



Flood Risk Management Planning in Scotland: Arrangements for 2012 – 2016

February 2012

Flood Risk Management (Scotland) Act 2009



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Flooding is a natural event and, no matter how effective our legislation or actions are, we cannot stop it completely. However, we can do our best to limit its devastating impacts by increasing our preparedness and enhancing our ability to manage, and raise awareness of flood risk. In this way, we will continue to reduce the risk of future flood events, and improve Scotland's ability to manage and recover from any events which do occur.

The publication in December 2011 of Scotland's first National Flood Risk Assessment was a significant milestone in the implementation of the Flood Risk Management (Scotland) Act 2009. For the first time, we have a national picture of flood risk across Scotland, which will help us to target efforts to plan and invest in reducing impacts in areas most vulnerable to flooding.

SEPA is now looking to build on their excellent work on the National Flood Risk Assessment, by starting work on the Flood Risk Management planning process. This guidance, which has been produced jointly by SEPA and the Scottish Government, builds on the guidance provided in *Delivering Sustainable Flood Risk Management*, by giving more detail on how the Flood Risk Management planning process will work.

I should like to thank all those who contributed to the development of this guidance, which will help to shape the way in which Flood Risk Management is delivered across Scotland. I am confident from our joint work to date, that there is a clear understanding of the benefits that will be provided by our efforts, and the guidance is intended to provide further support as we move forward.

A handwritten signature in black ink, appearing to read 'Stewart Stevenson'.

Stewart Stevenson MSP

Minister for Environment and Climate Change

SEPA foreword



A piecemeal response to the flood risk we face in Scotland will not work. Flooding by its nature is too complex, and its causes and consequences too complicated, for any individual or single organisation to address the challenge alone.

What will work – and what this document describes – is the alignment of our public responsibilities, the sharing of goals and the pooling of our energy and resources. Working together we will be able to tackle the risks we face. Working together we can reduce the likelihood of flooding, the risk to life and the damage caused to infrastructure and our economy.

Flooding crosses institutional and administrative boundaries. It demands collaboration between organisations responsible for Flood Risk Management. Equally important, it needs our combined actions to be organised and delivered within the river catchment or coastal area that determines the nature of flooding.

We now know the size of the problem we face as a nation. One in 22 homes and one in 13 businesses are at risk. Unchecked, we can expect climate change to increase the frequency and severity of extreme events including flooding. The scale of the challenge we face in managing this risk may be daunting, but the arrangements described in this document will significantly help all of us in Scotland to meet that challenge more effectively.

Our vision now is to foster more collaborative working to ensure Scotland develops a risk-based, sustainable and plan-led approach to managing floods. We need to improve public expenditure by targeting efforts where the risk of flooding and benefits of investment are greatest.

The arrangements developed by SEPA and the Scottish Government will help define sustainable policies and actions for Flood Risk Management. SEPA's strategic overview will help all those responsible to set a course for action and decide how we, as a society, manage the risk of flooding in the future.

A handwritten signature in blue ink that reads "James C. Curran". The signature is written in a cursive, flowing style.

James Curran

SEPA Chief Executive

1. Introduction to this document

In December 2011, SEPA published Scotland's first National Flood Risk Assessment. By bringing together the latest information on the sources and impacts of floods, the assessment marked a significant step forward in our understanding and management of flood risk. More information on the National Flood Risk Assessment can be found on SEPA's website here:

www.sepa.org.uk/flooding

At the same time, SEPA published a document that outlined the content and production process for Flood Risk Management Strategies and Local Flood Risk Management Plans. The strategies and plans, taken together, will form a single point of reference to describe the response and commitment of public bodies to address flooding issues. The document, *Flood Risk Management Strategies and Local Flood Risk Management Plans* (December 2011), can be found under the National Flood Risk Assessment section of SEPA's website here:

www.sepa.org.uk/flooding

In this document, SEPA and the Scottish Government now provide further explanation of how and when Flood Risk Management Strategies and Local Flood Risk Management Plans will be produced. We describe the involvement of local partnerships and advisory groups, as well as the planned co-ordination with River Basin Management Planning and land-use planning. This document is aimed at responsible authorities designated under the Flood Risk Management (Scotland) Act 2009 (the FRM Act), and other stakeholders with an interest in flooding issues across Scotland. Responsible authorities are currently all local authorities and Scottish Water.

How proposals have been developed

Many organisations have contributed to the development of the arrangements set out in this document. SEPA ran two major consultations, between August 2010 and August 2011, and is grateful for the many responses received. Proposals have also been developed with the Scottish Government and through the Scottish Advisory and Implementation Forum for Flooding (SAIFF), which has representation from the Scottish Government, local authorities, Scottish Water and others.

How this document is set out

Section 1 outlines the purpose of this document. The following sections are then presented as follows:

Section 2 describes the new approach to managing flood risk in a sustainable way, the roles and responsibilities in delivering Flood Risk Management and the planning framework.

Section 2 outlines the new, sustainable Flood Risk Management process, which encourages Scotland to invest and take action, where the greatest risks and benefits have been identified. SEPA, local authorities and Scottish Water are required to co-ordinate their Flood Risk Management activities in a way that integrates national consistency and strategic decision-making with local knowledge and accountability. This section outlines the findings of the National Flood Risk Assessment and describes the arrangements whereby Flood Risk Management Strategies and Local Flood Risk Management Plans are organised. This section also provides detail on the roles and responsibilities of SEPA, local authorities (including the role of the lead local authority), Scottish

Water, the Scottish Government and the public.

Section 3 outlines the content and production process of Flood Risk Management Strategies.

Flood Risk Management Strategies for each of the 14 Local Plan Districts in Scotland will set out objectives and actions to reduce flood risk. Section 3 outlines the key areas of work involved in the production of these strategies.

Section 4 outlines the content and production process of Local Flood Risk Management Plans.

Local Flood Risk Management Plans will translate the 14 Flood Risk Management Strategies into a local delivery plan, describing an agreed set of actions to manage flood risk. Local timings, who is responsible and how the work areas overlap is described. Section 4 also outlines the key areas of work involved in the production of these plans.

Section 5 describes local partnership and advisory group arrangements, and how stakeholders can contribute to the development of Flood Risk Management Strategies and Local Flood Risk Management Plans.

For each Local Plan District, a partnership will be established between the relevant local authorities, SEPA and Scottish Water to help produce the Flood Risk Management Strategy and Local Flood Risk Management Plan. The working arrangements for partnerships are expected to vary depending on the complexity of local flooding issues and the preference of the local authorities involved. The role and operation of national and local advisory groups and the Scottish Government Flooding Policy Stakeholder Group also are described.

Section 6 sets out the co-ordination and co-operation between Flood Risk Management, River Basin Management Planning and land-use planning.

Co-ordination and co-operation, between Flood Risk Management planning and River Basin Management Planning, is essential in identifying and delivering multiple benefits for flooding and the water environment and for the avoidance of conflicting objectives. Co-ordination and co-operation is also essential between Flood Risk Management and land-use planning to reduce flood risk across Scotland. This section will outline planned co-ordination arrangements.

Reference to other documents

The National Flood Risk Assessment, which identified Potentially Vulnerable Areas and Local Plan Districts, can be found here on SEPA's website:

<http://map.sepa.org.uk/nfra/map.htm>

A document accompanying the National Flood Risk Assessment providing detail on the assessment and how its outcomes support Flood Risk Management planning, can be found here on SEPA's website:

<http://www.sepa.org.uk/flooding>

Information supporting the National Flood Risk Assessment, including the methodology, can be found under the information section of the National Flood Risk Assessment page of SEPA's website here:

www.sepa.org.uk/flooding

The document, *Flood Risk Management Strategies and Local Flood Risk*

Management Plans (December 2011), can also be found on the National Flood Risk Assessment page of SEPA's website here:

<http://www.sepa.org.uk/flooding>

SEPA's previous consultations on Flood Risk Management can be found on SEPA's website here:

http://www.sepa.org.uk/flooding/flood_risk_management.aspx

Delivering Sustainable Flood Risk Management (January 2011) can be found here on the Scottish Government's website here:

<http://www.scotland.gov.uk/Publications/2011/01/14152758/0>

The Scottish Government's policy statement on the principles of appraisal can be found on the Scottish Government's website here:

<http://www.scotland.gov.uk/Publications/2011/07/20125533/0>

Queries

If you have any queries, you can contact the Flood Risk Management planning team by email: FRMplanning@sepa.org.uk

2. Sustainable Flood Risk Management in Scotland

Sustainable Flood Risk Management

Flood Risk Management requires the consideration of where floods are likely to occur in the future and taking action to reduce the impact of flooding, without moving the problem elsewhere. It requires the analysis of all sources of flooding, whether from rivers, the sea or from the surface water run-off in our towns and cities. It also requires the selection of actions that help preserve the environment, whilst meeting the needs of present and future generations.

This approach to Flood Risk Management will encourage Scotland to invest and take action where the greatest risks and benefits have been identified. To do this, a catchment approach will be adopted to identify a range of actions that can reduce the impact and likelihood of flooding. This requires collaboration between organisations and a focusing of (joint) effort to address flooding within the natural boundaries of river catchments, as opposed to political or administrative boundaries. The range of actions we need to consider must include structural measures (such as building floodwalls, restoring flood plains, or the clearance and repair works to rivers, embankments or dams) and non-structural measures (such as flood warning, land-use planning, raising public awareness or improving our emergency response). Structural and non-structural actions should be used together to manage flood risk effectively.

The Scottish Government set out five outcomes in *Delivering Sustainable Flood Risk Management* (June 2011). These outcomes underpin the new approach to Flood Risk Management and are:

1. A reduction in the number of people, homes and properties at risk of flooding as a result of public funds being invested in actions that protect the most vulnerable and those areas at greatest risk of flooding;
2. Rural and urban landscapes with space to store and slow down the progress of floods;
3. Integrated drainage that decreases burdens on our sewer systems while also delivering reduced flood risk and an improved water environment;
4. A well-informed public who understand flood risk and adopt actions to protect themselves, their property or their businesses, and;
5. Flood management actions undertaken that will stand the test of time and be adaptable to future changes in the climate.

Reducing flood risk in Scotland through the production and implementation of the Flood Risk Management Plans required in the FRM Act, provides an opportunity to improve the quality of Scotland's water environment at the same time. For example, co-ordination between River Basin Management Planning and Flood Risk Management in planning for the restoration of rivers and flood plains can reduce flood risk, whilst improving water quality and biodiversity.

SEPA is leading the delivery of River Basin Management Plans and Flood Risk Management Plans and will ensure that there is integration and co-ordination between them. This co-ordination, particularly in regard to consultation and engagement, will be important for stakeholders many of whom have an interest in the objectives of both plans.

Flood Risk Management planning

National Flood Risk Assessment

The National Flood Risk Assessment was published in December 2011. It improves our understanding of the causes and consequences of flooding, and helps identify areas most vulnerable to floods. It is the foundation, upon which we will build the new risk-based, sustainable and plan-led approach to Flood Risk Management.

The National Flood Risk Assessment is the first of its kind in Scotland. It assesses the likelihood of flooding from rivers, groundwater and the sea, as well as flooding caused when heavy rainfall is unable to enter drainage systems or the river network. The likelihood of flooding is considered alongside the estimated impact on people, the economy, cultural heritage and the environment. This combined understanding of where flooding is likely to occur, and the impact when it does, will allow Scotland to target its effort in managing the future risks to people, the economy and the environment.

The National Flood Risk Assessment tells us that approximately one in 22 of all residential properties and one in 13 of all non-residential or business properties in Scotland are at risk from flooding. The average annual damage to homes, businesses and agriculture from all sources of flooding is estimated to be between £720 million and £850 million. In addition to the personal distress and health impacts of flooding, this represents a significant impact on the Scottish economy.

As the climate changes, Scotland is likely to experience changes to its weather patterns. Predictions indicate that Scotland is likely to experience more extreme weather events, including intense rainfall in the summer months. This is likely to increase the risk of flooding to Scotland's communities, environment, cultural heritage and economy.

More information on the National Flood Risk Assessment can be found here:
<http://www.sepa.org.uk/flooding>

Potentially Vulnerable Areas

Based on the National Flood Risk Assessment, SEPA has identified and consulted on areas where the potential impact is sufficient to justify the further national assessment and appraisal of Flood Risk Management actions. This required the setting of a threshold above which the total impact of floods in a given area is considered nationally significant. These areas are based on catchment units and referred to as Potentially Vulnerable Areas. The setting of objectives and appraisal of actions, within the Potentially Vulnerable Areas, will form the basis on which local authorities, Scottish Water and SEPA develop long-term and sustainable Flood Risk Management Plans. The plans will set out what will be funded and delivered within each six-year planning cycle of the FRM Act.

In Scotland, 243 Potentially Vulnerable Areas have been identified. They contain, within them, 92% of the total number of properties at risk within Scotland and have been grouped together for planning purposes within Local Plan Districts. Information sheets for each Potentially Vulnerable Area are available on SEPA's website.

Flood Risk Management actions affecting those people at risk of flooding, outwith Potentially Vulnerable Areas, will continue to be identified and pursued. The approach has been designed so that Local Plan Districts cover all of Scotland, which means that all areas are drawn into the planning process. Important duties on public

bodies to reduce overall flood risk, raise awareness, provide flood warnings where appropriate, carry out maintenance and provide advice to planning authorities also apply throughout Scotland. The new approach will provide a framework, in which members of the public can take responsibility, for protecting themselves and their property from flooding assisted by relevant public bodies.

Refer to **Figure 1** for a map of all Potentially Vulnerable Areas.

Information on Potentially Vulnerable Areas can be found under the datasheet section of the National Flood Risk Assessment page on SEPA's website:

<http://www.sepa.org.uk/flooding>

Local Plan Districts

For Flood Risk Management purposes, Scotland is divided into 14 Local Plan Districts. Local Plan Districts are the geographical areas for the production of Flood Risk Management Plans. They take account of a number of variables, such as river catchment boundaries, local administrative boundaries and coastal areas.

Each Local Plan District requires the production of a Flood Risk Management Strategy and Local Flood Risk Management Plan. The production and content of these strategies and plans is now described in more detail.

Refer to **Figure 2** for the Local Plan District boundaries.

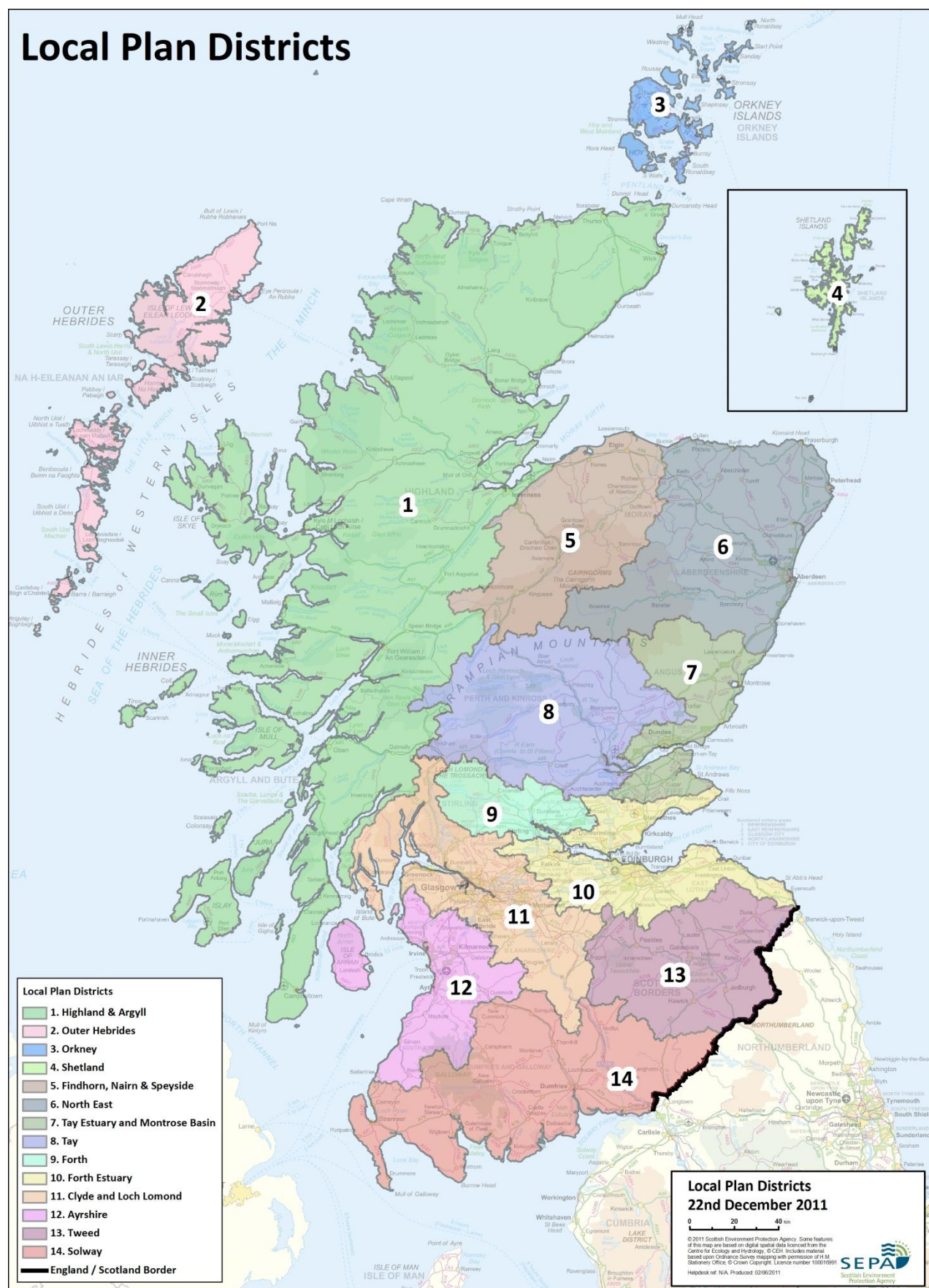
More information on Local Plan Districts can be found under the datasheet section of the National Flood Risk Assessment page on SEPA's website here:

<http://www.sepa.org.uk/flooding>

Figure 1: A map of Scotland showing Potentially Vulnerable Areas



Figure 2: A map of Scotland showing Local Plan Districts



Flood Risk Management Strategies and Local Flood Risk Management Plans

The FRM Act requires the production of Flood Risk Management Plans covering each Local Plan District. There will be two sets of complementary plans, Flood Risk Management Strategies produced by SEPA, and Local Flood Risk Management Plans produced by lead local authorities.

The Flood Risk Management Strategies will identify the main flood hazards and impacts, setting out objectives for reducing risk and the best combination of actions to achieve this, such as the appropriateness of an alleviation scheme or improving flood warning arrangements¹. The 14 Flood Risk Management Strategies, taken together, will comprise a national flood risk management plan for Scotland. The Local Flood Risk Management Plan takes these objectives and explains what actions will be taken, by whom and at what time, to deliver them within a six-year planning cycle. The first cycle will run from 2015 to 2021.

Flood Risk Management Strategies and Local Flood Risk Management Plans will be at the heart of efforts to tackle flooding in Scotland. They will help to target and maximise the benefit of public investment. The production of Flood Risk Management Strategies will be led by SEPA, with Local Flood Risk Management Plans being led by a lead local authority within each Local Plan District. Strategies and plans will be developed to be complementary through collaborative partnerships between local authorities, SEPA and Scottish Water. It is intended that the strategies and plans will be supported by all parties. In addition, the engagement and support of local and national advisory groups will be sought during the development of the strategies and plans.

Flood Risk Management information gathered, as part of the production of strategies and plans, will be shared with emergency responders in line with the requirements of the Civil Contingencies Act 2010, supporting efforts across Scotland to improve our response to flooding.

Figure 3 shows the relationship between Flood Risk Management Strategies and Local Flood Risk Management Plans, and how their development is supported by local partnerships and advisory groups.

¹ The Flood Risk Management Act uses the term 'measures' to describe Flood Risk Management activity. This document uses the term 'actions'.

Figure 3: Requirements for each Local Plan District



Flood Risk Management Strategies

The purpose of a Flood Risk Management Strategy is twofold. Firstly, to summarise the main flooding issues and impacts within each Local Plan District. Secondly, to set out the vision for how flooding should be managed, and the best combination of actions to address flooding in each Potentially Vulnerable Area over the short, medium and long term.

All 14 Flood Risk Management Strategies will be co-ordinated at a national level to ensure consistency. Taken together they will:

- Provide a national picture of flood risk and flood impacts for Scotland;
- Develop objectives for the management of flood risk based on long-term sustainable approaches, and;
- Ensure a nationally consistent and co-ordinated approach to Flood Risk Management.

Local Flood Risk Management Plans

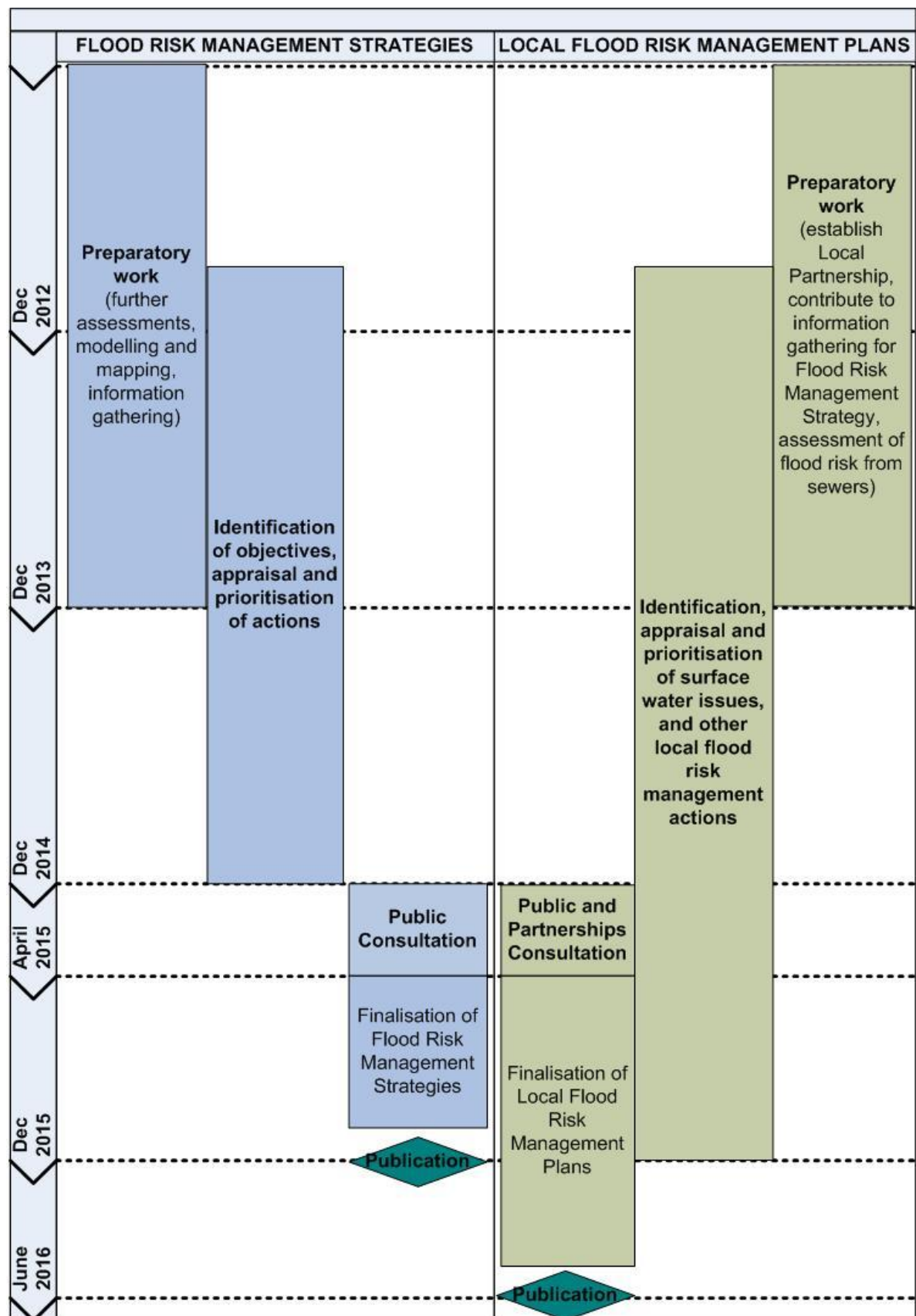
The 14 Local Flood Risk Management Plans turn each Flood Risk Management Strategy into a clear programme of delivery for each Potentially Vulnerable Area, identifying actions for each six-year cycle. To ensure continuity, with the Flood Risk Management Strategy, in addition to describing the implementation arrangements for the delivery of actions, the Local Flood Risk Management Plan will also summarise the key parts of the strategy.

Local Flood Risk Management Plans will take forward the objectives and actions set out in the relevant strategy, translating them into a short-term delivery plan. Where a proposed action has already undergone a detailed appraisal of its costs and benefits (and where it attracts local and national support and has been through the statutory approval process for funding), the timing, funding and co-ordination arrangements for its delivery will be described in the Local Flood Risk Management Plan. For example, the construction of a flood protection scheme will state where flooding will be reduced and the number of properties and infrastructure that will benefit from a reduction in flood risk, and the timetable for construction. Where a detailed appraisal of actions has not yet been carried out by the relevant body, the Local Flood Risk Management Plan will describe the arrangements by which organisations commit to do the necessary detailed work to support implementation (this may take the form of the detailed appraisal and design work needed to take forward a flood protection scheme for example).

Importantly, in addition to the prioritised actions set out in the Flood Risk Management Strategy, other local flood risk activity underway or planned by local authorities will be reported or referenced in the Local Flood Risk Management Plan. This will ensure that the Local Flood Risk Management Plan provides a comprehensive summary of local activity to manage flood risk within each Local Plan District.

The principal activities involved in the production of Flood Risk Management Strategies and Local Flood Risk Management Plans, together with the key dates, are shown in **Figure 4**.

Figure 4: Key areas of work involved in plan production



Roles and responsibilities

We are all responsible for protecting ourselves and our property from flooding. It is important that individuals at risk of flooding make use of available information and advice to protect themselves and their property from floods. SEPA's Floodline service can help people prepare for flooding, by providing free advance warnings of floods in their area.

It is important that the public is given the opportunity to engage with public bodies to help shape Flood Risk Management planning and contribute to the consultation process to ensure local knowledge and priorities are accounted for and addressed. SEPA will continue to ensure future consultations relating to Flood Risk Management will be open to the public and made widely available.

In addition, the FRM Act requires that public bodies in Scotland co-ordinate their activities to reduce the impact of flooding. The following organisations have an important role to play.

Local authorities

Local authorities have a central role in managing flooding and building flood protection schemes. In each Local Plan District, local authorities have chosen a lead local authority to co-ordinate the Local Flood Risk Management Plan. Local authorities also have responsibilities to:

- Map, assess and maintain watercourses;
- Be part of the relevant local partnership(s);
- Contribute to the development of the Flood Risk Management Strategy;
- Contribute to and approve the Local Flood Risk Management Plan content;
- Implement actions, as identified through the Local Flood Risk Management Plan, to reduce flood risk within their administrative boundary and co-ordinate their activities with other local authorities, and;
- Contribute to the production of Surface Water Management Plans.

Lead local authority

The FRM Act requires a lead local authority to be identified for each Local Plan District. The lead local authority is crucial to the successful implementation of the FRM Act and, as such, must perform several important functions over and above the general duties and powers given to local authorities elsewhere in the FRM Act.

The lead local authority, having contributed with other local authorities to the production of the Flood Risk Management Strategy, must prepare a Local Flood Risk Management Plan of co-ordinated actions to reduce flood risk within the Local Plan District. Although the lead local authority is responsible for the production of the plan, its content will be drawn from and agreed by all local authorities, other responsible authorities and SEPA within the Local Plan District.

In addition, the lead local authority is responsible for:

- Ensuring the Local Flood Risk Management Plan is consistent with the Flood Risk Management Strategy;
- Informing Scottish Ministers if the plan will not be completed by its deadline;
- Publishing the final plan and making copies available for inspection by the public;
- Reporting on progress every three years, and;

- Seeking advice from local advisory groups on the preparation of the plan.

The lead local authority also has the power to require SEPA, Scottish Water or other local authorities to provide information, documents and assistance as it may require to carry out its Flood Risk Management duties.

SEPA

SEPA has a new strategic oversight role in Flood Risk Management, as well as statutory roles in delivering planning advice, flood forecasting and warning. With regard to the new approach to Flood Risk Management, SEPA is specifically responsible for:

- Carrying out a National Flood Risk Assessment of flood risk;
- Producing of flood hazard and flood risk maps;
- Production of an assessment of the contribution that natural flood management can make to manage flood risk;
- Production of 14 Flood Risk Management Strategies;
- Establishing national and local advisory groups;
- Participating in all 14 Local Plan District partnerships;
- Ensuring co-ordination between Flood Risk Management planning and River Basin Management Planning and other land-use planning processes, and;
- Contributing to and agreeing Local Flood Risk Management Plans.

Scottish Water

Scottish Water is responsible for assessing the risk of flooding from surface water sewers and combined sewers (surface water and foul), resulting from higher than usual rainfall. Once risks are identified, Scottish Water, working with local authorities and SEPA, will look for opportunities to reduce those risks through its capital investment programme. For the production of Flood Risk Management Strategies and Local Flood Risk Management Plans, Scottish Water will contribute to local partnerships and will help identify areas where a Surface Water Management Plan is required to reduce flood risk.

Scottish Government

The Scottish Government's overall role is to set a policy framework for managing flooding in Scotland. The Scottish Government's specific role and responsibilities includes:

- Production of relevant guidance;
- Approval of the 14 Flood Risk Management Strategies, and;
- Seek to resolve conflict should agreement not be reached within a Local Plan District.

Refer to **Appendix 1** for a summary table on key roles and responsibilities involved with the production of Flood Risk Management Strategies and Local Flood Risk Management Plans.

3. Flood Risk Management Strategy production

Step 1: Preparatory work

To ensure SEPA, local authorities and Scottish Water make informed Flood Risk Management decisions, an evidence base of flood risk assessments, models and maps for each Local Plan District needs to be drawn together. SEPA will co-ordinate this preparatory work throughout 2012. The key areas of activity that will contribute to this evidence base and preparatory work are:

- Characterisation of Local Plan Districts;
- Natural flood management assessment and mapping of artificial and natural features, and;
- Initiation of flood hazard and flood risk maps.

These are described below.

Characterisation of Local Plan Districts

The National Flood Risk Assessment has increased our understanding of the causes and consequences of flooding across Scotland. For each Local Plan District, the number of people at risk, the economic impacts of flooding, catchment hydrology, land-use, geomorphology, climate change and long-term development plans will be drawn together to gain a comprehensive understanding of the Local Plan District.

SEPA will co-ordinate this work, in consultation with (and contribution from) the local authorities and Scottish Water, between June and December 2012.

Natural flood management assessment and mapping of artificial and natural features

The new approach to Flood Risk Management requires SEPA to consider whether techniques that restore, enhance or alter natural features and characteristics can contribute to managing flood risk. This means looking at the potential to work with natural hydrological and morphological processes.

Because the National Flood Risk Assessment provides only a strategic assessment of flood risk, further refined assessments may be required in Potentially Vulnerable Areas, including the mapping of artificial and natural features whose removal could increase flood risk.

The development of catchment characteristics and methodologies, to assess the potential for natural flood management, will take place throughout 2012. The work to identify natural flood management actions, that could contribute to the management of flood risk, will be carried out in 2012 as part of the appraisal process. The information will then be collated and published in 2013. The assessment of natural flood management will be a consideration in the setting of objectives and actions in the Flood Risk Management Strategies.

SEPA will lead this work, in consultation with the local authorities, Scottish Water and other stakeholders during 2012. SEPA will engage with relevant stakeholders through local partnerships and advisory groups.

Flood hazard and flood risk maps

The production of flood hazard and flood risk maps will improve our understanding of flooding and help inform the selection of actions required to manage flood risk in Potentially Vulnerable Areas. Work on production of these maps will begin in January 2012. These maps will show details of flood events for a range of probabilities and will cover flooding from rivers, the sea, sewers, surface water run-off and groundwater.

A flood hazard map will show information that describes the nature of a flood, such as the extent of flooding, water level, depth and velocity where appropriate.

A flood risk map provides detail on the impacts on people, the economy, cultural heritage and the environment.

SEPA will lead work to produce flood hazard and flood risk maps. Preliminary map outputs will contribute to the identification of objectives within Flood Risk Management Strategies from September 2012 onwards. Final flood hazard and flood risk maps will be published in December 2013.

Step 2 Identification of objectives, appraisal and prioritisation of actions

Working collaboratively with local partnerships, SEPA will agree objectives for addressing the main flooding impacts in each Local Plan District. Actions to meet the agreed objectives will then be appraised to ensure the right combinations are identified and prioritised. The key areas of activity that will contribute to the production of Flood Risk Management Strategies are:

- Identification of objectives and actions to reduce flood risk;
- Appraisal of actions to reduce flood risk, and;
- Prioritisation of actions.

Identification of objectives and actions to reduce flood risk

The setting of objectives and selecting the most sustainable actions to reduce flood risk in each Local Plan District will provide the long-term vision for Flood Risk Management in Scotland. Objectives set will focus on the main sources and impacts of flooding identified through the characterisation stage of the Local Plan District for each Potentially Vulnerable Area. Actions will be SMART (specific, measurable, achievable, relevant, and time-bound). Some initial appraisal work may be required to confirm whether the objectives are achievable. To be fully SMART, the actions will be attributed within the six-yearly planning cycles, but with more specific deadlines and timescales for implementation, detailed in the Local Flood Risk Management Plan. To meet the agreed objectives and manage flood risk sustainably, a wide range of structural and non-structural actions will be appraised.

Objectives and actions will be developed around the principles set out in the Scottish Government's guidance on *Delivering Sustainable Flood Risk Management* (June 2011):

- Avoid an increase in flood risk, e.g. provide enhanced flood risk advice on planning applications;
- Protect by reducing the likelihood of flooding, e.g. by investing in new or enhancing existing flood defences, and;
- Prepare to reduce the impacts of flooding, e.g. by raising public awareness or improving property-level resilience.

Table 1: Objectives and candidate actions for managing flood risk

	Focus for Objectives	Candidate Actions
Avoid	<ul style="list-style-type: none"> • Appropriate land-use planning policy and decision-making 	<ul style="list-style-type: none"> • Avoid new developments in high-risk areas by using strategic flood risk assessments • Provide advice to land-use planning (development plans, planning applications etc) based on improved data and information on flooding • Relocate vulnerable homes, businesses and infrastructure to areas at lower risk of flooding • Enforce building regulations and promote best practice to reduce surface water run-off from developments.
Protect	<ul style="list-style-type: none"> • Reduce overall likelihood of flooding to homes, businesses, and infrastructure 	<ul style="list-style-type: none"> • New, enhanced and well-maintained flood defences • Maintain watercourses and drainage systems to reduce the chance of flooding • Invest in assessment and action to tackle surface water flooding in urban areas • Protect important transport and utilities infrastructure • Look for opportunities to store and slow down water in catchments and along coastlines by working with natural processes
Prepare	<ul style="list-style-type: none"> • Awareness and responsibility • Effective flood forecasting and warning • Increased resilience • Improved knowledge and understanding 	<ul style="list-style-type: none"> • Improve flood forecasts and widen uptake of flood warnings • Protect individual properties and businesses from flood water (e.g. flood gates) • Effective preparation and emergency response • Investment in recovery efforts following a flood • Provision of affordable flood insurance

SEPA will lead this work, in consultation with local authorities and Scottish Water, between December 2012 and June 2013. Local advisory groups will be consulted on the identification of objectives and actions. Objectives will be finalised by April 2013 and actions will be identified between March and June 2013.

Appraisal of actions to reduce flood risk

To select the most sustainable actions and ensure public money is invested where it can deliver the greatest benefits, appraisal work will be based on the principles outlined in the Scottish Government's guidance on *Delivering Sustainable Flood Risk*

Management (June 2011). The focus of this work will be to ensure that the best combination of actions is selected for each Potentially Vulnerable Area. The principles underlying the appraisal work are:

- Define the purpose of the appraisal, the issue and the case for intervention and set clear objectives for the appraisal (done under Steps 1 or 2 above);
- Describe the impact (positive and negative) associated with a wide range of possible options. Impacts will be evaluated in qualitative and quantitative terms, assigning monetary values to them where possible. Impacts will be assessed against a range of economic, environmental and social factors, and;
- Compare different options and combination of options, selecting those that are most appropriate and deliverable.

The output of the appraisal process will be the summary of positive and negative impacts associated with practical and feasible Flood Risk Management actions in each Potentially Vulnerable Area. SEPA, Scottish Water and local authorities will use this information to select the most sustainable combination of actions for each Potentially Vulnerable Area.

The following five types of actions will require appraisal:

- Asset management (including maintenance or enhancement of drainage infrastructure);
- Natural flood management techniques;
- Traditional flood protection works;
- Enhanced flood forecasting tools,
- Awareness campaigns, and;
- Flood warning schemes.

Not all actions can be sensibly quantified (for example, the reviewing and influencing of local development plans) in a formal way. However, justification in qualitative terms as to why these actions have been selected will be provided.

Following the appraisal process set out above, SEPA and the local partnerships will have information on the most sustainable combination of actions and their contribution to reducing flood risk.

Additional Scottish Government guidance on appraisal for Flood Risk Management will be issued by December 2012.

SEPA will co-ordinate the appraisal of actions, in consultation with local authorities and Scottish Water, between May 2013 and March 2014. Local advisory groups will be consulted on the suitability of appraised actions.

Prioritisation of actions

Actions will be assigned to a particular planning cycle, through the work of the local partnership and based on a combination of the underlying evidence of proposed costs and benefits, prepared by SEPA. Members of the local partnership (local authorities, Scottish Water and SEPA) will have an important role to play in approving and prioritising selected actions. The availability of funding to deliver actions will be a key consideration of the prioritisation process. All actions need to be specific, measurable, achievable, relevant, and time-bound (SMART).

This work will be led by SEPA, in collaboration with local authorities and Scottish Water, between February and December 2014.

Step 3: Consultation and finalisation of Flood Risk Management Strategies

Draft Flood Risk Management Strategies will be made available by SEPA for public consultation by the end of December 2014. They will be subject to a three-month consultation, after which SEPA will consider the views expressed and amend the draft strategies, taking account of the comments received. The consultation on Flood Risk Management Strategies will overlap with the Local Flood Risk Management Plan consultation. This overlap will seek to avoid duplicating consultation with the public and stakeholders.

SEPA will produce a digest of consultation responses, submitting this along with the final 14 Flood Risk Management Strategies, to Scottish Ministers for approval in advance of the December 2015 publication date.

SEPA will prepare draft Flood Risk Management Strategies for consultation in December 2014. Final Flood Risk Management Strategies will be published in December 2015.

Refer to **Appendix 2** for a timetable of key dates involved in the production of Flood Risk Management Strategies and Local Flood Risk Management Plans.

4. Local Flood Risk Management Plan production

Step 1: Preparatory work

For each Local Plan District, Local Flood Risk Management Plan preparatory work will include establishing a local partnership early in 2012. Local partnerships are described further in **Section 5**. The three key activities involved with preparatory work for a Local Flood Risk Management Plan are:

- Map relevant water bodies, assessing their current condition and potential flood risk;
- Assess the risk of surface water flooding and initiate work in priority surface water management areas, and;
- Collate information on existing Flood Risk Management activity in the Local Plan District.

Map relevant water bodies assessing their current condition and potential flood risk

Local authorities have a duty to map and assess relevant water bodies.

Local authorities, within their administrative boundary, should prepare a map of relevant bodies of water and sustainable urban drainage systems by the end of December 2012.

Assess the risk of sewer flooding and initiate work in priority surface water management areas

Surface Water Management Plans should be a component of all Local Flood Risk Management Plans. Local authorities will also need to draw together their existing surface water models and data, compiling this information with historic records for surface water flooding. To inform the production of strategies and to ensure that plans are risk based in the prioritisation of actions, this information and mapping should be completed in sufficient time to inform the appraisal of actions and subsequent agreement of Flood Risk Management priorities by partners. The FRM Act requires Scottish Water to assess the risk of flooding from sewerage systems in Potentially Vulnerable Areas and any other area identified by SEPA. Scottish Ministers may direct when such assessments must be prepared. The aim is to have the work completed by June 2013, although SEPA and Scottish Water will work together to produce preliminary outputs by December 2012. In addition to SEPA's pluvial mapping, this will provide new information to supplement existing knowledge within local authorities on surface water flooding.

Local authorities will lead the work to assess surface water management issues in their area by the end of December 2012.

Scottish Water will lead work to assess the risk of flooding from sewerage systems, aiming to have the work completed by June 2013.

In addition, for the first Flood Risk Management planning cycle, five areas have been prioritised by Scottish Water in consultation with local authorities, SEPA and the Scottish Government for detailed modelling of the sewer network. Where it is identified that there are interactions with the sewer network and other sources of flooding, then integrated modelling of all relevant sources will be carried out. In the

longer term, this modelling will support the production of Surface Water Management Plans with identified actions for reducing flood risk forming part of the Local Flood Risk Management Plan. The process of doing this will be discussed further with the local authorities. The five areas are:

- Edinburgh;
- Grangemouth;
- Aberdeen;
- Irvine to Ayr, and;
- Dundee.

Scottish Water, the relevant local authorities and SEPA will progress work in the five areas between March 2012 and December 2013.

Collate information on existing Flood Risk Management activity in the Local Plan District

In order to complete the Flood Risk Management Strategies, there needs to be a common understanding of existing flood risk management activities underway by all partners. Although the focus on the Local Flood Risk Management Plan will be on actions identified within the Potentially Vulnerable Areas, it is important that the plans capture and reference existing Flood Risk Management activity, some of which may be outside of these designated areas.

Local partners should collate information on existing Flood Risk Management activity by December 2012.

Step 2: Identification, appraisal and prioritisation of surface water actions, and other local Flood Risk Management actions

The key activities at this stage in the Local Flood Risk Management Plan production are:

- Agreement on the prioritisation, funding and timing of actions within the first planning cycle;
- Preparation of a Surface Water Management Plan, and;
- Further identification of local actions.

Agreement on the prioritisation, funding and timing of actions within the first planning cycle

Local Flood Risk Management Plans will take forward the objectives and actions set out in the relevant Flood Risk Management Strategy, translating priority issues into a short-term delivery plan for the six-yearly cycles. In some cases, the funding and delivery of actions will relate to one responsible authority only. However, in situations where an action involves more than one responsible authority, such as when an administrative boundary is straddled, the Local Flood Risk Management Plan will need to describe the necessary co-ordination of arrangements.

Where an action has already undergone a detailed appraisal of its costs and benefits – the timing, funding and co-ordination arrangements for its delivery will be described. For example, the construction of a flood protection scheme will state where flooding will be reduced and the number of properties and infrastructure that will benefit from a reduction in flood risk and the timing of construction. Where a detailed appraisal of actions has not yet been carried out, the Local Flood Risk Management Plan will describe the arrangements by which organisations commit to investigate the costs and benefits of actions prioritised in the strategy.

This work will be co-ordinated by the lead local authority and undertaken by the authority responsible for the delivery of the action. This work will take place between December 2013 and December 2015.

Preparation of a Surface Water Management Plan

Surface Water Management Plans are particularly appropriate in situations where the causes of flooding are unclear or complex. The development of a plan to manage surface water in an area should help influence future capital investment, drainage maintenance, land-use planning, emergency planning and future developments. All Local Plan Districts will need to prepare a Surface Water Management Plan, although it is expected that they will vary in detail according to local need. The actions within the plan should be prioritised in areas considered to be at greatest risk of surface water flooding, or where partnership working is considered essential to both understand and address surface water flooding concerns.

Local authorities should work with others to produce a Surface Water Management Plan by June 2016, as part of the Local Flood Risk Management Plan.

Further identification of local actions

In addition to the objectives and actions identified in the Flood Risk Management Strategy, further local priorities may be identified by the local partnership. This allows important local issues and priorities, lying outwith designated Potentially Vulnerable Areas, to be addressed within the Local Flood Risk Management Plan.

Local authorities should collate information on Flood Risk Management activities outwith Potentially Vulnerable Areas for inclusion in the Local Flood Risk Management Plan by December 2014.

Step 3: Consultation and finalisation of Local Flood Risk Management Plans

Draft Local Flood Risk Management Plans will be produced by the lead local authority. The supplementary part of the plan, which includes a summary of the objectives, actions and other relevant information from the strategy, will be consulted upon between December 2014 to April 2015, overlapping and co-ordinated with the Flood Risk Management Strategy consultation. SEPA and the lead local authorities will co-ordinate the consultation, on the strategy and the supplementary part of the Local Flood Risk Management Plan, so as to avoid duplicating consultation with the public and stakeholders.

However, collaboration on the implementation part of the plan, which includes a detailed timetable for the delivery of actions and the associated funding arrangements, is expected to continue between local partners throughout 2015. A final set of Local Flood Risk Management Plans will be published by June 2016. These plans will only be finalised with the agreement of all local authorities within the Local Plan District, Scottish Water and SEPA, thus placing emphasis on the importance of good working relations between all partners.

The lead local authority will review the Local Flood Risk Management Plan and publish an interim report on the conclusions of the review, including information on

the progress that has been made towards implementing the actions to reduce flood risk. This report will be available by June 2019, at the latest.

The lead local authority will publish a final report on the assessment of progress made towards implementing the actions, summary of actions not implemented with reasons, description of other actions implemented since the plan was finalised which the lead local authority considers have contributed to achieving the plan objectives. The final report will be available by June 2022, at the latest.

The lead local authority will consult on draft Local Flood Risk Management Plans by the end of December 2014.

Local partners will continue to collaborate on the implementation arrangements throughout 2015.

The lead local authority will publish final Local Flood Risk Management Plans by the end of June 2016.

The lead local authority will publish an interim report by June 2019, at the latest.

The lead local authority will publish a final report by June 2022, at the latest.

Refer to **Appendix 2** for a timetable of key dates involved in the production of Local Flood Risk Management Plans and Flood Risk Management Strategies.

5. Partnerships and advisory groups

This section describes how advisory groups and local partnerships will help deliver Flood Risk Management Strategies and Local Flood Risk Management Plans.

Partnerships working

Responsibilities for Flood Risk Management are shared amongst several organisations. It is therefore essential that we all adopt partnership working to deliver our responsibilities, founded on a shared vision, common aspirations, and common goals.

This is particularly important in the development of Flood Risk Management Plans and the identification and undertaking of flood management actions. SEPA is keen to ensure that decisions on setting objectives and identifying actions are taken jointly with other responsible authorities and that these decisions are informed by wider stakeholders. The same principle applies to lead local authorities when developing Local Flood Risk Management Plans.

Although there are clear legal duties on the lead local authority, it does not take on sole responsibility for the production of the Local Flood Risk Management Plan. Section 39 of the FRM Act requires, so far as is practicable, joint working where there is more than one local authority in a Local Plan District. Even where there is only one local authority involved, co-operation with SEPA and Scottish Water is still needed. The Scottish Government Guidance *Delivering Sustainable Flood Risk Management* (June 2011), provides advice on delivering responsibilities collectively, and encourages local authorities to share services and seek economies wherever possible.

Some local authorities are already used to working in partnership with one another in order to deliver a joint goal, and there are many examples of how such partnerships can work. However, the Local Plan Districts vary in nature. They range from those with one local authority to those with around ten. Some cover island authorities, some cover large areas of rural land, whilst others cover urban areas. Some authorities are predominantly in one Local Plan District, others are in up to four.

For these reasons there is not a one-size-fits-all approach to partnership working. Some local authorities may be happy to delegate the decision-making role to the lead local authority, while others would prefer to see the lead local authority role as one of co-ordination and facilitation only. Some will be happy to work in an informal way, while others will want the reassurance of a memorandum of understanding or a more formal, contractual agreement. It is down to each of the partner local authorities to come to an agreement on a framework that delivers for them. For example:

- The Clyde and Loch Lomond Local Plan District, with ten authorities, might tend to follow the structured, well-documented governance arrangements of the Metropolitan Glasgow Strategic Drainage Partnership, which involves a number of agencies including several local authorities collaborating to achieve joint goals. This Local Plan District has several authorities that are entirely within its borders, but it also has some which are quite peripheral and as a result may not wish to attach themselves so closely.
- Island Councils may choose a simpler relationship working only with SEPA and Scottish Water.

Governance and working arrangements

Whatever approach local authorities decide to take, it is important that partnership working is underpinned by a clear governance and decision-making framework. Although the lead local authority will be the main point of contact with SEPA, the existence of a lead local authority should not reduce the involvement of the other local authorities in all areas of the Local Flood Risk Management Plan, or reduce the commitment to ensuring that the plan is produced on time and in a co-ordinated manner. The governance arrangements should promote accountability and co-ownership of the plans among all the partners, as well as with those affected by decisions. Shared responsibility should not mean diminished accountability.

One of the first actions expected of the lead local authority is to reach agreement with all the other members on governance and accountability arrangements. After that, it needs to have clear agreement on:

- Objectives for the partnership;
- The roles and responsibilities of the other local authorities, SEPA and Scottish Water;
- Communication and engagement plans;
- What information to share, and how to share it;
- Sharing resources, including identifying clear roles for staff and use of funding;
- Co-ordinating delivery to gain efficiencies;
- Confirming legality of agreements and works established by the partnership, and;
- Ensuring compliance with other legal requirements (for example procurement).

Because of the variety of forms that each working partnership may take, there may also be considerable variation in governance arrangements, and it will be important to have an agreed way to resolve disputes, should they arise.

It is worth noting that specific additional joint working arrangements may be appropriate to deal with complex problems within a Local Plan District, such as for integrated catchment modelling between Scottish Water and local authorities, or for implementing a particular measure or works. These collaborations will require separate, bespoke arrangements that the parties feel are appropriate.

Possible partnership arrangements are detailed more fully in **Appendix 3**.

Shared services

One particular challenge for local authorities will be to reduce implementation costs by sharing systems and services. The lead local authority may look to its partner local authorities to contribute to the costs incurred in carrying out its role. This could be a financial contribution or each local authority could provide support in the form of seconded staff, or the use of facilities or equipment. There may also be the option of having a jointly funded post or posts within the lead local authority for project management or the specific purpose of producing the plan.

It is sensible that local authorities develop systems and approaches together as appropriate, as this will allow for sharing of resources that are not widely available, given financial constraints and skills shortages. It is also sensible that local authorities standardise their approaches where appropriate, because information needed for planning and reporting needs to be consistent across the Local Plan District, in order to promote consistent and good decision-making.

Local advisory groups

It is important that the production of Flood Risk Management Strategies and Local Flood Risk Management Plans benefit from the input of local stakeholders. This local perspective on the identification of Flood Risk Management objectives and the sustainable actions to reduce risk is a valued part of the collaborative approach set out in the FRM Act.

The local advisory groups have a statutory role in providing advice on the co-ordination and integration of Flood Risk Management planning with other strategic plans and policies, particularly River Basin Management Planning. Many of the flooding issues and problems facing the water environment are best understood, and addressed, at the catchment level. Linking local advice for the two planning processes will help identify areas with potential for multiple benefits or where conflicting objectives in Flood Risk Management and the Water Framework Directive need to be managed.

SEPA's two most recent consultations on Flood Risk Management received a strong response from interest groups and non-governmental stakeholders to co-ordinate and streamline engagement and consultation, particularly with River Basin Management Planning. Accordingly, SEPA is looking to establish local advisory groups for Flood Risk Management that link with the Area Advisory Groups established for River Basin Management Planning. We need to ensure that they are co-ordinated, where relevant, to make as efficient use of public and private resources as is practicable.

Many of the stakeholder organisations interested in catchment issues such as flooding, water quality and biodiversity are the same for both Flood Risk Management and River Basin Management Planning. These include, for example, Scottish Water, Scottish Natural Heritage, relevant National Parks, environmental non-governmental organisations and other interest groups such as fishery trusts and land managers. In many cases, the individuals within each organisation having an interest in River Basin Management Planning and Flood Risk Management will be the same.

We recognise that the overlap between River Basin Management Planning and Flood Risk Management within some organisations is low. This is the case for different departments in local authorities. However, in many other organisations, the overlap is direct and provides a strong rationale for co-ordinating arrangements. To take things forward, SEPA will continue to co-ordinate the timing of meetings of River Basin Management Planning Area Advisory Groups with the Flood Risk Management local advisory groups. The local advisory group meetings will be held back to back with the River Basin Management Planning Area Advisory Groups and at the same venue and under the same SEPA Chair, but as a separate session. Where boundaries do not align, there will be a need for local arrangements to be made, and stakeholders to be notified according to which Area Advisory Group meeting is most relevant to the Flood Risk Management local advisory group area.

The purpose of local engagement on Flood Risk Management issues is to advise both SEPA and the lead local authority. More specifically, advice is needed on the key deliverables outlined in the FRM Act including:

- The production and review of flood hazard and flood risk maps in 2013;
- The production of an assessment of natural flood management potential in 2013;

- The production and review of the Flood Risk Management Strategies in 2014, and;
- The production and review of the Local Flood Risk Management Plans in 2014/2015.

It will not therefore be required to discuss Flood Risk Management in detail at every session of the River Basin Management Planning Area Advisory Group, however, we anticipate needing to seek specific advice on maps, natural flood management assessment, Flood Risk Management Strategies and Local Flood Risk Management Plans from stakeholders at least once every 12-month period. In addition to this face-to-face contact, SEPA will ensure all local stakeholders remain engaged with developments in between these key areas of activity through electronic updates, bulletins and newsletters.

SEPA will seek feedback from stakeholders as to how this develops and how arrangements might evolve and improve as we progress to the detailed discussions that are likely to accompany specific actions in Local Flood Risk Management Plans. The SEPA Chairs of the advisory groups will check whether arrangements are proving to be the most sensible means of local engagement for both planning processes and specifically in advance of discussions on objectives and actions in Flood Risk Management Strategies and Local Flood Risk Management Plans.

These arrangements seek to strike the right balance between providing opportunities for the efficient fostering of a catchment approach for all stakeholders, whilst not jeopardising the good work and momentum built up within the River Basin Management Planning Area Advisory Groups. They also retain the flexibility to adapt and adjust arrangements according to local needs and requirements.

To further enable this co-ordination, we believe there may also be merit in making some minor adjustments to the advisory group area boundaries which would bring them closer to the boundaries of the Flood Risk Management Local Plan Districts. However, these boundary adjustments will be considered further with the Scottish Government and local stakeholders.

Relationship between local partnerships and advisory groups

Each local partnership comprised of local authorities, SEPA and Scottish Water is distinct from the local advisory group of wider stakeholders and retains clear responsibility for delivery of the Flood Risk Management actions set out in the local plan. Advice will be sought from the local advisory groups on the key deliverables of the FRM Act. However, it will be the local partnership that will make decisions and facilitate momentum on the delivery of Local Flood Risk Management Plans.

National Flood Management Advisory Group

The National Flood Management Advisory Group was set up in April 2011 and provides advice and support to SEPA and lead local authorities. The National Flood Management Advisory Group will advise on the key deliverables of the FRM Act. In particular it will:

- Advise, support and review the preparation, delivery and implementation of Flood Risk Management Strategies and Local Flood Risk Management Plans, maps and assessments;

- Provide advice on the identified objectives and sustainable actions to reduce flood risk;
- Encourage partnership working and participation of stakeholders;
- Advise on the co-ordination and integration with other strategic plans and policies, and;
- Seek to resolve conflicting pressures identified by local advisory groups.

Cross Border Advisory Group

The Cross Border Advisory Group was set up in May 2011 and provides advice to relevant authorities (Environment Agency, SEPA and local authorities) on the manner in which they should exercise certain functions with respect to English and Scottish cross border areas within the Solway Tweed River Basin District. The group considers how the relevant authorities should co-ordinate their work, in order, to ensure that they understand how the impact of flood risk on one side of the border is affected by actions and inactions on the other side of the border.

Specifically, the group will be responsible for:

- reviewing SEPA/Environment Agency guidance or advice on preparing assessments, maps and plans in the cross border areas;
- providing high-level advice and setting out the principles of cross border co-ordination, and;
- where timeframes permit, reviewing assessments, maps and plans that relate to the cross border areas with the key objective of ensuring that they are sufficiently co-ordinated.

Scottish Government Flooding Policy Stakeholder Group

The Flooding Policy Stakeholder Group has been established as an informal forum designed to support the implementation of the FRM Act. The group replaces previous SAIFF advisory groups, and will run alongside the various Task and Finish Groups. The purpose of the Flooding Policy Stakeholder Group is to provide expert advice to the Scottish Government and other relevant organisations. It will ensure that a broad community of interests is aware of the current and future plans for FRM Act implementation.

The group is Chaired by the Scottish Government and membership is comprised of central and local government, researchers, consultants, SEPA, Scottish Water and wider interest groups. The Flooding Policy Stakeholder Group provides an opportunity for detailed discussion on technical requirements, research and the implementation of best practice.

6. Co-ordination with River Basin Management Planning and land-use planning

SEPA and the lead local authorities will ensure that the information in the Flood Risk Management Strategies and Local Flood Risk Management Plans is consistent with the information on the characterisation of River Basin Districts and within River Basin Management Plans. Integration of these two planning processes is important to deliver the common goal of protecting, enhancing and managing Scotland's water environment. Co-ordination and co-operation between the two will allow multiple benefits to Flood Risk Management and the water environment to be delivered. It will also help manage potential conflicting pressures between River Basin Management Planning and Flood Risk Management planning where, for example, building flood walls and embankments could compromise good ecological status or biodiversity.

Where possible, we are keen to ensure that natural flood management actions also support the delivery of River Basin Management Planning objectives, and that those objectives take into account flood risk issues. In summary we will:

- Ensure that information we develop is co-ordinated with information developed for River Basin Management Planning with the aim of delivering multiple objectives where possible;
- Ensure that opportunities for multiple benefits are identified, as part of our work to assess the potential contribution of natural flood management to reducing flood risk, in order to make links with River Basin Management Planning at an early stage of the process, and;
- Ensure that opportunities for the delivery of multiple benefits are identified in the Restoration Plan being produced as a supplementary plan to the River Basin Management Plan.

SEPA and responsible authorities will also ensure input into other major planning processes to help establish an integrated and sustainable approach to reducing flood risk in Scotland. One of the key planning processes which will be integral to delivering sustainable flood management is the land-use planning system. SEPA has a statutory role, under section 72 of the FRM Act, in providing flood risk information and advice to Planning Authorities and also has been identified as a key agency to assist authorities in the preparation of Development Plans. In this respect, we will continue to work in partnership with local authorities with a view to ensuring that the planning system is able to contribute to effective and sustainable flood management in a manner consistent with Flood Risk Management Plans and which is also supportive of Scottish Government policy guidance outlined in the consolidated Scottish Planning Policy. Furthermore, SEPA will continue to support other stakeholders in the land-use planning system (such as developers, consultants and the public) by providing timely, consistent and high-quality flood risk advice and information to enable a wider contribution to the delivery of sustainable flood management.

Appendix 1:
Roles and responsibilities for the production of Flood Risk Management Strategies and Local Flood Risk Management Plans

Stakeholder	Role and responsibilities
SEPA	<ul style="list-style-type: none"> • Production, consultation, publication and review of 14 Flood Risk Management Strategies; • Establish and administer national and local advisory groups; • Work in partnership with other responsible authorities through Local Plan District partnerships; • Ensure co-ordination and consistency with River Basin Management Planning and other development planning processes, and; • Agree Local Flood Risk Management Plans.
Local authorities	<ul style="list-style-type: none"> • Select a lead local authority for their relevant Local Plan District; • Deliver objectives set out in Flood Risk Management Strategies through the preparation of Local Flood Risk Management Plans; • Participate in Local Plan District partnerships; • Approve the Local Flood Risk Management Plans; • Co-ordinate flood-related work with other local authorities; • Implement actions, as identified through the Local Flood Risk Management Plan, to reduce flood risk within their administrative boundary, and; • Contribute to the production of Surface Water Management Plans.
Lead local authority	<ul style="list-style-type: none"> • Establish and lead local partnerships; • Co-ordinate the production, consultation, publication and review of the Local Flood Risk Management Plan; • Inform SEPA of the views expressed on the Local Flood Risk Management Plan; • Produce an interim report no later than three years after the final Local Flood Risk Management Plan is published; • Produce a final report no later than six years after the Local Flood Risk Management Plan is published; • Inform Scottish Ministers if planned deadlines set in legislation or relevant guidance will not be kept; • Submit any additional information seen as relevant to the Local Flood Risk Management Plan, and; • Serve notice to a relevant person(s) (except SEPA, another responsible authority or Scottish Ministers) to provide information or documents in connection to their role.
Scottish Water	<ul style="list-style-type: none"> • Assess the risk of flooding from surface sewers and combined sewers (surface water and foul) in locations agreed with SEPA; • Help identify areas requiring a Surface Water Management Plan, and;

	<ul style="list-style-type: none"> • Work in partnership with other responsible authorities through Local Plan District partnerships.
Scottish Government	<ul style="list-style-type: none"> • Approve Potentially Vulnerable Areas and Local Plan Districts; • Approve the 14 Flood Risk Management Strategies, and; • Act as final decision-maker where agreements for actions cannot be reached in a Local Plan District.

Appendix 2:
Timetables of key dates involved in the production of Flood Risk Management Strategies and Local Flood Risk Management Plans

Flood Risk Management Strategy

Step	Date	Activity	Lead
Step 1: <i>Preparatory work</i>	June to December 2012	Characterisation of Local Plan Districts	SEPA
	January to December 2012	Natural flood management assessment and mapping of artificial and natural features	SEPA
	Commencing January 2012 with preliminary outputs in September 2012 and final maps published in December 2013	Flood hazard and flood risk maps	SEPA
Step 2: <i>Identification of objectives, appraisal and prioritisation of actions</i>	December 2012 to June 2013	Identification of objectives and actions to reduce flood risk	SEPA
	By April 2013	Objectives to be finalised	SEPA
	March to June 2013	Actions to reduce flood risk to be identified	SEPA
	By December 2012	Additional guidance on appraisal for Flood Risk Management	Scottish Government
	May 2013 and March 2014	Co-ordinate the appraisal of actions, in consultation with local authorities and Scottish Water	SEPA
	February and December 2014	Prioritisation of actions	SEPA
Step 3: <i>Consultation on Flood Risk Management Strategies</i>	December 2014	Draft Flood Risk Management Strategies for public consultation	SEPA
	December 2015	Final Flood Risk Management Strategies	SEPA

Local Flood Risk Management Plan

Step	Date	Activity	Lead
Step 1: Preparatory work	January to March 2012	Establish local partnerships	Lead local authority
	By end of December 2012	Mapping of water bodies and assessing their current condition and potential flood risk within each local authority administrative boundary	Local authorities
	By end of December 2012	Assess surface water management issues in each local authority administrative boundary	Local authorities
	Preliminary outputs by December 2012, final outputs by June 2013	Assess the risk of flooding from sewerage systems	Scottish Water
	March 2012 to December 2013	Progress work in the five surface water study areas, with local authorities and SEPA	Scottish Water
	By December 2012	Collate information on existing Flood Risk Management activity in each Local Plan District	Local authorities
Step 2: Identification, appraisal and prioritisation of surface water actions, and other local Flood Risk Management actions	December 2013 and December 2015	Agreement on the prioritisation, funding and timing of actions within the first planning cycle	Lead local authority
	By June 2016	Preparation of a Surface Water Management Plan	Local authorities
	By December 2014	Further identification of local actions, including collation of information on Flood Risk Management activities outwith Potentially Vulnerable Areas for inclusion in the plan	Local authorities
Step 3: Consultation and finalisation of Local Flood Risk Management Plans	By the end December 2014	Draft Local Flood Risk Management Plans for consultation	Lead local authority
	throughout 2015	Local partners will continue to collaborate on the implementation arrangements of the plan	Local partners
	By the end of June 2016	Final Local Flood Risk Management Plans	Lead local authority
	By June 2019	Local Flood Risk Management Plan interim report	Lead local authority
	By June 2022	Local Flood Risk Management Plan final report	Lead local authority

Appendix 3:

Possible Partnership Working Arrangements produced by Society of Chief Officers of Transportation in Scotland and Scottish Government

Three possible types of agreement that local authorities could use are set out below. These are offered solely as guidance and the decision for how the working relationship is established is down to the partner local authorities. However, Local Flood Risk Management Plans cannot be completed until agreements over funding and implementation timetables are reached. It is crucial, therefore, that whatever agreement local authorities decide to use, there are clear arrangements in place within each local authority to secure agreement on Flood Risk Management actions, their funding and implementation.

There is naturally some uncertainty as to how implementation of Flood Risk Management Plans will develop. Any agreement between multiple agencies should, therefore, be viewed as a working document, and should allow for flexibility and adaptability as plans are developed. As the working partnership develops it is important to revisit the agreement to make sure that it is relevant and up-to-date. When drawing up any kind of agreement, the parties should, therefore, agree on how often it will be reviewed, who will be involved and how this will be done. As a minimum, it is recommended that the parties review arrangements, including the lead local authority at the start of each Flood Risk Management planning cycle.

It should also be noted that SEPA will be working alongside the lead local authority and other authorities in the Local Plan District to provide perspective on and assistance through the process. This demonstrates that the partnership ethos continues from the national level through to the local level.

Memorandum of Understanding (MoU)

A simple, formal MoU can be drawn up between various organisations to outline the purpose of the working partnership and how the members will work together. An MoU can set out the level of involvement of each organisation, scope, governance, funding, accountability and roles and responsibilities. It can also address information sharing protocols, data management and security, intellectual property rights and issues relating to the Data Protection Act.

The MoU can be produced to be binding in honour only and devoid of legal obligations.

Model 1: Loose Partnership

Political co-operation: Individual committees in each local authority approve decisions.

Official co-operation: Lead local authority co-ordinates the partnership.

Advantages:

- No requirement for special agreements or formal governance documents;
- Maintains local democratic accountability;
- Scottish Water and SEPA representation is simple;
- Easier to implement than more structured models, and;
- Clarity of roles – each local authority does its part.

Disadvantages:

- Reaching agreements can be more difficult and can lead to paralysis;

- Inconsistencies are more likely;
- Could make sharing of resources and expertise more difficult;
- Duplication of work (cost), and;
- Fragmentation of resources/expertise and less well-resourced local authorities might fail to deliver.

Potentially, this option would suit Local Plan Districts where there is a predominant local authority or a small number of local authorities (i.e. three or less), where there is little track record of joint working or for geographically dispersed/diverse districts.

Model 2: Joint Working Group

Political co-operation: Working group of elected members and officials from all partner local authorities, SEPA and Scottish Water. Representation could vary among local authorities depending upon, for example, the number of Potentially Vulnerable Areas or the level of annual average damages within their local authority area. Remit would be to make recommendations for approval by individual local authority committees. Chaired by the lead local authority.

Official co-operation: Joint management team led by lead local authority. Roles and responsibilities would be to advise the political group and for opportunities for shared roles and cross-border working to be explored, agreed and implemented.

Advantages:

- Speeds up local authority approval process by having political buy-in earlier;
- Promotes a joint working approach;
- Opportunity to second staff to a management unit or work cross-boundary;
- Promotes better officer/member working;
- Reduces barriers and increases trust;
- Flexible interpretation of the model possible;
- Scottish Water and SEPA participation reasonably straightforward.
- Democratic accountability retained, and;
- More consistent and structured approach than loose partnership.

Disadvantages:

- Needs formal governance and written Memorandum of Understanding/Agreement;
- Representation might be contentious (in terms of how many representatives from each local authority);
- Recommendations might not be accepted by all local authorities in the approval process; and
- Requires a more dedicated resource, e.g. secretariat, which might raise funding issues to be resolved.

Potentially, this would suit a district of between two and six local authorities where there is existing familiarity and joint working approaches in place. There might be issues where there is a single, predominant local authority, and how this manifests itself in political representation. It could develop or evolve into a more integrated model (see below) over time.

Model 3: Joint Committee

Political co-operation: A formal arrangement entered into voluntarily to delegate powers to a joint committee of local authorities, potentially with the option for peripheral local authorities to operate only as corresponding members. If this were the case it would be a hybrid model. The joint committee would have powers regarding approval of Local Flood Risk Management Plan and to monitor progress. It is envisaged that delegated powers would have restrictions to protect individual local authorities from undue financial risk.

Official co-operation: Single officer team to advise committee. Possible co-location for team.

Advantages:

- Quicker decision-making process;
- Joint political buy-in;
- Joint working/office sharing/etc, promoted;
- Quasi-autonomous, and;
- Consistency across the Local Plan District.

Disadvantages:

- Legal framework and secretariat required – greater resource and time to set up;
- Democratic accountability arguably diminished;
- Might not fit well with neighbouring Local Plan Districts (which means that some local authorities could be involved in several models);
- Working with Scottish Water and SEPA could be more challenging given very different constitutions, and;
- Would require all participating local authorities to be working from same systems – politically confusing.

Potentially would suit the larger Local Plan Districts, although there is scope for all districts to take this approach and apply it proportionately. There is a need to consider how SEPA and Scottish Water would fit within a committee structure and how they might resource it.

Appendix 4: Glossary

Flood hazard map	Required by FRM Act to show information that describes the nature of a flood in terms of the extent, water level or depth and velocity of water, where appropriate.
Flood risk	A measure of the combination of the likelihood of flooding occurring and the associated impacts on people, the economy and the environment.
Flood Risk Management Strategy	Sets out a long-term vision for the overall reduction of flood risk. They will contain a summary of flood risk in each Local Plan District, together with information on catchment characteristics and a summary of objectives and measures for Potentially Vulnerable Areas. Taken together, the strategies will satisfy the requirement for National Flood Risk Management Plans, set out in section 27 of the FRM Act.
Flood risk map	Build on flood hazard maps to provide detail on the impacts of flooding on people, the economy and the environment.
Lead local authority	A local authority responsible for leading the production, consultation, publication and review of a Local Flood Risk Management Plan.
Local advisory group	Local advisory groups advise lead local authorities in the preparation of local Flood Risk Management Plans. SEPA and lead local authorities must have regard to the feedback they provide.
Local Flood Risk Management Plan	Plans prepared by local authorities that provide a local expression of the strategic plans prepared by SEPA. They include a summary of how actions will be implemented in each local plan area.
Local Plan District	Geographical areas for which Local Flood Risk Management Plans will be produced.
National Flood Management Advisory Group (NFMAG)	The National Flood Management Advisory Group provides advice and support to SEPA and, where required, to other responsible bodies on the key deliverables of the Flood Risk Management Act. NFMAG has a wide variety of members, reflecting the impact flooding has on communities, the environment, cultural heritage, the economy and human health.
National Flood Risk Assessment	A national assessment of the impacts of flooding on people, the economy and the environment. Taking into account catchment characteristics, climate change and long-term developments. It provides the information required to undertake a strategic approach to flood management that targets those areas at greatest risk from floods.
Natural Flood Management	A set of flood management techniques that aim to work with natural processes (or nature) to manage flood risk.
Potentially Vulnerable Areas	Catchment units in which the National Flood Risk Assessment has identified significant impacts from flooding either now, or in the future, as a result of climate change. They will be used as the basis for producing Flood Risk Management Strategies.
Responsible authority	Designated in the FRM Act as local authorities and Scottish Water. Responsible authorities, along with SEPA and Scottish Ministers have specific duties in relation to their flood risk-related functions. Scottish Ministers can designate additional public bodies as responsible authorities.

River Basin Management Planning	River Basin Management Planning is a strategic decision-making process introduced by the Water Environment & Water Services (Scotland) Act 2003 (WEWS Act) which integrates the management of land and water within River Basin Districts.
Scottish Advisory and Implementation Forum for Flooding (SAIFF)	A stakeholder forum on flooding set up by the Scottish Government to provide a platform for sharing expertise and developing common aspirations and approaches to reducing the impact of flooding to Scotland's communities, environment, cultural heritage and economy.
Surface Water Management Plan	An integrated approach to drainage that takes account of all aspects of urban drainage systems and produces long-term and sustainable actions. Ensures that during a flood event the flows created can be managed in a way that will cause minimum harm to people, buildings, the environment and business.
Water Framework Directive (WFD)	The WFD establishes integrated River Basin Management Planning for Europe. It requires all inland and coastal waters to reach "good status" by 2015, or an alternative or delayed objective.

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