

**City Services Scrutiny Panel
Policy Review 2013 – 2014**

Flood Risk Management in Sunderland

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1 Foreword from the Scrutiny Lead Member for City Services

It gives me great pleasure to introduce the City Services Scrutiny Panel's policy review into flood risk management in Sunderland.

The Flood Risk Management Act 2010 provides the Council with a number of new roles and responsibilities for flood risk management in the city, perhaps the most important being to lead local flood risk management and bring together all relevant bodies and agencies. During our discussions the Panel has heard what this meant in practice for the main agencies involved; namely the Council, the Environment Agency and Northumbrian Water.

In practice residents do not care who is responsible for various aspects of flood defence. What they are concerned about is the effect on themselves and their property and the subsequent response. They want action rather than discussions as to who is responsible for particular actions. As a result of the new legislations there is now a clear duty on all the principal players to cooperate. While such partnership working has been going on previously, it is to say that there is now an added impetus to cooperate in order to pool skills, information and resources.

While Sunderland is not a high risk area for flooding, it seems likely that the incidence of flooding will increase in the future reflecting the impact of changing weather patterns, increasing urbanisation, an ageing drainage and sewerage system and increasing surface water run off. We therefore must not be complacent. Flooding events can have a potentially devastating impact on local residents and businesses causing considerable distress and cost in terms of repairs, cost to business, public health, emergency services, and agriculture. The Council and our partners need to give flood risk management a continuing priority; to ensure that sufficient resources are available to undertake necessary actions and ensure that skilled staff are in place.

However, we must be realistic. We cannot say that we can prevent or eradicate the potential for flooding. But we can try to minimise the possibility and the severity through a variety of measures for example by ensuring that our residents are better prepared and more self-reliant during emergencies.

In conclusion, I would like to thank my colleagues on the City Services Scrutiny Panel and all of the officers and staff involved for their hard work during the course of the review and thank them for their valuable contribution.

Councillor Stephen Bonallie, Lead Scrutiny Member for City Services

2 INTRODUCTION

- 2.1 The Flood and Water Management Act 2010 provides a number of new powers to local authorities over flooding. One of the powers is the overview and scrutiny of flood risk management in the city.
- 2.2 As recent events have shown, severe flooding can have a major impact on local residents and businesses. Indeed, in recent years the city itself has experienced a number of severe storms and flooding events.
- 2.3 The Scrutiny Committee therefore considered that this was a good time to look in detail at the approach being taken in the city to flood risk management.

3 AIM OF THE REVIEW

- 3.1 The objectives of the review are to examine the approach being taken to flood risk management in the city, including the roles and responsibilities of the key agencies involved and the measures being taken to alleviate the problem.

4 TERMS OF REFERENCE

- 4.1 The Panel agreed the following terms of reference for the review:-
 - (a) the causes and types of flooding;
 - (b) the respective roles and powers of the agencies involved; including the Environment Agency (EA), Northumbrian Water Ltd (NWL) and the local authority as the Lead Local Flood Authority (LLFA);
 - (c) the current situation with regard to flood risk in the city;
 - (d) the action currently taking place and planned for the future to alleviate these risks;
 - (e) to contribute to the development of the forthcoming Local Flood Risk Management Strategy.

5 MEMBERSHIP OF THE PANEL

- 5.1 The membership of the City Services Scrutiny Panel consists of Councillors Stephen Bonallie (Lead Member), Michael Essl, Stephen Foster, Neville Padgett, Stuart Porthouse, Lynda Scanlan, Dianne Snowdon and Amy Wilson.

6 METHODS OF INVESTIGATION

- 6.1 The following methods of investigation were used for the review:
 - (a) Desktop Research
 - (b) Evidence from relevant Council officers and key stakeholders including Northumbrian Water and the Environment Agency;
 - (c) Visit to public meeting on flooding

7 FINDINGS OF THE REVIEW

Findings relate to the main themes raised during the Panel's investigations and evidence gathering.

7.1 Main Causes and Types of Flooding

- 7.1.1 As a starting point for the review, the Panel looked at what are generally considered to be the main causes and types of flooding. These include:

Coastal Flooding and Erosion - occurs where high tidal levels lead to coastal defences being breached and the coastline eroded, especially when combined with other severe weather conditions and high winds.

River (Fluvial) Flooding - River (fluvial) flooding occurs during periods of heavy or prolonged rainfall or rapid snow melt when the water course cannot cope with the water draining into it from surrounding land.

Surface Water (Pluvial) Flooding - Surface water flooding occurs where high or intense rainfall exceeds the drainage capacity of an area. Surface water cannot then enter the system or the drainage network overflows, with manhole covers surcharging. The resulting water can create flow paths along roads, through and around developments and ponding in low spots which often coincides with river flooding in low lying areas. Surface water flooding is often unpredictable and can affect areas not obviously susceptible to flooding.

The majority of the city's recent issues have been the result of surface water flooding.

Groundwater Flooding - Ground water flooding occurs where water levels in the ground rise above the surface after prolonged periods of heavy rainfall. This is most likely to occur in areas underlain by permeable rocks called aquifers.

Failure of Infrastructure (Including Sewer Systems and Reservoirs) - Sewer flooding occurs due to large rainfall events causing sewers to surcharge and can result in sewage escaping from pipes and manholes. This can occur due to the incapacity of the sewer system, where the volume of water is too great for the size of the pipe. It can also result in effluent being discharged from manholes affecting local residents.

Increasing Likelihood of Flood Risk

- 7.1.2 Most commentators agree that the challenge posed by flooding is likely to increase in the future due to a number of factors, including:-

- The culverting of watercourses to release more land for development can significantly restrict water flow, increase the risk of blockage and eliminate natural flow routes;
- Urbanisation has reduced the ability of the land to absorb rainfall

through the introduction of hard impermeable surfaces. This has resulted in an increase in the volume and rate of surface run-off as less water infiltrates the ground;

- the historic practice of allowing development to take place on areas of land at high risk of flooding has the potential to worsen river flooding downstream;
- Ageing drainage and flood defense infrastructure and inadequate levels of maintenance on flood risk defenses;
- The impact of climate change, which many commentators feel will lead to rising sea levels and changing rainfall patterns.

7.2 Roles and Responsibilities

7.2.1 At a national level, the Department for Environment, Food and Rural Affairs (DEFRA) has responsibility for flood and coastal erosion risk management and also provides funding through grant aid to the Environment Agency.

7.2.2 At a local level, the arrangements are set out as part by the Flood and Water Management Act 2010 (FWMA); which was itself a response to the findings of the Pitt Review held in the wake of the severe floods of 2007.

7.2.3 The Act emphasises the need for a clearer oversight of flood risk management at a national and local level, including clearer roles and responsibilities for the main agencies involved in flood risk management and a continued presumption against development in flood-prone areas, barring exceptional circumstances;

7.2.4 In Sunderland, the main agencies involved in flood risk management are the Council, the Environment Agency and Northumbrian Water. Set out below are the main roles and responsibilities of each.

7.2.5 **Sunderland Council** in its role as the Local Lead Flood Authority (LLFA) now has a number of duties, including the requirement to:-

(a) prepare and maintain a strategy for local flood risk management for the area and coordinate the views and activities of local bodies and communities through public consultation and scrutiny;

(b) build partnerships and ensure effective working relationships are in place at a local level;

(c) investigate significant local flooding incidents and publish the results of such investigations;

(d) maintain a register of assets – i.e. physical features that have a significant effect on flooding in the area;

(e) establish Sustainable Drainage Systems (SuDS) Approval Bodies (SAB) for the design, building and operation of Suds;

(f) review and scrutinise all flood risk activities and responses to flood events.

(g) lead responsibility for managing the risk of flooding from surface water, groundwater and ordinary watercourses (NB: this includes smaller rivers, streams, ditches, drains, cuts, culverts, dikes, sluices, sewers (other than public sewers). Examples within the city includes Hendon Burn, Ryhope Dene and Cut Throat Dene

7.2.6 As well as the duties attached to its role as Local Lead Flood Authority, the Council also has a number of other responsibilities which impact directly on flood risk management. These include:-

- Planning Authority: through the prevention of development in more vulnerable areas and also in controlling flows from developments that increase general flood risk;
- Highway authority: has responsibility for highways drainage;
- Emergency response: to assess the risk of emergencies, develop emergency/contingency plans, warn the public and provide advice and assistance;
- the Council is also designated as a Coastal Protection Authority and has powers and duties to protect land vulnerable to the effects of the sea.

7.2.7 **The Environment Agency** has a key strategic role at a national level covering all aspects of flood and coastal risk management in England and managing flood risk, primarily from main rivers and the sea. This includes setting the direction for managing the risks through strategic plans; providing evidence and advice to inform Government policy and support others; working collaboratively to support the development of risk management skills and capacity and providing a framework to support local delivery.

7.2.8 The Agency has operational responsibility for managing the risk of flooding from main rivers (in Sunderland this includes the Wear, Usworth Burn and Lumley Park/Hetton Burn), reservoirs, estuaries and the sea, as well as being a coastal erosion risk management authority.

7.2.9 The Environment Agency is also responsible for Catchment Flood Management Plans (CFMPs) and Shoreline Management Plans (SMPs). CFMPs address flood risk in each river catchment while SMP's assess the risks of coastal flooding and erosion and propose ways to manage them.

7.2.10 The Environment Agency is also a statutory consultee to the development planning process and planning applications and administers grants for capital projects to local authorities.

7.2.11 **Northumbrian Water Ltd**, as the city's water and sewerage company manages the risk of flooding to water supply and sewerage facilities. Its main roles and responsibilities includes:-

- making sure their systems have the appropriate level of resilience to flooding, and maintain essential services during emergencies;
- maintaining and managing their water supply and sewerage systems to reduce the risk of flooding and pollution to the environment;
- providing advice to the Council and other agencies;
- to address frequent and severe sewer flooding through their capital investment plans.

7.3 Flood Risk in Sunderland

Background to Flood Risk in Sunderland

- 7.3.1 Historically flooding in the city has been a mix of surface water, coastal and sewer capacity issues. However, as mentioned earlier, the majority of the Sunderland's flooding issues have been the result of surface water flooding.
- 7.3.2 There have been several incidences of surface water flooding in recent years, most notable around Washington Central, Houghton and Hetton, Herrington and Barnes Burn and Hendon Burn. The severe weather of 2012 saw a great deal of surface water and sewer capacity flooding issues in these areas. A large number of residential properties in both were badly affected and these events were subject to close consideration by their respective Area Committees.
- 7.3.3 In September 2013, the Panel's Lead Member Councillor Stephen Bonallie attended a public meeting held on 2 July 2013 at Houghton Kepier, Houghton – le Spring to discuss the effect on local residents. The event was attended by Council officers and representatives from Northumbrian Water and the Environment Agency. During the event there was a full and frank discussion about the reasons behind the floods and the remedial action that was being taken at a local level.
- 7.3.4 The topography of the River Wear in Sunderland has made the problem of river flooding less of a problem than some surrounding areas. However, there have also been several occurrences of the Wear flooding around the Fatfield area of Washington.
- 7.3.5 Instances of coastal flooding have been less common, though as recently as 2013, Seaburn and Roker experienced huge sea surges which did considerable damage to coastal flood defences. This was estimated to be a once in 200 year's event.
- 7.3.6 Ground water flooding is considered to be much less likely than other types of flooding largely due to the impermeable clays on which the city is founded.

Preliminary Flood Risk Assessment 2011

- 7.3.7 In June 2011, the Council undertook a Preliminary Flood Risk Assessment for the city. This represented a high level screening of flood risk which was used

by the Environment Agency to determine whether there are any Flood Risk Areas within the city. The Assessment was based upon past and future flood risk data and potential flood risk. The majority of this local data was sourced from the Environment Agency's national flood risk mapping datasets and the Council's Strategic Flood Risk Assessment (July 2010).

7.3.8 As a result of the Assessment and based on the Flood Risk Regulations, there were found to be no significant future Flood Risk Areas in Sunderland (NB: under the Regulations significant equates to 30,000 people in a single cluster affected by a flood event).

7.3.9 However, the assessment did confirm that the majority of the city's flooding events have been the result of surface water flooding. The Assessment found there to be 22,500 properties (45,000 people) at risk from surface water during a 1 in 200yr rainfall event across the city - of which 19,100 are residential properties, housing around 45,000 people.

7.3.10 The Assessment included details of some of the past remedial work undertaken in the city; including:-

- Expansion and improvements to the flood warning service to 109 homes and premises in the Lumley park area (2009/10)
- Completion of £1m scheme to improve sewerage in Fullwell (2008/9)
- £1.45m scheme to improve storm water alleviation and reduce potential of sewer flooding to properties in Penshaw and Shiny Row. (2009/10)
- Completion of £350,000 highways drainage improvements to tackle surface water flooding hotspots (2009/10)

7.3.11 Clearly, therefore while the city contains no significant future flood risk areas according to the Flood Risk Regulations, it has had and will have major flood events in the future, potentially affecting large numbers of local residents and businesses.

7.4 Action Being Taken in the City

7.4.1 As the next stage in the review, the Panel went on to discuss with the main agencies the approach being taken to flood risk management in the city and the progress being made. This included the Council's responsibilities as Lead Local Flood Authority, the role of other key service areas of the Council (including planning, highways maintenance and emergency planning) as well as the work of the Environment Agency and Northumbria Water.

Lead Local Flood Authority

- 7.4.2 The Panel met with David Laux (Assistant Head of Street Scene) and Graham Carr (Highway Asset Manager) in order to discuss the progress being made by the Council as part of its role as the Lead Local Flood Authority.
- 7.4.3 It was noted that a structure to enable joint working had been established and that frequent joint meetings were now being held. Such meetings have encouraged the sharing of information and data and helped to build partnership and effective joint working. It is felt that the Council and its partners are now in a better position to investigate and respond to any future flood risk incidents.
- 7.4.4 In 2010, the Council carried out a Preliminary Flood Risk Assessment that provided information and data on the level of flood risk in the city. As previously mentioned, while the Assessment had identified no significant future flood risk areas in the city it had helped to focus on those communities and properties most at risk. The Council also maintains a register of assets and structures that have an effect on flood risk.
- 7.4.5 In terms of the role of the Council's overview and scrutiny function it was noted that in the past few years a number of update reports have been submitted to the relevant Scrutiny Committee on the implications of the Flood and Waste Management Act and the progress being made. Indeed this review itself represents an important part of the on-going scrutiny process.
- 7.4.6 The Council is currently preparing a Local Flood Risk Management Strategy for the city which is required for completion by 2015. The Panel would suggest that the conclusions and recommendations of this review should be incorporated into the finalised Local Flood Risk Management Strategy.

Sustainable Drainage Systems (SuDS)

- 7.4.7 Under the Act, the Council as Lead Local Flood Authority is required to establish a SAB – **SuDS Approval Body** to approve, adopt and maintain sustainable urban drainage elements of new developments.
- 7.4.8 Sustainable Drainage Systems (SuDS) are a set of management practices that are designed to drain surface water in a more sustainable manner. Measures that could be used include:-
- (a) Swales and basins including infiltration trenches, basins and filter drains;
 - (b) Permeable pavements – water may infiltrate directly into the underlying subsoil or be drained through into a sub-surface storage area
 - (c) Ponds and wetlands;
 - (d) Rainwater harvesting, water butts and other green roof drainage and technology;
 - (e) Using urban trees

7.4.9 SUDS represents a new approach to surface water management and follows the approach of the Building Regulations 2000 which introduced a hierarchy of preference for connection of surface water from development:-

- SUDS
- Watercourse
- Surface water sewer
- Combined sewer

7.4.10 It was originally envisaged by the Government that the SuDS Approval Body would be established by 2014 but this timetable has now slipped and further guidance from Government is awaited.

7.4.11 It was noted that Sustainable Drainage Schemes are difficult to retrofit in dense urban areas and not all area may have suitable conditions. For some schemes there may well be considerable on-going maintenance costs.

7.4.12 The Panel would suggest that the situation with regard to the introduction of SuDS be monitored and subject to further update reports.

Planning Authority

7.4.13 The Council, through its planning authority role, has an important part to play in helping to mitigate the future growth of flood risk in the city. The Panel therefore met with Clive Greenwood (Senior Policy Officer for Economy and Place) and Danielle Pearson (Senior Planner) to discuss the implications of the Core Strategy and Land Use Planning documents and the approach being taken to new planning applications.

7.4.14 The National Planning Policy Framework (2012) sets out the Government's planning policies for England and provides the context for the City's Development Plans. It has replaced a number of Planning Policy Statements (PPS) including PPS 25: Development and Flood Risk (29 March 2010).

7.4.15 The NPPF states that local planning authorities should adopt proactive strategies to mitigate and adapt to climate change, taking full account of flood risk, coastal change, water supply and demand considerations. They should also apply a sequential risk-based approach to the location of development.

7.4.16 With regards to development and flood risk, NPPF states that "inappropriate development in areas at risk of flooding should be avoided by directing development away from areas of highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere".

7.4.17 During the discussion, it was stressed that the City Council as planning authority determines all planning applications according to their individual merit against national and local policies and that planning permission can be refused if a development increases the risk of flooding. For flood risk matters, the Council will consult with the Environment Agency in order to identify flood risk. In practice, the Council has not approved an application where there has

been an objection from the EA. Also when new developments are proposed or sites are to be redeveloped, planning officers ensure that the level of flood risk in an area is reduced by promoting good practices such as rainfall harvesting.

- 7.4.18 The Panel highlighted the apparent contradiction in Government policy with regard to deregulating many smaller household planning applications which could have a long term detrimental effect on future flood risk. Such developments can potentially increase the amount of impermeable areas from hard surface, leading to a loss of green space and an increase level of run off on drainage infrastructure.

Highway Authority

- 7.4.19 The Council as the highway authority for the city also has an important role in flood risk management.

- 7.4.20 This involves ensuring that culverts and drains receive regular maintenance, repairing retaining walls and sluices and general improvement works. It also requires the regular inspection and maintenance of grills and gullies.

- 7.4.21 Clearly, there are resource pressures on the Council which has the potential to impact on the maintenance regime. It is therefore important that the Council continues to provide an effective inspection and maintenance regime into the future.

Emergency Planning

- 7.4.22 The readiness of the Council's Emergency Planning function is central to the city's ability to respond and bounce back from a serious flooding event.

- 7.4.23 As part of its review into the work of the Council, the Panel met with Dave Turnbull, Senior Resilience Officer. Dave confirmed that the response of the city to a major flood event is set out in great detail in the Council's Major Incident Plan. There also exists a specific plan in relation to flood events.

- 7.4.24 Any major incident will result in a range of city support including the provision of emergency accommodation and supplies as necessary. A data base is also held of those classified as being vulnerable. The Council also works closely with its partners such as the Police, emergency services and the voluntary sector to ensure a smooth and coordinated response. The Council's Communications Team would also play an active role in the event of a major flooding event.

- 7.4.25 The Council works closely with the Environment Agency who are responsible for flood forecasting and the issue of flood warnings, ensuring that emergency services and other professional partners are briefed and operating a flood-line service. It was recognised that the Council needs to look to fully exploit the opportunities offered by new channels of communication in order to keep residents aware and up to date about potential flood risk.

7.4.26 However, it is unrealistic to rely solely on the work of emergency services and Council staff and it is vital that communities understand how they can help themselves by being encouraged to report blocked drains; knowing what to do and where to go if homes are flooded and helping neighbours in emergencies.

7.4.27 Nonnie Crawford (Director of Public Health) referred to the importance of securing greater community involvement in preparing for and tackling future flooding. This could involve encouraging at risk communities and businesses to sign up for flood alerts and ensure that emergency numbers are near at hand.

7.4.28 Members also have an important part to play in the event of a flooding incident and they too should have a clear understanding of their own responsibilities as well as the roles of other agencies.

7.4.29 We would recommend that the Council works to identify and better prepare those residents most at risk at flooding and take action to help them to protect themselves.

7.4.30 We would also suggest that further action is taken to identify new and innovative ways of communicating with the public regarding potential flooding events.

Environment Agency

7.4.31 As mentioned earlier, the Environment Agency is one of the key agencies involved in flood risk management both nationally and locally. For this reason, the Panel met with Phil Welton, Area Flood and Coastal Risk Manager in order to discuss Environment Agency's approach to flood risk management in Sunderland.

7.4.32 The Environment Agency has a central role in formulating and contributing to a number of key plans shaping the flood risk management. At the present time, the Agency is preparing its Flood Risk Management Plan and has now completed its Catchment Flood Management Plan and Shoreline Management Plan.

7.4.33 A further key role of the Agency is to administer grants for capital projects on behalf of local authorities. Such funding comes from a variety of sources including:-

- Flood Defence Grant-in-Aid
- Local Levy
- LLFA Funding
- Developers
- Businesses

7.4.34 In practice, the Environment Agency directly carries out little flood alleviation work in Sunderland due to there being little flood risk from Main Rivers or the sea in the city, with the bulk of the activity being from the local authority. The

Agency is currently working on annual bidding round for the next 6 years of Flood Defence Grant Aid and working with the Council on bids to be funded through the Local Levy.

7.4.35 Given the limited resources available, the Environment Agency is increasingly looking for financial contributions from as broad a range of sources as possible particularly through local developers and the business sector. The Agency stresses the value of a partnership funding approach in encouraging agencies to work together and through this partnership working devise more integrated and innovative solutions.

7.4.36 In Sunderland the capital schemes for 2013/14 includes:-

- South Bents and Seaburn Sea Walls Overtopping Protection
- Hendon Foreshore Barrier / SWBreakwater
- Whitburn to Ryhope Coastal Protection Strategy
- Hendon Burn Culvert Access
- Bog Row Channel Works

7.4.37 For 2014/15 onwards planned capital schemes includes:-

- Springwell Village – surface water flooding
- Borrowdale Street - surface water flooding
- Dene Street
- Craigwell Drive - surface water flooding
- Hendon Burn Culvert Capital Maintenance Design & Construction

Northumbrian Water

7.4.38 As part of the review, the Panel met with Les Hall, New Developments Manager with Northumbrian Water to discuss the work of Northumbrian Water in mitigating the risk of flooding in the city.

7.4.39 Northumbrian Water takes an active approach to partnership working contributing to the work of the Regional Flood and Coastal Committee and Sub-Regional Flood Risk Management Groups. They are also an active consultee on a range of Local Planning documents such as the Water Cycle Study, Surface Water Management Plan, Strategic Flood Risk Assessment, Strategic Housing Land Availability Assessment and Infrastructure Delivery Plan. Northumbrian Water participates in quarterly liaison meetings at an operational level and attends customer meetings when required. They will also be actively involved in preparation for the Sustainable Urban Drainage Systems.

7.4.40 Northumbrian Water has contributed a substantial investment programme across the region for flood alleviation schemes (2005 to 2010 - £104m and 776 properties and 2010 to 2015 - £126m and 1000+ properties). A lot of work was also going on to resolve sewer flooding with £81m invested regionally during 2005-10 and a further £120m investment planned for 2010-15.

7.4.41 During our discussions, Northumbrian Water referred to examples of good practice in relation to planning policy with regards to flood risk; including:

- Requirements for Flood Risk Assessment
- Zonal Approach to Flood Risk
- Sequential and Exceptions Test
- Hierarchy for dealing with run-off i.e. sewers are the last resort
- Hierarchy for foul water disposal
- Explains evidence base i.e. Strategic Flood Risk Appraisal, Water Cycle Study

7.4.43 The Panel suggests that the Council investigate further the applicability of such an approach to planning policy in relation to water management and flood risk.

7.4.44 As part of its commitment to partnership working, Northumbrian Water shares a range of data including:-

- Sewer flooding locations
- GIS mapping and pipe data
- Sewer capacity factors
- Hydraulic models from Drainage Area Studies
- Strategic Housing Land shape files

7.4.45 For new developments, Northumbrian Water undertakes investigations into capacity issues. Inevitably, there are instances where new infrastructure work is required and they work closely with the Council and new developers in order that this work can be coordinated and targeted.

7.4.46 Northumbrian Water is also investing a substantial amount to the monitoring of the sewer system. One issue that they particularly emphasised was the promotional work going on with residents and businesses, particularly in the fast food sector, to highlight the problems of blockages that can arise from putting grease and other material in the sewer system.

8 CONCLUSION

- 8.1 The Council has key role in leading local flood risk management in the area and bringing together all relevant bodies. During our discussions, the Panel has heard about what this means in practice for the main agencies involved; namely the Council, the Environment Agency and Northumbrian Water. This reflects the importance of all the agencies involved having a clear understanding of their respective roles and responsibilities and where these activities might overlap.
- 8.2 Residents do not care who is responsible for various aspects of flood defence. What they are concerned about is the effect on themselves and their property. They want action rather than discussions as to who is the responsible authority. As a result of the new legislations there is now a duty on all the principal players to cooperate, though in practice such partnership working has been going on previously. But it fair to say that there is now an added impetus to cooperate in order to pool skills, information and resources.
- 8.3 Based on discussions with our partners there is clearly a willingness and commitment to further joint working and we now have a structure in place to promote this and a willingness to share expertise and information. We need to build on these arrangements to ensure joint working in the future.
- 8.4 Sunderland is not considered a high risk area for flooding but we must not be complacent. There will be further flood events in the future. Flooding events can have a potentially major impact on local residents and businesses causing considerable distress and cost in terms of repairs, cost to business, public health, emergency services, and agriculture. The Council and our partners need to give flood risk management a sufficient priority; to ensure that sufficient resources are available to undertake necessary actions and ensure that skilled staff are in position.
- 8.5 It seems likely that the incidence of flooding will increase in the future reflecting the impact of changing weather patterns, increasing urbanisation, an aging drainage and sewerage system and increasing surface water run off.
- 8.6 Over the past century, the UK has seen sea levels rise and more of winter rain falling in intense wet spells. Some of the changes might reflect natural weather variations; however the broad trends are in line with projections for climate change models. Increasing global temperatures and changing weather patterns may mean that climate change will cause more extreme weather events resulting in more frequent flooding.
- 8.7 If climate change and changing weather patterns are a reality in the future then it is important that we plan ahead now so that we can as far as possible mitigate its effects.
- 8.8 In the past it has been the policy to solve flooding by increasing the capacity of water courses and building greater flood defences. We have heard that

investment programmes are prioritised and based on frequency and severity but available resources will not meet all demands and it is important that the agencies look creatively at a range of possible measures.

- 8.9 In future we will need to encourage the use of public open spaces for water storage in times of heavy rainfall. We need to give greater priority to the use of Sustainable Urban Drainage (SUDS) and make sure that we retain the capacity and skills to meet demands. Clearly there is general support in principle for SUDS, however there remain concerns about its practical implications.
- 8.10 The local authority, as planning authority, has an important role to play in understanding flood risk in its area and gauging the constraints that should be placed on development. The NPPF requires that flood risk is considered at all stages of the planning process. This should help us to ensure that in appropriate development does not occur in flood risk areas.
- 8.11 While we need to bear in mind the cumulative effect of new developments, it must also be remembered that not all new development is necessarily harmful and that it can bring benefits to areas providing flood risk measures are built in.
- 8.13 It is important that we continue to build up our knowledge of the potential for flood risk in the city and identify vulnerable areas and people. We need to ensure that we possess robust emergency planning to deal with any major flooding incident and are clear about respective responsibilities.
- 8.14 The Act gives a much stronger and clearer role for local authorities. However, the additional responsibilities, along with limited resources, means that the Council has to consider how best to fund and prioritise flood risk management. Although the council has commenced the requirements of FWMA using existing resources, it will be important for the council to fully develop the expertise, structures and procedures to carry out the new duties effectively for the long term. We must continue to lobby central government to ensure that the city benefits from any additional resources directed to flood risk as a result of the recent flooding events in the South and South West.
- 8.15 Finally, while we will never be in a position to completely eradicate the risk of flooding we can take action to lessen its likelihood and mitigate its effect on our residents. We can also take action to help to ensure that those residents living in higher risk areas are prepared and equipped to deal with a flood event. We need to encourage communities and businesses to prepare before the event by signing up for flood alert and ensuring that emergency numbers are near at hand.

9 RECOMMENDATIONS

9.1 The Panel's recommendations are as outlined below:-

- a. That the council and partners continue to meet regularly to build on existing joint working in order to maximise the use of resources and share information;
- b. That the council considers the long term resource requirements to develop the expertise, structures and procedures to carry out the new duties set out in the Flood and Water Management Act 2010;
- c. That the Scrutiny Committee monitors the progress being made in relation to the establishment of a SUDS Approval Body for the city through its annual monitoring of performance against the delivery of the recommendations;
- d. That the council investigates the approach to planning policy being taken by other local authorities in relation to water management and flood risk;
- e. That action is taken to ensure that residents are made aware of the potential risk to them and their properties from all forms of flooding and encourage them to take responsibility to help reduce these risks by creating a flood plan for their households that compliments the actions of the other responsible agencies;
- f. That the council looks further at developing new and innovative channels of communication to keep residents aware of potential flood risk event; and
- g. That the recommendations of the Panel (listed a-f) be fed into the forthcoming Local Flood Risk Management Strategy.

10. ACKNOWLEDGEMENTS

10.1 The Panel is grateful to all those who have presented evidence during the course of our review. We would like to place on record our appreciation, in particular of the willingness and co-operation we have received from the below named:-

- (a) Les Clark - Head of Street Scene;
- (b) David Laux – Assistant Head of Street Scene
- (c) Graham Carr – Highways Asset Manager
- (d) Clive Greenwood – Senior Policy Officer
- (e) David Turnbull – Senior Resilience Officer
- (f) Les Hall – New Developments Manager, Northumbrian Water
- (g) Phil Welton – Area Flood and Coastal Risk Manager, Environment Agency
- (g) Nonnie Crawford – Director of Public Health

11. BACKGROUND PAPERS

Sunderland City Council Preliminary Flood Risk Assessment
Flood and Water Management Act 2010
The Pitt Review
Northumbrian Water – Looking to the Future
Notes of the meeting of the City Services Scrutiny Panel