

13 February 2008

Dear Consultee

Consultation on 'The Future of Flood Risk Management in Scotland'

The First Minister announced on 5th September 2007 that the Scottish Government will introduce a Flooding Bill in 2008 to modernise the flood risk management system in Scotland. The broad objective in promoting new legislation is to provide the framework to ensure that a modern approach to flood management is in place across Scotland.

The flooding summit we held in Perth in September 2007 demonstrated unanimous support for a fresh approach to flood risk management.

The proposals we have set out in this consultation paper are designed to establish a framework within which sustainable flood risk management in Scotland will operate more effectively than at present. They will ensure that there is no duplication of effort, and that the flood risk management process is simplified and better co-ordinated. Local authorities, who are accountable to local communities, and best able to judge the needs of their areas, will continue to be responsible for implementing flood alleviation measures. However, individual local authorities cannot operate in isolation. Our proposals will establish a way of co-ordinating catchment flood management planning to ensure a national approach, delivered locally.

We have included options to simplify the present statutory process for approving flood risk management measures, and to remove the risk of two public inquiries being held; one on planning and one on flood risk management measures. We are confident that these proposals will reduce significantly the delays associated with this aspect of flood risk management.

The Scottish Government is today publishing a consultation document which sets out the proposals for the Flooding Bill and seeks your views on the proposals. We are asking important questions about the future of flood risk management and development of legislation to provide this framework. The consultation document and accompanying material are available from the Scottish Government website:

<http://www.scotland.gov.uk/Consultations>.

Responding to this Consultation

Please send your views and comments on the proposals in this paper via e-mail, letter or fax to the address below by 23 April 2008.

Email: Engineering@scotland.gsi.gov.uk

Letter: Frances Conlan
Water, Air, Soils and Flooding Division
The Scottish Government
1H North
Victoria Quay
Edinburgh
EH6 6QQ

Regulatory Impact Assessment and Environmental Report

We also seeking information to help us fully to assess the potential environmental, economic and social impacts of our proposals. When responding to the consultation we would welcome comments on the partial Regulatory Impact Assessment, and the draft Environmental Report, giving supporting evidence wherever possible. Both of these documents are available on our website. Because neither the partial Regulatory Impact Assessment nor the draft Environmental Report contain specific questions, there is no online response form for them. Responses should be sent directly to the email or postal address above.

Printed Copies and alternative formats

In order to save resources by limiting the amount of paper we use, this has been designed as an internet - based consultation. However, if you wish to obtain a printed copy of the consultation document or materials, or require an alternative format, please contact the Flooding Bill Team at the email or postal address above or by telephone on 0131 244 0159.

Handling your response

We need to know how you wish your response to be handled and, in particular, whether you are happy for your response to be made public. Please complete and return the Respondent Information Form which forms part of the consultation as this will ensure that we treat your response appropriately. If you ask for your response not to be published we will regard it as confidential, and we will treat it accordingly. All respondents should be aware that the Scottish Executive are subject to the provisions of the Freedom of Information (Scotland) Act 2002 and would therefore have to consider any request made to it under the Act for information relating to responses made to this consultation exercise.

Next steps in the process

Where respondents have given permission for their response to be made public (see the attached Respondent Information Form), these will be made available to the public in the Scottish Government Library and on the Scottish Government consultation web pages by the end of May 2008. We will check all responses where agreement to publish has been given for any potentially defamatory material before logging them in the library or placing them on the website. You can make arrangements to view responses by contacting the SE Library on

0131 244 4552. Responses can be copied and sent to you, but a charge may be made for this service.

What happens next?

Following the closing date on 23 April 2008, all responses will be analysed and considered along with any other available evidence to help us reach a decision on the future of Flood Management in Scotland. We aim to issue a report on this consultation process by summer and introduce legislation in 2008.

Comments and complaints

If you have any comments about how this consultation exercise has been conducted, please send them to:

Please refer to the contact details above.

The following annex is attached to this letter:

Annex A: Respondent Information Form

We look forward to receiving your responses to this consultation.

Yours sincerely

Bob Irvine

Deputy Director

Water Air Soils and Flooding Division

The Future of Flood Risk Management in Scotland

Please complete the details below and return it with your response. This will help ensure we handle your response appropriately. Thank you for your help.

Name:

.....

Postal Address:

.....

.....

.....

1. Are you responding: (please tick one box)

(a) as an individual (go to Q2a/b and then Q4)

(b) on behalf of a group/organisation (go to Q3 and then Q4)

Individuals

2a. Do you agree to your response being made available to the public (in Scottish Executive library and/or on the Scottish Government website)?

Yes (go to 2b below)

No (We will treat your response as confidential)

2b. Where confidentiality is not requested, we will make your response available to the public on the following basis: (please tick one of the following boxes)

Yes, make my response, name and address all available

Yes, make my response available, but not my name or address

Yes, make my response and name available, but not my address

On behalf of Groups or Organisations

3. The name and address of your organisation will be made available to the public (in the Scottish Government library and/or on the Scottish Government website).

Are you also content for your response to be made available?

Yes

No (We will treat your response as confidential)

Sharing Responses / Future Engagement

4. We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so.

Are you content for the Scottish Government to contact you again in the future in relation to this consultation response?

Yes

No

Please indicate which questions or parts of the consultation paper you are responding to as this will aid our analysis of the responses received:

Flooding

Reservoirs

Both

The Future of Flood Risk Management in Scotland A Consultation Document

The Scottish Government has one, clear purpose: to focus the Government and public services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth. It is extremely important, therefore, to manage the risks associated with flooding, which can devastate lives, communities, property and the environment.

The proposals we have set out in this consultation paper are designed to establish a framework within which sustainable flood risk management in Scotland will operate more effectively than at present. They will ensure that there is no duplication of effort, and that the flood risk management process is simplified and better co-ordinated. Local authorities, who are accountable to local communities, and best able to judge the needs of their areas, will continue to be responsible for implementing flood alleviation measures. However, individual local authorities cannot operate in isolation. Our proposals will establish a way of co-ordinating catchment flood management planning to ensure a national approach, delivered locally.

We welcome your views on these proposals and hope that you will take this opportunity to consider what is best for the future of flood risk management in Scotland.

The Future of Flood Risk Management in Scotland



A Consultation Document
February 2008

The Future of Flood Risk Management in Scotland

A Consultation Document
February 2008

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Ministerial Foreword And Executive Summary



MINISTERIAL FOREWORD



The Scottish Government has one, clear purpose: to focus the Government and public services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth. It is extremely important, therefore, to manage the risks associated with flooding, which can devastate lives, communities, property and the environment.

However, we have to recognise that floods are a natural process, which have been exacerbated and made more problematic by human activity. Historically, we have built on the flood plain, straightened rivers and forced them into underground culverts, and drained land for agricultural production. Climate scenarios for Scotland tell us that over the course of this century our climate will become wetter and stormier. As evidenced by events such as the 2002 Glasgow flood and the 2005 Western Isles storm, the implications of severe weather events are wide ranging across society, the environment and the economy. We know we can expect an increase in flood risk - for all types of flooding - which could be damaging to both Scotland's economy and society as a whole.

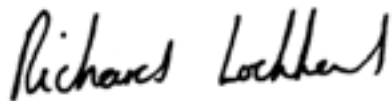
Scotland needs to adapt to this change if it is to minimise the impacts of costly disruptions and safeguard the continued smooth functioning of services and infrastructure. How we manage these risks will be one of our main challenges for the future.

The flooding summit we held in Perth in September 2007, demonstrated unanimous support for a fresh approach to flood risk management.

The proposals we have set out in this consultation paper are designed to establish a framework within which sustainable flood risk management in Scotland will operate more effectively than at present. They will ensure that there is no duplication of effort, and that the flood risk management process is simplified and better co-ordinated. Local authorities, who are accountable to local communities, and best able to judge the needs of their areas, will continue to be responsible for implementing flood alleviation measures, however individual local authorities cannot operate in isolation. Our proposals will establish a way of co-ordinating catchment flood management planning to ensure a national approach, delivered locally.

We have included options to simplify the present statutory process for approving flood risk management measures, and to remove the risk of two public inquiries being held; one on planning and one on flood risk management measures. We are confident that these proposals will reduce significantly the delays associated with this aspect of flood risk management.

We welcome your views on these proposals and hope that you will take this opportunity to consider what is best for the future of flood risk management in Scotland.



Richard Lochhead MSP

Cabinet Secretary for Rural Affairs and the Environment



Michael Russell MSP

Minister for Environment

EXECUTIVE SUMMARY

The First Minister announced on 5 September 2007 that the Scottish Government will introduce a Flooding Bill in 2008 to modernise the flood risk management system in Scotland. The broad objective in promoting new legislation is to provide the framework to ensure that a fully sustainable approach to flood risk management is in place across Scotland.

Problems With The Current System

At the moment, there are a large number of key players dealing with flooding from all its sources; however there is a lack of co-ordination between the different powers and duties under different legislation (including flood prevention, roads, urban drainage, sewerage and land drainage). This lack of co-ordination is because there is no national framework within which local authorities, Scottish Water, SEPA and others can take decisions relating to the management of flood risk. As a result, flood risk management has been largely reactive. We have to leave this reactive approach behind, and instead look to reduce the risk of significant impacts of flooding through sustainable flood management.

The Flood Prevention (Scotland) Act 1961 is the main piece of legislation for managing flood risk from rivers and the sea, but it was written for previous local government structures and responsibilities, and does not interact well with new duties such as the duty to promote sustainable flood management under the Water Environment and Water Services Act 2003 (The 2003 Act). In particular:

- its emphasis on large scale engineered solutions to flooding problems makes it difficult to implement a catchment wide approach.
- the measures permitted in the Act are only suitable for river and coastal flooding, and would not address all types of flooding as required by a sustainable approach.
- the statutory process set out in the Act is seen by many as the cause of delays in developing and building flood prevention schemes (as they are currently known) as it is not integrated with other statutory processes such as planning and the Controlled Activities Regulations (under the 2003 Act) and so requires local authorities to pursue three separate statutory processes in order to get a scheme built.

Another problem is the lack of integration of water industry infrastructure with other drainage and flooding infrastructure. At the time of the 1961 Act, local authorities were also responsible for water infrastructure and could use the water and sewerage legislation to carry out work on the sewerage infrastructure. They could only use the 1961 Act where the existing sewers or water mains had to be diverted as a consequence of carrying out a flood prevention operation.

Now that Scottish Water is responsible for water industry infrastructure, there are difficulties when proposed flood alleviation measures would require an upgrading of, or improvements to, the sewerage infrastructure which is not on Scottish Water's 6 year work programme.

This splitting of responsibilities has also meant that surface water drainage has become a grey area, where local authorities are responsible for the water on the road surface but Scottish Water is responsible once the water enters its sewers.

Finally, there is no legal restriction on building on a flood plain, although SPP7 - Planning and Flooding, published in February 2004, strengthened planning guidance on striking a balance between how we use land and avoid inappropriate development on flood plains.

The Way Forward

We are seeking views on the following proposals:

- identify a competent authority with overall responsibility for the implementation of the EC Floods Directive and responsible authorities (including local authorities, Scottish Water, SNH and the Forestry Commission) for the purposes of flood risk management planning.
- enable areas for flood risk management planning to be defined by Ministerial direction following consultation with SEPA and the responsible authorities. These areas will cover a single large catchment or combination of multiple catchments including coastal management units.

We require the competent authority to:

- undertake preliminary flood risk assessments (PFRA) to create a national picture of flood risk in Scotland, by 22 December 2011.
- undertake Flood Risk and Hazard Mapping for those areas identified through the PFRA as being at significant flood risk by 22 December 2013.
- produce strategic Area Flood Risk Management Plans that will coordinate flood risk management objectives and measures across catchments, or groups of catchments, and set the framework in which measures are delivered or planned for at a local level by responsible authorities i.e. local authorities and others.

In preparing these plans, the competent authority will:

- secure the participation of responsible authorities via area advisory groups, and will consult stakeholders.
- submit the plans to the Scottish Ministers by the required date, and will monitor and review in accordance with the requirements of the Floods Directive.

- require local authorities to develop detailed Local Flood Risk Management Plans, prepared in co-operation with the other responsible authorities, which will set out in more detail the measures required to manage the local flood risk.

Local authorities will retain existing duties to:

- assess the condition of watercourses from time to time to ascertain whether their condition was likely to cause flooding of non-agricultural land in their area.
- maintain watercourses in a due state of efficiency where such maintenance would substantially reduce the risk of such flooding.
- publish a biennial report of instances of flooding and measures taken since their last report, and any further measures they consider they require to take to mitigate flooding of non-agricultural land.

However, we propose that the form and content of the biennial reports will be prescribed by the Scottish Ministers in secondary legislation, and that it will also be subject to Ministerial guidance.

Local authorities will also have the power to carry out such flood risk management measures as may appear to them to be necessary or expedient for the protection of any land or property in their area. This would enable local authorities to implement the measures agreed in a Local Flood Risk Management Plan.

The present statutory process will be simplified by either:

- retaining a statutory process for approval of flood risk management measures, but for Ministerial confirmation to carry deemed planning permission, or
- removing entirely the Ministerial confirmation process.

The Scottish Government is also seeking views on proposals to introduce a transfer of responsibility for enforcement of the Reservoirs Act 1975 in Scotland from local authorities to a single enforcement authority, and is keen to obtain feedback on which organisation may be best placed to undertake enforcement.

The detailed proposals are set out fully later in this document.

Summary of Questions Purpose of Consultation And Consultation Arrangements



SUMMARY OF QUESTIONS

- Q1.** Do you believe the definition of SFM is helpful and of practical benefit to flood risk management?
- Q2.** Do you think the definition is clear and simple to understand?
- Q3.** Do you agree with the conclusion as set out in paragraph 3.17?
- Q4.** Do you agree that there should be a single competent authority with a national remit for implementing the Floods Directive, and that it should be SEPA?
- Q5.** Do you agree that this is a sound basis for the development of Local Flood Risk Management Plans? If not what alternative do you propose?
- Q6.** Should Ministers or SEPA have the power to designate a lead authority within a local area, or should it be left to the partners?
- Q7.** Do you agree that Local Authorities, Scottish Water, the Forestry Commission, and SNH should be identified as responsible authorities?
- Q8.** Which other bodies should be identified as responsible authorities?
- Q9.** Do you agree that responsible authorities should have a duty to work together within Flood Advisory Groups to produce plans?
- Q10.** Do you agree the proposals are sufficient to support wider stakeholder and community engagement in the flood risk management planning process?
- Q11.** Do you agree that the Bill should set out a process similar to that for River Basin Management Planning for the preparation by SEPA of area flood risk management plans?
- Q12.** Do you agree that Ministers have the power to approve, reject or modify Area Flood Risk Management Plans?
- Q13.** Do you think that integrated urban drainage plans should be included as part of a Local Flood Risk Management Plan?

- Q14. Should Flood Risk Management Plans inform the way that development plans are prepared, or should there be a stronger linkage such as a requirement on planning authorities to show that they have regard to the FRMPs?**
- Q15. Do you think that the granting of deemed planning permission at the end of the statutory process for flood risk management will deliver a more streamlined approach to the delivery of flood risk management?**
- Q16. Should Ministerial confirmation be made necessary even where features of a scheme do not require planning permission?**
- Q17. Is the present procedure for Ministerial confirmation satisfactory for this new purpose or are there revisions e.g. to timescales which should be considered?**
- Q18. Do you think that the option to rely on a local authority based process in a similar way as other local authority development activity should be taken forward?**
- Q19. What would be the appropriate timescales for notification and response?**
- Q20. Would it be appropriate for such a process to carry deemed planning consent?**
- Q21. How should the issue of technical expertise and capacity to ensure the necessary technical standards are observed, be addressed?**
- Q22. Are there any additional alternatives to the options outlined above which would simplify procedures?**
- Q23. Do you consider local authorities' powers are sufficient to take necessary action to avert danger to life and property?**
- Q24. Do you agree that streamlining the CAR and flooding/planning processes can be managed through better guidance?**
- Q25. Do you think there is anything further SEPA, the Scottish Government or others should be doing to promote joined-up regulation?**
- Q26. Do you think that there is an alternative approach to simplifying the process of promoting flood measures to those discussed above which the Government should consider?**

- Q27. Do you agree that the form and content of the biennial reports should be more systematic, and subject to direction from Ministers?**
- Q28. Do consultees agree that the proposals as outlined will improve flood risk management and ensure Scotland is equipped to implement sustainable flood management?**
- Q29. Do consultees feel that this is enough to ensure that flood risk is addressed or should local authorities have a new duty to promote measures to alleviate flooding?**

RESERVOIR SAFETY

- Q30. Do you believe enforcement responsibilities under the Reservoirs Act 1975 should be transferred to a single national body?**
- Q31. If so, should it be SEPA or another as yet unidentified body?**
- Q32. Are you content with the proposals for dealing with reservoir flood maps under the provisions of the Floods Directive, or do you think that there should be a statutory duty on reservoir undertakers to prepare reservoir inundation maps and plans, similar to the duty in the 2003 Water Act for England and Wales?**
- Q33. Do agree that enforcement powers be extended and post incident reporting included as an additional requirement?**
- Q34. Views on crown application and any other comments?**

PURPOSE OF CONSULTATION

The First Minister announced on 5th September 2007 that the Scottish Government will introduce a Flooding Bill in 2008 to modernise the flood risk management system in Scotland. The broad objective in promoting new legislation is to provide the framework to ensure that a modern approach to flood management is in place across Scotland.

This paper sets out the Scottish Government's proposals for the Flooding Bill. The proposals for the draft Bill, which are described further in the paper, will:

- reform the current legislation covering flood protection and prevention;
- transpose the EC Directive on the Assessment and Management of Flood Risks (the Floods Directive);
- simplify the procedures necessary to develop and implement measures to manage flood risk;
- create a framework for a sustainable, catchment focused approach to flood risk management; and
- set out proposals to transfer responsibility for enforcement of the Reservoirs Act 1975 in Scotland from local authorities to a single enforcement authority.

Proposals take into account the recommendations of the Flooding Issues Advisory Committee (FIAC).

The Bill will not cover the emergency response to a flooding event, as this comes under the auspices of the Civil Contingencies legislation.

We welcome your responses to the specific questions outlined in the "Proposals" section of this document and any other comments you may have generally. This is a public consultation, so anyone is welcome to respond. We have however invited a number of practitioners, professionals and academics with a direct interest in flood risk management for their views. A list of these consultees is included at Annex C.

CONSULTATION ARRANGEMENTS

Invitation to respond to the Consultation on the Future of Flood Risk Management in Scotland.

Please send your views and comments on the proposals in this paper via e-mail, letter or fax to the address below by 23 April 2008.

Email: Engineering@scotland.gsi.gov.uk

Letter: Frances Conlan
Water, Air, Soils and Flooding Division
The Scottish Government
1H North
Victoria Quay
Edinburgh
EH6 6QQ

Fax: 0131 244 0259

If you have any queries please contact:

Judith Tracey on 0131 244 0213 or
Frances Conlan on 0131 244 4938

We would be grateful if you could clearly indicate in your response which questions or parts of the consultation paper you are responding to as this will aid our analysis of the responses received:

- Flooding
- Reservoirs
- Both

This consultation, and all other Scottish Government consultation exercises, can be viewed online on the consultation web pages of the Scottish Government website at:

<http://www.scotland.gov.uk/consultations>

You can telephone Freephone 0800 77 1234 to find out where your nearest public internet access point is.

The Scottish Government now has an email alert system for consultations:

SEconsult: <http://www.scotland.gov.uk/consultations/seconsult.aspx>

This system allows stakeholder individuals and organisations to register and receive a weekly email containing details of all new consultations (including web links). SEconsult complements, but in no way replaces SE distribution lists, and is designed to allow stakeholders to keep up to date with all SE consultation activity, and therefore be alerted at the earliest opportunity to those of most interest. We would encourage you to register.

Handling your response

We need to know how you wish your response to be handled and, in particular, whether you are happy for your response to be made public. Please complete and return the Respondent Information Form which forms part of the consultation as this will ensure that we treat your response appropriately. If you ask for your response not to be published we will regard it as confidential, and we will treat it accordingly. All respondents should be aware that the Scottish Executive are subject to the provisions of the Freedom of Information (Scotland) Act 2002 and would therefore have to consider any request made to it under the Act for information relating to responses made to this consultation exercise.

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What happens next?

Following the closing date on 23 April 2008, all responses will be analysed and considered along with any other available evidence to help us reach a decision on the future of Flood Management in Scotland. We aim to issue a report on this consultation process by summer and introduce legislation in 2008.

Comments and complaints

If you have any comments about how this consultation exercise has been conducted, please send them to:

Please refer to the contact details above.

Responses should reach us by **23rd April 2008**. Earlier responses would be welcome.

Chapter 1: Background



CHAPTER 1: BACKGROUND

The impacts of flooding

- 1.1 Flooding can have serious effects on people, their homes and businesses, and their health. According to the most recent flood maps¹ almost 100,000 properties in Scotland are either at risk of fluvial flooding or lie within coastal flood zones. Flooding may also arise from sewers overflowing and from the overland flow of surface water (pluvial flooding), as a result of heavy and intense rainfall. More generally, flooding impacts on the transport infrastructure and on many other aspects of people's lives.
- 1.2 A number of damaging floods have occurred in Scotland in recent years: Perth 1993, Strathclyde 1994, Edinburgh 2000, Elgin 1997 and 2002, Glasgow 2002, and Hawick 2005. These vary in scale as the following two examples illustrate; however the distress to those affected remains equal.

BOX 1 Recent flooding incidents – two examples

The River Lossie and Elgin have a well documented history of flooding dating back to 1750. Elgin has suffered severe flooding in 1997 and 2002. In these severe events, over 600 residential and 170 commercial properties were inundated. Key transport infrastructure was affected. The A96 trunk road was disrupted for several days and the Inverness to Aberdeen railway line was closed for several weeks. The 1997 and 2002 flood events combined are estimated to have caused damages in excess of £100 million.

Continuous heavy rainfall throughout 11 and 12 October 2005 caused widespread flooding across Southern Scotland. At its peak, there were some 26 flood watches, 16 flood warnings and 1 severe flood warning in place within the area. The Teviot Water flows were the highest since records began in 1963, and the collapse of a wall by the river in Hawick led to inundation of around 100 households and 30 small businesses. Some of the worst of the flooding occurring around the Mansfield area, the rugby ground was completely inundated and Hawick High School was closed.

¹ Flood maps can be found at: <http://www.scotland.gov.uk/Publications/2007/09/20092209/0>



Hawick 2005

- 1.3 Climate trends in Scotland show that since 1961, heavy rainfall events have increased significantly in winter, particularly in the northern and western regions where winter rainfall has increased by almost 60%. Further information on climate trends in Scotland is available from the Scotland and Northern Ireland Forum for Environmental Research work on climate trends². Moreover, climate change scenarios predict that flooding will become more frequent in future. The UK Climate Impacts Programme (UKCIP) has formulated scenarios to look at possible future climate change, dependent on predicted future global greenhouse emissions. This research provides Scotland with the best available information on predicted changes in climate over the next century and indicates that, over the coming decades, Scotland will experience more severe rainfall events, particularly in the east of the country³. Revised versions of the UK climate change scenarios will be available in late 2008.

- 1.4 There is a growing recognition that to adapt to these changes, we must take a more holistic approach to flood risk management. The local effects of inland flooding can be exacerbated by the way our river catchments are used and managed. To be effective, solutions must be sought and planned across catchments i.e. the area which is drained by a river.

² Scotland & Northern Ireland Forum for Environmental Research, A handbook of climate trends across Scotland, 2006
<http://www.sniffer.org.uk/climatehandbook/>

³ UK Climate Impacts Programme, <http://www.ukcip.org.uk/>

- 1.5 In addition to addressing flood risk, the Scottish Government is also working to address other unavoidable consequences of climate change with the development of Scotland's first climate change adaptation strategy. This strategy will identify priority action to safeguard the smooth functioning of our communities' services and infrastructure and will be released for consultation in 2008.

Current landscape of flood risk management in Scotland

General roles and responsibilities

- 1.6 In Scotland, it is up to owners to provide a level of protection from flooding appropriate to their property, including overland flooding caused by the build up of water on land following heavy rainfall or by a high water table causing ponding of standing water in low lying areas.
- 1.7 Public bodies have significant responsibilities:
- [Local Authorities](#) - are responsible for planning control, bringing forward and constructing flood prevention schemes, the assessment and maintenance of watercourses, and co-ordination of authorities when there is a flooding event. They are required by section 6A of the Flood Prevention (Scotland) Act 1961 (The 1961 Act) (as inserted by the Flood Prevention and Land Drainage (Scotland) Act 1997) to publish a biennial report of instances of flooding and measures taken to mitigate flooding of non-agricultural land. As planning authorities they have responsibility for controlling development in flood risk areas.
 - [Scottish Environment Protection Agency, SEPA](#) - has responsibility for the dissemination of flood warnings, providing flood risk and flood mitigation information through [Floodline](#), assisting local authorities by providing flood risk information, such as publishing flood risk maps, and regulating the impact on the water environment of flood defences (and other engineering works on rivers) through the Controlled Activities Regulations (CAR) made under the Water Environment and Water Services (Scotland) Act 2003.
 - [Scottish Water](#) - Scottish Water maintain water supply and drainage infrastructure, and manage the discharge of surface water that enters their drainage systems. They also work in partnership with the local authority and emergency services to alleviate any flooding of sewers and the impact of this flooding. Where necessary, Scottish Water repair flood damaged mains and deal with any flooding caused by bursts and manage the storage and release of flood water supply to reservoirs.
 - **The Scottish Ministers** - have responsibility for national policy on flood alleviation and provide resources to public bodies to discharge their functions. They are also responsible for confirming flood prevention schemes under the 1961 Act.

- 1.8 Responses to flood events are coordinated through [eight strategic coordinating groups](#) across Scotland, led by the Chief Constable and local authority Chief Executives. These groups are responsible for developing detailed plans for all types of incidents in their areas. These plans are exercised regularly and all groups have experience of dealing with different types of emergencies. A number of organisations contribute to delivery of the plans, including local authorities, emergency services and SEPA.
- 1.9 Many of the criticisms levied at current roles and responsibilities revolve around the 'grey' areas where it is unclear who is responsible for dealing with floodwater, whatever its source. **The Flooding Bill will therefore establish a clear framework of responsibility, with duties and powers defined so that each organisation involved knows exactly what is required.**

Current Legislation for the management of flood risk

- 1.10 A wide range of legislation underpins flood risk management in Scotland. A summary of the major flooding related legislation is provided in Annex A. The statutory responsibility for flooding is currently widespread and at times unclear, leading to a piecemeal approach being adopted in many instances.
- 1.11 Much of this legislation is now outdated and does not reflect changes to the way that government and local services are delivered in Scotland, including the creation of the Scottish Government, unitary local authorities, Scottish Water and SEPA.
- 1.12 Similarly, current legislation does not interact well with modern approaches to flood risk management, which are underpinned by catchment focused planning of a range of measures to alleviate and avoid flood risk as well as promoting awareness of flood risk and improving assistance once flooding has occurred.
- 1.13 **The Government's proposals for a Flooding Bill will shift the emphasis to a catchment focused approach to managing flood risks and clarify the roles and responsibilities to create a fully integrated approach to flood management.**
- 1.14 **The legislation will also transpose the EC Floods Directive.**

EC Floods Directive

- 1.15 EU environment ministers agreed in October 2004 that there was a need for greater European coordination of flood risk management, leading to proposals for a new EC Directive. The purpose of the Directive, which came into force in December 2007, is to establish a common framework for the assessment and management of flood risks. The Floods Directive requires action by Member States in 3 main areas:
- Production of preliminary flood risk assessments

- Production of flood hazard maps and flood risk maps
- Production of flood risk management plans

The Floods Directive must be transposed into Scots Law by December 2009.

The planning system and the statutory process for flood prevention schemes

- 1.16 Flood prevention schemes (as they are currently known) may be proposed by local authorities under the Flood Prevention (Scotland) Act 1961. BOX 2 summarises the main stages of promoting a flood prevention scheme.
- 1.17 The statutory process set out in the 1961 Act is seen as the cause of lengthy delays in developing and building flood prevention schemes and is not integrated with other statutory processes such as planning and CAR licensing. Local authorities therefore face three separate statutory processes in order to get a scheme built. The Government wishes to streamline these statutory processes to remove some of the potential for delays.
- 1.18 Development on areas of flood plain is a significant issue and the planning process has a critical role to play. Scottish Planning Policy 7 (SPP7) currently provides a statement of the policy to be taken into consideration within the preparation of development plans and development control. For example, it sets a risk framework using the annual probability of flooding to assist the determination of planning applications, essentially to prevent development that would be affected by flooding.
- 1.19 Planning Advice Note 69 complements this by outlining approaches to ensure that future built developments are not located in areas with a significant risk of flooding. It outlines advice and background information that, together with SPP7, has become the reference point for strategic and local planning consideration of flood risk.

BOX 2 Main Stages of Promoting a Flood Prevention Scheme

Feasibility study. The key elements:

- A catchment study - modelling the river /coastal system.
- Identification of the Development Plan Policy Context.
- Initial environmental issues and constraints for EIA.
- Investment appraisal to establish whether a scheme has a positive cost-benefit.
- Appraise options to manage risk.

Preparation of Flood Prevention Scheme

The Flood Prevention (Scotland) Act 1961 requires a Scheme to include a description of:

- all permanent elements of the scheme, e.g. embankments, floodwall, storage areas etc
- all land affected by the above operations
- land where entry or temporary works will be required

A scheme will also need other consent under planning and environmental legislation. That legislation requires further information appropriate to its purpose. There is no provision in the 1961 Act to amend a Scheme after it has been confirmed so the Council should satisfy itself that its preferred scheme has addressed the likely requirements of all the relevant regulatory authorities.

Statutory Process - Flood Prevention (Scotland) Act 1961;

- Scheme widely advertised and served on affected persons and statutory bodies
- Any person may object in writing to Scottish Ministers within three months of first advertisement.
- If objections from affected persons are not withdrawn, Scheme referred to for public local inquiry
- Scottish Ministers consider Report of any inquiry, any other objections not withdrawn and representations on any modification to the Scheme which is under consideration
- Scottish Ministers may confirm scheme, with or without modifications considered, or refuse to confirm scheme
- Council publishes notice of confirmation of scheme and Scheme comes into effect on publication - unless confirmation challenged at Court of Session within 6 weeks by any person aggrieved.

Planning Process

- Council makes application to Planning Authority and notifies all interested parties of proposals
- Any person may make their views known to PA who must also consult statutory consultees.
- PA must take account of all competing considerations.
- In the circumstances of most flood prevention schemes, if PA are minded to give consent, they must notify application to Scottish Ministers
- Scottish Ministers have opportunity to decide whether to intervene or not
- Normally, PA is allowed to decide the application as it thinks fit.

Managing urban drainage

- 1.20 As highlighted by the summer floods of 2007 in England and Wales and in Glasgow in 2002, managing urban drainage is a vital component of flood risk management. Current drainage infrastructure is being placed under increasing pressure from industrial development and urbanisation, and the capacity to accommodate continuing regeneration and growth is limited in many areas.
- 1.21 Sustainable Urban Drainage Systems (SUDS), which describes a set of techniques designed to slow the flow of water, can contribute to reducing flood risk by absorbing some of the initial rainfall, and then releasing it gradually, thereby reducing the flood peak and helping to mitigate downstream problems, and make a useful contribution to a flood management strategy. However, SUDS alone cannot provide full protection against the quantities of water involved in prolonged heavy rain.



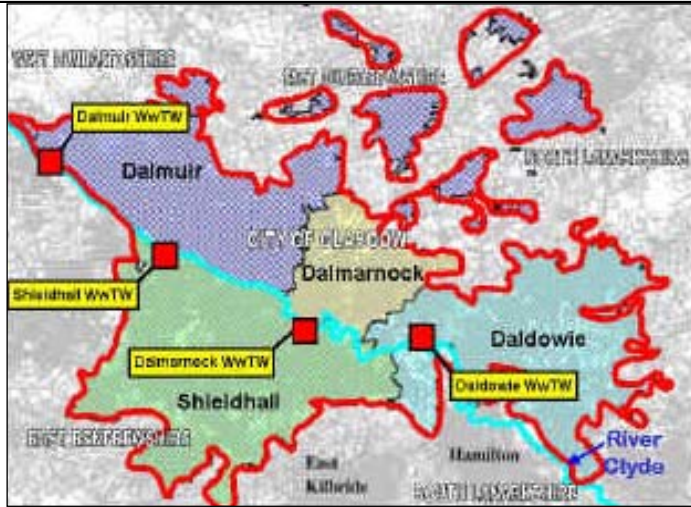
Moray 2002

- 1.22 Under the rules of CAR, discharges (run-off) from new developments, during and following construction, may be required to be drained by a SUDS. While the main driver for this provision is the control of diffuse pollution, it may be expected to assist in storm water management.
- 1.23 Scottish Water has published a set of standards for SUDS in its Sewers for Scotland, 2nd edition. The Scottish Government has advised that developers and Scottish Water should make agreements for the construction and vesting in Scottish Water of SUDS in public spaces, including the use of appropriate source control within curtilages, but does not propose to make any regulations to govern the form or content of such agreements.
- 1.24 Urban drainage plans have been used in Scotland to reduce the risks of flooding in urban settings. An example of an integrated approach to managing urban drainage is the Metropolitan Glasgow Strategic Drainage Plan.

BOX 3 Metropolitan Glasgow Strategic Drainage Plan (GSDP)

To ensure a *strategic* approach to managing flood risk, a *multi-agency* steering group was formed to deliver the Glasgow Strategic Drainage Plan. The plan involved an *integrated appraisal* of sewerage, watercourse and sustainable drainage options for the East End of Glasgow. Whilst the desire to reduce flooding risk was a primary driver for the study, the methodology also addressed development constraints, water quality and the desire for habitat enhancement in an area much in need of regeneration. Ultimately, this benefited the stakeholders involved, the *environment* and addressed the *social* impacts of drainage related problems.

Work over the last two years on the GSDP has resulted in the Initial Drainage Masterplan for Glasgow, containing proposals for upgrading the sewerage and wastewater treatment facilities of the City, together with the watercourse systems of northeast Glasgow.



The GSDP has promoted ‘soft’ engineering approaches such as attenuation and disconnection, to complement conventional ‘hard’ engineering solutions. This has involved Glasgow-wide investigations into SUDS retrofitting⁴, and the potential for watercourse daylighting⁵ and creation of areas for flood attenuation.

The Surface Water Management Plan has defined drainage communities, local and regional storage and attenuation facilities, together with opening up of existing culverts and creation of new flood attenuation areas. The effect of the measures, to address existing and future flows and climate change, has been tested using integrated hydraulic modelling. Facilities have been designed in outline and mapped to create the overall drainage management plan for an area of some 870 hectares.

Info/Links: http://www.wapug.org.uk/past_papers/Autumn_2005/A2005fleming.pdf

The Pitt Report on the Floods in July/August 2007

1.25 Scotland was fortunate not to experience the severe and widespread flooding experienced in England, but we recognise that Scotland too can learn lessons from these floods. The interim report from Sir Michael Pitt into the summer floods confirms the extreme nature of the weather that gave rise to the floods, and identifies a number of urgent steps recommended to be taken straight away. These relate to monitoring of specific flood risks, better information sharing and the practicalities of emergency response.

⁴ Use of Sustainable Urban Drainage Systems in an area of existing development, slowing runoff response and allowing disconnection from the sewer network

⁵ Opening-up of previously culverted watercourses

- 1.26 The report recommends that flood legislation should be streamlined and updated to clarify responsibilities, address all sources of flooding, and reflect the modern, risk-management approach. The Flooding Bill will address flood risk management issues in Scotland to ensure a modern risk-based approach is complemented by a streamlined decision-making process.

Chapter 2: Developing a Sustainable Approach to Flood Risk Management



CHAPTER 2: DEVELOPING A SUSTAINABLE APPROACH TO FLOOD RISK MANAGEMENT

Sustainable development

- 2.1 The Scottish Government is committed to building a sustainable future and has published its Economic Strategy aimed at creating a more successful country with opportunities for all of Scotland to flourish, through increasing sustainable economic growth, which it defines as building a dynamic and growing economy that will provide prosperity and opportunities for all, while ensuring that future generations can enjoy a better quality of life too. It sets out the approach for the whole of the public sector to work collaboratively with the private, academic and third sectors to achieve this purpose.
- 2.2 In order to facilitate delivery of its Economic Strategy, the Scottish Government has identified five Strategic Objectives which map a Scotland that is *wealthier and fairer, smarter, healthier, safer and stronger, and greener*. The alignment of the Scottish Government's work with these Strategic Objectives will help us to deliver the sustainable development that will increase the prosperity of Scotland.
- 2.3 Management of flood risk has a significant contribution to play to the achievement of all these Strategic Objectives, and particularly *safer and stronger and greener*.

Sustainable flood management

- 2.4 The Scottish Government believe that the principles of sustainable development provide a valuable basis for developing a sustainable approach to flood management. Ensuring that a sustainable approach to flood management can be delivered in Scotland will be at the heart of the Flooding Bill proposals.
- 2.5 While the Bill is intended to set the framework to ensure sustainable flood management, the legislation will not define sustainable flood management, or list possible measures. To do so would run the risk of creating an inflexible system that would be unable to adapt to changing pressures caused by climate change, or to utilise more up-to-date methods as our understanding of methods to manage flood risk develops.
- 2.6 It is important, however, that all bodies involved in flood management and the public have a shared understanding of what sustainable flood management means. It is proposed that this common understanding should be based on the definition of Sustainable Flood Management proposed by FIAC (BOX 4).
- 2.7 The Scottish Government proposes to develop guidance on the definition of sustainable flood management. This guidance will also include objectives, principles

(BOX 5) and indicators of sustainable flood management (ANNEX B) which can be used to assess the performance of flood management measures and plans.

BOX 4 Definition of Sustainable Flood Management

The Flooding Issues Advisory Committee (FIAC) was a stakeholder group established to provide advice to Ministers on flood risk management issues.

FIAC proposed this definition of sustainable flood management:

“Sustainable flood management provides the maximum possible social and economic resilience against flooding**, by protecting and working with the environment, in a way which is fair and affordable both now and in the future.”*

* ‘Resilience’ means: ‘ability to recover quickly and easily’. The Scottish Government uses it to deliver the ‘four As’: Awareness + Avoidance + Alleviation + Assistance.

** Flooding means all types of flooding: surface water run-off (pluvial), sewer, river, groundwater, estuarine and coastal.

2.8 FIAC proposed the following overall objective of sustainable flood management:

- **Meet needs for flood resilience**

and that to meet this overall objective it must be integrated with four further objectives:

- A social objective to **enhance community benefit with fair access for everyone;**
- An environmental objective to **protect and work with the environment, with respect for all species, habitats, landscapes and built heritage;**
- An economic objective to **deliver resilience at affordable cost with fair economic outcomes;** and
- A future generation’s objective to **allow for future adaptability, with a fair balance between meeting present needs and those of future generations.**

The Scottish government would like to hear your views on the definition of sustainable flood management and the associated objectives and principles.

Q1. Do you believe the definition of SFM is helpful and of practical benefit to flood risk management?

Q2. Do you think the definition is clear and simple to understand?

BOX 5 Principles of Sustainable Flood Management

1. **Strategic Approach:** Sustainable flood management should reflect a strategic approach both nationally (across Scotland) and locally with links to the River Basin Management Plan Process and with phasing where appropriate. It should take account of the 2003 Act principles of co-ordinated management to achieve relevant objectives for all water bodies, and the planning policy contained in Scottish Planning Policy 7. It should use strategic environmental assessment and sustainability appraisal as they are introduced into Scottish methodology.
2. **Responsibilities:** All stakeholders should be actively engaged in and share responsibility for achieving sustainable flood management. They are expected to collaborate constructively to meet sustainable flood management objectives, with the lead taken by the appropriate party(ies) according to their statutory, legal, common law or commercial roles.
3. **Options Appraisal:** Sustainability issues should be considered from the earliest stages of investigating options. The options considered for flood management should include, through to full evaluation, at least one option that represents a 'most sustainable benchmark', addressing all four 'A's': Awareness, Avoidance, Alleviation and Assistance, even if regulatory or legal barriers appear to block implementation¹. Decision-making tools will include, but not be limited to, Cost Benefit Analysis and should make the 'values' applied explicit. It will also be a requirement for the carbon emissions impact to be considered, in line with the Scottish Government's commitment to carbon cross compliance.
4. **Uncertainty:** A long-term view of sustainability means acknowledging and taking account of current uncertainties (including current data and models) and future uncertainties. Flood risk should be expressed clearly. It also requires explicit consideration of the implications of flood events that exceed design limits.
5. **Multiple Benefits:** Sustainable flood management should seek opportunities for multiple benefits, but also cover costs and frequency of loss (economic, rural, landscape or amenity enhancement), wherever possible and seek other relevant funding sources.
6. **Openness:** The whole sustainable flood management process should be transparent; and there should be a common, shared source of information, from which all stakeholders can access and learn.
7. **Democracy:** Sustainable flood management should promote effective community engagement. Decisions should be taken at the local level, as far as possible, and reflect local community 'Agenda 21'¹ or similar sustainability objectives. Parties should plan and manage to achieve community consents without the cost and delay of a Public Inquiry.
8. **Simplicity:** Implementation of sustainable flood management should be understandable, aim for ease of delivery, and promote continual learning, and sharing of knowledge.

- 2.9 In practice, adopting a sustainable approach to flood risk management will require practitioners to consider a wide range of measures for managing flood risk and to plan these measures across whole catchments or coastlines (Figure 1, BOX 5). Management plans will be required to enable selection of the most appropriate combination of measures for a particular location.

2.10 Adopting a sustainable approach to flood risk management increases the range of responses available. This means that in some cases the overall development of a flood risk management project would be different in design and in scope to a traditional engineering solution. This will also have implications for the process and timescales of implementation since some measures across a catchment are likely to take more time to develop and to reach their full effectiveness e.g. natural flood management measures such as replanting upland forests or wetland creation. Measures will therefore have to be presented and evaluated in their full context – not in isolation.

Sustainable Flood Management

Sustainable flood management is an approach to planning and delivering measures to reduce flood risk.

Increasing resilience to flood risk is an important component of sustainable flood management. Resilience to flooding can be increased through a variety of measures, including flood warning, flood defences, natural flood management (e.g. floodplain storage) and quick and effective responses to flooding.

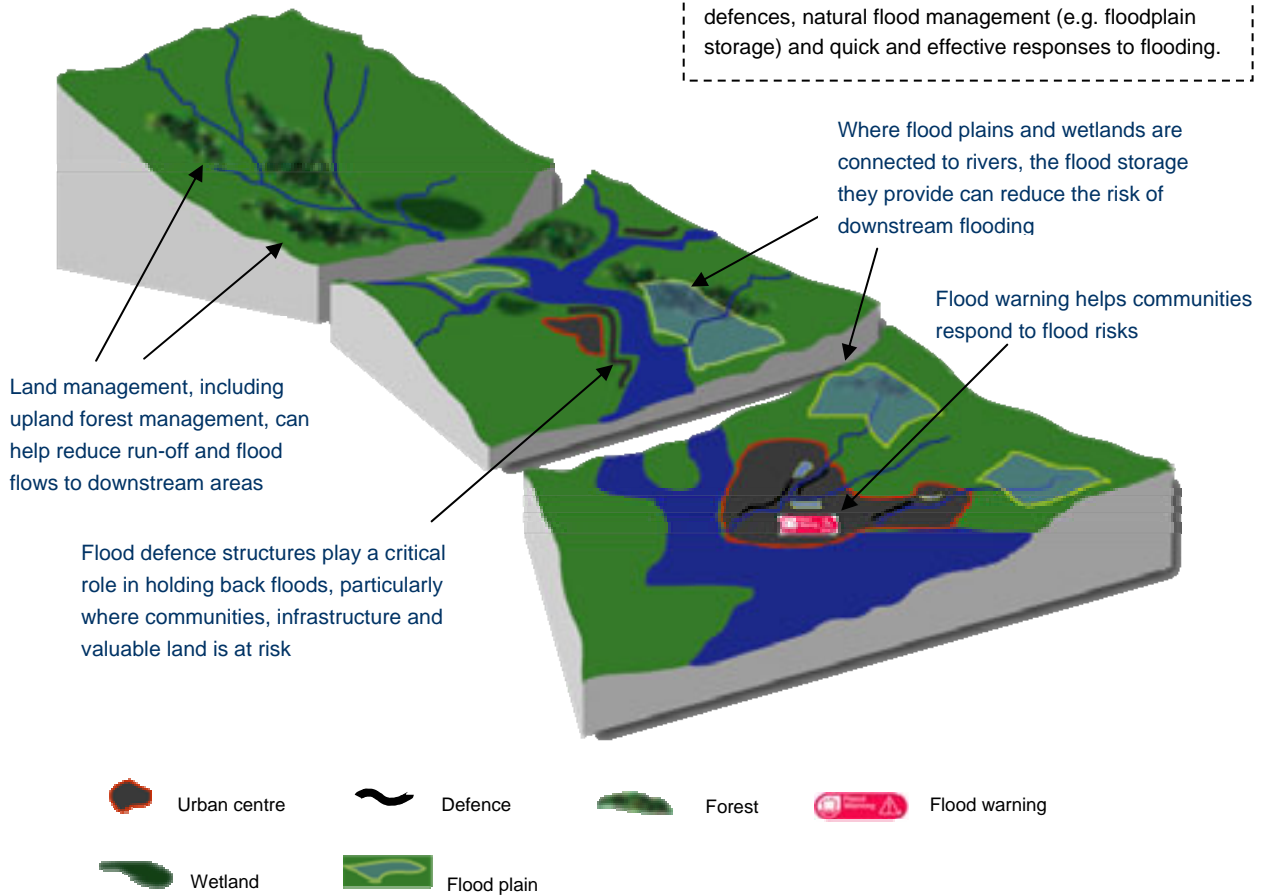


Figure 1 Illustration of sustainable flood management

2.11 The participation of a wide range of stakeholders, at all levels, from the earliest stages of the process, is fundamental to the success of the sustainable approach. It can help determine the most sustainable options as well as agree a shared responsibility for their implementation. The statutory framework should provide the basis for

stakeholders to work creatively and co-operatively with each other across sectors, responsibilities and policy interests.

- 2.12 The Water Environment and Water Services (Scotland) Act 2003 (“the 2003 Act”), together with the secondary legislation made under that Act, transposes the EC Water Framework Directive into Scots Law. The 2003 Act made the link between flood risk management and protecting the water environment by placing a duty on Scottish Ministers, SEPA and responsible authorities to promote sustainable flood management when carrying out certain functions (including flood prevention functions) and to adopt an integrated approach in doing so.
- 2.13 Although the duty to promote sustainable flood management is firmly in place, the current flooding legislation in Scotland does not meet all the challenges of addressing flood risk management in the 21st century.
- 2.14 Sustainable flood management should not be confused with “natural flood management”. Natural flood management promotes a subset of flood alleviation techniques that aim to work with natural process to reduce flood risk. Examples of natural techniques include replanting upland forests, reconnecting rivers to their flood plains and restoring wetlands to act as natural sponges for flood waters.



Callander 2006

- 2.15 Whilst natural flood management measures can help reduce peak flows during flood events and address, in part, the cause of flooding, they are likely to be most effective when combined with more ‘traditional’ engineering options for flood alleviation protecting people and property within settlements and communities. Improving awareness and understanding of the benefits of natural approaches to flood management will be an important element of flood risk management in Scotland.

- 2.16 The Scotland Rural Development Programme 2007-13 includes measures to address economic and social goals as well as environmental measures. It brings together a wide range of formerly separate support schemes including those covering the farming, forestry and primary processing sectors, rural enterprise and business development, diversification and rural tourism. Natural flood management measures such as wetland creation will be eligible for funding under this programme.
- 2.17 Increased use of other non-structural flood management measures, such as flood warning and development control, will also provide an important contribution to delivering sustainable approaches to flood management.

Chapter 3: Bill Proposals



CHAPTER 3: BILL PROPOSALS

General scope and content of Bill

- 3.1 The Flooding Bill will cover all aspects of planning and preparing for flooding, with the key provisions focusing on⁶:
- Transposing the EC Directive on the Assessment and Management of Flood Risks (the Floods Directive);
 - Creating a framework for a sustainable, catchment focused approach to flood risk management;
 - Reforming the current legislation covering flood protection and prevention;
 - Simplifying the approach to developing and implementing measures to manage flood risk;
- 3.2 **The Bill will not cover the emergency response to a flooding event, as this comes under the auspices of the Civil Contingencies legislation outlined in ANNEX A.** However, Flood Risk Management Plans as described further below should cross refer to the emergency plans for flooding developed by the Strategic Co-ordinating Groups.

Legislative framework

- 3.3 The framework on which the Flooding Bill will sit is that of the EC Floods Directive, which came into force in December 2007.
- 3.4 The Scottish Government's work on sustainable flood management already reflects the principles underpinning the Floods Directive.
- 3.5 The Floods Directive recognises the benefits of integrating flood risk management within the planning framework established for the Water Framework Directive. In creating the duty in the 2003 Act for responsible authorities to promote sustainable flood management, Scotland has, among other things, already made the statutory link between the objective of flood risk management to protect life and property and the environmental objectives of the Water Framework Directive.
- 3.6 **The Government wishes to maximise the integration of the framework established by the 2003 Act for the development of River Basin Management Planning with the approach to planning for flood risk management.**

⁶ Refer to Chapter 4 for a summary of proposals to change enforcement of the Reservoirs Act.

General duties and responsibilities

The Competent Authority

- 3.7 The Floods Directive requires appointment of a competent authority/ies responsible for the implementation of the Directive in each River Basin District within Scotland. In Scotland there are 2 River Basin Districts identified under the 2003 Act – one for the Solway/Tweed area⁷ and one covering the rest of Scotland. The latter district is subdivided for planning purposes into 9 subdistricts.
- 3.8 The competent authority will fulfil a strategic, coordinating role in flood risk management. The primary duties of the competent authority, as specified in the Floods Directive, are summarised in BOX 6.
- 3.9 **The Scottish Government proposes that these duties should be set out in the Bill. The Bill will provide for the detailed direction of the competent authority by Ministers in the conduct of the new duties, and will reflect the timetable for the EC Floods Directive.**
- 3.10 The Floods Directive requires Member States to map and plan for those areas that have been identified as being at significant risk of flooding. The Scottish Government proposes, therefore, to prepare flood risk and hazard maps and plans only for those areas identified in the preliminary flood risk assessment as being at significant risk of flooding. For those coastal areas where an adequate level of protection is in place (at the moment the standard of flood protection in Scotland is a 0.5% annual probability of flooding), and for those limited areas of Scotland that are affected by flooding from groundwater sources, we are proposing to prepare flood hazard maps that show only the extent of a flood, and not the water depth or flow velocity.
- 3.11 For the purposes of the Floods Directive, the term “flood” may exclude floods from sewerage systems. We are proposing to exclude floods from sewerage systems in our transposition of the Directive, however, we do believe that it is necessary to include sewer flooding in the Flood Risk Management Plan process described below.
- 3.12 The Floods Directive requires member states in identifying a competent authority to consider the administrative arrangements of the Water Framework Directive. However, it is not a requirement of the Floods Directive that the competent authority is the same body as designated under the Water Framework Directive.
- 3.13 The options for appointing a competent authority are therefore fairly wide ranging. We could identify a single, national authority or we could identify different competent authorities for each river basin district or sub-district. Alternatively, we could consider

⁷ In the Solway/Tweed District, SEPA shares responsibility with the Environment Agency. A third river basin district – Northumbria – is almost entirely in England, with Defra and Environment Agency leads, and Scottish Government and SEPA as consultees.

establishing a new Floods Authority. This body would be responsible for all aspects of flood management in Scotland, including flood risk assessment, flood management and planning, building of flood defences, flood warning and coordinating responses to flooding.

BOX 6 Duties for competent authority as specified by the Floods Directive-

Undertake Preliminary Flood Risk Assessments (PFRA)

Preliminary Flood Risk Assessments create a national picture of flood risks, which includes consideration of climate change. They provide the information required to undertake a strategic approach to flood risk management that targets those areas at greatest risk from floods. Collectively the PFRAs produced must be completed and submitted to the European Commission by the 22nd December 2011.

Undertake Flood Risk and Hazard Mapping

Flood Hazard and Flood Risk Maps must be produced for those areas identified through the PFRA as being at significant flood risk. These Maps are used to (i) increase public awareness of flood risks, (ii) inform decisions on the investment into measures to address flood risk and, (iii) support production of Flood Risk Management Plans. Three event scenarios will be considered - Floods with a low probability (extreme events), floods with a medium probability and floods with a high probability. The Maps will also provide details of the potential numbers of inhabitants affected by different flood scenarios, the type of economic activity affected and potential pollution. These Maps will subsequently form the basis of the Area Flood Risk Management Plans. The Maps must be completed and submitted to the European Commission by the 22nd December 2013

Produce Flood Risk Management Plans

The Bill will require, and set the framework for, Flood Risk Management Planning. The competent authority will secure the production of strategic Flood Risk Management Plans (herein referred to as Area Flood Risk Management Plans). These plans will coordinate flood management objectives and measures across large catchments, or groups of catchments, and set the framework in which measures are delivered or planned for at a local level. The plans will cover flood risk management measures, ranging from flood warning to building of new defences, and will take into account costs and benefits, flood extent, areas which have the potential to retain flood water, the environmental objectives of the Water Framework Directive, soil and water management, spatial planning, land use, nature conservation, navigation and strategic infrastructure. The plans will cover all forms of flooding - fluvial (flooding from rivers), coastal, surface water flooding (pluvial) and dam breaks.

While for the purposes of the Floods Directive a Plan covering Scotland will be required, the Bill will make provision for subordinate legislation to identify the units of management for which to produce Area Flood Risk Management Plans. These areas will be defined by Ministerial direction [order] following consultation with SEPA and responsible authorities. The plans must be completed and submitted to the European Commission by the 22nd December 2015.

- 3.14 The Scottish Government recognises that a number of important elements come together to manage risks from flooding, including flood risk assessments, flood warning, flood protection and flood response. Bodies are already in place in Scotland

with responsibilities for these different elements of flood risk management and the role of local authorities is of central importance. While the Scottish Government recognises the importance of ensuring proper and effective strategic leadership, and the need for coordination and consistency among all these bodies, it does not believe that a single body with responsibility for all aspects of flood risk management is the most practicable way forward. There was no support at the [Flooding Issues Advisory Committee](#), or at the recent [flooding summit](#) for a move to a single flooding authority.

- 3.15 Creation of a new body would require key functions from a number of existing bodies to be carved out and transferred to the new body. This would be very resource intensive and there would also be a risk that important elements of Scotland's integrated approach to water and land management, and local authorities' ability to coordinate and engage at local level would be prejudiced. The Scottish Government considers that local participation and involvement is essential to successful flood risk management planning. It considers in particular that local authorities must have a continuing and central role in the development and promotion of local measures. Indeed, one of the key findings of the Pitt Review of the floods in England and Wales in summer 2007 was that local authorities should adopt a new leadership and scrutiny role, overseeing flood risk management within their local area.
- 3.16 The Scottish Government has considered having a number of competent authorities at a local authority or regional level, but concluded that this would not provide a vehicle for a national, strategic overview of flood risk in Scotland. The Scottish Government has spent the last few years developing a strategic approach to flood risk management in Scotland through the National Flooding Framework, and the development of the SEPA flood risk maps and the database of flood defences in Scotland. We do not want to take a step back from this and return to a system where local authorities feel that there is no national framework within which they are carrying out their flood risk management functions.
- 3.17 The Scottish Government therefore believes that a single competent authority with a national remit for implementing the Floods Directive should be identified, and that the important role of local authorities in implementing flood defence works and engaging at a local level should be maintained. This approach will ensure that the national and catchment focused approach to flood risk management planning is underpinned by local co-ordination and delivery of measures by those bodies with direct experience of implementing flood risk management measures in Scotland.

Q3. Do you agree with the conclusion as set out in paragraph 3.17?

- 3.18 There are a number of qualities required of the competent authority to enable delivery of the Floods Directive. These include:
- *Technical capability:* Flood risk assessment and management must be underpinned by robust and reliable scientific evidence. Common forms of data include monitoring records, modelling outputs, and socio-economic analysis. Data must be

used to produce a national and local picture of flood risk and flood management options.

- *Operational capacity:* Delivery of the EC Floods Directive requires assessment of flood risks, the separation of rivers, catchments and coasts into relevant management units, the production of large scale management plans that are not interrupted by local authority boundaries and the identification of opportunities to link outcomes with other environmental improvements. This requires considerable experience in water management at a local, catchment and national scale.
- *Accountability:* A partnership approach to flood management that includes clear opportunities for public participation and stakeholder engagement is essential. The competent authority must have the ability to engage with and bring on board other parties and the wider community. The ability to take a national perspective is also essential; otherwise there would be a risk of inconsistent practice across the country and a lack of focus on national flood risk priorities.

3.19 On the basis of the criteria outlined the Government considers that SEPA is best placed to take the lead role in the implementation of the Floods Directive and should be identified as the competent authority.

3.20 SEPA has the ability to adopt both a national perspective and to reflect regional and local issues. SEPA is accountable to Scottish Ministers. SEPA also has extensive experience of flood risk assessment and, through the 2003 Act, an existing duty to produce and deliver management plans that coordinate measures across catchments via extensive stakeholder participation. Identifying SEPA as the competent authority would provide an opportunity to draw on these experiences to deliver the principles of sustainable flood management.

3.21 In preparing the Flood Risk Management Plan, SEPA would have a duty to secure the participation of responsible authorities and to consult stakeholders.

Q4. Do you agree that there should be a single competent authority with a national remit for implementing the Floods Directive, and that it should be SEPA?

A clear and participative approach to flood risk planning

3.22 The Scottish Government also proposes that a hierarchical approach to flood management planning would be the most effective way to deliver flood risk management in Scotland (BOX 7, Figure 2). As described in BOX 7, the Area Flood Management Plans developed under the Floods Directive would set the strategic framework for flood risk management in Scotland. The competent authority would have a duty to produce these plans. In summary, these plans would:

- Summarise significant flood risks (preliminary flood risk assessments);

- Map flood hazards (likelihood of flooding) and flood risks (impacts of flooding);
- Set out objectives to manage flood risk; and
- Set out broad-scale measures and policies to address flood risk.

3.23 The identification of areas at significant flood risk would be a collaborative process between the competent and responsible authorities. The assessment would use information from a variety of sources, and information held or produced by local authorities through biennial reporting and other studies would be of vital importance.

3.24 The Scottish Government does not intend to define significant flood risk in legislation; instead the intention is to issue ministerial guidance on determining and assessing significant flood risk.

3.25 The strategic Area Flood Risk Management Plans must be translated into sets of specific measures to address flood risk, for instance building new flood defences or adopting natural approaches to flood management. The identification of specific measures must be done in consideration of local and catchment conditions, locally derived datasets and thorough options appraisals.

BOX 7 Flood Risk Management Planning

The Scottish Government believes that the hierarchical planning process summarised below would ensure that national objectives for flood management are underpinned locally by targeted measures that are organised within and across catchments.

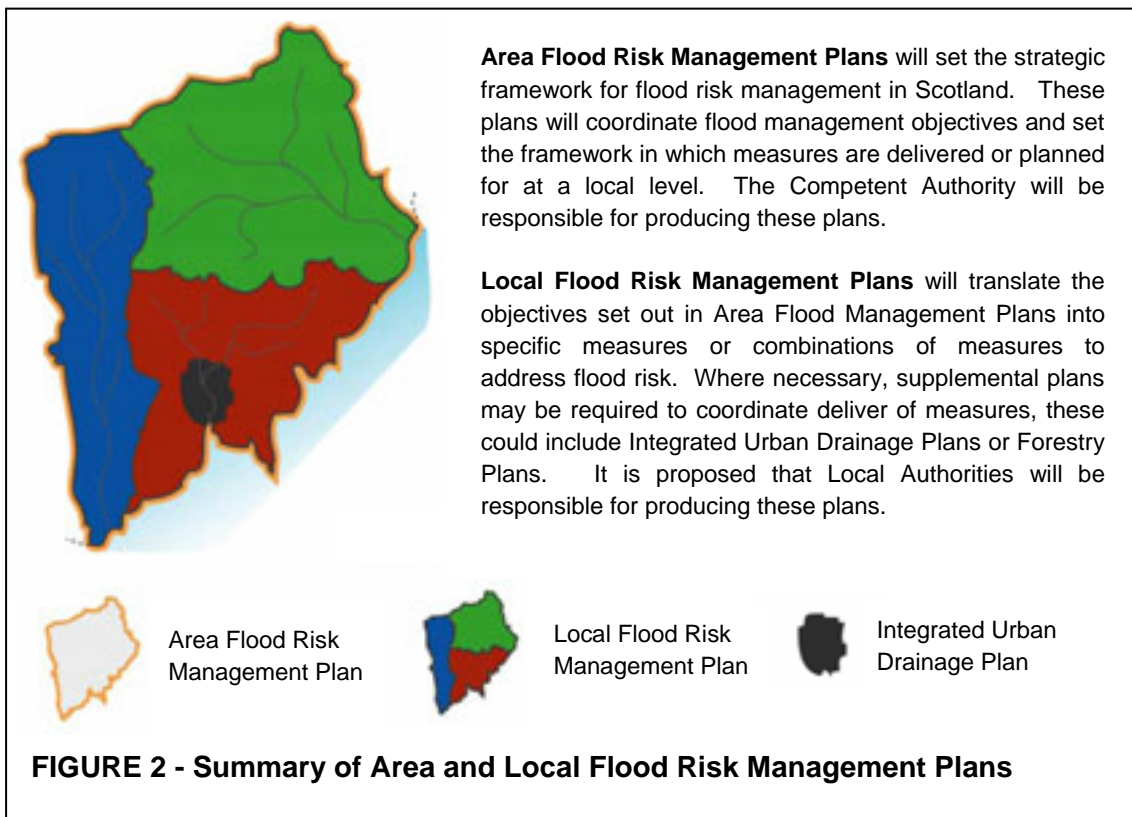
	Area Flood Risk Management Plan	Local Flood Risk Management Plan	Projects
<i>Operating scale</i>	These are large-scale plans intended to cover a single large catchment, including coastal areas (e.g. River Tay) or a combination of multiple catchments (e.g. West Highlands).	These plans would operate at the scale of a single small catchment (e.g. sub-catchment of the River Tay). They would cover the natural drainage area of a river. They would not be restricted to Local Authority boundaries.	Operate at the scale of a single scheme or a combination of measures/schemes (e.g. flood defences) across a catchment.
<i>Overall purpose</i>	A high level plan that sets the strategic framework for flood risk management in Scotland. These plans would set the framework in which measures are delivered or planned for at a local level.	These plans translate the strategic objectives and measures set out in Area Flood Management Plans into locally focused sets of measures to address flood risk.	Projects are used to deliver the preferred flood risk management measures for a specific location within a catchment.
<i>Example Tasks</i>	<ul style="list-style-type: none"> • Identify areas at significant flood risk. • Map of flood hazards (likelihood of flooding) and flood risks (impacts of flooding). • Set objectives to manage flood risks. • Prioritise flood risk at a national level. • Outline broad-scale measures to address flood risks, e.g. improved flood warning and/or flood alleviation. • Establish links and integration with other aspects of land and water management (e.g. WFD). 	<ul style="list-style-type: none"> • Assessment of local catchment characteristics. • Detailed appraisal of flood risks to inform selection of measures. • Appraisal of management options and selection of preferred measures. – could include traditional flood defences, natural flood management techniques and urban drainage plans. • Prioritise flood risk management measures locally • Funding and implementation planning. 	<ul style="list-style-type: none"> • Pre-project monitoring and assessment • Design • Complete statutory process • Implementation of the preferred approach. • Post project appraisal and monitoring
<i>Lead</i>	Competent Authority (SEPA)	Local Authorities	Appropriate organisation or individual depending on type of works being undertaken

- 3.26 The Scottish Government propose that local authorities are given new responsibilities in relation to the production of Local Flood Risk Management Plans. We propose that local authorities have the power to prepare a Local Flood Risk Management Plan in any area within their boundaries, but that they have a new duty to prepare a Local Flood Risk Management Plan where a significant flood risk has been identified. In developing Local Flood Risk Management Plans, local authorities must take account of Area Flood Risk Management Plans.
- 3.27 It is proposed that Local Flood Risk Management Plans would include the following:
- an appraisal of flood risks to inform a selection of measures - this assessment must take into account the preliminary flood risk assessments and the flood risk and hazard maps produced by the competent authority.
 - measures to manage that risk;
 - a sustainable urban drainage plan (where necessary, or a justification for its omission);
 - a timetable for implementation;
 - a funding plan (including joint funding arrangements for plans crossing local authority boundaries); and
 - any other matters specified by Scottish Ministers following consultation with SEPA and the responsible authorities.
- 3.28 It is important that Local and Area Flood Risk Management Plans are integrated and developed in full recognition of the duty placed on responsible authorities' to promote sustainable flood management. It is the Scottish Government's intention to use the Flooding Bill to enable future development of regulations to specify the scope, structure and content of Area and Local Flood Management Plans, and mechanisms to ensure integration of plans.
- 3.29 Any Local Flood Risk Management Plan would be prepared on the basis of the catchment in which a significant flood risk is situated. Where there is more than one area of significant risk within a catchment, a single plan can cover these areas. There would be a duty on all responsible authorities within the defined catchment to participate in the Local Flood Risk Management Plan process. Where a Local Flood Risk Management Plan is being produced for a catchment covering two or more local authority boundaries, all responsible authorities within the catchment, including local authorities, would have a duty to collaborate in the production of the plan. It should be for those authorities to determine the best approach to that cooperation – it is unnecessary for an external body – SEPA or Scottish Ministers – to identify a lead authority.
- 3.30 As funding for flood risk management has now been transferred to the local government settlement, we envisage that the future allocation of that money will be based on the level of significant flood risk in each local authority. This will be informed by the preliminary flood risk assessments, and the flood risk and flood hazard maps developed by the competent authority. This will ensure that, if an Area Flood Risk

Management Plan, identifies a particular flood risk in a local authority area, the local authority will have funding to put into a funding plan for dealing with the risk.

Q5. Do you agree that this is a sound basis for the development of Local Flood Risk Management Plans? If not what alternative do you propose?

Q6. Should Ministers or SEPA have the power to designate a lead authority within a local area, or should it be left to the partners?



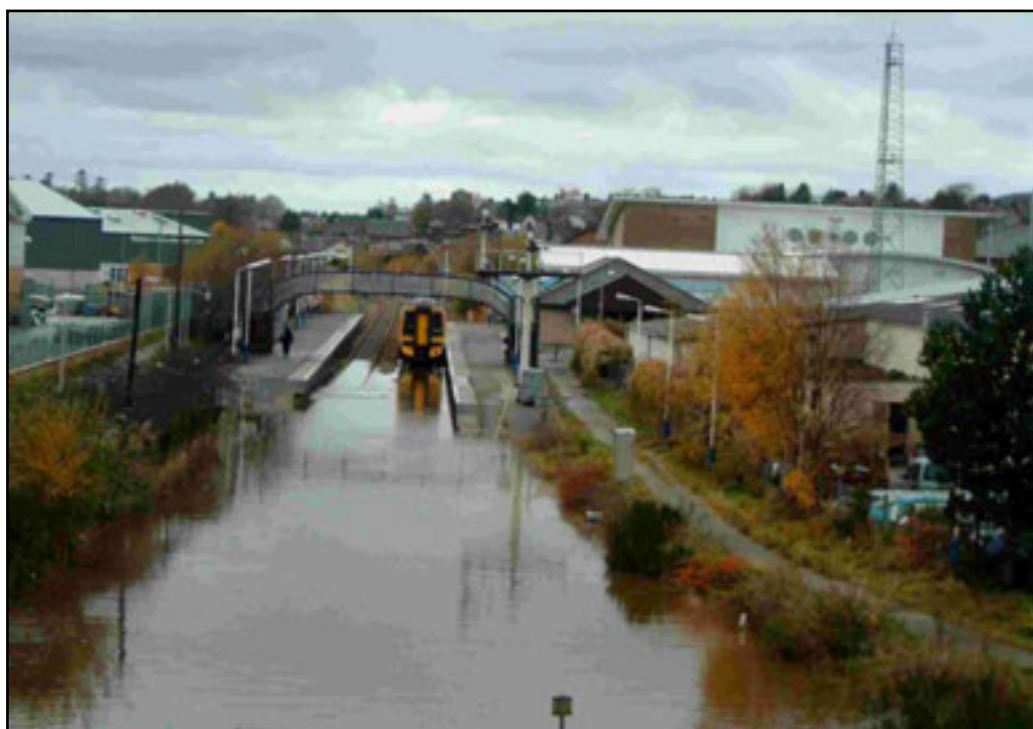
Responsible Authorities

3.31 As outlined above, improving flood management in Scotland requires clarification of the roles and responsibilities of all the bodies involved in flood risk management, and appointing a competent authority is only one step in this process. The Government recognises that a number of important elements come together to manage risks from flooding, including flood risk assessments, flood warning, flood protection and flood response. Bodies are already in place in Scotland with responsibilities for these different elements of flood risk management **and the role of local authorities is of central importance.**

3.32 A general duty has already been placed on relevant public bodies by the 2003 Act to contribute to the delivery of sustainable flood management. We therefore propose that the Bill should provide for responsible authorities to be listed by statutory instrument. Responsible authorities should include Scottish Water, Local Authorities SNH and Forestry Commission among others – as responsible authorities they will have a duty to co-operate in the development of the Area Flood Risk Management Plans.

Q7. Do you agree that Local Authorities, Scottish Water, the Forestry Commission, and SNH should be identified as responsible authorities?

Q8. Which other bodies should be identified as responsible authorities?



Moray 2002

Flood Risk Management Planning – a participative process

3.33 It is important that Flood Risk Management Planning is undertaken in full cooperation between the competent authority and the relevant authorities with responsibilities or interests in the area affected by a plan. It is also important that the preparation and implementation of these plans is undertaken in full and continuing consultation and discussion with the local population directly affected.

- 3.34 To support collaborative working, we propose that responsible authorities within a designated area would have a duty to work together with the competent authority to produce the Area Flood Risk Management Plans. We propose that the best way to do this would be to form **flood risk management advisory groups** comprising all the relevant responsible authorities. To support integration with the Water Framework Directive, these groups would be subgroups of the Advisory Groups established under the 2003 Act.
- 3.35 We also propose to establish groups to support production of Local Flood Risk Management Plans. The groups would be established for each local authority and would have representation from all relevant responsible authorities. The responsible authorities would be under a duty to collaborate to produce the Local Flood Risk Management Plans. Where there is a requirement to develop a Local Flood Risk Management Plan for a catchment crossing a local authority boundary, the relevant groups would have a duty to collaborate in the production of that plan. Where appropriate, the groups would be based around existing Flood Liaison Advisory Groups.
- 3.36 To ensure wider stakeholder and community engagement, the Scottish Government also propose to establish stakeholder forums. These forums would help harness the ideas and enthusiasm of individuals and groups and help the organisations involved in flood management communicate how and why specific objectives and measures are being considered.
- 3.37 The groups supporting flood management planning would be established under ministerial direction.

Q9. Do you agree that responsible authorities should have a duty to work together within Flood Advisory Groups to produce plans?

Q10. Do you agree the proposals are sufficient to support wider stakeholder and community engagement in the flood risk management planning process?

Approving the plans

- 3.38 The 2003 Act sets out a detailed procedure for the preparation and approval by Scottish Ministers of River Basin Management Plans. Ministers can require the modification of the plan before approval. The Act also provides for the regular review of the plan. The system adopted for River Basin Management Plans is broadly similar to the existing approval of structure plans for planning purposes. The Scottish Government considers that the Bill should set out a similar procedure for the development of the plan involving consultation. There should also be a similar role for the Scottish Ministers to whom the Plans should be presented ultimately for approval.

3.39 We envisage a system whereby the competent authority, having developed the Area Flood Risk Management Plans with the relevant responsible authorities, and in consultation with all relevant parties, would submit the Plans to the Scottish Ministers for approval. As with the River Basin Management Plan, Scottish Ministers would consider the Plan and could approve, reject or instruct modifications. The Scottish Ministers would be accountable to the Scottish Parliament for their decisions.

Q11. Do you agree that the Bill should set out a process similar to that for River Basin Management Planning for the preparation by SEPA of area flood risk management plans?

Q12. Do you agree that Ministers have the power to approve, reject or modify Area Flood Risk Management Plans?

3.40 There will then be a requirement for the local flood risk management plans to conform with the Area plans. Ministers should not be directly involved in the approval of the local plans, unless objections cannot be resolved.

Ensuring compliance with the Flood Risk Management Plans

3.41 The Scottish Government believe that the flood risk management planning framework outlined in this paper will deliver an integrated and catchment focused approach to flood risk management. The success of these plans will depend on co-operation and collaboration between the competent and responsible authorities, and we believe that placing a duty on all responsible authorities to collaborate in the production of plans that are ultimately approved by the Scottish Ministers will ensure that the plans are translated into co-ordinated and agreed actions on the ground. It would be the responsibility of each body involved in flood risk management to ensure that their investment plans are aligned with the measures and objectives agreed through the Flood Risk Management Planning process.

3.42 Alternative options for ensuring compliance and investment in measures agreed through Flood Risk Management Plans include giving the competent authority enforcement powers to ensure compliance with the Area Flood Risk Management Plan, and/or establishing a mechanism to agree investment plans between the competent and responsible authorities. The Scottish Government does not believe that this is necessary or consistent with SEPA's wider role. Responsible authorities are separately accountable for the conduct of their statutory duties.

BOX 8 Proposed roles and responsibilities for flood management in Scotland	
Flood risk assessment	SEPA would fulfil the role of flood risk assessment authority; this would include a duty to assess and map flood risks and identify areas at significant flood risk.
	Responsible authorities would have a duty to collaborate in the production of risk assessments. This would include sharing and reviewing data and information.
Strategic and catchment planning	SEPA would fulfil the role of strategic flood planning authority; this would include a duty to produce Area Flood Risk Management Plans that set out the strategic framework for flood risk management in Scotland. Local Authorities would fulfil the role of local catchment planning authority; this would include a duty to prepare catchment focused Local Flood Risk Management Plans that coordinate delivery of measures to address flood risk.
	Responsible authorities would have a duty to collaborate in the production of these plans. This would include contributing through advisory groups.
Implementation of measures to manage flood risks	<u>FLOOD ALLEVIATION (e.g. flood defences and natural flood management)</u> Local Authorities would have primary responsibility for flood alleviation and would be responsible for coordinating and implementing flood alleviation measures, including natural flood management measures). Scottish Water (in collaboration with Local Authorities) would be responsible for implementing measures associated with urban drainage infrastructure. All measures would be coordinated through Local Flood Management plans. Forestry commission would be responsible for bringing forward measures associated with forestry management. All measures would be coordinated through Local Flood Management plans.
	<u>FLOOD AWARENESS AND AVOIDANCE</u> SEPA would fulfil the role of flood warning authority; in fulfilling this role, SEPA would have a duty to provide flood warning services to those areas of Scotland at significant flood risk. Local Authorities (and statutory consultees) would use development control to ensure that flood risks are minimised for new developments.
	Responsible authorities would exercise their duties to support implementation of measures to reduce flood risk.
Responses to flooding	Responses to flooding would continue to be coordinated through the framework established under the Civil Contingencies Act.

Managing surface water and urban drainage

- 3.43 The Scottish Government wishes to ensure that urban drainage plans sit within a Local Flood Risk Management Plan, and wishes to identify the most effective means to facilitate co-ordination of efforts to reduce flooding from surface water run-off and sewers.
- 3.44 One particular area of concern is the lack of integration of water industry infrastructure with other drainage and flooding infrastructure. This is one of the current “grey areas” where responsibilities are unclear, and we feel it is important that the Flood Risk Management Plans address the need for integrated urban drainage as outlined in the example given in BOX 3. For example, as a result of the Glasgow Strategic Drainage Plan there is now effective interaction between all the relevant parties, but that came about in response to a major flooding incident. Such interaction is still not the norm for all urban areas.
- 3.45 The long term answer cannot be the renovation of all sewerage infrastructure as this would be impractical and prohibitively expensive. Managing storm water on the surface is the key and may involve the creation of designated flood routes - either green corridors or roads. It could also involve the designation of areas of open space that would be allowed to flood when storms occur. These are significant planning issues for urban areas of the future.
- 3.46 It is important that new development does not add to the risk of flooding in an area, and that integrated drainage and flood resilience are considered from the start, where appropriate. Scottish Water has just published the 2nd Edition of Sewers for Scotland which includes a section on the design of Sustainable Urban Drainage systems (SUDs – as described earlier in the paper), and is currently looking to form standard agreements with all Scottish Local Authorities for the provision of integrated drainage arrangements. We propose that such agreements would form part of a local flood risk management plan.

Q13. Do you think that integrated urban drainage plans should be included as part of a Local Flood Risk Management Plan?

The planning system

- 3.47 SPP7 sets out the Scottish Government’s policy for identifying flood risk and taking it into account in the planning process. It is clear that new development should be free from significant flood risk, and Local Flood Risk Management Plans that can inform local authorities’ development plans should help planning authorities to make more informed judgements on flood risk. This information would add to the current provision whereby SEPA give advice to planning authorities.

Q14. Should Flood Risk Management Plans inform the way that development plans are prepared, or should there be a stronger linkage such as a requirement on planning authorities to show that they have regard to the FRMPs?

Flood protection measures – Simplifying the Statutory Process

3.48 The 1961 Act gives local authorities discretionary powers to mitigate flooding of non-agricultural land in their areas through the carrying out of certain operations and sets out a procedure for the promotion of these operations

Promoting a flood prevention scheme

3.49 Under the 1961 Act local authorities wishing to secure new or improved flood defence within the definitions of the Act, must promote a flood prevention scheme which is widely advertised before being submitted to the Scottish Government for confirmation. As well as advertisement the Act requires notification of certain interests affected by the scheme (this includes those with an interest in land affected by the scheme as well as other local authorities and statutory bodies whose functions may be affected). Only objections from those to whom the scheme was notified and those who are likely to be affected by the carrying out of a scheme or the change in the flow of water must be considered at a public local inquiry. Scottish Ministers may confirm with or without modification, or refuse to confirm a scheme.

3.50 In confirming a scheme under present legislation Ministers must have regard to the desirability of protecting the water environment in terms of the 2003 Act, will consider the scheme's technical soundness and, taking account of the goal of sustainable development, whether it is sympathetic to the environment and provides value for money. As well as being the basis on which central grant has been awarded, confirmation gives authorities powers of entry onto private land and ensures independent scrutiny of proposals.

Separate processes

3.51 However, in addition to the confirmation process described above, there are separate legislative procedures for granting flood prevention schemes planning permission. In most cases the Scottish Ministers are involved in both processes, but in different roles and at different times. As FIAC examined (see box) there are some significant differences between the 2 procedures. It is possible that an inquiry can be required as part of each process.

3.52 In addition, since 2006 engineering works in watercourses require authorisation from SEPA under the CAR regulations. This can add to the procedural burden and timetable.

EXAMPLE OF THE STATUTORY TIMESCALE FOR A FLOOD PREVENTION SCHEME – THE WHITE CART (GLASGOW CITY COUNCIL)

Task Name	Half 2, 2004				Half 1, 2005				Half 2, 2005				Half 1, 2006				Half 2, 2006				Half 1, 2007				Half 2, 2007				Ha															
	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	
Flood Prevention (Scotland) Act 1961	[Timeline bar]																																											
Advertise Scheme	[Blue bar]																																											
3 month objection	[Blue bar]																																											
Negotiate with objectors	[Blue bar]																																											
Last objection withdrawn																																									◆ 06/02			
Scheme confirmed																																									◆ 04/05			
Planning Permission	[Timeline bar]																																											
Submit application																																									◆ 27/10			
Period for representations	[Blue bar]																																											
Consent granted																																									◆ 30/08			
Implementation	[Timeline bar]																																											
Detailed Design (Storage)	[Blue bar]																																											
Detailed Design (Urban)	[Blue bar]																																											
Controlled Activities Regulations	[Timeline bar]																																											
Submit Storage Application																																									◆ 27/06			
Determination Period	[Blue bar]																																											
Submit Urban Application																																									◆ 24/09			
Determination Period	[Blue bar]																																											

CAR only came into force towards the end of this process and so Glasgow City Council was not in a position to apply for a CAR authorisation any earlier.

- 3.53 Local authorities, and many others, have expressed concerns about these overlapping processes. As well as the bureaucratic overload, they consider that the procedures can add unnecessarily to the time taken to undertake a scheme. The Government recognise this is a significant issue which requires to be addressed.
- 3.54 Guidance to local authorities on how best to co-ordinate both processes is given in Planning Advice Note 69 *Planning and Building Standards Advice on Flooding 2005*. The 2005 Planning White Paper *Modernising the Planning System* also said that consideration would be given to improving the interaction between the planning process and the statutory procedures for flood prevention schemes.
- 3.55 In recent years, the statutory process for schemes with no objections has taken around 5-6 months, but for those where there are objections the process can take over 2 years if a Public Local Inquiry has to be held. However, there have been only 4 Inquiries held into planned flood prevention schemes in Scotland in the last 20 years. The shortest of these lasted only 20 minutes, while the longest was the Inquiry into the Water of Leith Flood Prevention Scheme in Edinburgh, which lasted for 6 weeks. The Planning process usually takes around 6 months.

Simplifying Procedures

- 3.56 **The Scottish Government believes that the present processes must be radically simplified. The possibility of two public inquiries being held; one on planning and one on flood risk management measures must be removed. Local authorities should have to prepare only one set of drawings and carry out one consultation exercise.**
- 3.57 The Government considers that there are 2 basic possible approaches to this simplification. The first is that Ministerial confirmation should carry deemed planning permission. The second is for a local authority based process which would similarly lead to deemed planning consent.
- 3.58 Under either option the procedures would have to ensure the following:
- That the rights of those entitled to object under planning law and those entitled to object under 1961 Act are maintained.
 - The flood risk management measure would have to be submitted with sufficient details for the planning issues to be considered.
 - The flood risk management “permissible limits of deviation” would have to be accommodated in the deemed planning consent.
 - The requirements of the environmental impact assessment directive were met.

Simplifying Procedures – Option 1 – Ministerial Approval To Also Grant Deemed Planning Permission

- 3.59 Under this option the Bill would provide that, when Scottish Ministers confirm a flood risk management measure, they would make a statutory Direction that planning permission was deemed to be granted for the relevant parts. This process would approve all the measures in the scheme, including those such as wetland creation or tree planting, which are unlikely to require planning permission.
- 3.60 The Bill would set out a procedure largely similar to the present confirmation procedure under the 1961 Act so that people would continue to have the right to object and there would be a similar opportunity for objections to be examined in an inquiry.
- 3.61 This would be broadly in line with the procedure provided for in Section 57 of the Town and Country Planning (Scotland) Act 1997, where a consent given under the Electricity Act for major wind farms enables Ministers to direct that planning permission is deemed to be granted.
- 3.62 Under this proposal there could be one inquiry with 2 classes of objectors – those entitled to appear at the inquiry because the scheme was to be built on their land and those who could only appear at the inquiry by invitation. This might give rise to some awkwardness. However, it occurs at present in that the Scottish Ministers are only obliged to call an inquiry to consider maintained objections from eligible parties. These

parties would have an automatic right to be heard at the inquiry. Any other party might be heard at the discretion of the Reporter, and the Ministers would be required to consider their objection. However, should the first group of objectors withdraw, there would be no need for the inquiry to proceed and the Ministers would simply consider the remaining objections.

Q15. Do you think that the granting of deemed planning permission at the end of the statutory process for flood risk management will deliver a more streamlined approach to the delivery of flood risk management?

Q16. Should Ministerial confirmation be made necessary even where features of a scheme do not require planning permission?

Q17. Is the present procedure for Ministerial confirmation satisfactory for this new purpose or are there revisions e.g. to timescales which should be considered?

Simplifying procedures – Option 2 – Relying on a local authority based procedure

3.63 An alternative to simplify the procedures would be to remove the Ministerial confirmation process and rely wholly on local authority based procedures.

3.64 Local authorities are able to undertake a wide range of development activity in line with their statutory responsibilities without a process of approval or confirmation by Scottish Ministers. In many of these areas, e.g. roads and highways, authorities have powers of compulsory purchase. Procedures are wholly undertaken at local authority level but, where there are unresolved objections, they may be passed to Scottish Ministers for determination. It is not clear that flood prevention schemes are of such a character that a similar process is not appropriate.

3.65 The Government has already taken one step in simplifying the process by transferring funding for flood risk management part to the block grant to local authorities.

3.66 Now that Ministers no longer award central grant to a flood scheme, confirmation under the 1961 Act has lost a significant part of its purpose. **The Government therefore wishes to consider whether there is still a need for a separate statutory process involving Ministers for flood risk management schemes.**

3.67 A local authority based procedure - which would carry deemed planning consent - would give local authorities the power to carry out such flood risk management measures as may appear to them to be necessary or expedient for the protection of any land or property in their area.

- 3.68 A statutory procedure of advertisement and consultation would be described and where objections could not be resolved, a local inquiry would be held.
- 3.69 SEPA and responsible authorities would be identified as required consultees in addition to those already identified in the 1961 Act. Where a scheme did not conform to the approved flood risk management plan, or met with an objection from SEPA or other responsible authorities, Scottish Ministers could call it in.
- 3.70 The safeguards conferred by the European Convention on Human Rights, such as the right to compensation for the loss of land, would still apply. However, for those occasions where local authorities could not reach agreement with a landowner on the use of land for flood management purposes, they would have the option to use powers of compulsory purchase.
- 3.71 Technical standards would be provided by regulation under the Bill or guidance - just as in promoting a road they are required to ensure that defined standards are met and construction consent is granted under the Roads (Scotland) Act 1984.
- 3.72 This process would raise the importance of Local Flood Risk Management Plans and the process of their development, as the first opportunity that the public would have to go through a formal objection process would be when any flood risk management measures was identified.
- 3.73 Local authorities would as now, preferably have to include the proposals in their development plans. A procedure for informing or notifying Scottish Ministers might also be required in specific circumstances, for example unresolved objections.
- 3.74 There are a number of questions which arise in relation to this proposal including the capacity of local authorities to take it forward. A procedure separate from planning is necessary – it would be inappropriate to make the full technical detail of a flooding scheme the responsibility of the planning authority. In addition it may be that even under such a procedure the majority of proposals would be referred to Ministers under one or other criterion.
- 3.75 The technical capacity of local authorities is a significant issue, but is not unique to this proposal. It is relevant also to the flood risk management planning process. In order to ensure informed scrutiny of any engineering proposals, local authorities in each Flood Risk Management Planning Area might contribute to an area pool of experienced flooding engineers, which could be utilised by each authority for technical scrutiny of proposals and for long-term development of in-house expertise, thereby avoiding sole reliance on expertise bought in from consultants.

Q18. Do you think that the option to rely on a local authority based process in a similar way as other local authority development activity should be taken forward?

Q19. What would be the appropriate timescales for notification and response?

Q20. Would it be appropriate for such a process to carry deemed planning consent?

Q21 How should the issue of technical expertise and capacity to ensure the necessary technical standards are observed, be addressed?

Q22 Are there any additional alternatives to the options outlined above which would simplify procedures?

Flood measures beyond the 1961 Act

3.76 The definition of operations for the purposes of the 1961 Act is not fully consistent with sustainable flood management. This has hitherto been a constraint on local authorities' approaches to flood risk management since schemes that did not fit the definition could not be eligible for central funding. With the transfer of funding to local authorities this is no longer a constraint – local authorities are empowered under other legislation to undertake other activities. Some of these may require approval through planning or other processes, some may not. It is only a certain class of flood risk measures i.e. those involving engineering operations, which are subject to the statutory procedures. The Government consider that procedures for measures outwith the definition of the 1961 Act are satisfactory and do not require to be amended.

3.77 Nevertheless, rainfall events can have a number of damaging effects on property and cause risk to life. Local authorities have extensive powers to act to protect life and property. However given the increasing incidence of severe rainfall events, it may be advisable to ensure that local authorities are fully empowered, where a clear and present danger exists, to take urgent remedial action, including on private land, to avoid damage to life and property, and to recover costs after it has taken such action.

Q23 Do you consider local authorities' powers are sufficient to take necessary action to avert danger to life and property?

CAR authorisation

3.78 Either of these options would deal with the difficulty of having separate statutory processes for flooding and planning. However it would, in most cases, still be necessary for a CAR authorisation to be obtained from SEPA before a scheme can be

constructed. In the example given on page 40 of the White Cart Flood Prevention Scheme in Glasgow, CAR had only just come into force and so Glasgow City Council was not in a position to apply for a CAR authorisation any earlier in the process.

3.79 An application for a CAR authorisation has to be advertised and objections considered. The timetable for the consideration of the application is subject to a strict timetable set out in regulations. There is scope for objectors to appeal to Ministers to determine the application.

3.80 The Scottish Government wishes to consider how best to align the CAR process with the options listed above. In order to achieve this it considers that:

- Local authorities should seek CAR authorisation at the same time. Application and advertisement should cover all relevant factors.
- It is unlikely that any statutory provisions are required to achieve this alignment. The Government will therefore work with SEPA, local authorities and other interested parties to ensure that guidance ensures the necessary alignment.
- if it is decided to retain a process of Ministerial confirmation, then such confirmation could carry deemed CAR authorisation.

BOX 9 - CONTROLLED ACTIVITIES REGULATIONS

All engineering works in or in the vicinity of rivers, lochs and wetlands now require authorisation under the CAR Regulations. This includes any work by local authorities to manage flood risk, and works by others that have the potential to increase flood risk. The regulations are designed to contribute towards achieving the objectives of the WFD.

In considering applications under CAR, SEPA assess whether new activities will increase flood risk to homes and businesses. SEPA can refuse applications where flood risk cannot be mitigated.

Some of the activities authorised under CAR also require planning permission. SEPA is often consulted on these applications by local planning authorities. SEPA works closely with local planning authorities to ensure the requirements of CAR are considered at planning, therefore promoting joined-up working and avoiding duplication of effort. An example of this would be where the requirement to assess the impact on the water environment under CAR, and in particular on WFD objectives, is considered as part of any environmental impact assessment required through planning.

SEPA and the Scottish Government worked together to introduce a year-long transitional period for CAR engineering activities, to enable larger projects that had been in development for several years to proceed with confidence. There still remain a few transitional issues, in particular with flood prevention schemes, and SEPA is working jointly with local authorities to minimise any delays to those projects. Looking ahead, SEPA will work with the Scottish Government and local authorities to raise awareness of the requirements of CAR and ensure that planning and CAR process run concurrently and are appropriately joined-up. This may include parallel advertisements and joint impact assessments.

Q24. Do you agree that streamlining the CAR and flooding/planning processes can be managed through better guidance?

Q25. Do you think there is anything further SEPA, the Scottish Government or others should be doing to promote joined-up regulation?

Q26. Do you think that there is an alternative approach to simplifying the process of promoting flood measures to those discussed above which the Government should consider?

Ensuring a Co-operative Approach

3.81 3.80 Authorities are not limited to their own administrative area in using their powers to mitigate flooding, and may use them jointly with other authorities. However, this co-operative approach has been rarely applied, given the differing priorities in each local authority. Therefore, as mentioned above at paragraph 3.29, the Government propose that the Bill should place a duty on local authorities to co-operate for the purposes of flood risk management planning.

Other duties under the 1961 Act

3.82 As well as the power to mitigate flooding, at present local authorities have a duty to:

- Assess the condition of watercourses from time to time to ascertain whether their condition is likely to cause flooding of non-agricultural land in their area
- Maintain watercourses in a due state of efficiency where such maintenance would substantially reduce the risk of such flooding
- Publish a biennial report of instances of flooding and measures taken since their last report, and any further measures they consider they require to take to mitigate flooding of non-agricultural land.

3.83 The Government propose to maintain these duties.

3.84 The biennial reports should form an important component of the Preliminary Flood Risk Assessment required under the Floods Directive. The Government propose that duties on local authorities to produce these reports should be retained and that they form part of their duties as responsible authorities. In order to ensure consistency the

Government propose that the form and content of the biennial reports should be prescribed by Ministerial direction made under the Bill.

Q27. Do you agree that the form and content of the biennial reports should be more systematic, and subject to direction from Ministers?

Delivering Sustainable Flood Management

- 3.85 Removing the formal statutory process, and therefore the definition of ‘schemes’ within the meaning of the 1961 Act, will also provide local authorities with the flexibility to develop an incremental approach to providing protection based on a portfolio of measures including land management techniques, as well as the more traditional flood prevention schemes. However, **we do not propose that the Bill should set out in detail what a flood management measure might be.** Rather, the Bill would establish the framework to ensure that all flood risk management measures are implemented as part of a strategic approach to flood risk management in Scotland.
- 3.86 We therefore do not believe that it is necessary to specify a detailed range of flood management measures in the Bill; instead we plan to issue guidance on sustainable flood management, based on the work of FIAC. If we retain the need for Ministerial confirmation of flood risk management measures, then we will expect local authorities to have taken the guidance into consideration in the development of the most appropriate measures in order to achieve confirmation.
- 3.87 The aim of the Flood Risk Management Plans will be to manage the consequences of flooding on people, economic activity and the environment where these are significant. This may include taking steps to slow the flow, or to store flood waters where the consequences will be less, in order to reduce the consequences elsewhere. We do not wish to prescribe the nature of the land where these measures may be taken and the simple distinction between agricultural and non-agricultural land in the 1961 Act is no longer appropriate.
- 3.88 The proposals outlined above provide a new framework of duties and responsibilities on a number of bodies across Scotland with a role to play in flood risk management. The powers remain largely permissive, with duties only being placed on the competent authority and responsible authorities to collaborate in flood risk management planning. However, this is combined with the existing duty under the 2003 Act to promote sustainable flood management, and with the fact that all responsible authorities should have signed up to a national flood risk management plan that has been approved by Ministers. The Scottish Government believe that this approach will support delivery of

the Floods Directive and ensure that Scotland is equipped to take forward sustainable flood management.

Q28. Do consultees agree that the proposals as outlined will improve flood risk management and ensure Scotland is equipped to implement sustainable flood management?

Q29. Do consultees feel that this is enough to ensure that flood risk is addressed or should local authorities have a new duty to promote measures to alleviate flooding?

Chapter 4: Reservoir Safety



CHAPTER 4: RESERVOIR SAFETY

Purpose of Consultation

- 4.1 The Scottish Government is seeking views on proposals to introduce a transfer of responsibility for enforcement of the Reservoirs Act 1975 in Scotland from local authorities to a single enforcement authority, and is keen to obtain feedback on which organisation may be best placed to undertake enforcement.

What is a Reservoir?

- 4.2 In the context of water resources, a reservoir is generally understood to be a place where water is retained by usually a man made structure to be *reserved*, for later use by agriculture, industry and domestic household use. The supply of water using such storage developed in the UK during the 19th century alongside the development of sewer infrastructure and legislation to ensure the standard of drinking water to improve health. Indeed some 70% of all reservoir dams in the UK were constructed before 1900. Reservoirs are a key component within the water supply regime.

Why a Reservoirs Act?

- 4.3 The Act is an administrative structure to manage reservoirs, whether constructed or planned, that minimises the risk of water escaping and the potential damage and loss of life which *could* result. The Act provides for a regime of inspections and recommendations in relation to works on reservoirs and the functions and responsibilities of who will carry out those inspections and works.
- 4.4 In the Act, those with a statutory duty and their relationship to each other are outlined:
- Reservoir undertakers (usually the owners) have ultimate responsibility for the safety of their reservoirs. They must appoint a Panel Engineer (a specialist civil engineer who is qualified and experienced in reservoir safety) to continuously supervise the reservoir (Supervising Engineer) and to carry out periodic inspections (Inspecting Engineer). A Panel Engineer must also be appointed to design and construct a new reservoir or repair or make changes to an existing reservoir (Construction Engineer).
 - “Panel” is referred to above. This is a panel set up by the Secretary of State after consultation with the Institution of Civil Engineers (ICE). The ICE oversee the competency and qualification of their member engineers to undertake the inspections that ensure the continuing structural integrity of the reservoir and its associated apparatus such as embankments, valves and spillways. Once identified as proficient they are “panel” engineers and this is notified to the Secretary of State.

- Reservoir safety is a devolved matter for the Scottish Government, but the operation of the “panel” system, is administered on a national basis by DEFRA. A detailed outline of how this system of inspection and reporting operates is well understood by all engaged in the process. Full details and explanation of the operation of the Act are contained in “A Guide to the Reservoirs Act 1975”, Thomas Telford Publishing, London, 2000. We do not seek to change this process.

This administrative structure has worked effectively and efficiently “to protect persons or property against an escape of water from a reservoir.”

Reason for change

- 4.5 The safe operation and management of reservoirs to reduce flood risk is extremely important. The system of enforcement of this is essential, with reservoir operation being as free from risk as is practicable, given available resources. A uniformity of approach is achieved in assessing the integrity and safety of reservoir structures through the administrative arrangements outlined above; such uniformity in enforcement is also essential.
- 4.6 Currently, the enforcement of the Act in Scotland is the responsibility of the 32 Scottish local authorities. The biennial reports they submit indicate varying staffing and financial resource allocation to reservoir responsibilities amongst these authorities. This can be attributed partly, to geography and topography; for example Highland Council has some 125 reservoirs which fall within the ambit of the Act, whilst Glasgow City Council has only 2. However the enforcement role is considered an onerous burden which is disproportionate to the reservoirs located within many local authority areas. For example, two local authorities have responsibility for the enforcement of the Act for 21 reservoirs, some 1-2% of the total number of reservoirs in Scotland. However, both authorities experienced significant and lengthy problems in trying to establish ownership of one reservoir within each of their areas.
- 4.7 As the format of biennial reports has never been prescribed, they vary in format and in the detail of information contained within them. It is difficult, therefore, to quickly gain an overview of the situation regarding the essentials of reservoir safety in Scotland and meet the demands of modern administrative practice.

For example:

- the number of new reservoirs recorded;
- the number removed from the large raised category;
- the number of Supervising Engineers appointed;
- whether or not regular inspections have been commissioned and undertaken;
- recording and detail of any incidents;
- whether or not essential works “in the interests of safety” have been carried out.

In addition, the mapping of inundation as a result of a dam breach is not a statutory requirement; such maps and plans as exist have been compiled by reservoir undertakers for various reasons.

Proposals

- 4.8 The current approach to enforcement in Scotland was also undertaken in England and Wales until 1st October 2004, with 140 local authorities providing the enforcement function. Through the 2003 Water Act, England and Wales chose to transfer this important enforcement function to a single body; the Environment Agency. Whilst the Scottish situation is by no means as diverse as that evidenced latterly in England and Wales there would be clear staff and financial benefits and consistency of application by establishing a single enforcement authority for Scotland. Most importantly, the information essential to gauge the operation of the enforcement regime, would be collected, collated, analysed, understood and acted upon by one body.
- 4.9 Under the proposed reform, the Reservoirs Act 1975 would be amended to provide for the duties and powers given to local authorities, except those relevant to local authorities' functions as reservoir undertakers, to be transferred to one single body. This proposed transfer of responsibility for enforcement of the Reservoirs Act 1975 would ensure a uniform and efficient application of legislative powers throughout Scotland. The transfer would ensure that one body assumes full responsibility for the following:
- Maintaining a register of reservoirs (and making this information available to the public);
 - Ensuring that the Undertaker has appointed a Supervising Engineer;
 - Ensuring that the Undertaker commissions regular inspections of the dam by an Inspecting Engineer;
 - Enforcing the Reservoirs Act 1975 by influencing, warning, cautioning and ultimately prosecuting non-compliant Undertakers;
 - Commissioning essential works required in the 'Interests of Safety' in the event of non-compliance and recouping full costs incurred from the Undertaker;
 - Ensuring that the Controlled Activities Regulations (CAR) licensing requirements and similar regulation of the impact of works are granted;
 - Producing a Biennial Report for submission to the Scottish Government;
 - Recording and cataloguing detail and specifics of any incidents, to provide a post incident reporting regime; and
 - Acting in an emergency if the Undertaker cannot be found or identified.
- 4.10 In addition, a range of principles that now underpin the management of assets, risk management and the administration undertaken to ensure efficiency, have developed and become accepted practise since 1975. These should be applied to the enforcement of reservoir safety. Similarly, the application of quality management could also be undertaken by one single enforcement authority, to standards accepted by, for example BSI. A Quality Management System (QMS) such as ISO 9001 can provide a

management framework that makes available the necessary controls to address risks and monitor and measure performance.

Reservoir Flood Plans and Inundation Maps

- 4.11 The 2003 Water Act for England and Wales introduced greater flexibility within the Reservoirs Act over the future implications of climate change and rainfall patterns, and the need to ensure safety of population resident within the area that would be inundated were a dam to fail. Reservoir undertakers in Scotland are not required to produce inundation maps and the flood plan that would show the extent of the flood risk following an uncontrolled release of water from a reservoir. Any that have been produced are held by undertakers and are available for use by Category 1 responders for emergency planning purposes under the terms of Civil Contingencies Act, 2004. We believe that it is essential for local responders to have access to this information for any large raised reservoirs, which are categorised as endangering lives in a community.
- 4.12 “Floods and Reservoir Safety”, 3rd Edition published by the ICE, provides a 4 tier categorisation of dams and their potential effects upon communities were they to be breached. We are proposing that where a dam breach would give rise to significant hazards (those categorised as A or B in the above document) these will require to be considered in Preliminary Flood Risk Assessments under the Floods Directive.
- 4.13 We are not, therefore, proposing to amend the Reservoirs Act to impose a duty on reservoir undertakers to produce separate maps and plans in the same way as is required in England and Wales. Instead we are proposing that reservoirs will be assessed as part of a preliminary flood risk assessment under the Floods Directive, and where it is considered that a dam breach would give rise to significant hazards, then the competent authority under the Floods Directive (SEPA) would be required to map that risk. Any subsequent plan that was undertaken to deal with that risk would form a part of the information and detail considered by strategic co-ordinating groups under the Civil Contingencies legislation, in order for them to plan more effectively for the risk of a reservoir breach. . The single enforcement authority would be expected to integrate within these groups for this purpose. As stated above Flood Risk Management Plans should cross refer to emergency plans for flooding developed by the Strategic Coordinating Groups.
- 4.14 We are proposing this approach because, although many reservoir undertakers are large organisations such as Scottish Water, SEPA or local authorities, there are many others that are small clubs, such as angling clubs, that do not have the resources or the ability to produce inundation maps or plans. Furthermore, there is now a requirement under the Floods Directive to map floods with a low probability, or extreme event scenarios. By definition, a dam break would be an extreme event scenario. Our proposals mean that those reservoirs that pose a potential for significant risk, will have properly developed maps overseen by a single competent authority. For those reservoir undertakers that have already produced such maps as part of good working practice, we do not propose to duplicate the work that has been undertaken as long as it meets the required standards.

- 4.15 It is important to reiterate that the Bill will not cover the emergency response to a flooding event, whatever the source of that flooding, as this comes under the auspices of the Civil Contingencies legislation.

Extension of Enforcement Powers

- 4.16 Section 8 of the Act provides, for England and Wales, powers of enforcement to the Environment Agency (as enforcement authority) in the event of non-compliance by a reservoir undertaker with recommendations made by the supervising engineer in connection with the construction or enlargement of a reservoir. At the moment these powers are not available in Scotland, and we are proposing to amend the Reservoirs Act to ensure that they are available to the new enforcement authority for Scotland. This will extend the enforcement remit to ensure measures recommended in the interests of safety are carried into effect, within a specified timescale.

Monitoring and Supervision

- 4.17 Section 11 of the Act requires undertakers to keep a record of information of changes in water levels, overflow levels, leakages and settlement of walls and repairs carried out, and such other matters as may be prescribed. We are proposing to a system of post incident reporting that will include such information as is deemed appropriate by the enforcement authority following an incident. This will enable common causes and responses to be identified in order to strengthen our understanding and knowledge of any incidents as may occur.

Crown Application

- 4.18 The Act in Scotland is currently silent on binding Crown bodies to comply; this legislative review presents the opportunity to consider this. We would expect any views on this to be made in consultation responses.

Towards a Single Enforcement Authority in Scotland

- 4.19 In order to explore and assess practise and methods of enforcement, an initial scoping exercise was carried out during 2005 to seek to ascertain the views of the current enforcement authorities and other stakeholders engaged in water supply. The vast majority of responses (84%) were in favour of a transfer of enforcement responsibilities to a single national body. A minority of responders suggested a possible negative outcome of this proposal could be a potential loss of local knowledge should responsibility for enforcement be removed from local authorities. However, it was also acknowledged in the same replies that this knowledge could be built up and maintained within any new body.
- 4.20 As well as maintaining the status quo, the single national body considered suitable for the role of enforcement authority is the Scottish Environment Protection Agency Opinion on how they may undertake the role, the extension of the role to deliver an

enhanced incident reporting system and integrate reservoirs within flood risk assessment and planning are strongly desired. It would be helpful for the analysis of consultative responses if the following questions could be considered and the supporting information for your answer outlined:

Q30. Do you believe enforcement responsibilities under the Reservoirs Act 1975 should be transferred to a single national body?

Q31. If so, should it be SEPA or another as yet unidentified body?

Q32. Are you content with the proposals for dealing with reservoir flood maps under the provisions of the Floods Directive, or do you think that there should be a statutory duty on reservoir undertakers to prepare reservoir inundation maps and plans, similar to the duty in the 2003 Water Act for England and Wales?

Q33. Do you agree that enforcement powers should be extended and post incident reporting included as an additional requirement?

Q34. Views on Crown application and any other comments?

What the change will deliver?

4.21 Although still in the early stages of the revised reporting cycle, the England and Wales experience has immediately proved to be a less time consuming process for those involved. The collation and analysis of all reservoir safety information gained through the enforcement role of the Environment Agency enables an accurate and concise summary to be made which then forms the basis for DEFRA to report to Ministers. The proposals would result in the same improvements if adopted in Scotland.

4.22 Such a transfer of authority would ensure greater resilience to the risk of dam breaches as one body would take responsibility for, and accumulate knowledge on, all reservoirs in Scotland. The concentration of enforcement duties within Scotland in one body would provide not only a more focussed approach on matters affecting the safety of reservoirs but also an opportunity for Ministers to receive advice and an overview from a single public body, sponsored by the Scottish Government, on the working of the Act in Scotland and the role of panel engineers.

4.23 The greatest gains would accrue in improved asset management; the application of objective risk management and the administration undertaken to ensure efficiency that have developed and become accepted practise since 1975. A resource as important

as reservoirs in the water supply chain requires the application of a quality management regime to quickly address risks, monitor and measure performance, to ensure reservoirs continue their function in the 21st century and beyond.

Annexes



ANNEX A: SUMMARY OF CURRENT FLOODING LEGISLATION

The Land Drainage (Scotland) Act 1958

This Act provides that owners of agricultural land may request the Scottish Ministers to make an order permitting them to carry out improvement works, which may include flood protection, to improve the agricultural potential of their land. This Act is now little used, the last order being made in 1985.

The Flood Prevention (Scotland) Act 1961

This Act empowers local authorities to take such measures as they consider necessary to mitigate flooding of non-agricultural land. The cause of flooding is not prescribed, however the measures available are in relation only to watercourses, barriers and similar flood defence works, and their ancillary apparatus and so may only be of use in instances of river or tidal flooding. Since 1997, authorities have had duties to assess the condition of watercourses and maintain them in a due state of hydraulic efficiency where that would substantially reduce the risk of flooding to non-agricultural land, and to publish a biennial report of instances of flooding of non-agricultural land and measures taken or still to be taken to mitigate such flooding.

Works, other than maintenance and repair, can only be carried out under a flood prevention scheme, promoted by the authority and confirmed by the Scottish Ministers. There is provision for objections to be considered at a public local inquiry and the Scottish Ministers may confirm a scheme, with or without modification, or refuse to confirm a scheme.

From April 2008, funding of flood prevention schemes will be included in the local government block grant and it will be the responsibility of each local authority to allocate the total financial resources available to it on the basis of local needs and priorities having first fulfilled its statutory obligations and the national and local outcome agreement priorities agreed with the Scottish Government.

The Roads (Scotland) Act 1984

This Act empowers the roads authorities, who are the Scottish Ministers (who exercise these powers via Transport Scotland) for trunk roads [and special roads (i.e. motorways)] and local authorities for other public roads, to carry out works to protect roads from flooding. The Act also empowers roads authorities to carry out various works to drain roads and to prevent surface water from flowing onto them. There is an interaction between roads authorities' drainage powers and Scottish Water's responsibilities under drainage and sewerage legislation (see below). Finally, roads authorities can make contributions to the expenses of flood prevention operations under the 1961 Act and land drainage works under the Land Drainage (Scotland) Act 1958, where they consider that the operations or works are desirable for the protection of roads.

Planning Legislation and Guidance

The Town and Country Planning (Scotland) Act 1997 as amended provides for the control of new development and the preparation of development plans (currently structure and local plans) by planning authorities. Planning applications have to be determined in accord with the development plan unless material considerations indicate otherwise. Flood prevention schemes prepared under the 1961 Act are development and therefore require planning permission.

The Town and Country Planning (General Development Procedure)(Scotland) Order 1992 (as amended in 1996) and the Notification of Applications Direction make specific provisions regarding development where they may be a risk of flooding. If a proposed development is likely to result in an increase in the number of buildings at risk of being damaged by flooding the planning authority have to consult the Scottish Environment Protection Agency (SEPA) before granting planning permission. If SEPA advise against planning permission but the planning authority wishes to approve or recommends conditions which the authority does not intend to apply, they are required to notify the application to the Scottish Ministers who may call it in for their own decision.

National guidance on addressing flood risk in development planning and determining applications is set out in Scottish Planning Policy 7 – Planning and Flooding and Planning Advice Note 69 – Planning and Building standards Advice on Flooding. The SPP contains policy specifically directed at planning authorities and developers, promotes pre-application discussions to identify flooding issues and says that developers should commission a flood risk assessment if necessary. Central to the SPP is a Risk Framework which describes the planning response to different risks of flooding. Planning Advice Note 69 complements this by outlining approaches to ensure that future built developments are not located in areas with a significant risk of flooding. It outlines advice and background information that, together with SPP7, has become the reference point for strategic and local planning consideration of flood risk. The guidance includes the provision that every Council should convene a Flood Liaison and Advice Group (FLAG) or combine with other councils, possibly on a catchment basis. Flags provide a forum for the key public and private interests to share knowledge and offer advice on flooding issues.

The EC Water Framework Directive

(Directive 2000/60/EC) aims to preserve and improve the ecological status of the water environment including rivers, lochs, coastal waters, transitional waters and groundwater. The Directive has two key components. Firstly it ensures that for the first time the water environment across Europe is managed in a co-ordinated and sensible manner. Secondly it requires that all activities that impact adversely on the quality (using quality in its widest sense) of the water environment are controlled. Our rivers and lochs are the lifeblood of our communities - the EC Water Framework Directive ensures their continued good health for future generations.

The Water Environment and Water Services (Scotland) Act 2003

The 2003 Act transposes the EC Water Framework Directive into Scots Law. The legislation sets up strong links between the role of flood management in protecting people and property, and river basin planning and environmental protection in improvement of the water environment. As such, the legislation has significant implications for local authorities with respect to their strategies for flood management and flood alleviation.

Under section 2 of the 2003 Act Scottish Ministers, SEPA (as the competent authority) and the responsible authorities (designated under the Act and who include local authorities) have a duty to carry out certain functions (including, in the case of local authorities, flood prevention, road drainage and planning functions and, in the case of the Scottish Ministers and SEPA, functions under CAR) in compliance with the requirements of the EC Water Framework Directive.

They also have a duty, so far as is consistent with relevant enactments or the designated functions in question, and having regard to social and economic impacts:

“to promote sustainable flood management, and act in the way best calculated to contribute to the achievement of sustainable development.”

In respect of flood risk management, the 2003 Act (section 2(3) and (4)) requires the Scottish Ministers, SEPA and the responsible authorities “to work in an integrated fashion and co-operate with each other to promote sustainable flood management” so far as practicable.

In practice this means that local authorities are required to promote sustainable flood management when carrying out flood prevention functions under the 1961 Act and should co-operate with each other and (where possible) with other responsible authorities when doing so. However “sustainable flood management” is not given a specific meaning in the 2003 Act. That is why FIAC proposed that it should be clear what it comprises so that there is a common understanding of what compliance with the duty to promote sustainable flood management might involve.

The River Basin Management Plan is a 6-yearly statement which sets out how we are meeting the requirements of the Water Framework Directive and how we are planning to continue to do so. Producing such plans will involve identifying risks to the status of our water environment, and assessing how and to what extent these risks can be addressed in the current or subsequent planning cycles.

The objective setting process will allow us to strike the right balance between protecting the water environment and securing its sustainable use for the purposes of economic and social development. The planning process will also provide new opportunities for interested parties to become actively involved in shaping how we protect and improve our river basin districts. The plans do not cover drains or sewers, which are the responsibility of Scottish Water.

The Water Environment (Controlled Activities) (Scotland) Regulations 2005.

Section 20 of the 2003 Act made provision for a new system to regulate activities which affect the water environment, which are known as “controlled activities”. The new system was established by the Water Environment (Controlled Activities) (Scotland) Regulations 2005 (CAR). Certain activities (generally more minor activities) are automatically authorised if they comply with rules (known as “general binding rules”), most of which are set out in CAR, others require to be registered with SEPA and may be subject to conditions imposed by SEPA and other activities (generally those which will have a more major impact on the water environment) require a formal water use licence to be granted by SEPA.

The Scottish Ministers have a role in directing SEPA, they can call in and determine particular applications and they also determine appeals against decisions taken by SEPA under CAR. Since impoundments and engineering works for flood defence will generally be controlled activities under CAR (the position for certain coastal works is more complex, with some authorisations governed by the Food and Environment Protection Act 1985 rather than CAR), authorisation under the CAR regime will be required for most flood management activities (although some more minor activities, carried out as part of management and maintenance of watercourses under the 1961 Act, may be authorised under general binding rules). Further details about CAR can be found at: <http://www.sepa.org.uk/wfd/index.htm> .

The EC Directive on the Assessment and Management of Flood Risks

The EC Floods Directive builds on and is closely related to the Water Framework Directive. It is now in force but does not have to be implemented by Member States until 2009. The Directive creates a 3-step approach to flood management. Member states will first have to undertake a preliminary flood risk assessment. Where a significant flood risk exists, the competent authority/ies will need to develop a flood map and flood risk management plans must then be drawn up for these zones. The management plans should include measures to reduce the probability of flooding and so its potential consequences. The plans will also need to address all phases of the flood risk management cycle but focus particularly on prevention, protection and preparation.

The Environment Act 1995

Under section 25 of the Environment Act 1995 and Part VI of the Agriculture Act 1970, SEPA has a variety of responsibilities in relation to flooding. SEPA has discretionary powers for the provision of Flood Warning for Scotland and it currently exercises these by operating the formal flood warning schemes, in partnership with other responsible authorities, and the operation of Floodline (including provision of 24 hour Flood Watch cover for all of Scotland by monitoring of data from river levels, rainfall, tide predictions and weather forecasts). SEPA has the function of assessing as far as it considers appropriate the risk of flooding in any area of Scotland and a duty to provide advice to planning authorities based on the information held. SEPA can also provide advice to local authorities on flood risk for

planning purposes and on flood prevention. Under the Act, provision of information in response to public queries on flood risk areas and properties is also their responsibility.

The Water Industry (Scotland) Act 2002 (“the 2002 Act”) and Sewerage (Scotland) Act 1968 (“the 1968 Act”)

This gives responsibilities to Scottish Water to manage the discharge of surface water that enters its drainage systems (by providing sewers and public SUD systems) and to maintain water supplies and drainage infrastructure. As mentioned above, there is an interaction between the drainage of surface water under the 1968 Act and drainage of roads under the Roads (Scotland) Act 1984. The 1968 Act defines “surface water” as run-off of rainwater from roofs and paved ground surfaces “within the curtilage of premises” so the term does not generally cover run-off from roads. However, section 7 of the 1968 Act allows roads authorities to enter into agreements with Scottish Water so that Scottish Water’s sewers, SUD systems and drains can be used to carry run-off from roads and/or so that roads authority drains or other infrastructure can be used to carry surface water from premises.

The provisions about SUDS in the 1968 Act are relatively new, having been inserted by the 2003 Act and brought into force in autumn 2007.

Under Section 25 of the 2002 act, Scottish Water at its discretion may also engage with 3rd parties to carry out activities that are consistent with its core function. Scottish Water could thus collaborate with local authorities or private contractors on matters related to sustainable urban drainage systems (SUDS) in accordance with its technical manual “Sewerage for Scotland” (2nd Edition).

The Civil Contingencies Act 2004

This Act and accompanying regulations and non-legislative measures will deliver a single framework for civil protection in the United Kingdom capable of meeting the challenges of the twenty-first century. The Act is separated into two substantive parts:

- Part 1: focuses on local arrangements for civil protection, establishing a statutory framework of roles and responsibilities for local responders.
- Part 2: focuses on emergency powers, establishing a modern framework for the use of special legislative measures that might be necessary to deal with the effects of the most serious emergencies.

The basic principle applied in Scotland and the UK is of local management of incidents. [Eight strategic coordinating groups](#) throughout Scotland, led by the Chief Constable and Local authority Chief Executives, make detailed plans for all types of incidents in their area. These plans are exercised regularly and all groups have experience of dealing with different types of emergencies.

At the Scottish level the Scottish Government chairs the Scottish Emergencies Co-ordinating Committee (SECC), which ensures that steps are taken to respond to the changing risk environment. It also ensures that work is co-ordinated with the UK Government's Civil

Contingencies Secretariat. Membership of SECC includes the Scottish Government, emergency services, local authorities and the Military.

At Scottish Ministerial level sits the Ministerial Group on Civil Contingencies (MGCC) chaired by the Minister for Justice and comprising the Ministers for Environment and Rural Development, Finance and Public Service Reform, Health and Community Care, Transport, Parliamentary Business and the Lord Advocate.

The Reservoirs Act 1975

This is an administrative structure to manage reservoirs, whether constructed or planned, that minimises the risk of water escaping . The Act does not define safety. What it does define is the regime of inspection and the function and responsibilities of who will carry this out.

ANNEX B: INDICATORS OF SUSTAINABLE FLOOD MANAGEMENT

The use of measurement indicators as a means for assessing the performance of implemented policies is well established. Indicators are also widely used as assessment criteria to allow decisions to be made between alternative investment options. The key to the successful use of measurement indicators is to ensure that:

- There is agreement and clarity on the **validity** of what is to be measured;
- Measurement of particular indicators is **practicable**; and
- The use of indicators in making decisions is **transparent** and **auditable**.

Validity is the process by which the relevance of the objectives can be tested and you are encouraged to give your views on which of the objectives appear valid and desirable in the development of sustainable flood management.

The second point allows us to assess how practical it is to collect, examine and analyse the relevant data. It also enables us to assess the gaps between what should be measured and the **practicality** of what can be measured.

It is essential that we are **transparent** and **auditable** when using measurement indicators to make decisions. This is especially true where multiple indicators are aggregated and weightings are used, as these processes require value judgements on the relative importance of the different indicators.

FIAC believes that practitioners should be able to measure compliance with each of the 5 objectives of sustainable flood management and proposes a number of measurement indicators. These indicators are detailed in the paper *What is Sustainable Flood Management?* (pages 32 to 46) available on the Scottish Government website; <http://www.scotland.gov.uk/Resource/Doc/1223/0028633.pdf>

To ensure clarity on what needs to be measured, each objective has first been divided into a number of components each with its own detailed meaning. A measurement indicator has been attributed to each one of these detailed meanings.

Where a common measurement unit can be identified (e.g. £), it is proposed that the scores from each indicator are aggregated to provide an overall score for the objective. Where this is not possible an alternative method of assessment will be required to judge performance, which can then be converted into a numerical score using an agreed scale, such as a look-up table.

The need to prioritise investment funding may require assessment of performance against the objectives as the basis on which to make decisions between alternative proposals. In this case, indicator scores will *either* need to be aggregated to provide an overall assessment of performance, perhaps using a system of weighting, *or* individual indicator scores will need to be presented so as to enable decision makers to form judgements on the relative

performance of each proposal. There are various techniques by which this could be done. The former is the simpler approach but the granularity of the indicators is reduced and its usefulness depends on how the weightings are agreed between stakeholders. The latter will require development of a more complex approach using a technique based on multi-criteria analysis, sustainability appraisal and/or social cost-benefit analysis.

Table – Detailed Meanings and Draft Measurement Indicators for the SFM Objectives

DETAILED MEANING	DRAFT MEASUREMENT INDICATOR <i>(qualifying comments in italics)</i>	STATUS	NATIONAL SCALE MEASURE <i>(qualifying comments in italics)</i>
OBJECTIVE 1: OVERALL – MEET NEEDS FOR FLOOD RESILIENCE			
Reduce the total sum of flooding impacts over time, to an agreed level. Specifically:	Net sum of indicators (i), (ii), (iii) and (iv) <i>Aggregate measure requires analysis of the distribution of reduced impacts (benefits) accrued across all future flood probabilities.</i>		Total unmet need quoted as number of properties, and % of population, remaining at risk at target level. <i>Where there are differences of definition between the types of flooding, each could be quoted separately. It may be appropriate to gradually move to a common definition. Summing the components of the draft measurement indicator in £ appears to be the only way to aggregate the different kinds of flood impact to the national scale.</i>
(i) Personal social impact	(i) People at risk x personal social impact/person <i>Impact costs for death and injury are used in Highways Agency roads assessment and social impact is being considered by Defra for inclusion in their appraisals.</i>	Potentially measurable subject to research <i>SE has commissioned a study on the social impacts of flooding</i>	
(ii) Potential damage to personal, commercial or public property	(ii) (Personal, Commercial and/or Public) Property at risk x damage potential/property	Already practical <i>standard practice; embedded in Defra's methodology</i>	
(iii) Travel time losses	(iii) People at risk x lost travel time/person	Already practical <i>standard practice; embedded in Defra's methodology</i>	

DETAILED MEANING	DRAFT MEASUREMENT INDICATOR <i>(qualifying comments in italics)</i>	STATUS	NATIONAL SCALE MEASURE <i>(qualifying comments in italics)</i>
(iv) Commercial and industrial losses including those due to disruptions to transport or other infrastructure	(iv) Jobs at risk x lost time/job + lost production & sales	Already practical <i>standard practice; embedded in Defra's methodology</i>	
OBJECTIVE 2: SOCIAL – ENHANCE COMMUNITY BENEFIT WITH APPROPRIATE ACCESS FOR EVERYONE			
Enhanced community benefit is expressed in terms of:	... and measured in terms of:		
(i) The impact on local jobs	(i) No. of local jobs protected <i>Needs to take account of changes in labour market activity that do not add to the total number of local jobs.</i>	Practical	Cumulative national results of jobs protected, and total £ spent in communities. <i>The draft measurement indicator can be aggregated across the different types of flooding to create a national measure.</i>
(ii) Wealth generated for local community.	(ii) £ (and percentage of proposal costs) spent in the local community	Potentially measurable	<i>The draft measurement indicator can be aggregated across the different types of flooding to create a national measure.</i>
(iii) All those affected having fair access to the benefits of sustainable flood management (SFM)	(iii) Clear statement of who has access to which benefit	Facts	<i>By categorising access for indicator (iii) and weighting by population, the draft measurement indicator can be aggregated across the different types of flooding to create a national measure.</i>
OBJECTIVE 3: ENVIRONMENTAL – PROTECT AND WORK WITH THE ENVIRONMENT WITH RESPECT FOR ALL SPECIES, HABITATS, LANDSCAPES, AND BUILT HERITAGE			
The individual elements are to:	Measurement is based on two indicators of the water environment, (i) and (ii), and four indicators for the non-water environment (iii), (iv), (v) and (vi). <i>It may be possible to combine the individual measures (at local level) into an 'Environmental footprint'</i>		

DETAILED MEANING	DRAFT MEASUREMENT INDICATOR <i>(qualifying comments in italics)</i>	STATUS	NATIONAL SCALE MEASURE <i>(qualifying comments in italics)</i>
(i) Prevent deterioration of, protect and enhance the water environment (quality, quantity, physical habitat and natural processes)	(i) Use indicators developed by SEPA for measuring the water quality, water quantity, and hydromorphological state of water bodies in terms of WFD objectives.	Measurable subject to the results of research	Cumulative national results of all implemented proposals, expressed in terms of percentage changes in the various WFD indicators.
(ii) Protect and/or improve floodplain ecological habitats and landscapes	(ii) Statement of specific areas (SSSIs, 'corridors', wetlands, landscape features, etc.) affected in terms of hectares (as per Defra's existing appraisal guidance) by percentage of: <ul style="list-style-type: none"> • Urban/agricultural land converted to catchment floodplain • Human activities reclaimed by catchment wetlands • Flow (or catchment rainfall) stored in impoundments with flow regulation functions 	Potentially measurable	Cumulative national results of all implemented proposals, expressed in terms either of areas or of percentages determined at local level.
(iii) Deliver Biodiversity Action Plan targets, etc.	(iii) Percentage of targets achieved <i>(The Scottish Biodiversity Forum is developing indicators to measure progress in implementing the Scottish Biodiversity Strategy)</i>	Potentially measurable	<u>Either</u> aggregate the individual indicators, across all implemented proposals, to obtain 3 separate national measures, <u>or</u> use 'Environmental Footprinting' to create a single national measure expressed per person or property.
(iv) Minimise emissions of greenhouse gases	(iv) Million tonnes of all GHG emissions weighted by Global Warming Potential (GWP) <i>It is considered that materials use, waste production, and energy use could be encompassed within an overall measure of GHG emissions.</i>	Potentially measurable	<i>A national indicator for GHG emissions should allow measurement in terms of the targeted reductions under the UK Emissions Trading Scheme.</i>
(v) Deliver other targets associated with relevant non-water plans and programmes	(v) Use indicators specified in other plans/programmes consistent with the Schedule 2 topics and methodologies adopted in SEA and sustainability appraisal.	Potentially measurable, otherwise provide facts	

DETAILED MEANING	DRAFT MEASUREMENT INDICATOR <i>(qualifying comments in italics)</i>	STATUS	NATIONAL SCALE MEASURE <i>(qualifying comments in italics)</i>
(vi) Provide other benefits through physical improvements to the urban and rural environment	(vi) Shadow price valuation of benefits from specific improvements in amenities and aesthetic appearance (open spaces, views, wetlands, landscape, etc). <i>Willingness-to-pay approaches may enable benefits to be valued. The challenge is establish an indicator that can effectively capture the diversity of 'social capital' in perceived benefits and individual responses.</i>	Potentially measurable	Cumulative valuation of benefits, across all implemented proposals expressed per person or per property
OBJECTIVE 4: ECONOMIC - DELIVER RESILIENCE AT AFFORDABLE COST WITH FAIR ECONOMIC OUTCOMES			
Achievement of this objective is expressed in terms of:	... and measured in terms of:		
(i) Delivering SFM for lowest whole life cost of alleviation (capital costs, operation & maintenance, replacement, individual response funding and compensation), plus awareness, avoidance and assistance costs.	(i) £ (Whole Life Cost)	Already practical (and included in C:B ratio calculations)	Cumulative national costs and number of properties affected for all implemented proposals <i>Aggregation across the different types of flooding will create a national measure.</i>
(ii) A comparison and judgement on 'fairness' in terms of the causes of flooding and those who pay the cost	(ii)(a) A statement of the main causes of flood impacts which are to be reduced	Facts only required	Cumulative 'people affected' weighted average of 'fair', 'partly fair', or 'unfair'. <i>By categorising the 'fairness' and weighting by population, an aggregate national measure can be created across the different types of flooding.</i>
	(ii)(b) A broad assessment of the distribution of who pays the costs	Facts only required	
	(ii)(c) A comparison of facts to provide an objective judgement of fairness ('fair', 'partly fair', 'unfair') or even-handedness as developed for WFD cost-effectiveness analysis.	Facts only required	

DETAILED MEANING	DRAFT MEASUREMENT INDICATOR <i>(qualifying comments in italics)</i>	STATUS	NATIONAL SCALE MEASURE <i>(qualifying comments in italics)</i>
OBJECTIVE 5: FUTURE GENERATIONS - ALLOW FOR FUTURE ADAPTABILITY WITH A FAIR BALANCE BETWEEN MEETING PRESENT NEEDS AND THOSE OF FUTURE GENERATIONS			
Achievement of this objective is expressed in terms of:	... and measured in terms of:		
(i) Allowance for increased precipitation, storms or sea level rise (as a result of climate change)	(i) Composite indicator (expressed as percentage of current conditions), which includes changes in precipitation, sea level rise and storminess, and is a proxy for more detailed analysis of predicted changes to flood hydrology.	Potentially measurable subject to the results of research	
(ii) Allowance for increased or decreased 'catchment' response <i>Defined around man-made causes of river flooding – the word 'catchment' needs to be re-interpreted for other types of flooding.</i>	(ii) Change in average runoff coefficient (expressed as percentage of current) <i>Accompanied by qualitative statements concerning changes in land use.</i>	Potentially measurable subject to the results of research	Cumulative net headroom as percentage of design total, weighted by catchment area. <i>If net headroom, for each flooding type, can be expressed as a percentage then it should be possible to aggregate a national measure, by using an appropriate weighting.</i>
(iii) Headroom, as the net result of (i) and (ii)	(iii) Net headroom expressed as percentage of design total <i>Accompanied by a statement of what is involved in securing the headroom allowance.</i>	Potentially measurable subject to the results of research	
(iv) Maximising natural capacity for flood response <i>Although defined around river flooding, it can be re-interpreted for other types of flooding.</i>	(iv) Flood plain storage (m ³ and %age of 'natural' floodplain retained), and floodplain channel capacity (m ³ /s and %age of 'natural' channel retained) <i>Also incorporate a measure to take account of changes in the flow regime.</i>	Potentially measurable subject to the results of research	Percent of 'natural capacity' retained, for each type of flooding, weighted by area impacted by flooding.

DETAILED MEANING	DRAFT MEASUREMENT INDICATOR <i>(qualifying comments in italics)</i>	STATUS	NATIONAL SCALE MEASURE <i>(qualifying comments in italics)</i>
(v) Future affordability of continuing resilience	(v) Composite indicator taking into account design life, discount rate and predicted change in local income/wealth over time <i>Although Treasury Green Book requires use of 3.5% discount rate, this may not properly reflect this objective.</i>	Potentially measurable subject to the results of research	Cost-weighted average
(vi) Fail safe provision for design flood exceedence	(vi) Statement of the expectation, and estimate of the relative effect of exceedence – catastrophic, severe, minor.	Facts?	Aggregated sum of exceedence risks weighted by population served by each proposal

ANNEX C: LIST OF CONSULTEES

Association of British Insurers
Convention of Scottish Local Authorities
University of Dundee
Environment Agency
Forestry Commission Scotland
Historic Scotland
Homes for Scotland
Independent Consultants
Jacobs Bابتie
JBa Consulting
Local authorities
Met Office
MWH Ltd
National Flood Forum
NFU Scotland
RSPB Scotland
Scottish Environment Link
Scottish Environment Protection Agency
Scottish Natural Heritage
Scottish Water
WWF Scotland

ANNEX D: RESPONDENT INFORMATION FORM

The Future of Flood Risk Management in Scotland

Please complete the details below and return it with your response. This will help ensure we handle your response appropriately. Thank you for your help.

Name:

.....

Postal Address:

.....

.....

.....

1. Are you responding: (please tick one box)

(a) as an individual (go to Q2a/b and then Q4)

(b) on behalf of a group/organisation (go to Q3 and then Q4)

Individuals

2a. Do you agree to your response being made available to the public (in Scottish Executive library and/or on the Scottish Government website)?

Yes (go to 2b below)

No (We will treat your response as confidential)

2b. Where confidentiality is not requested, we will make your response available to the public on the following basis: (please tick one of the following boxes)

Yes, make my response, name and address all available

Yes, make my response available, but not my name or address

Yes, make my response and name available, but not my address

On behalf of Groups or Organisations

3. The name and address of your organisation will be made available to the public (in the Scottish Government library and/or on the Scottish Government website).

Are you also content for your response to be made available?

Yes

No (We will treat your response as confidential)

Sharing Responses / Future Engagement

4. We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so.

Are you content for the Scottish Government to contact you again in the future in relation to this consultation response?

Yes

No

Please indicate which questions or parts of the consultation paper you are responding to as this will aid our analysis of the responses received:

Flooding

Reservoirs

Both

Glossary



GLOSSARY

1 in 100 year event	An event that has a probability of occurring once every 100 years. Also expressed as an event, which has a 1% probability of occurring in any one year.
Annual Exceedence Probability (AEP)	The probability of a flood of a certain magnitude occurring in any one year.
Area Flood Management Plans (AFMP)	These are plans that set the strategic framework for flood risk management in Scotland. The plans coordinate flood management objectives across Scotland, and set the framework in which measures are delivered or planned for at a local level.
Benefit/Cost Analysis	Comparison of present value scheme benefits and costs as part of an economic appraisal. The benefit–cost ratio is the total present value benefits divided by the total present value costs.
Catchment Flood Management Plan (CFMP)	A large scale strategic planning document prepared by the Environment Agency in England and Wales that identifies long-term sustainable policies for the holistic management of flood risks in a defined river catchment or group of related catchments.
Catchment or Catchment Area	The specific land area that drains into a watercourse.
Civil Contingencies	The Civil Contingencies Act 2004 and accompanying regulations and non-legislative measures, deliver a single framework for civil protection in the United Kingdom capable of meeting the challenges of the 21st century. The Act is separated into two substantive parts: Part 1 focuses on local arrangements for civil protection, establishing a statutory framework of roles and responsibilities for local responders. Part 2 focuses on emergency powers, establishing a modern framework for the use of special legislative measures that might be necessary to deal with the effects of the most serious emergencies.
Climate Change	Long-term changes in climate specifically linked to those changes resulting from human intervention in atmospheric processes through, for example, the release of greenhouse gases to the atmosphere from the burning of fossil fuels.

Controlled Activities Regulations (CAR)	A reference to The Water Environment (Controlled Activities) (Scotland) Regulations 2005. All engineering works in or in the vicinity of rivers, lochs and wetlands now require authorisation under the CAR Regulations. This includes any work by local authorities to manage flood risk, and works by others that have the potential to increase flood risk. In considering applications under CAR, SEPA assess whether new activities will increase flood risk to homes and businesses. SEPA can refuse applications where flood risk cannot be mitigated.
Crown Application	A reference to whether or not a specific Act applies to the Crown or Crown properties and whether or not the Crown must comply with the legislation.
Crown Exemption	A reference to whether or not a specific Act exempts the Crown or Crown properties, and whether or not the Crown needs to comply with the legislation.
Culvert	A closed conduit used for the conveyance of surface drainage water under a roadway, railroad, canal, or other impediment.
Daylighting	Opening-up of previously culverted watercourses.
DEFRA	<p>DEFRA (Department for Environment, Food and Rural Affairs) is a UK Government Department. DEFRA has eight Departmental Strategic Objectives which describe everything they do, and which will be used to manage performance.</p> <p>Climate change tackled internationally and through domestic action to reduce greenhouse gas emissions</p> <p>A healthy, resilient, productive & diverse natural environment</p> <p>Sustainable patterns of consumption and production</p> <p>Economy and society resilient to environmental risk and adapted to the impacts of climate change</p> <p>A thriving farming and food sector, with an improving net environmental impact</p> <p>Championing Sustainable Development across government, across the UK, and internationally</p> <p>Strong rural communities</p> <p>A respected department delivering efficient and high quality services and outcomes.</p>
Diffuse Pollution	Pollution which originates from various activities and which cannot be traced to a single source e.g. contaminated runoff from built up areas.

Do-Nothing Scenario

An option used in benefit/cost analysis to act as a baseline against which all other options are tested. It assumes no active intervention. In the case of existing works it assumes walk-away: cease all maintenance, repairs and other activities immediately. In the case of new works it assumes that there is no intervention in natural processes. Politically this is often seen as a non-viable option but it is an important comparison tool in benefit–cost analysis.

EC Floods Directive

The EC Directive on the Assessment and Management of Flood Risks or *EC Floods Directive* builds on and is closely related to the Water Framework Directive. It is now in force but does not have to be implemented by Member States until 2009. The Directive creates a 3-step approach to flood management. Member states will first have to undertake a preliminary flood risk assessment. Where a significant flood risk exists, the competent authority/ies will need to develop a flood map and flood risk management plans must then be drawn up for these zones. The management plans should include measures to reduce the probability of flooding and so its potential consequences. The plans will also need to address all phases of the flood risk management cycle but focus particularly on prevention, protection and preparation.

Economic Appraisal

An appraisal that takes into account a wide range of costs and benefits, generally those which can be valued in monetary terms.

Embankment

Artificial raising of the natural bank height of a waterway.

Environment

Where environmental issues are referred to in this document, this term is used to encompass landscape and visual, flora, fauna, geological or geomorphological features and buildings, air, water, sites and objects of archaeological, architectural or historical interest. (It is recognised that in other contexts the environment has much wider implications).

Environmental Appraisal

The process whereby the effects of a proposal on the natural or manmade environment are identified, measured and assessed to determine their significance.

Environmental Impact Assessment (EIA)

Environmental Impact Assessment (EIA) is a process which identifies the environmental effects (both negative and positive) of development proposals. It aims to prevent, reduce and offset any adverse impacts.

FIAC: Flooding Issues Advisory Committee

The Flooding Issues Advisory Committee (FIAC) was a stakeholder group established to provide advice to Ministers on flood risk management issues. It was set up by the Scottish Executive in April 2005 to advise Scottish Ministers on flood related issues and to continue the work of NTAG.

FLAG: Flood Liaison and Advice Group

A non statutory advisory group of public and private sector representatives, convened by Councils to share concerns and knowledge and to provide advice on a wide range of planning and other flooding issues in an informal setting. FLAGs were formerly called Flood Appraisal Groups under the 1995 NPPG. The new name better describes their roles.

Flood Alleviation

Measures which are designed to reduce or remove the risk of flooding.

Flood Risk and Hazard Mapping (FRHM)

Mapping delineating the areas that have been predicted to be at risk of being flooded during an event of specified probability.

Flood Risk Management Plans (FRMP)

High-level planning strategies through which key decision makers within a river catchment identify and agree policies to secure the long-term sustainable management of flood risk.

Floodplains

Floodplains are land areas adjacent to rivers and streams that are subject to recurring inundation.

Fluvial Flooding

Flooding which is caused by a river or a watercourse.

Forestry Commission

The Forestry Commission is a Department of the UK Government. They are the government department responsible for the protection and expansion of Britain's forests and woodlands. The objective of the Forestry Commission GB is to take the lead, on behalf of all three administrations, in the development and promotion of sustainable forest management and to support its achievement nationally. In England, Scotland and Wales the organisation has its own strategy and mission, and delivers the forestry policy of each country through specific objectives drawn from the country forestry strategies.

Glasgow Strategic Drainage Plan	Following severe flooding in July 2002, Glasgow City Council instigated a Strategic Drainage Plan. The key objectives of the GSDP are Flood Risk Reduction, Water Quality Improvement, Removal of Development Constraints, Habitat Improvement and Integrated Investment Planning.
Greenhouse Gases	Naturally occurring gases, such as carbon dioxide, nitrous oxide, methane and ozone, and man-made gases like chlorofluorocarbons, which absorb some of the sun's radiation and convert it into heat.
Hazard	A situation with the potential to result in harm. A hazard does not necessarily lead to harm.
Impoundment	Any dam, weir, or other works by which surface water may be impounded; or any works diverting surface waters in connection with the construction or alteration of any dam, weir or other works falling within (a) above. Raising the level of an existing natural loch is also considered an impoundment. A pond or lake created by excavation below the pre-existing ground level (e.g. a dug pond or flooded quarry) is not included.
Instream River Structures	All structures that occupy a portion of the channel.
Inundation Maps	A map delineating the area that would be submerged in the event of a specific flood risk.
Local Flood Management Plans	Local Flood Management Plans would translate the objectives set out in Area Flood Management Plans into catchment focussed, locally targeted combinations of measures to address flood risk.
Loch	An inland body of water formed in a depression on the land surface (usually a loch has a discernable inlet and outlet)

National Flooding Framework (LFMP)	In October 2002 an Ad Hoc Committee of Ministers, chaired by the Deputy First Minister, was set up to consider the arrangements for addressing flood risk and how advice and support is provided to those at risk from, and affected by, flooding. In February 2003 the Scottish Parliament Cabinet agreed a Statement of Commitments to reduce the risks and impacts of flooding and an action plan in the form of the National Flooding Framework. The National Flooding Framework aims to address the problems of flooding through four areas of action, namely, Awareness, Avoidance, Alleviation, and Assistance.
Natural Flood Management	Natural flood management promotes a subset of flood alleviation techniques that aim to work with natural process to reduce flood risk. Examples of natural techniques include replanting upland forests, reconnecting rivers to their flood plains and restoring wetlands to act as natural sponges for flood waters.
No Regrets Actions	Actions taken to respond to perceived climate change impacts whose consequences both economic and environmental will be beneficial (usually in the short term) without imposing any long-term commitments.
NTAG: National Technical Advisory Group	Established by the Scottish Executive in November 2003 with a one year life span as an expert national group to discuss flooding issues
PFRA (Preliminary Flood Risk Assessment)	Preliminary Flood Risk Assessments create a national picture of flood risks, which includes consideration of climate change. They provide the information required to undertake a strategic approach to flood management that targets those areas at greatest risk from floods.
Pluvial flooding	Flooding that results from overland flow which has been generated by rainfall before the runoff enters any watercourse or sewer. This is also referred to as surface water flooding.
Post project evaluation	A procedure to review the performance of a project with respect to its original objectives and the manner in which the project was carried out.
Precautionary Principle	An approach which takes avoiding action based on the possibility of significant environmental or other damage, even before there is conclusive evidence that the damage will occur.

Probability	The probability of an outcome is the relative proportion or frequency of events leading to that outcome, out of all possible events.
Qualitative Methods	Approaches which use descriptive rather than numerical values for assessment and decision making.
Quality Management System (QMS)	Provides a management framework that makes available the necessary controls to address risks and monitor and measure performance.
Reservoir	In the context of water resources, a reservoir is generally understood to be a place where water is retained by usually a man made structure to be reserved, for later use by agriculture, industry and domestic household use.
Reservoir Flood Plans	A flood plan that indicates the extent of the flood risk following an uncontrolled release of water from a reservoir
Reservoirs Act	The Reservoirs Act 1975 is an administrative structure to manage reservoirs, whether constructed or planned, that minimises the risk of water escaping. The Act does not define safety. What it does define is the regime of inspection and the function and responsibilities of who will carry this out.
Residual life of defences	The remaining time until a defence is likely to fail or no longer achieve minimum acceptable performance criteria in terms of serviceability or structural strength.
Residual risk	The risk which remains after risk management and mitigation. May include, for example, risk due to very severe (above design standard) storms, or risks from unforeseen hazards.
Resilience	Resilience means: 'ability to recover quickly and easily'. The Scottish Government uses it to deliver the 'four As': Awareness + Avoidance + Alleviation + Assistance.

Return Period (Annual Exceedence Probability)

The flood return period is a measure of the rarity of an event: the longer the return period, the rarer the event. It is the average length of time (usually in years) separating flood events of a similar magnitude taken over a very long period. Sometimes this is referred to as the recurrence interval. The term Flood Return Period is now commonly expressed as the percentage probability of a flood event of a particular magnitude occurring in any one year - the Annual Exceedence Probability (AEP). Thus a 200 year Return Period Flood Event is now expressed as the 0.5% AEP flood event.

Risk

A combination of both the likelihood and consequences of an event.

Risk Assessment

Consideration of the risks inherent in a project, leading to the development of action to control them.

River Basin District

In Scotland there are 2 River Basin Districts identified under the 2003 Act – one for the Solway/Tweed area and one covering the rest of Scotland. The latter district is subdivided for planning purposes into 9 subdistricts

River Basin Management Planning

River basin planning is a new strategic decision-making process introduced by the Water Framework Directive (WFD) which integrates the management of land and water within river basin districts (RBDs). The Directive requires the preparation of a River Basin Management Plan (RBMP) for each River Basin District in the European Union. It also specifies that interested parties must be encouraged to become actively involved in river basin planning and that the implementation process should be open and inclusive.

Scottish National Heritage (SNH)

Scottish National Heritage. SNH is a Non-Departmental Public Body answerable to the responsible Minister and the First Minister, and through them to the Scottish Parliament. Their mission is to work with the people of Scotland to care for our natural heritage.

Scottish Water

Scottish Water is a publicly owned business, answerable to the Scottish Parliament and the people of Scotland. It offers a new public sector model in the UK water industry and Scottish Water aims to be as efficient and effective as water companies in the private sector.

It plays a key role in protecting the nation's health by providing water and waste water services 365 days per year to 2.2 million households across an area that is one third of the size of Britain.

Scottish Water is managed by an Executive Board consisting of five executive and eight non executive members, answerable to the Scottish Parliament.

Sea Level Rise

The rise in sea levels due to global warming causing thermal expansion of the oceans and to a lesser extent from melting of the ice caps and glaciers. Relative sea level rise refers to the effective change in sea level relative to the land surface and takes account also of long-term land movement.

Sensitivity testing

Method in which the impact on the output of an analysis is assessed by systematically changing the input values

SEPA

Scottish Environment Protection Agency. SEPA is the public body responsible for environmental protection in Scotland. Its main aim is to provide an efficient and integrated environmental protection system for Scotland that will both improve the environment and contribute to the Scottish Ministers' goal of sustainable development.

SEPA was established by the Environment Act 1995. It became operational on 1 April 1996. The Environment Act 1995 also sets out SEPA's powers and responsibilities.

In broad terms, SEPA regulates:

Activities that may pollute water.

Activities that may pollute air.

Storage, transport and disposal of waste.

Keeping and disposal of radioactive materials.

Some of SEPA's other principal responsibilities include:

Maintaining a flood warning system.

Implementing the National Waste Strategy.

Controlling, with the Health and Safety Executive, the risk of major accidents at industrial sites.

Operating the Scottish part of the Radioactive Incident Monitoring Network.

SEPA also works with many other organisations to help protect and improve the environment.

Sewer Flooding	Flooding caused by a blockage or overflowing in a sewer or urban drainage system.
Shoreline Management Plan (SMP)	<p>In accordance with Defra, the objectives and general principles of SMPs are to:</p> <ul style="list-style-type: none">Set out the risks from flooding and erosion to people and the developed, historic and natural environment within the SMP area.Identify opportunities to maintain and improve the environment by managing the risks from floods and coastal erosion.Identify the preferred policies for managing risks from floods and erosion over the next century.Identify the consequences of putting the preferred policies into practice.Set out procedures for monitoring how effective these policies are.Inform others so that future land use, planning and development of the shoreline takes account of the risks and the preferred policies.Discourage inappropriate development in areas where the flood and erosion risks are high.Meet international and national nature conservation legislation and aim to achieve the biodiversity objectives
Strategic Approach	Any process or element of a process undertaken in a holistic or comprehensive (strategic) way whilst not being to any great level of detail.
Strategic Flood Risk Assessment (SFRA)	A Strategic Flood Risk Assessment (SFRA) is designed for the purposes of specifically informing the Development Planning Process, i.e. Local Plans. A SFRA involves the collection, analysis and presentation of all existing and readily available flood risk information (from any source) for the area of interest. It constitutes a strategic overview of flood risk,
Strategic Framework	A planning structure which has been developed using strategic principles within which layers of consistent and interrelated plans and strategies can be developed.
Strategic Objectives	The Scottish Government has defined 5 main strategic objectives which map a Scotland that is wealthier and fairer, smarter, healthier, safer and stronger, and greener.

Strategy Plan	A long-term (usually 50 years or more) documented plan for flood management, including all necessary work to meet defined flood for the target area.
Sustainability	The degree to which flood and coastal flood management solutions avoid tying future generations into inflexible and or expensive flood management options. This will usually include consideration of interrelationships with other flood management measures and likely developments and processes within a catchment or coastal cell. It will also take account of long-term demands for non-renewable materials.
Sustainable Development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
Sustainable Economic Growth	Defined as building a dynamic and growing economy that will provide prosperity and opportunities for all, while ensuring that future generations can enjoy a better quality of life also.
Sustainable Flood Management (SFM)	Sustainable flood management provides the maximum possible social and economic resilience against flooding, by protecting and working with the environment, in a way which is fair and affordable both now and in the future
Sustainable Urban Drainage Systems (SUDS),	A set of techniques designed to slow the flow of water, can contribute to reducing flood risk by absorbing some of the initial rainfall, and then releasing it gradually, thereby reducing the flood peak and helping to mitigate downstream problems, and make a useful contribution to a flood management strategy
The Pitt Report	This independent report was commissioned by HM Government in the wake of the severe flooding of summer 2007.
Urban Drainage Plan	A coordinated sustainable strategy to deal with all types of drainage from urban areas.

Water Framework Directive (WFD)

The Water Framework Directive (WFD) is the most substantial piece of EC water legislation to date and establishes integrated river basin management for Europe. It requires all inland and coastal waters to reach "good status" by 2015. It will do this by establishing a river basin district structure within which demanding environmental objectives will be set, including ecological targets for surface waters.

The Directive came into force on 22 December 2000. The Directive sets out a timetable for both initial transposition into laws of Member States and thereafter for the implementation of requirements.

Weir

An overflow structure that is used for controlling upstream water level. Passive weirs are weirs not associated with abstraction (their only purpose is to raise water level upstream of the impounding structure).

WEWS Act or Water Environment and Water Services (Scotland) Act 2003

Water Environment and Water Services (Scotland) Act 2003. An Act of the Scottish Parliament to make provision for protection of the water environment, including provision for implementing European Parliament and Council Directive 2000/60/EC. Also to amend the Sewerage (Scotland) Act 1968 and the Water (Scotland) Act 1980 in relation to the provision of water and sewerage services, and for connected purposes.

Whole Life Costs

The total costs associated with a scheme for its full design and potential residual life span, taking proper account of all aspects of design, construction, maintenance and external impacts. A particularly useful approach in helping to determine economic sustainability when used to compare the relative costs of long-life schemes such as flood defences and where decisions between short-term capital costs and long-term maintenance costs need to be made.

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