that former NWASCO and current Building Act flood protection standards are always appropriate values to use
- Require infrastructure to cater for known flood hazard risks and avoid exacerbating those risks
- Require all Crown agencies and other national bodies to have an objective to reduce the impact of their activities on the flood risk in local catchments.

5. Climate Change Adaptation

Local government has been identified as a key sector to prepare and adapt NZ communities to the impacts of climate change. A local government project team has been working with Ministry for the Environment official to prepare a prioritised list of projects to assist local government with its work on climate change adaptation. The chief executives on the Sub-committee reviewed the work and have identified two areas that they see as priorities; a set of nationally consistent methodologies to determine sea level rise, and rainfall figures for inclusion in council decision making.

6. Update on the MfE Review of Flood Management

The table below shows the MfE's progress in its eight key work areas.

	Work Area		Progress
1	Identifying current levels of and approach to flood management including an assessment of whether flood protection assets are being appropriately maintained.	1	A report on 17 case studies has been prepared and circulated. 40 councils responded.
2	Identifying the flood risk in regions and methods available to mitigate risk	2	
3	Identifying best practice	3	Work commenced. RFPs have been prepared and consultants are being engaged to undertake preparation of a Quality Planning Website Guidance Note on Natural Hazards

4/5	Funding and affordability? Role of central government	4/5	Work commenced. RFPs have been prepared and consultants engaged to undertake an examination of funding data from Regional Council LTCCPs.
6	Legislative framework	6	Report will be sent out for comment around the end of February
7	Information transfer	7	
8	NPS on Flood Management	8	Officials to report back to Cabinet in March 2007 on desirability, possible scope, direction and process for preparing the NPS. MfE officials have held workshops for Council technical officers in Auckland, Wellington, Christchurch and Invercargill.

Action

Please pass this memorandum on to relevant councillors and staff within your organisation.

Please review the attached flood management report and if you have any issues with it, send them to Susan Edwards (susan.edwards@lgnz.co.nz) by close of business on Monday 26 February

Ian Buchanan
Chair, RAC Flood Management Sub-committee

ANNEX 1:

Regional Affairs Committee (RAC) Flood Management Sub-Committee
Flood Management Paper, February 2007

FLOOD MANAGEMENT

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1 Introduction

This Paper has been developed by the Regional Affairs Committee (RAC) Flood Management Sub-Committee. It sets out the Local Government (LG) perspective on the current and future management of flood risks in NZ, with a particular emphasis on identifying central and local government actions required to achieve a robust decision making framework for sustainable flood management.

Foremost amongst the issues to be addressed is the lack of community and personal understanding and recognition of residual flood risk, a reluctance to consider asset retreat and relocation as the best option in some circumstances, and a disparity in the level of community and council funding and resources available for flood management.

The flood risks of communities in New Zealand are a product of previous central and local authority policies, community values and land-use decisions. This means in looking forward to the future protection of our communities and catchments, we inevitably have a legacy of flood risk that will require careful management in the transition to the future. This legacy must not be seen as a blame issue, but should be focused upon as a learning experience, as we move towards a wider sustainable catchment management approach when considering protection and resilience of our communities.

2 Local Government Aim

The aim of LG with regards to flood management can be stated as:

Sustainable river and catchment management that achieves the particular level of flood hazard protection desired and accepted by each distinct community of interest, with residual risks fully understood and taken into account.

This aim acknowledges that communities and individuals must be responsible for articulating the particular level of flood protection that is appropriate for their circumstances. It recognises that a “one size fits all” approach to flood management is unrealistic.

LG acknowledges that residual risks could remain at a ‘higher than desirable’ level where the community decides for affordability and other reasons to accept a lower level of protection. Dealing with this residual risk will need to be addressed at the district or regional level.

3 Available Tools

LG largely has sufficient statutory flood management tools available to it.

These tools include hazard avoidance achieved by land use planning under the Resource Management Act (“RMA”); the provision of physical flood protection works and flood warning systems under the Soil Conservation and Rivers Control Act, Land Drainage Act and Local Government Act; and the identification of flood risk and the delivery of community wide civil defence responses during and after flood events under the Civil Defence and Emergency Management Act.

However, there are issues that prevent LG achieving its flood management aim in a consistent and effective manner nationwide. The resolution of many of these issues relies on Government action.

Some of the necessary Government actions could feasibly reside within a non-prescriptive process based National Policy Statement (“NPS”) developed under the RMA, while others must be separately delivered by Government outside of the RMA framework.

LG sees no role for a prescriptive standards based NPS that attempts to set mandatory flood design standards or require mandatory flood protection measures.

4 Issues and Solutions

The issues and their solutions are listed below. The solutions are tabulated and the assessed ability of a NPS to deliver them is shown.

4.1 *Collective Capacity*

Multiple community needs and Government legislative requirements, coupled with a limited rating base and staff resources, leads some councils to assign a lower priority to flood management activities.

A lack of appropriately skilled and experienced practitioners can hinder councils attempting to manage catchments in a holistic manner, for example by failing to link upper catchment land use to lower catchment flood risks.

Solutions – Institutional Capacity		
Solution	Delivery	NPS
Make flood management a matter of national importance	Government	Yes
Facilitate holistic catchment management that integrates flooding from all sources and the impacts of catchment land use	Government & Councils	Yes
Facilitate the training of flood management practitioners	Government, Councils & Professional bodies (IPENZ, NZPI, etc)	No

4.2 Flood Hazard Assessment and Residual Risk

LG considers that each community exposed to a flood hazard risk is entitled to have that level of risk assessed, with appropriate avoidance and mitigation strategies being subsequently developed in consultation with those communities. Different strategies will be required for urbanised (brown fields) and non-urbanised (greenfields) areas.

The impacts of climate change on flood frequency and severity (and associated matters such as sea level rise) should be addressed by LG and the community in a nationally consistent manner. This can be facilitated through Government advice and guidance.

Communities generally, and some decision makers, do not seem to understand that even with appropriate avoidance and mitigation strategies in place, there will always be a level of **residual risk** from either flood events larger than the design event, or from flood protection scheme and flood warning system failures and shortcomings.

There can never be a guaranteed 100% level of flood protection within a flood plain.

There is too little action being taken to acknowledge, determine and proactively plan for the consequence of residual flood hazard risks.

Solutions –Flood Hazard Assessment and Residual Risk		
Solution	Delivery	NPS
Require community scale assessments of flood hazard risks to be undertaken in a nationally consistent manner, with appropriate avoidance and mitigation strategies being developed by LG for each community of interest	Government & Councils	Yes
Include impacts of climate change in flood hazard risk assessments	Government & Councils	Yes
Require disclosure of residual risk to communities	Councils	Yes
Proactively plan for and manage residual risk and its consequences	Government & Councils	Yes

4.3 Inappropriate RMA Outcomes

RMA policy documents and regional and district plans sometimes fail to require hazard avoidance in preference to hazard remediation or mitigation.

At times there is also a failure to steadfastly implement the hazard avoidance provisions that RMA policy documents and regional and district plans do contain, at both a council and Environment Court level. This reflects the ability of persuasively argued private property rights to dominate matters of public interest.

Unforeseen or faster than anticipated land use intensification can exacerbate adverse cumulative effects and cause flood hazard land use planning and physical flood protection schemes to become obsolete, or make their nature and scale inappropriate.

Solutions – Inappropriate RMA Outcomes		
Solution	Delivery	NPS
Require preference to be given to flood hazard avoidance in RMA documents	Government & Councils	Yes
Consistently implement hazard avoidance provisions in RMA documents	Councils	No
Balance private property rights with public interest matters in high flood risk areas	Government & Councils	Yes
Better review of and response to land use intensification	Councils	No

4.4 De facto National Standards

There are a number of de facto flood management standards that are sometimes advocated by councils and landowners, or incorporated into District and Regional Plans. These include the 1:100 year urban and 1:50 and 1:20 rural flood protection standards promoted by the former National Water and Soil Conservation Organisation, and the 1:50 year standard for habitable structures included in the current Building Act.

These standards are often assumed to be the general level of flood protection that should be provided for communities. LG considers that what is required instead is a flexible and participatory process that determines suitable flood protection standards for individual communities. In some cases the level of flood protection should be very high (for nationally important infrastructure for example) and in some cases it can be much lower (for low intensity rural land use areas for example).

The appropriate level of flood protection (and associated residual risk) must be determined by councils in consultation with their individual communities.

Solutions – De facto National Standards		
Solution	Delivery	NPS
Remove presumption that former NWASCO and current Building Act flood protection standards are always appropriate values to use.	Government	Yes

4.5 Repeat Events

There is a reluctance to acknowledge that some public and private infrastructure, buildings and other assets are simply located in inappropriate and high risk floodable areas. This results in Government, councils and the insurance industry enabling the reinstatement of those assets in locations where they will be repeatedly flooded. In some cases the relocation of assets would be more appropriate.

There is a lack of clear and certain statutory tools to require the relocation or staged retreat of at risk assets. Currently the only viable option is voluntary purchase. LG acknowledges that there are potentially options under the Building Act and Health Act for declaring buildings dangerous or uninhabitable, and that District and Regional Plans can establish exclusion zones for new development.

This tendency to avoid making hard decisions on the relocation or retreat of at risk assets, coupled with the ready provision of financial assistance to rebuild or restore them in-situ, often precludes individuals from exercising self-responsibility in dealing with the residual flood hazard risks that they face. LG considers it desirable that the insurance industry gains a better understanding of the undesirability of reinstating some assets in areas subject to repeat flood events.

Solutions – Repeat Events		
Solution	Delivery	NPS
Acknowledge that some infrastructure, buildings and other assets are simply located in inappropriate and high risk floodable areas	Government & Councils	No
Overtly consider the merits of relocation or staged retreat as opposed to the reestablishment of infrastructure, buildings and other assets	Government & Councils	Yes
Provide statutory tools to enable councils to require the relocation or retreat of infrastructure, buildings and other assets from high flood risk areas	Government	No
Make necessary hard decisions on asset relocation	Government & Councils	No
Provide clear policies which persuade or require individuals to exercise self responsibility regarding residual flood hazard risk	Government & Councils	No

4.6 Affordability

Some communities simply cannot afford to fund desirable flood protection measures, be they flood protection schemes or flood warning systems. This can be addressed through the provision of “safety net” funding for poorly resourced communities, akin to the existing Government grant scheme for small community wastewater treatment systems and water supply quality.

Some councils lack the necessary funding and staff resources to utilise and effectively implement the full range of statutory flood management tools available to them. This is exacerbated by a general shortage of appropriately trained and experienced flood management practitioners.

Society, including Government, tends to underestimate the true cost of responding to flood events that could have been avoided through appropriate land use planning decisions or the provision of flood protection measures. Such costs include the reinstatement of infrastructure, costs to business and the mental and physical health of flood victims. This tends to favour reestablishment of assets as opposed to their relocation.

There is a general lack of Crown infrastructure and land owner contribution towards the funding of community flood alleviation schemes. LG considers that Government needs to accept its responsibilities as a good neighbour, for example where poorly managed Crown land exacerbates upper catchment runoff and erosion. Consequently,

Government should allow Crown owned land to be subject to the same LG funding regime as private land. The inability to rate Crown land is an unacceptable inequity that transfers costs to private landowners.

LG also considers that where statutory functions undertaken by LG have a tangible component of national interest or provide a clear national benefit (such as some aspects flood management), then commensurate national funding should be available to assist with the LG delivery of those functions.

Solutions – Affordability		
Solution	Delivery	NPS
Provide “safety net” funding to at risk communities for flood avoidance, protection or warning systems	Government & Councils	No
Provide funding assistance to under resourced councils to boost their institutional capacity	Government	No
Properly consider the true cost of responding to flood events when assessing appropriate responses and recognise who actually pays for remediation	Government & Councils	No
Provide funding in recognition of the national interest nature of, and national benefit provided by, some flood management activities	Government	No
Allow Crown land to be rated (or payments to be made in lieu of rates) in the same manner as private land for flood management purposes	Government	No
The Crown and its agencies to acknowledge their responsibilities as infrastructure owners, land owners and ‘good neighbours’	Government	No

4.7 Inappropriate Infrastructure

At times infrastructure, such as road and rail bridges and culverts, are under sized in terms of the floods they are required to pass. The infrastructure also needs to be protected from flood events and the infrastructure owners may not be aware of the importance of upstream flood protection works in that regard. This arises due to funding constraints and a lack of knowledge of flood events.

Crown agencies can have conflicting objectives set by Government, such as Transit NZ and OnTrack being required to run their networks, efficiently, with a performance measure being to keep them open during a flood. Raising a road or railway line to keep it flood free can cause flooding elsewhere in the catchment.

Solutions – Inappropriate Infrastructure		
Solution	Delivery	NPS
Require infrastructure to cater for known flood hazard risks and avoid exacerbating those risks	Government & Councils	Yes
Require all Crown agencies and other national bodies to have an objective to reduce the impact of their activities on the flood risk in local catchments.	Government	Yes

Require Crown agencies and other national bodies to contribute to flood avoidance or mitigation measures where they adversely impact on those measures or receive benefits from them.	Government	No
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5 Existing Work Streams

Apart from the addressing the issues described above, there are other complimentary and necessary Ministry for the Environment and LG flood management work streams in place that LG is committed to continuing with. These are:

- Conversion of the Draft New Zealand Protocol on Managing Flood Risk into a New Zealand Standard;
- Clarifying Government, LG and private sector roles and responsibilities for flood management. This includes confirming the LG management role for rivers beds subject to Treaty of Waitangi claims;
- Identifying and promulgating Best Practice Guidance on risk assessment, cost benefit analysis, flood hazard land use planning, flood protection schemes, and flood warning systems;
- Providing accurate weather forecasts and heavy rain warnings;
- Gathering and reporting information on the level of flood hazard risks in New Zealand and the performance of existing avoidance and mitigation strategies.

Other substantive Ministry for the Environment work programmes also have positive synergies with sustainable flood management. These include Government's:

- Sustainable land management programme;
- Water programme of action;
- Climate change programme.

The importance and benefits of these existing Government initiatives is acknowledged by LG.

LG considers, however, that an additional work stream is required that involves working with the Insurance Industry to establish a collaborative process for assessing whether or not flood affected assets should be relocated or retreated as opposed to being rebuilt in their original locations. LG considers that there is also scope for insurance premium differentials to better reflect flood risks, including residual risks.

6 Summary and Conclusions

Local Government largely has available to it the statutory tools necessary to achieve effective and appropriate flood management. However there are identifiable issues preventing the consistent nationwide implementation of those tools. There are readily

identifiable solutions to those issues and many of them require Government action and support.

Some Government led solutions could be embodied in a non-prescriptive and process oriented RMA National Policy Statement. These are:

- Make flood management a matter of national importance;
- Facilitate holistic catchment management that integrates flooding from all sources and the impacts of catchment land use;
- Require community scale assessments of flood hazard risks to be undertaken in a nationally consistent manner, with appropriate avoidance and mitigation strategies being developed by LG for each community of interest;
- Include impacts of climate change in flood hazard risks assessments;
- Require disclosure of residual risk to communities;
- Proactively plan for and manage residual risk and its consequences;
- Overtly consider the merits of relocation or staged retreat as opposed to the reestablishment of infrastructure, buildings and other assets;
- Require preference to be given to flood hazard avoidance in RMA documents;
- Balance private property rights with public interest matters in high flood risk areas;
- Remove presumption that former NWASCO and current Building Act flood protection standards are always appropriate values to use;
- Require infrastructure to cater for known flood hazard risks and avoid exacerbating those risks;
- Require all Crown agencies and other national bodies to have an objective to reduce the impact of their activities on the flood risk in local catchments.

Some barriers can be addressed by Local Government themselves. These are:

- Consistently implement hazard avoidance provisions in RMA documents;
- Better review of and response to land use intensification.

However, other critical barriers must be resolved by Government actions undertaken outside of a RMA National Policy Statement. These actions are:

- Provide funding assistance to under resourced councils to boost their institutional capacity;
- Provide funding in recognition of the national interest nature of, and national benefit provided by, some flood management activities;
- Facilitate the training of flood management practitioners;
- Provide “safety net” funding to at risk communities for flood avoidance, protection or warning systems;

- Properly consider the true cost of responding to flood events when assessing appropriate responses and recognise who actually pays for remediation;
- Allow Crown land to be rated (or payments to be made in lieu of rates) in the same manner as private land for flood management purposes;
- The Crown and its agencies to acknowledge their responsibilities as infrastructure owners, land owners and 'good neighbours';
- Acknowledge that some infrastructure, buildings and other assets are simply located in inappropriate and high risk floodable areas;
- Make necessary hard decisions on asset relocation;
- Provide statutory tools to enable councils to require the relocation or retreat of infrastructure, buildings and other assets from high flood risk areas;
- Provide clear policies which persuade individuals to exercise self responsibility regarding residual flood hazard risk;
- Require Crown agencies and other national bodies to contribute to flood avoidance or mitigation measures where they adversely impact on those measures or receive benefits from them.

Local Government would not support Government proceeding with a NPS if the barriers listed above were not addressed concurrently by Government.