

Renfrewshire Council

To: Scrutiny & Petitions Board

On: 12 May 2008

Report by Lead Officer Flooding in Renfrewshire – Scope of Review

1. Summary

- 1.1 At the meeting of the Scrutiny Board on 25 June 2007, it was agreed to investigate flooding in Renfrewshire. This report outlines the proposed purpose and scope of the review. The report also includes a list of potential participants to be invited to submit evidence to the Scrutiny Board to assist the investigation and provides an indicative timetable for evidence and reporting.

2. Recommendations

It is recommended that the Board:

- approve the purpose and scope of the review
- Agree to delegate powers to the lead officer, in consultation with the convener and depute convener of the Scrutiny Board, to determine the detailed timetable for the review having regard to the scheduling of evidence and witnesses.
- Agree to the list of potential participants to be requested to provide evidence.
- Authorise the lead officer to make the necessary arrangements to progress the review within the agreed timescales

3. Background

3.1 Flooding in Renfrewshire.

In recent years there have been more frequent flood events throughout Scotland. Renfrewshire has experienced major flood events in 1994, 1999 and most recently in December 2006. Flood events in Renfrewshire are typically characterised by a complex interaction between intense rainfall events, watercourses exceeding peak flow capacities, surface water run-off from developed areas, and lack of capacity in the sewerage system and the tidal influence of the Clyde. The key flooding issue in the urban area, as evidenced in December 2006, relates to the lack of capacity in the sewerage system and local watercourses, exacerbated by overland flow i.e. water which becomes concentrated and flows across land after heavy rainfall (see report to HECS Policy Board, 9 January 2007, item 27).

- 3.2 Although recent flood events are not statistically unusual when measured over long time periods, they perhaps can be attributed to the onset of the globally predicted climate change. Climate change is presenting new challenges and threats. Research predicts

that Scotland will become warmer, sea levels may rise, rainfall will increase, particularly in the west, ground water levels will rise and storm events will become more frequent. Flood hazards from river and coastal flooding and from intense rainfall overloading natural and artificial drainage systems are predicted to increase during the 21st century.

3.3 **Legislation and Government Policy.**

Following the flood events in Scotland in 1994, changes were made to national policy guidance on flooding and new legislation was introduced. These changes had significant implications for local authorities. In 1995, new planning policy guidance (National Planning Policy Guideline (NPPG) 7 was introduced which required Councils as planning authorities to fully consider flood risk as a material consideration in determining planning applications and in the preparation of development plans. It also recommended that local authorities set up flood appraisal groups and take a lead role in co-ordinating measures and responses to flooding. The guidance was subsequently updated and reinforced in 2004 by Scottish Planning Policy (SPP) 7 which emphasised the importance of taking account of the probability of flooding from all sources. In 1997, the Flood Prevention and Land drainage (Scotland) Act 1961 was amended which increased Councils' duties in flood prevention, requiring a more proactive role in watercourse maintenance and watercourse flooding assessments. Around the same time, the concept of sustainable urban drainage systems (SUDS) was introduced for new developments. Sustainable drainage systems attempt to mimic natural drainage patterns to minimise surface water runoff rates using attenuation (i.e. surface water storage) and ground infiltration techniques. Planning advice on this subject was provided in Planning Advice Note (PAN) 61 (2001).

3.4 In February 2008, the Scottish Government published a consultation document entitled *The Future of Flood Risk Management in Scotland* which sets out the proposals for a new Flooding Bill. The proposals are designed to implement the EU Floods Directive and establish a framework within which sustainable flood management in Scotland will be defined and operate more effectively than at present. The EU Floods Directive requires:

- the production of Preliminary Flood Risk Assessments to identify areas at significant flood risk by December 2011.
- the production of Flood Hazard Maps and Flood Risk Maps for areas at significant risk of flooding by December 2013.
- the production of Flood Risk Management Plans for areas at significant risk of flooding by 2015.

The Draft Flooding Bill proposes SEPA as the competent authority but expects local authorities to play a key role. The Flooding Bill has potentially significant implications for the manner in which local authorities undertake their flood management responsibilities and engage with partner organisations. The emphasis on sustainable flood management and an integrated approach to the preparation of flood risk management plans has been welcomed by the Council (see report to Environment and Infrastructure Policy Board 23 April 2008).

3.5 **The role of the Council.**

Local authorities now have a wide range of powers to minimise the risk of flooding through maintaining the efficiency of watercourses, promoting mitigation measures where appropriate by flood prevention schemes and through Strategic Planning, Local Planning and Development Management. Since 1996, the Council, through the

Department of Planning and Transport, has invested over £10m in flood mitigation measures. This effort has been supported by grant aid from the Scottish Government. A strategic planning framework for flood risk assessment has been provided in the Glasgow and the Clyde Valley Structure Plan 2000. Renfrewshire Local Plan (2006) provides detailed policies governing flood risk assessment and standards of flood protection. Renfrewshire Council's Drainage Assessment Notes for Guidance (2004) sets out drainage requirements, including sustainable drainage systems, which are required in new developments and which are assessed in planning applications.

- 3.6 The main Council activities in relation to flood hazard reduction have lain with the Planning and Transport Department with its responsibilities for land use planning and building standards, flood prevention schemes and roads drainage. However, there are implications for most if not all Council departments in relation to flood hazard reduction and these should be considered as part of the Scrutiny Board's investigation.
- 3.7 Whilst local authorities have a range of powers in relation to flooding, public responsibilities for flooding issues are wide in their extent. The division of responsibilities for flood prevention and watercourse maintenance, piped water systems, flood warning and flood emergency response requires co-operation between the respective agencies involved, principally the local authority, SEPA, Scottish Water and the emergency services.
- 3.8 In relation to the requirements of the Flooding Bill, local authority involvement will be required in all parts of the process from Preliminary Flood Risk Assessment, the production of Flood Hazard and Risk Maps to the preparation and implementation of Flood Risk Management Plans.
- 3.9 **The role of the Scottish Environmental Protection Agency.**
SEPA's principal role relating to flooding is in monitoring rainfall and water quality regulation. The agency is a statutory consultee for planning authorities and provides information and advice on flood risk in new developments. In November 2006, SEPA issued flood risk maps to assist strategic flood risk assessment (see report to Environment and Infrastructure Policy Board, 6 June 2007, item 1). The agency uses discretionary powers to monitor a number of river flow gauges throughout Scotland, including the Gryfe, White Cart, the Black Cart and the Clyde at Renfrew. It provides a number of flood warning schemes, including the Clyde at Renfrew, the Flood Watch and Floodline services. The Water Environment and Water Services (Scotland) Act 2003 (WEWS Act) which transposes the EU Water Framework Directive (WFD), designates SEPA as the lead authority for the preparation of River Basin Management Plans (RBMPs). The RBMPs aim to improve the water environment and to promote sustainable flood management. A draft RBMP for Scotland should be available by the end of 2008.
- 3.10 Under the draft Flooding Bill, SEPA is proposed as the competent authority with a national remit for implementing the EU Floods Directive.
- 3.11 **The role of Scottish Water.**
Scottish Water is responsible for the public sewer system, which takes foul and waste water and has limited responsibility for surface water, and for the quantity and quality of any discharge to watercourses. Much of the existing urban drainage system comprises combined sewers (waste and surface water). Problems can arise with this system when there is heavy rainstorm and the combined sewer pipes cannot take the volume of water. Combined sewer overflows (CSOs) provide relief to the system by allowing discharge to watercourses. During extreme rainfall events and watercourse flooding, the sewer system itself can surcharge (i.e. exceed its capacity) and sewage contaminated flooding

may affect roads and property. Such events have become more common as pressure on our 19th century sewerage network has increased with urban development. This is likely to increase further if, as predicted, there are more intense rainfall events associated with climate change.

3.12 The lack of sewer capacity can impact on watercourse flooding and the effectiveness of roads drainage which connect to the sewer network. Responsibility for watercourse flooding and roads drainage lies with the local authority. The fragmented nature of responsibility for drainage makes surface water management more complex. One of the most challenging aspects of managing the effects of extreme events in urban areas is the division of responsibilities for drainage.

3.13 **Partnership Working.**

There has been increasing recognition of the need for partnership working and for integrated approaches to resolve flooding issues, particularly in relation to surface water drainage systems within the urban area (e.g. Glasgow Strategic Drainage Plan, GSDP). This has been assisted by the introduction of the WEWS Act and its designation of local authorities and Scottish Water as “responsible authorities” charged with working in partnership with SEPA on the RBMP and promoting sustainable flood management. The recently approved EU Flood Directive reinforces the existing Water Framework Directive and will require additional future partnership working on flood risk management plans.

3.14 Partnership working on sustainable flood management issues has been facilitated by Renfrewshire’s participation in the EU Interreg III B Urban Water project. Since December 2003, the Council together with Scottish Water, SEPA and other local authorities from NW Europe have worked jointly with the aim of obtaining a better understanding of the causes of flooding in our towns and villages and promoting affordable, cost effective and sustainable solutions to reduce flood risks. Renfrewshire’s participation in the project has allowed it to be at the forefront in the development of integrated catchment management approaches to flood hazard reduction in the U.K. The final report for the Interreg project has now been published and the project will come to an end in June 2008.

3.15 **New Approach to Managing Flood Risk**

The approach now being taken by the Council to catchment management is founded on the need for a holistic view of the urban water drainage system (watercourses, the sewer network and roads drainage) and the promotion of integrated surface water management making best use of opportunities to secure improvements. The approach is long term in nature and requires integrated investment, partly levered in from new development and redevelopment via the planning process, with concurrent and supporting investment by Scottish Water and by the Council in their asset management of sewers, roads, and other assets as well as watercourse management functions. There are clear financial and environmental benefits in integrated catchment management and developing mechanisms for co-ordinated planning for investment in surface water infrastructure, management of flood incidents and resolution of constraints on development.

3.16 The Flooding Bill and in particular its commitment to sustainable flood management and Flood Risk Management Plans provides the opportunity to progress the work undertaken under Renfrewshire’s Interreg project. It is anticipated that it will provide the legislative framework for catchment strategy planning which would facilitate partnership working between key stakeholders, including the public.

3.17 Further information on flooding is available on the Renfrewshire website:
<http://www.renfrewshire.gov.uk/ilwwcm/publishing.nsf/Content/Navigation-pt-FloodingHomePage>

4. Purpose of the Review

4.1 In summary, it is recommended that the purpose of the review should be to identify what are the main issues which arise from flooding at present and in the future; to consider what the Council and partner bodies are doing to tackle these problems; and to assess whether these activities can be improved. The review should:-

- Consider the requirements of existing legislation and national guidance,
- Assess the performance of Renfrewshire Council in relation to statute and guidance and review flood mitigation measures taken by the Council since 1996;
- Consider current partnership working arrangements with external bodies and the extent and effectiveness of integrated responses to flooding;
- Identify the opportunities for improvements to the level of service provided by the Council as a corporate body and in its partnership working arrangements, and appraisal of costs and benefits; and,
- Consider the implications of the Flooding Bill for the Council.

4.2 Scope of the Review

The scope of the review should examine:

- The legislative context, government policy and guidance on flooding (including the Flooding Bill);
- The nature and extent of flood risk within Renfrewshire as presently understood, including assessment of climate change impacts;
- The concept of sustainable flood management, the conclusions of the Interreg IIB Urban Water Project and the implications of the EU Flood Directive for the Council;
- The Council responses and investment made to date and appraise revenue and capital costs of service;
- The effectiveness of working relationships between and within departments and with external organisations;
- The potential contribution and financial implications of integrated catchment management planning within Renfrewshire

4.3 Potential Participants

It is proposed to invite representatives from the following individuals and organisations to provide information and opinion to inform the review (each witness is followed by an indication of issues which should be covered in evidence). It should be noted that the witnesses shown with ** are professional consultants who may expect to be paid an

appropriate fee for providing evidence. This would have to be confirmed if the Board agree to seek their advice as part of the scrutiny process

4.3.1 Internal

Chief Executive's Department: Emergency Planning Officer.
Emergency planning issues relating to flooding

Housing and Property Services
Flooding issues associated with protection, management and maintenance and disposal of Council property.

Planning and Transport Department
Land use planning, climate change and implications for flooding, flood mitigation and flood prevention schemes, roads drainage, emergency responses, sustainable flood management, implications of the new Flooding Bill, and outputs from Interreg IIIB Urban Water project including catchment planning.

Environmental Services
Environmental protection, (e.g. implications for waste disposal and contaminated land); impact of flooding on outdoor recreation facilities, and impact of run off on to and from outdoor recreation areas.

Finance and IT
Written note on potential resource issues arising from use of GIS in flood analysis and monitoring

4.3.2 External.

External representatives have been divided into those considered essential for the review and those whose contribution is optional:

Essential

Scottish Water (Asset and Development Planning)
Implications of flooding for Scottish Water infrastructure and future investment

SEPA (Flood warning/ RBMP/ Hydrology)
Current responsibilities relating to flooding, flood risk maps, flood warning, River Basin Management Planning, and impact of new Flooding Bill

Police and Fire Services
Responsibilities, experience and requirements in relation to flood incidents

Scottish Government (Transport, Infrastructure and Climate Change/ Environment)
Implications of Flooding Bill

Optional

Glasgow City Council
Glasgow Strategic Drainage Plan, White Cart Flood Prevention Scheme

** Professor Chris Jeffries - Abertay University (Consultant for Interreg III Urban Water project)
Sustainable flood management, outcome of Interreg IIIB Urban Water project

World Wildlife Fund
Sustainable flood management

** Yusuf Kaya Consulting Engineer and ** Dr. J F Riddell Consultant Civil Engineer who have advised on flood issues in Renfrewshire over a number of years.
Flooding in Renfrewshire and sustainable flood management

** Professor David Crichton
Assessment of flood risk and insurance implications.

Homes for Scotland
View of House builders on flood risk management

4.4 **Timetable**

The initial timetable for evidence and reporting is set out below. However this will depend on the number of witnesses called

12 May commence review

9th June - progress review

23 June - progress review

18th August - progress review

1st September - submit draft report

11th September - submit final report to Council

Implications of this Report

There are few implications arising directly from the report itself but implications arising from the issues discussed above are outlined below.

- 1. Financial Implications** - No immediate direct implications, but the adoption of courses of action arising from the review and enactment of Flood Bill may have implications with regard to investment by the Council.
- 2. Personnel Implications** – Similar to 1 above. These are likely to be related primarily to changing work practices rather than seeking additional resources.

3. Community Plan Implications

Social Inclusion - socially and economically disadvantaged communities may be particularly vulnerable to the hardship caused by flooding to their home and possessions.

Sustainable Development - sustainable development requires a long term view of flood risk and the encouragement of sustainable drainage systems which mimic the natural environment.

Modernising Government - the review should promote partnership working between the local authority, Scottish Water and Scottish Environment Protection Agency and enhance integrated working within the Council.

- 4. Legal Implications** – The enactment of the Flood Bill is likely to have legal implications for the Council. For example, it may be that new approaches or courses of action may require a review of contractual and other arrangements associated with the way the Council undertakes its flooding responsibilities.
- 5. Property implications** - These are unlikely to come about solely as a result of this review, but may be an outcome of further consideration of issues raised in the course of the review.
- 6. Information Technology Implications** - These may arise as the need to support new ways of operating emerge particularly in relation to integrated watercourse and sewer modelling and information management requirements.
- 7. Equality Implications** - None