

Flood Risk Management Conference 2018 Summary Report

University of Strathclyde Technology & Innovation Centre (TIC), Glasgow - February 5 & 6, 2018

Introduction

Sniffer's annual Flood Risk Management (FRM) Conference moved to the West Coast in 2018 and was held at Strathclyde University's Technology and Innovation Centre (TIC) in Glasgow. The conference theme was '*Working Together to Manage Flood Risk*'. This impetus on weaving together policy areas as well as organisations is central to the delivery of the Flood Risk Management Act. The conference sessions included a mix of presentations and breakouts focused on four topics:

- the wider Flood Risk Management policy landscape;
- coastal flood risk management;
- surface water management;
- innovation.

Feedback from last year's conference showed many delegates were attending for the first time, so to help new attendees get started on their networking James McLeod from Dumfries and Galloway Council kicked us off with an entertaining [who's who of the Scottish FRM community](#). Organisations highlighted included the National Flood Management Advisory Group, the Society of Chief Officers of Transportation in Scotland (SCOTS) FRM Group, the Lead Local Authority Forum, a number of the Scottish Advisory and Implementation Forum for Flooding (SAIFF) sub groups, Flood Risk Management Local Advisory Groups, the Cross Border Advisory Group, and the Scottish Flood Forum. SAIFF Groups are often looking for new members. Those interested in joining a group should, in the first instance, advise Antje Branding at Scottish Government.

Overview of the wider Flood Risk Management policy landscape

The Cabinet Secretary for Environment, Climate Change and Land Reform, **Roseanna Cunningham**, welcomed attendees to the 13th FRM conference. She highlighted that delivering FRM in Scotland is not only important in and of itself, but supports a variety of additional national policies and international commitments. [Antje Branding from the Scottish Government](#) continued this theme, highlighting there are inextricable links between FRM and Scotland's economic success. Flooding has direct and indirect consequences on businesses and communities, and is closely tied to inequality and economic disadvantage.

[Ruth Ellis from SEPA](#) explained how these interlinkages are being incorporated into



Picture courtesy of @RebeccaCarrotte

the update of the National Flood Risk Assessment. These advancements acknowledge the wide-reaching and often interrelated factors which contribute to flood risk in communities. This top down approach can be complimented by the powers granted by the Community Empowerment Act 2015, as [Frankie Barrett and Heather Claridge](#) showed in their presentation on Glasgow City Council's implementation of a strengthen community empowerment agenda. Here they drew on a wealth of examples including the [city's new resilience strategy](#), the action research project [Weathering Change](#) and the [Dip Into Waterways & Parkways project](#) in Greater Easterhouse.



As well as considering how other policy areas can help deliver FRM objectives, many speakers emphasised the ways completing FRM objectives can contribute to momentum in other sectors, particularly climate change adaptation. Here FRM managers were encouraged to ensure their work is recognised for its wider benefits, such as by contributing to the annual [Climate Change Public Bodies Duties Report](#) for their organisation.

2018 will be an important year for the FRM community, with lots of opportunities to contribute to policy development and delivery, including SEPA's National Flood Risk Assessment, the Scottish Climate Change Adaptation Programme, UKCP18 climate change projections and Scottish Water's Storm Water Management Strategy.

Coastal Flood Risk Management: Case Studies and Evidence Generation

As [Alistair Rennie from the Dynamic Coast project](#) reminded us in his presentation on the National Coastal Change Assessment, coastal flood risk management is particularly important as a large proportion of our population and our key infrastructure is located near the coast. Our coasts are dynamic systems and as they face accelerated changes due to sea level rise it is vital that we monitor and understand the changes underway. [Dr Travis Mason](#) explained that partnership working led by the Channel Coastal Observatory has led to 70% of the English and Welsh coastline being mapped at greatly reduced cost and with improved consistency, providing a model for others to follow. [Jennifer Hornsby and Douglas Pender](#) showed how similar data driven partnerships are helping to produce updated national datasets on Coastal Flood Boundaries. Led by JBA Consulting, with contributions from the Environment Agency, SEPA and Natural Resources Wales, this approach has helped to improve understanding of sea level and swell wave conditions. This is being complimented by new coastal flood risk mapping, supported by Royal Haskoning DHV and HR Wallingford.



This improved understanding of the coast will help us make better interventions in the communities and places that matter. [Greg Guthrie from Royal Haskoning DHV](#) first presented case studies from coastal change in action from the UK, focusing on how best to communicate with the public when their homes may be at risk, while his colleague [Jasper Fiselier](#) added an international perspective with examples from the Netherlands that explored the contribution nature-based solutions can have on flood protection.

Turning the focus onto hearing views from the delegates, these presentations were followed by a breakout session on coastal flood risk management, delivered by SEPA. With increasing risks to coastal communities from flooding and erosion impacts, the long term sustainability of assets could also be at risk. Roundtable discussions with delegates focused on policy options to respond to this risk, including relocation. Whilst there was some divergence in opinion on whether the term 'relocation' is most appropriate, there was almost universal agreement that relocation should be explored, with decisions based on a robust understanding of risk, and potentially considered as part of a Shoreline Management Plan. Scale (spatial and temporal) will be an important consideration in decision-making but it was also recognised that some communities are dependent on their coastal location and cannot be relocated.

Delegates noted the need for a nationally coherent approach on roles and responsibilities for implementing and resourcing relocation, should this be chosen as a policy approach. Whilst there were no practical examples given of relocation having taken place in Scotland to date, several ideas were put forward in terms of how policy development on relocation could be progressed, including developing an evidence base, identifying high-risk sites (e.g. using outputs of NCCA), communicating risks and engaging communities to get buy-in.



Surface Water Management

Surface water is influenced by a complex set of interlinked factors and so requires a matching flexible approach to manage it well. This takes new thinking and wise use of existing assets, as [David Hay from Glasgow City Council](#) demonstrated in his talk on the North Glasgow Integrated Water Management System (NGIWMS). This pioneering drainage system brings together the modern and the historic by using the Forth and Clyde Canal, itself an ancient monument, to store excess water. As well as enabling flood risk reduction this approach will help to unlock local regeneration and the development potential of 25,000 homes.

We also learnt about developments in the Merchant's Quarter of Aberdeen occurring through a partnership between [Aberdeen City Council and Scottish Water, presented by Will Burnish and Dawn Lochhead](#). By joining forces, these organisations are working together to develop options to reduce the risk of flooding from all sources, using the improved knowledge and understanding of the urban drainage network provided by the integrated catchment study for Aberdeen. This joint approach has helped to create opportunities to extend assessments to include multiple-benefits across a range of related factors, meaning better outcomes for all.

Following this theme, [Diane McKain from the Met Office and Louise Parry from SEPA](#) explained how collaboration was improving understanding of surface water management through the [Scottish Flood Forecasting Service Partnership](#). Many useful lessons have been learned through the partnership, including the importance of

allowing time for the complex legal agreements that form the foundation of the partnership to be developed, the benefits to problem solving but also the need for compromise and flexibility from all sides, and the need to ensure the key messages reach the right people to have the most impact.

Capping off this theme, three breakout sessions provided opportunities for delegates to explore the aspects of surface water management most relevant to them.

The first of these provided delegates with the first chance to hear about [Scottish Water's new Storm Water Management Strategy](#), which was officially launched on the second day of the conference. This new strategy illustrates how more effective and sustainable solutions addressing storm water above ground will substantially reduce pressure on nearly 32,000 miles of sewer network. Complimentary case study projects are currently underway from permeable paving and property level raingardens to diverting roof and road water through channels to ponds. The anticipated benefits include improved street scene and visual enmity, improving local property prices and promoting sense of community. New approaches to reduce the impact of sewer flooding on households and businesses will also help support economic development across the nation through creating space for new properties to connect to Scottish Water's network. With increased pressure from factors like climate change, development growth and urban creep, delegates were reminded we all have a role to play in reducing risks to homes and businesses.

The second breakout, led by the [SCOTS Flood Risk Management Group](#), provided a space for delegates to find



out more about how their colleagues were approaching surface water management plans and the implementation of SUDS. By bringing together flood risk managers from local authorities, and professionals from SEPA, Scottish Water and consultants, the session helped attendees to see their part in the larger system and begin discussions on holistic solutions. Attendees noted a greater focus on new developments at the strategic scale could help create linkages and reduce difficulties further down the line. Agreement on planning at the small scale can often be tricky too, underlining the benefits of close collaboration with key partners.

The final breakout of the surface water management theme was delivered by [The Museums of the FutureNow](#) and aimed to give attendees a glimpse of the far future of FRM. The Museums of the FutureNow team have developed an engagement approach that facilitates knowledge exchange between environmental scientists, creative practitioners and different public audiences to develop a cultural paradigm shift in the way we see ourselves in the world. Delegates, as museum 'visitors', were guided through a workshop that helped them tell each other about how they perceive the future of flood risk management. This process revealed both fears about long-term consequences of current actions and hopes for the beneficial outcomes that can be realised if action is taken now. Visitors were asked to select an exhibit at random from the Living with Water collection. Visitors were also given a place (e.g. Glasgow), the time when the exhibit entered the museum and became part of the collection (e.g. 2050), and a driver providing a context for scenario/story development (e.g. Culture). In groups of 4 or 5, the visitors spent 20 minutes writing a story that provided a history for their exhibit, explaining how it had influence flood risk management and helped create their imagined future. Summaries of these stories were shared with the full group. Seventy eight conference delegates visited the Museum and 18 stories were collated, illustrating the many different ways the future of FRM in Scotland could continue to develop.

Innovation

Variety breeds innovative solutions, so on the final afternoon of the conference delegates were provided with a sea of possibilities for the next big thing, with six unique breakout sessions. First up, the Innovation Showcase gave delegates a whistle stop tour through four emerging areas, taking in ideas on a National Flood Brigade from [Britt Warg at Geodesign Barriers](#), ways renewable energy projects can support Natural Flood Management from [Kelly Wyness at Natural Power](#), a new hydrological toolkit for peatland catchments from [Brendan Quigley at RPS](#), and three case studies exploring the case for monetising environmental benefits from [Angus Pettit at JBA Consulting](#).

At the same time, [Cordelia Menmuir from SEPA](#), [Gary Martin from RiverTrack](#) and [Paul Laidlaw from the Scottish Flood Forum](#) provided an overview of how the three organisations brought together flood forecasting and alerts, with real time monitoring of local river levels and volunteer community flooding groups to increase both flood preparedness and understanding.

In the next room, [Marina Piper from the Dee Catchment Partnership](#) and [James Travers from WSP](#) took delegates back to the halcyon

days of youth with their session on bringing raingardens into schools. Drawing from a number of recent projects, they showed how raingardens not only provide water management solutions, they also provide an opportunity to help pupils understand the science of water and give them the chance to get inspired by engineering.

In the second round of breakouts, [Matthew Barker from BRE](#) led a discussion on the growing area of Flood Resilient Repair. He encouraged delegates to consider how we could change the design of houses so that flooding does not cause long-term damage and people can get back in their homes faster after an event.

This focus on the impacts of floods on the people affected was explored further in a session based on work by [Annie McKee, Lorna Philip, Mags Currie and Gillian Dowds](#). This joint disciplinary team from CREW, the James Hutton Institute and the University of Aberdeen drew lessons from the 2015/16 flooding in the North East of Scotland, giving voice to those affected through many first-hand accounts. These powerful testimonies brought home that the impacts of flooding are multifaceted and continue long beyond the event, striking not just at people's property but also their sense of identity and community.



Picture courtesy of @Michaelcranston



Picture courtesy of @ScottishEPA

Closing out this brace of breakouts, [Will Burnish of Aberdeen City Council](#) led a session exploring new ways to fund the ambitious partnership projects we need. In this session he challenged FRM managers to think what else a flood scheme can be: from a cycleway project to a city garden to a road improvement scheme, all hold potential for FRM objectives and can open doors to new funding streams. Through a collection of examples he showed how we frame the story around a scheme can be just as important as how it is designed.

With so many ideas running through the conference, it was a challenge to sum it all up. Luckily we could turn to our group of key note listeners for a final panel session on the collective key messages and learning.

Key messages and Learning

Nine years on from the Flood Risk Management Act, this year's FRM Conference confidently showcased the significant advancements made by the many dedicated professionals in attendance and around the country. The strong message from the 15 presentations and 11 workshops over the two days was that **partnership working** is delivering great benefits and that continuing this progress requires understanding of each other's cultures, emotions and ways of working, as much as it requires understanding of technical evidence.

Many speakers noted this mutual understanding and the input of skilled intermediaries to facilitate partnership working are vital components of FRM efforts. [Ian Aikman from the Scottish Borders Council](#) brought us from theory to action with his talk on how the benefits of collaboration helped to achieve the success of the award winning Selkirk Flood Protection Scheme, while [Anna Beswick of Adaptation Scotland](#) showed that partnerships and their positive impacts can extend beyond the traditional FRM realm through initiatives such as Edinburgh Adapts.

"A very valuable combination of policy, practice, engineering and society."

Feedback from delegates on
FRM2018

However, delegates were reminded, good things don't come for free and partnership working brings new challenges which need to be managed to make the most of the opportunities available. These challenges include working to different timeframes, and aligning funding streams and engagement efforts. Spending the time at the start of a partnership to build a strong foundation of governance helps smooth out these differences and is key to making partnership working work. All these elements come together to create avenues to achieve multiple objectives and co-benefits, as well as enabling cost saving.

The importance of **community engagement** and particularly communicating flood risk to the public was also emphasised throughout the conference. There is still significant learning and understanding needed around community empowerment and flood risk management, and conference delegates were reminded everyone can play a role in developing the knowledge needed for co-operation and collaboration between organisations and communities.

"The content was great extremely relevant to the industry and its future and the breakout sessions in particular were very engaging."

Feedback from delegates on
FRM2018

As well as developing new approaches, delegates were encouraged to **celebrate the success** they are already achieving and continue to build a positive narrative around their work. Scotland has a good story to tell on FRM and we should not be shy about telling it. As a nation, we take pride in promoting our work with recent delegations from Ireland, Ukraine and Estonia all aiding our understanding and building new knowledge and skills pathways. A lot of enthusiasm and impetus was evident at this year's FRM conference, and whilst there is still some way to go, through partnership working flood risk management great accomplishments can be achieved.

Finally, with many delegates joining the conference for the first time, a strong theme of **collective learning, welcoming new voices and sharing learning** from the many closely linked FRM groups emerged. With introductions provided on the first day to many of these groups and a bustling marketplace with over 20 stalls, the conference continues to provide a way to keep best practice flowing and good ideas circulating.

This was a free event designed by Sniffer and the conference steering group: Antje Branding (Scottish Government), Elliot Robertson (SEPA), Dawn Lochhead (Scottish Water), James McLeod (Dumfries and Galloway Council) and Will Burnish (Aberdeen City Council). It was funded by:



**The Scottish
Government**

www.sniffer.org.uk