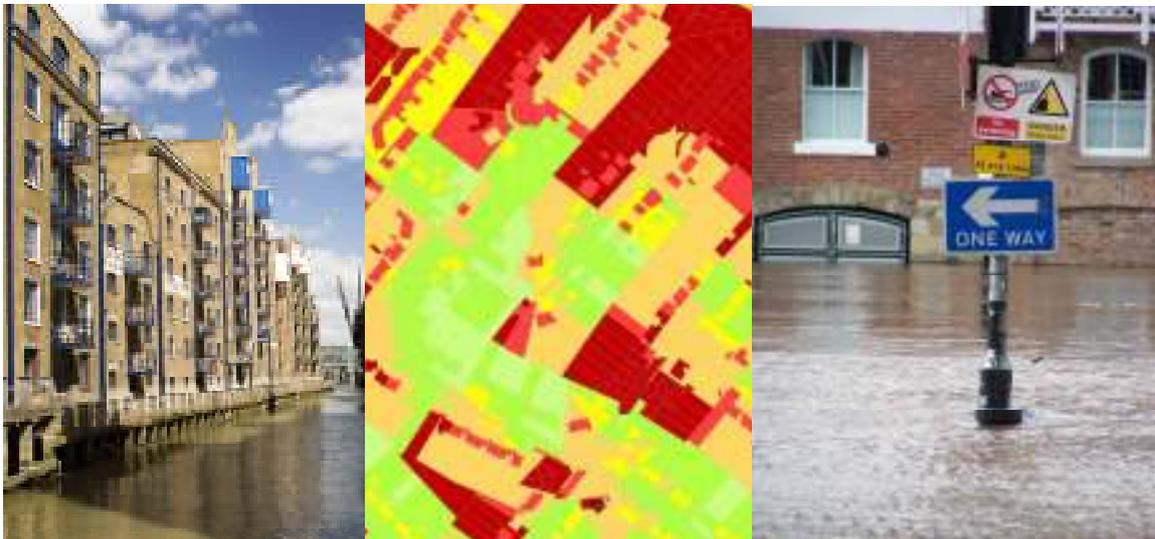




**Delivery of Surface Water Management Plans to  
support implementation of the Flood Risk  
Management (Scotland) Act**

**Workshop 3 - 18<sup>th</sup> March 2014**

<http://www.ciwem.org/knowledge-networks/groups/urban-drainage.aspx>





## **Delivery of Surface Water Management Plans to support implementation of the Flood Risk Management (Scotland) Act**

**Barcelo Stirling Highland Hotel, Stirling– 18<sup>th</sup> March 2014**

**This was the 3<sup>rd</sup> Workshop in a series hosted by CIWEM Urban Drainage Group and CIWEM Scotland Branch.**

### **TECHNICAL ENQUIRIES**

All technical enquiries and suggestions relating to this publication should be addressed to:

Technical Queries CIWEM Website

<http://www.ciwem.org/knowledge-networks/groups/urban-drainage.aspx>

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This publication has been checked by the editor members of the CIWEM (Scotland Branch) and CIWEM UDG Committee for major errors. However, this publication does not necessarily represent the views of either Committee. It is issued for guidance in good faith but without accepting responsibility for its content.

### **ACKNOWLEDGEMENTS**

This summary output was edited by Jamie Margetts (RPS Clear), Elliot Gill (CH2M Hill) and Kieran Downey (Scottish Water). It is based on the outputs of the 3<sup>rd</sup> workshop on the 18<sup>th</sup> March 2014, Stirling, and full list of attendees is given in Section 4.0 of this output.

### **AMENDMENTS**

<b>Reference</b>	<b>Details</b>	<b>Date</b>
V01-001	Summary Output from Workshop 3	December 2014
V01-002	Final Version following comments and Edit	February 2015



# **Delivery of Surface Water Management Plans to support implementation of the Flood Risk Management (Scotland) Act 2009**

**Barcelo Stirling Highland Hotel, Stirling– 18<sup>th</sup> March 2014**

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## 1.0 Introduction

Over 80 delegates with an interest in urban drainage and the Flood Risk Management (Scotland) Act attended the joint CIWEM (Scotland Branch) and CIWEM UDG “Delivery of Surface Water Management Plans to support implementation of the Flood Risk Management (Scotland) Act” Workshop in Stirling. This was the 3<sup>rd</sup> Workshop in a series, started in 2012, and a follow on workshop from the “Urban Drainage Integrated Modelling” workshop held in 2012 and “Delivery of Surface Water Management Plans to support implementation of the Flood Risk Management (Scotland) Act” workshop held in March 2014.

This third workshop was aimed at further raising awareness and assisting with building capacity in the Local Authorities and Partner organisations. Through a series of presentations, the event provided a general update on programme and requirements from SEPA, updates on revised SAIFF guidance with a particular focus on a streamlined appraisal process, and experience of applying the guidance in Glasgow.

The workshop then offered an opportunity for delegates to work in expert-led small groups to discuss in more detail different aspects of the SWMP process. Topics included: i) Partnership & Collaboration; ii) Measures & Options; iii) Data and Mapping; iv) Modelling; v) Options Appraisal; vi) Planning & Implementation.

This report summarises the outputs from the workshop so that these can be considered as part of any further action plans by Scottish Water, Local Authorities, the regulators, or Government. Many of the outputs align with those identified at the 2012 and 2013 Workshops; the reports of which can be found at <http://www.ciwem.org/knowledge-networks/groups/urban-drainage/events/past-events--presentations.aspx>.



As with previous workshops, a broad range of stakeholders from across the industry attended in 2014. Attendees ranged from Local Government, the regulators, Scottish Water and various consultants & specialist software suppliers. This allowed the full spectrum of challenges to be understood, and consideration given to all stakeholders needs in the development of solutions.

Presentations from the day are contained in Appendix 1, and the full report and presentations is available on the CIWEM website.



## **2.0 Aims and Objectives of the Day**

This third workshop was aimed at further raising awareness and assisting with building capacity in the Local Authorities and Partner organisations.

In summary, the main aims of the day were:

1. Share experiences from recent studies;
2. Further understand partnership and collaboration, and the role of each organisation in driving forwards SWMPs in Scotland;
3. Identify a broad range of measures and options to implement SWMPs (i.e. green infrastructure or underground drainage);
4. Better use data and mapping techniques to communicate and analyse flood risk;
5. Understand when different levels of modelling are required; and the upskilling in various organisations to implement different levels of modelling;
6. Identify different options appraisal processes, considering affordability, transparency, knowledge gaps and uncertainty;
7. Outline SWMP implementation strategies, considering duration, resourcing, costs etc.
8. Identify the role of CIWEM in helping promote understanding and application of SWMPs to practitioners in Scotland, including software developments, practical support and any obvious further research needs;
9. Transfer knowledge from the workshop to assist CIWEM or other bodies (R&D, software developers etc.) to implement the identified outputs.



### 3.0 Agenda for the Day

**09:00**

**Registration and Coffee**

**09:30 - 10:50**

**Introductory Session**

Introduction to Workshop

Kieran Downey, Scottish Water / UDG

SWMP update (Programme & expectations)

Roy Richardson, SEPA

Mapping and flood damage data

Jonathan Werritty, SEPA

Cost-benefit appraisal methodology

Elliot Gill, CH2M HILL / UDG

Glasgow SWMP example

Neil McLean, MWH

**10:50 - 10:55**

**Comfort Break**

**10:55 - 11:35**

**Breakout Session**

Focussed expert-led small groups addressing different aspects of SWMP:

- i) Partnership & Collaboration;
- ii) Measures & Options;
- iii) Data & Mapping;
- iv) Modelling;
- v) Options Appraisal;
- vi) Planning & Implementation

**11:35 - 11:50**

**Tea / Coffee Break**

**11:50 - 13:00**

**Summary and Feedback Session**

Structured feedback from breakout groups

All

Upcoming events

Rebecca Green, Scottish Water

Closing remarks

Kieran Downey, Scottish Water / UDG

**13:00**

**Workshop Closes**



#### 4.0 List of Attendees

The following delegates attended the day. CIWEM thanks everyone for their contributions during the day making it a successful event.

First Name	Surname	Organisation
Barbara	Barbarito	Scottish Water
Fiona	Barbour	Mott MacDonald
Neil	Berwick	Abertay University
Ben	Bickle	Scottish Water
Louise	Brown	Scottish Water
Barry	Considine	North Lanarkshire Council
Joanna	Corrigan	Arup
Stuart	Cullen	Clackmananshire Council
Tom	Dougall	City of Edinburgh Council
Kieran	Downey	Scottish Water
Harry	Doy	East Dunbartonshire Council
Claire	Elliott	Stirling Council
Ronnie	Falconer	Jacobs
Alayne	Finlay	Stirling Council
Bob	Fleming	Scottish Water
David	Gander	Aberdeen Council
Elliot	Gill	C2HMHill
Rebecca	Green	Atkins
Craig	Hart	Argyll & Bute Council
Rick	Haynes	SEPA
Sergi	Illa	Aberdeen Council
Iain	Jones	Scottish Water
Sarah	Jones	Mouchel
Stewart	Jordan	SEPA
George	Kerr	Inverclyde Council
Stephen	Kinghom	Argyll & Bute Council
Raj	Kumar	East Dunbartonshire Council
Ian	Lang	MWH
Dawn	Lochhead	Scottish Water
Richard	Malloy	Ricardo AEA
Jamie	Margetts	Clear Environmental Consultants Ltd
Andre	Matos	WSP
Andrew	McCrone	Black & Veatch Ltd
Rebecca	Austin	Clear Environmental Consultants Ltd
Iain	McLachlan	Clear Environmental Consultants Ltd
Grant	Vanson	SEPA
Neil	Mclaughlin	Mott MacDonald
Hamish	McLean	Atkins
Neil	McLean	MWH



Shona	McMillan	Falkirk Council
Eric	McQuarrie	Scottish Water
Craig	McQueen	Perth & Kinross Council
Gordon	Millar	Jig Ltd
John	Millar	West Lothian Council
David	Miller	North Lanarkshire Council
David	Molloy	South Lanarkshire Council
Alan	Murray	Clackmananshire Council
Chris	Newlands	Clear Environmental Consultants Ltd
Ryan	Newlands	Clear Environmental Consultants Ltd
Alvin	Pedzai	C2HMHill
Chris	Pittner	WSP
Fiona	Pollock	Atkins
Brian	Raeburn	Falkirk Council
Andy	Reid	Dundee City Council
Gordon	Reid	Scottish Water
Roy	Richardson	SEPA
Ndenyangnde	Ripiye	Abertay University
Zak	Ritchie	SLR Consulting
Patricia	Rowley	North Ayrshire Council
William	Sharkey	McLaughlin Partners
Sharon	Smith	Falkirk Council
Steven	Smith	Perth & Kinross Council
Ross	Speirs	Dundee City Council
Russell	Stewart	Perth & Kinross Council
Brian	Templeton	Dumfries & Galloway Council
Kirsty	Thorburn	SEPA
Lucy	Van der Ven	City of Edinburgh Council
Miquel	Vinyals	Aberdeen Council
David	Wailly	Scottish Water
Les	Watson	SEPA
Jonathan	Werritty	SEPA
Ron	Wilson	Dundee City Council
David	Winter	Scottish Water
Janice	Wotherspoon	Angus Council
Neil	Young	Angus Council



## **5.0 Presentations**

Presentations from the day are contained in Appendix 1, and the full report and presentations are available on the CIWEM website.

## **6.0 Breakout Session Outputs**

The breakout session was an opportunity for delegates to work in expert-led small groups to discuss in more detail different aspects of the SWMP process. Topics included: i) Partnership & Collaboration; ii) Measures & Options; iii) Data and Mapping; iv) Modelling; v) Options Appraisal; vi) Planning & Implementation. The outputs from these were then presented back to the group, and it is intended that these outputs are made freely available to assist or influence future co-ordination, delivery and enhancement of SWMPs.

The following tables summarise the outputs for each of the topics.



### Partnership & Collaboration

<b>Facilitator: Ben Bickle (Scottish Water) &amp; Alayne Finlay (Stirling Council)</b>	<b>Partnership &amp; Collaboration</b>
<p><b>Likely topics to discuss and feedback .....</b></p> <p>Discuss the role of SW, SEPA and the LA in the completion of SWMPs</p> <p>Discuss the planning/investment cycles of each organisation</p> <p>Discuss role of the community</p> <p>Who (role in each organisation) needs to sat around the table driving forward SWMPs</p> <p>How should the community take part in a SWMP?</p> <p>Any remaining barriers to partnership and collaboration?</p>	

### Outputs from Discussions

The **main stakeholders** are Local Authorities, Scottish Water and Forestry Commission Scotland (responsible authorities as set out in the Act), SEPA, other Government Agencies (i.e. SNH), Community Action Groups, Business Improvement Districts, Youth Groups and Sporting Groups. The wider community would need to be consulted on specific elements, but this is difficult as there are so many conflicting opinions and interests.

Within these groups, more detailed stakeholders were identified, for example:

- Local Authorities: Flood Officers (though often these are not a dedicated resource and thus a potential barrier to efficient implementation of measures); Emergency Planning Officers (information on historic events and help deliver community resilience measures); Planners (influence policy, prevent poor development or extensions, introduce green infrastructure measures and monitor paving over of areas); Housing / Roads / Land (opportunity to change behaviour of LA depts. And how assets are implemented / drained)
- Scottish Water: Flood teams (often have detailed local knowledge); Local Asset Planners (understand range of issues and measures to be implemented). SW would normally be a data provider (and resource provider), and responsible for implementation of measures affecting the sewer system.
- SEPA: FRM Team and Pollution Control. SEPA would normally provide data on flooding, river flows and water quality. They would coordinate and facilitate SWMP outputs with FRM stakeholders.

In determining **who drives** a SWMP, a first stage assessment would normally be undertaken to understand source and consequence of flooding to identify those with the largest interest in the study. This leads to initial barriers and challenges in that there is so much data that even assessing this at an early stage can have significant time, resource and finance implications. The first stage assessment will generally result in an initial SWMP and a range of measures.

Partnerships **should be simple** – there is no need to overcomplicate these if not required. Simple partnerships are more efficient and lead to more effective communications and decision making.



The duty is on the LA to set up the partnership, but if the problems are specific to individual stakeholders then the need for a partnership is queried, though dialogue and working together are still important to ensure best practice is shared. LAs would normally lead the SWMP, with a lead LA responsible for co-ordination of the SWMP outputs for the LFRMP.

SEPA is identified as a data provider, but also a key stakeholder with environmental concerns and obligations to implement measures set out in RBMP and FRMP. Scottish Water and the LAs often lead on the production of plans (dependant on main source of flooding). Issues often exist in determining where responsibilities lie across different stakeholders and who is responsible for taking a specific measure forward. Understanding each other's roles, obligations and funding mechanisms is critical.

Different objectives and duties of the different responsible authorities is identified as a challenge; particularly understanding and implementing the varied amounts of differing legislation across roads, planning, flooding and Scottish Water departments and bodies.

Planning and Investment is identified as a long term barrier, as Scottish Water Q&S4 is not aligned to LA or SEPA funding, leading to challenges in delivering improvement measures. Even different departments within LAs have very different funding and investment routes or cycles (i.e. flooding or roads). Likewise, ensuring a plan is delivered in the long term across stakeholders is a concern, due to issues around funding, ownership or implementation of the plan, and maintenance of assets and measures.

The **community** can take part in SWMPs in a number of ways, including consultation, information gathering, education to help themselves, for example, property level protection or not undertaking works that would make matters worse (paving driveways, wrong connections etc.). However, engagement with all the community is a barrier, as people often only show interest if they have been flooded, and getting areas of the community that have not flooded to change behaviours to reduce flood risk is difficult.

Understanding when to engage with different elements of the community is a challenge. It should be done as early as possible, but balanced against having some information that is robust so that expectations can be confidently managed, particularly in terms of available funding, likely scale or level of protection offered by a measure, the role of property level protection, and implementation timescales.

Open days and workshops are a good method of engaging with the community throughout the whole process, with more focused sessions to allow key members to be involved in the solution stage. Wide ranging workshops at the start of a study are a good method of collecting as much first hand and anecdotal evidence about flooding.



## Measures & Options

Facilitator: Les Watson (SEPA / CIWEM UDG)	Measures & Options
<p><b>Likely topics to discuss and feedback .....</b></p> <p>Broad discussion of experiences of a range of structural &amp; non-structural measures</p> <p>When and where is green infrastructure appropriate</p> <p>When and where is improved underground drainage appropriate</p> <p>Maintenance and public awareness and preparedness</p> <p>Most common measures which the group thinks will arise from SWMPs</p> <p>Skill gaps (and training needs) in applying, designing and constructing these measures.</p>	

## Outputs from Discussions

The process of choosing measures is very much ‘horses for courses’ and depends on a range of factors such as the catchment, the flooding mechanisms, geology, existing infrastructure and utilities, planning policies and the community. It is rarely possible to keep every stakeholder happy, and measures or options must undergo benefit analysis to ensure the maximum benefit (for a given cost) is obtained. SWMPs should start simple, and build up over time. Initial focus should be on how best to solve the flooding (which will be dependent on flooding mechanism, then the solution should evolve to maximise flooding, environmental and wider community benefits, or reduce issues that may cause concern (disruption, aesthetic appeal etc.).

The following were identified by the group as the ‘Top 4’ measures that SWMPs should consider:

1. Keep it on the Surface – disconnection from the drainage network to prevent overloading, and use the surface to store and manage extreme events in a safe and non-disruptive manner;
2. Awareness and Education – change behaviours to reduce connections and creep, and control flows at source. This will provide long term sustainable solutions to help mitigate climate change;
3. Green Pathways and Designated Flow Routes – to help divert flows away from flood risk areas and store or infiltrate away. This helps both immediate flood mitigation and climate change adaption;
4. At Source – attenuation, infiltration and storage at source (leaky butts, multi storey flood cells, infiltration zones etc.).

Property Level Protection (flood gates, airbricks etc.) was identified as a last resort measure, but one which sometimes there may be no other option.



## Data & Mapping

<b>Facilitator: Jonathan Werritty (SEPA)</b>	<b>Data &amp; Mapping</b>
<b>Likely topics to discuss and feedback .....</b> Accessing and manipulating data Generating equivalent (more accurate) data with new modelling / mapping Advantages and benefits that these data will deliver in support of SWMPs What further guidance, tools or training is required to take advantage of the data or generate new data	

### Outputs from Discussions

A SWAT Analysis was undertaken by this group relating to data and mapping

<b>Strengths</b>	<b>Weaknesses</b>
<b>We have data and maps</b>	Lack of common platforms or IT to use the data
	Size of data and storage challenges
	Data gaps and confidence issues
	Modelling gaps and confidence issues
<b>We are data rich</b>	Lack of access to all data
	Co-ordination of data departments across stakeholders (LAs, SW, SEPA)
	Weaknesses in internal processes and systems
<b>Opportunities</b>	<b>Threats</b>
<b>Develop a common platform and common IT system</b>	Data sharing – legal issues
<b>Develop ‘open sourced’ or licence free software for data viewing</b>	IT bureaucracy
<b>Common data sharing arrangements</b>	Lack of experienced modelling and GIS staff to develop and use data
<b>National data sets to share (i.e. flood events, rainfall)</b>	Lack of experienced staff and systems to analyse data properly to understand flooding mechanisms and interactions
<b>Full data set to inform the planning process</b>	
<b>Development of policy measures for the future</b>	
<b>Development of national standards for consistent data collection, formats and storage</b>	Funding – needs to be a national funding route to establish national protocols



## Modelling

<b>Facilitator: Rebecca Green (Atkins / CIWEM Scotland Branch)</b>	<b>Modelling</b>
<p><b>Likely topics to discuss and feedback .....</b></p> <p>Discussion on when new modelling may be required, or when it would be sufficient to use SEPA outputs (or outputs from any other available modelling studies)</p> <p>What level of modelling complexity is required in a given area</p> <p>How to deal with uncertainties in model outputs</p> <p>Who will do the work, and what will be their brief</p> <p>Pros and cons of using the SEPA mapping and data alone</p> <p>When and why would new modelling be commissioned in support of SWMPs?</p> <p>What further guidance, tools or training is required to equip stakeholders to either carry out or purchase modelling for SWMPs</p>	

### Outputs from Discussions

**Use of models** - The recent ICS studies have provided good examples of decision making when using existing models or constructing new models to understand flood risk. These have targeted investment and modelling complexity at the areas of largest risk, the most complex flooding mechanisms or where information is lacking and important. Some areas of very high flood risk have been fast tracked in advance of others (e.g. Slammannan). Models do not need to be large scale or provide full coverage; they can be targeted to be cost effective, and there must be a balance between scale and cost.

Wherever possible, existing knowledge must be used, particularly from LA, Scottish Water or SEPA, and model hydraulic analysis to supplement this and provide evidence base to assess network performance and the flooding mechanism, and ultimately the correct intervention. This will also provide information on any temporary or short term measures (mitigation, maintenance) that can be implemented immediately whilst the longer term solution is being developed.

**Dealing with uncertainty** - The SEPA maps have a score for uncertainty which should be used to drive further investigations on a more local scale to address confidence issues and uncertainty. The main challenge is how uncertainty translates into the appraisal process and is communicated to stakeholders. A nationwide system for assessing uncertainty and how to deal with it would be useful to drive consistency across studies and understanding across stakeholders. This is an evolving area, and may need test schemes or pilot studies to help develop a better understanding of how this would be implemented.

**Who will do the work?** - LAs are likely to need external expert help to undertake much of detailed modelling, though seem to have the capacity in-house to develop the higher level strategic plans. LAs are likely to drive the brief, assess the benefits and justify the need for work being undertaken, or justify the funding for implementation of the best measures. They are likely, though, to require further capacity building and resources to undertake much of the hands on work that currently is undertaken in Scottish Water or external consultants.



## Options Appraisal

<b>Facilitator: Elliot Gill (C2HMHill / CIWEM UDG)</b>	<b>Options Appraisal</b>
<p><b>Likely topics to discuss and feedback .....</b></p> <p>Why is important that the appraisal process is transparent</p> <p>How do we prevent the appraisal process slowing down good judgement and locally made decisions</p> <p>What level of protection from flooding is affordable</p> <p>What are the knowledge gaps &amp; uncertainties around the costs of measures</p> <p>What other benefits (from SWMP measures) are important in our communities</p>	

## Outputs from Discussions

1. **Methodology** – There are issues with the approaches. For example, a slightly skewed approach given the buffer around the address point which does not give high confidence in the calculated benefit figures. A significant issue is also that railways and airport Average Annual Damages are not included within the analysis. These are due to the conflict between strategic or specific calculations. However it is noted that these are a unique national dataset and provide value.
2. **Data** – The assessments used huge amounts of data that almost brought LA servers down in some areas, and also leading to viewing and manipulation of data to be extremely difficult. Data size is a big challenge and must be addressed.
3. **Funding structure** - There was discussion around the principle that SW would have been better driving the surface water studies given that they have security of investment. They have at least 5/6 year funding plan, followed by another 5/6 outlook, compared to councils who rely on a known yearly budget. LAs will need to work very closely together with SW to obtain funding. However it was appreciated that SW is not responsible for flooding on the surface. There is concern about ICS and how it fits in with the SWMP. Councils without ICS need to start writing their SWMP on priority areas now.
4. **Silo thinking** – There is a need to break the silo thinking between LA departments and between organisation. All the focus on collaborative working, people and customer need a strategic overview across departments, bodies and studies. No one wants their budget spent on something that is not necessarily their responsibility.
5. **Adopt SUDS** – The group believed that there was a massive gap in the legislation and until this is addressed then SWMP will face challenges if no one adopts them; making them potentially a waste of time! The Scottish Government needs to resolve the issues around SUDS ownership as soon as possible.
6. **“Spend to Save”** - All departments and teams have cuts to budgets and funding but SWMP practitioners need to be smarter in how funding is obtained. The term ‘guerrilla engineers’ was used in the context of implementing SUDs in the back of other projects, such as road safety, parks etc.
7. **Resource** – It was discussed in the group that LA’s are generalists and on occasionally ‘willing amateurs’, compared to ‘specialists’ of Scottish Water and SEPA. LAs will need to hire in expertise, but there may even be challenges in defining roles and providing scope through an expert client role. SEPA could potentially help in this area.



8. **Education** – It was agreed in the group that education was needed of councillors and head of services, who are often driven by political priorities in the short term. There are challenges in communicating to senior stakeholders what is involved with SWMP and the long term nature of these. The group understood that it is difficult to spend money on something that has not happened (i.e. flooding), however there was concern that many politicians don't realise there is a ticking time bomb due to growth, climate change and creep causing future flooding issues.
9. **Costs** - Specific question on whether there was anything needed by SEPA in relation to costs:
  - a. Accurate and validated as much as possible;
  - b. Maintenance costs need to be included – whole life costs;
  - c. Adopting SUDS – who will have the budgets to maintain them and need legislative guidance to control this. There is also a contradictory level of protection requirement across stakeholders, for example, SW is a 1:30 and LAs is 1:200. However studies have shown that most damage can be reduced and a significant benefit achieved by reducing the level of protection to the 1:30 year event.



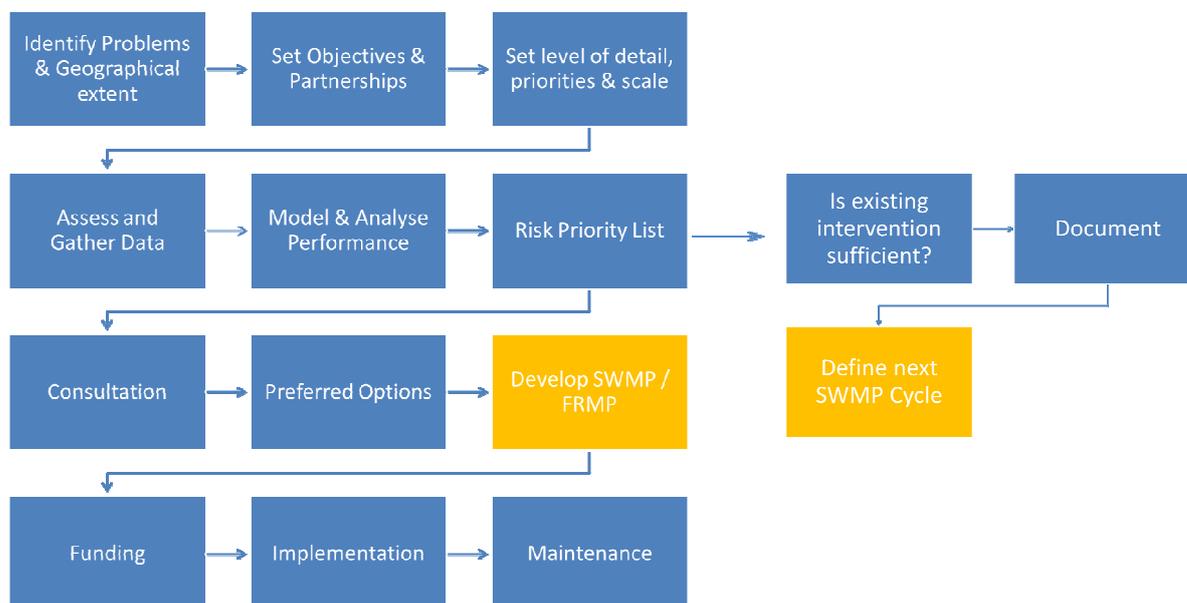
### Planning and Implementation

<b>Facilitator: Ian Lang (MWH / CIWEM UDG) &amp; Neil McLean (MWH / CIWEM Scotland Branch)</b>	<b>Planning and Implementation</b>
<p><b>Likely topics to discuss and feedback .....</b></p> <p>In carrying out a SWMP who does what and when</p> <p>What's the ideal duration, resourcing &amp; cost of a SWMP? What will the reality be of a simple, average and complex SWMP</p> <p>Describe the critical path activities in a SWMP</p> <p>Measures of success; and risks and opportunities</p>	

### Outputs from Discussions

The following are involved in different aspects of a SWMP: LA Drainage Departments, LA Planners, LA Roads and Highways, SEPA, Community Contacts and Groups, Flood Officers, Scottish Water, Consultants, Elected Members, Stakeholders, Legal Departments. The time each inputs is very different across studies, and is site dependant. They will be required to input in the short, medium and long term, and into simple or complex SWMPs.

The following was identified as the critical path activities in a full SWMP:



The challenges within this critical path relate to:

- Defining the appropriate level of analysis, modelling and data collection detail;
- Confirming geographical boundaries and priorities across stakeholders;
- Resourcing in the LAs to assimilate and use large amounts of SEPA and SW data;
- Discrepancies in outputs against local knowledge – data verification and confidence;
- Inconsistent definition and recording events across LAs and other stakeholders



**A successful SWMP was defined as one where:**

- All Stakeholders liked it and were bought into it
- It addressed the problem (would reduce flood risk to acceptable level)
- It was cost effective and cost beneficial
- It added wider value and benefits to the community
- It was embraced by the community and the community took ownership of the measures
- It was sustainable

**A disappointing SWMP was defined as one where:**

- It cost too much and was not cost beneficial
- It was not accepted by the community and stakeholders – no buy in
- It had a high amount of maintenance and potential legacy issues
- It had no clear solutions for overall implementation



## **7.0 Next Steps**

This report summarises the various ideas and priorities identified by the delegates in relation to the challenges and issues affecting the roll out and implementation of SWMPs as part of FRM (Scotland) Act. The next steps are to:

- Gain feedback and comments to this summary from the workshop delegates; and
- Make outputs publically available through CIWEM website.

The ideas and challenges identified need to be considered by different stakeholders at different levels (Scottish Government, Scottish Water, Local Authorities, SEPA, Regulators, Academia, CIWEM etc.) so that these can be progressed further to improve the implementation of SWMPs in Scotland.

It was determined that a follow up workshop would be of benefit to practitioners. No date has been set for this, but early 2015 appears an appropriate time given the current on-going work and commitments in relation to the Act.



## Appendix

### Appendix 1 – Presentations

See attached documents:

<b>Document Reference</b>	<b>Presentation</b>	<b>Presenter</b>
<b>SWMP14-App1.1</b>	Introduction to Workshop	Kieran Downey, Scottish Water / UDG
<b>SWMP14-App1.2</b>	SWMP update (Programme & expectations)	Roy Richardson, SEPA
<b>SWMP14-App1.3</b>	Mapping and flood damage data	Jonathan Werritty, SEPA
<b>SWMP14-App1.4</b>	Cost-benefit appraisal methodology	Elliot Gill, CH2M HILL / UDG
<b>SWMP14-App1.5</b>	Glasgow SWMP example	Neil McLean, MWH