Environment and Sustainable Communities Overview and Scrutiny Committee

Overview and Scrutiny Review of Flooding

June 2014

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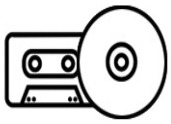 Audio

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Foreword

Flooding is an issue that is much more prominent in the UK now. The devastation caused by recent floods in Somerset and coastal damage in the South West are not far from our minds. It is estimated that 600 households in County Durham have been flooded since April 2012 with the average cost of flood damage to a household of £30,000. A number of businesses have also been adversely affected and the total repair bill has been conservatively estimated to have topped £20 million. Flooding also disrupts our daily lives with transport links and power affected. The cost of the loss of just one day's economic input in 2012/13 was estimated to be £23 million.

It is widely acknowledged that climate change affects local flood risk. The Country is now experiencing wetter winters characterised by longer and more persistent storm periods. This increases the risk of flooding of rivers and other water courses, surface run-off, erosion and incidents of localised flooding. In 2012 County Durham experienced the highest level of rainfall since 1930 causing severe damage to our local communities and impacting on service delivery.

The work of this review is linked to the statutory role of this Committee as the designated Flood and Coastal Erosion Risk management Committee of the Council. We wanted to ensure that the policies and plans that Durham County Council and partners have in place to deal with flooding are fit for purpose and use the review to develop our future programme of work in this key area. As part of the review we examined all relevant policies, questioned council officers and the key partner organisations involved in helping us to manage flood risk. We heard evidence from members and local residents on the impact of flooding on local communities and the actions taken by the council and its partners in responding to these incidents. We visited number of mitigation schemes in the County which have been designed to alleviate flood risk. We also considered plans to increase community resilience in those areas most at risk of future flooding.

I would like to take the opportunity to thank members of the committee, officers from Durham County Council, the Environment Agency and Northumbrian Water Limited, local members and residents for their valuable time in giving evidence and supporting the work of the review group.

Councillor Barbara Graham
Chair, Environment and Sustainable Communities Overview and Scrutiny Committee

Executive Summary

1 The record level of rainfall in 2012 caused flood events on several dates within County Durham resulting in Durham County Council (DCC) as Lead Local Flood Authority (LLFA) receiving 772 requests for flood investigations since the 1 April, 2012 with a total of 661 investigations undertaken up to 31 October 2013. Flooding has affected 600 households in County Durham and adversely affected the business community with the total repair bill estimated to have topped £20 million. As a result of the impact caused by flooding on individuals and communities within County Durham it was decided by members of the Environment and Sustainable Communities Overview and Scrutiny Committee that flooding would be the topic for a focused scrutiny review examining whether the policies and plans in place are 'fit for purpose' and minimised the impact of flooding on service delivery.

2 It was determined by the committee that the Flooding Scrutiny Review Group would consist of ten members of the Environment and Sustainable Communities Overview and Scrutiny Committee designated the Flood and Coastal Erosion Risk Management Committee for County Durham. In addition, those County Council members who had experienced flooding within their local communities would be invited to share their experience with the scrutiny review group and would be kept updated on the progress of the review, the resulting recommendations and progress made against those recommendations. The review group met on eight occasions and heard evidence from: the Risk Management Authorities, the Civil Contingency Unit and the Coastal and Drainage Protection Team; looked at planning implications; examined the role of the Overview and Scrutiny in relation to flood risk management and carried out site visits to completed flood defence work.

3 Overall, the committee found that a strong policy and planning framework was in place with some very effective flood mitigation work undertaken by DCC and partners. However, it was felt that DCC needs to continue to maximise the funding opportunities available, that more needed to be done to develop the role of Overview and Scrutiny as the designated Flood and Coastal Erosion Risk Management Committee and to ensure that effective contact mechanisms are in place to respond to flooding incidents within the county.

4 **Funding** - Durham County Council as Lead Local Flood Authority (LLFA) for County Durham has been successful in obtaining funding for flood prevention schemes from the Flood Defence Local Levy and the Flood and Coastal Risk Management Grant in Aid receiving an award of £7.5m in 2013/14 and just over £4m for 2014/15 (in total from both funds) together with various preventative maintenance funded from the council's own revenue budget. In addition, significant funding opportunities exist via the European funding programme for 2014-2020, with officers from DCC and partners currently in discussion on how to maximise this funding opportunity. It was highlighted by the review group the need for DCC to continue to maximise the funding opportunities available.

5 **Overview and Scrutiny role in relation to flood risk management** - The Environment and Sustainable Communities Overview and Scrutiny Committee has been designated as the Flood and Coastal Erosion Risk Management Committee for County Durham with responsibility for engaging with the Risk Management Authorities (RMAs). It was recognised by the review group that to date the committee has undertaken a reactive role receiving reports and presentations following flooding incidents within County Durham. It was felt by the review group that there is a need for the committee to be proactive engaging with the RMAs on an annual basis to ensure that they continue to work in partnership and have the necessary policies and plans in place to mitigate flooding.

6 **Sewerage treatment work capacity** - Northumbrian Water Limited (NWL) has responded to increased development within County Durham by considerable investment within existing sewer treatment works with extensive renovations at Consett and Bowburn totalling £15m with further investment planned for 2015-2020 at seven sewerage treatment works within County Durham. However, it is recognised by the review group that there is a need for the Environment and Sustainable Communities Overview and Scrutiny Committee in their capacity as the Flood and Coastal Erosion Risk Management Committee for County Durham to be kept updated on the capacity of sewerage treatment works within County Durham to ensure that the demands of future development within the county can be met.

7 **Northumbria Regional Flood and Coastal Committee** - Liaison between the RMAs within County Durham takes place on a regular basis at a regional level via the Northumbria Regional Flood and Coastal Committee (NRFCC) and locally at monthly meetings of the Durham Strategic Flood Prevention Group. This liaison promotes strong partnership working providing an opportunity to discuss project development, funding and work programmes. It was highlighted by the review group the importance of the Environment and Sustainable Communities Overview and Scrutiny Committee receiving the minutes of the NRFCC in their capacity as the Flood and Coastal Erosion Risk Management Committee for County Durham.

8 **Sustainable Urban Drainage Systems (SuDS) and SuDS Approval Body (SAB)** - Sustainable Urban Drainage Systems (SuDS) supported by policy 46 of the County Durham Plan mimic nature by using filtration strips to collect surface water and reduce flood risk. DCC as LLFA is required to establish a SuDS Approval Body (SAB) which is a section of the Council specifically established to deal with the design, approval and adoption of SuDS within any development consisting of two or more properties. It was felt by the review group that there was a need for the Environment and Sustainable Communities Overview and Scrutiny Committee to be kept updated on the development of the SAB within County Durham and the mechanisms used to collect any charges in respect of SuDS adopted by the County Council.

9 **Drainage Area Studies** - The planning process has benefitted significantly from the excellent partnership working between DCC and NWL with information provided in Drainage Area Studies (DAS) used to identify the capacity of sewers downstream of development sites, surface water separation opportunities and the impact of surface water reduction. As part of the future formalised engagement process with the RMAs it is recommended that the Environment and Sustainable Communities Overview and Scrutiny Committee is provided with an update on the development of Drainage Area Studies within County Durham.

10 **Building community resilience** - Within DCC the Civil Contingencies Unit leads on the response to emergencies within the County and work with local communities to build community resilience during emergency incidents, helping communities to use local resources and knowledge to help themselves in a way that complements the work of the local authority and emergency services. A new approach has been developed to building community resilience involving seven Civil Contingency Officers working in local communities based on geographical locations across Durham and Darlington. The review group requested that the Environment and Sustainable Communities Overview and Scrutiny Committee be kept updated on the development of this new approach.

11 **Private land owners** - Private land owners are responsible for any watercourses within the boundary of their land and DCC as LLFA mediates with land owners providing advice on various measures available to prevent flooding. In addition, DCC can take action to force private land owners to undertake preventative works or DCC can carry out the work and seek reimbursement via a land charge. The review group felt that there was a need for the Environment and Sustainable Communities to be kept updated on the work undertaken by DCC with private land owners to reduce surface water run-off.

12 **Responding to flooding incidents** - Flood alerts are received from the Flood Forecasting Service (FFS) which combine the weather forecasts from the Meteorological Office with the impact at ground level as predicted by the Environment Agency. The FFS gives an indication of the risk as green, yellow, amber or red, with disruption minimal, minor, significant and severe. A decision as to the appropriate response level Operational (Bronze), Tactical (Silver) or Strategic (Gold) Command will be determined by the indication of risk (flood alert) and the actual weather conditions. Telephone calls in relation to flood incidents are currently reported via the Highways Action Line (03000 261000) in accordance with the Customer First Strategy. It was felt by the review group that DCC should investigate the possibility of establishing a flooding hotline number for use during flooding emergencies. In addition the Environment and Sustainable Communities Overview and Scrutiny Committee in their role as the Flood and Coastal Erosion Risk Management Committee, should receive a comprehensive report detailing the response taken and lessons learned in relation to flooding emergencies within the county.

Section 1 Background and Methodology for the Review

Background

13 At a meeting of the Environment and Sustainable Communities Overview and Scrutiny Committee held on the 21st June 2013 members considered a report detailing the proposed work programme of the committee for 2013/2015. At that meeting members identified flooding as a future Scrutiny Review project. It was felt by committee members that flooding was a topical issue and that as a result of flooding incidents within County Durham causing damage to local communities and impacting on service delivery there was a need to examine whether the policies and plans in place were 'fit for purpose' and minimised the impact of flooding within the county.

Objectives

14 A report setting out the scope of the review was considered by the committee at its meeting on 12 December, 2013. This set out the objectives of the review as:

- To establish what policies and plans are in place to manage flood risk in County Durham.
- How Durham County Council (DCC) and its partners work together to mitigate the risk of flooding..
- Establish what emergency plans are currently in place in the event of flooding incidents occurring and the role and responsibilities of the Neighbourhood Services Service Grouping and the Civil Contingencies Unit.
- Establish the role of planning policies in mitigating the risk of flooding both in relation to new development and the capacity of an ageing sewerage and drainage system to cope with increased demand.
- Investigate funding available to DCC and partners in relation to preventing flooding incidents and alleviating the impact of flooding.
- Establish how we communicate with, engage and involve our communities in flood risk management.
- Establish how DCC should discharge its statutory responsibilities regarding the specific role of Overview and Scrutiny in relation to flood risk management.

Engagement

15 An invitation was sent to councillors who have experienced incidents of flooding within their wards to attend an overview presentation which would 'set the scene' for the review and provide detail of rainfall levels within County Durham, examples of flooding incidents, causes of increased rainfall levels, impact of flooding, causes and contributing factors of flooding, action undertaken and building community resilience. In addition, arrangements were put in place for these members to receive regular

updates detailing the progress of the review group and an invitation issued for the review group meeting on the 18th February providing an opportunity for these members to share their experiences of flooding incidents with the Review Group.

Membership

16 A review group was set up consisting of ten members in total including the Chair and Vice Chair of the Overview and Scrutiny Management Board.

- Councillors J Armstrong, J Clare, J Clark, B Graham, D Hall, C Kay, P May and P Stradling.
- Mr D Kinch and P Spurrell (Co-optees).

Timescale

17 Review Group meetings and visits took place between January and April with a report scheduled to be presented to the Committee and Cabinet thereafter.

Evidence

18 The review has gathered evidence through:

Officer presentations:

- *John Reed, Head of Technical Services, Durham County Council*
- *Simon Longstaff, Drainage and Coastal Protection Manager, Durham County Council*
- *Peter Ollivere, Principal Policy Officer, Durham County Council*
- *Les Hall, Development Manager, Northumbrian Water.*
- *Phil Welton, Area Flood and Coastal Risk Manager, Environment Agency.*
- *Su Jordan, Civil Contingencies and Programme Office, Manager, Durham County Council.*

Visits:

- *Waldridge estate - to view surface water overland flow scheme.*
- *Chester-le Street riverside – to view river erosion scheme to stop flooding to the Cong Burn.*
- *Witton-Gilbert – to view a proposed scheme to prevent flooding from the Dene Burn.*

Reference material:

- *The Pitt Review: Learning lessons from the 2007 floods (2008)*
- *Flood Risk Regulations 2009.*
- *Flood and Water Management Act 2010.*
- *Localism Act 2011.*
- *County Durham Plan – 2015 (in development).*

- *National Planning Policy Framework – Department for Communities and Local Government (2012).*
- *Preliminary Flood Risk Assessment – Durham County Council (2011).*
- *Surface Water Management Plan – Durham County Council (2011).*
- *Strategic Flood Risk Assessment – Durham County Council (2011).*

Section 2 – Context

Climate Change

19 The world's weather patterns are changing and this means that we must change the way we do things to prepare for any potential impacts of climate change. To understand the potential impact and the risks posed by climate change the UK Climate Impacts Programme (UKCIP) was undertaken and has identified a major consequence of climate change will be an increased risk of flooding and erosion. Scientists indicate that the potential risks of climate change include wetter winters, hotter summers and rising sea levels.

20 Climate change affects local flood risk in several ways with the impact depending on local conditions and vulnerability. Wetter winters and more rain falling in wet spells will increase the risk of river flooding in both rural and heavily urbanised catchments. More intense rainfall causes more surface runoff, increasing localised flooding and erosion. Rising sea or river levels will increase local flood risk inland or away from major rivers because of interactions with drains, sewers and smaller water courses.

21 Local studies help us to understand the impact of climate change including the effects of land use. It is essential that we respond by planning ahead and understand current and future vulnerability to flooding, produce plans for increased resilience and develop the capacity to adapt to the changing demands of climate change.

Local Context

22 The Meteorological Office (Met Office) has confirmed that the rainfall over the course of 2012 was the worst year on record for County Durham. The average rainfall for County Durham was expected to be in the region of 651mm however the total rainfall recorded for 2012 was 1018mm, 130mm higher than the previously recorded highest in 1930. The amount of rainfall between April and June 2012 and the lack of any prolonged dry spell over the summer led to the ground becoming saturated and unable to dispense with subsequent rainfall or run off from water courses. The maps below show the moisture levels in the soil as a comparison of March 2012 and December 2012.

23 Durham County Council is designated as the Lead Local Flood Authority (LLFA) under the Flood and Risk Management Act 2010. One of the responsibilities as LLFA is a duty to investigate flood events within County Durham and publish the results of its findings.

24 As a result of the record levels of rainfall, flood events in County Durham were recorded on the 26 April, 28 June, 5 July, 14 August, 25 September, 10 October, 28 November, 14 December and 20 December, 2012. This resulted in Durham County Council as Local Lead Flood Authority receiving 772 requests for flood investigations since the 1 April, 2012 with 661 investigations undertaken up to the 31 October 2013. During 2012 flooding had taken place in a number of areas within County Durham including Bishop Auckland, Witton Gilbert, Chester-le-street and Oakenshaw (near Willington).

25 Since the 1 April 2012, 600 household have been flooded within County Durham at an average cost of £30,000 per household. A number of businesses were flooded resulting in flood damage with the total cost to business and households of approximately £20m. In addition, flooding had a major detrimental impact on the wellbeing of communities within County Durham and is traumatic for those involved especially for the more vulnerable within our society. Flooding had also caused major disruption to council services with some having to operate 'emergency cover' only.

26 In relation to County Durham there are two types of flooding:

- Fluvial (river) flooding which occurs where rivers overflow and burst their banks due to high or intense rainfall which flows into them. This can be from main rivers or smaller watercourses.
- Pluvial (rain) or surface water flooding where the amount of water falling onto impermeable surfaces or already saturated surfaces such as roads or paved areas can generate surface water run-off beyond the capacity of the drainage network. There are several factors which effect pluvial flooding including:
    - Topography of the area making it more prone to flooding e.g. a flood plain or river basin.
    - Urbanisation which has reduced the ability of land to absorb rainfall through the introduction of hard impermeable surfaces.
    - Insufficient surface water drainage capacity.
    - Surface water run-off from adjacent land.
    - Blocked drainage assets – debris, fly tipping, silt, tree root infestation and inappropriate disposal of fats, oils, grease and food waste.

Legislative Context

27 Following the 2007 severe floods that occurred in England and Wales the government appointed Sir Michael Pitt to chair an independent review to examine flood risk management in the U.K and identify what could have been done differently. The review called for urgent and fundamental changes in the way the country dealt with the likelihood of more frequent and intense periods of heavy rainfall putting forward 92 recommendations of which 21 are specifically designated to local authorities. These recommendations cover prediction and warning of flooding, prevention,

emergency management, resilience and recovery with many of them calling for the reshaping of flood risk management.

28 'Future Water' was a government water strategy developed in 2008 which set out the government's long term vision of water management putting forward policies to urge a more effective and sustainable management of surface water and flood risk including the development of Surface Water Management Plans (SWMP) and Sustainable Urban Drainage Systems (SuDS). The strategy also makes reference to the following:

- A risk based approach for river and coastal flooding where there is a greater understanding of future risks of flooding.
- A holistic management approach will be taken and greater encouragement of public understanding of the risks.
- An improved planning for development, emergency response and resilience to flooding will also be encouraged.

29 The government's response to the Pitt Review was the introduction of new legislation, the Flood and Water Management Act 2010, which implements many of the changes recommended in the Pitt Review. It updated previous legislation for a more comprehensive management of flood risk for people, homes and, businesses. The Act aims to reduce the flood risk associated with extreme weather conditions and clarifies who is responsible for managing all sources of flood risk, it encourages more sustainable forms of drainage in new developments and gives new responsibilities and a new role for upper tier local authorities as Local Lead Flood Authorities (LLFAs).

30 The Act requires effective partnerships to be formed between the LLFA and key partners (Environment Agency and water companies) who are responsible for flood risk management. The Act also provides a specific role to Overview and Scrutiny enabling Overview and Scrutiny Committees in LLFAs to hold Risk Management Authorities (LLFAs, Environment Agency and water companies) to account. The Localism Act 2011 reinforces and strengthens the arrangements in relation to the Overview and Scrutiny function with Risk Management Authorities being under a duty to comply with a request made by an overview and scrutiny committee for information or a response to a report in relation to its flood or coastal erosion risk management function.

31 The Flood Risk Regulations 2009 impose new duties on LLFAs including responsibility for managing local flood risk in particular from ordinary watercourses, surface runoff and ground water and requires a Preliminary Flood Risk Assessment to be produced.

32 National planning policy on development and flood risk was previously set out in Planning Policy Statement 25. The National Planning Policy Framework (NPPF) streamlines and reforms the planning system promoting greater local decision taking. The NPPF retains a strong planning policy on avoiding and managing risks from flooding and

highlights that inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk but where development cannot be avoided it should be made safe and not cause an increased flood risk anywhere else.

Section 3 – Evidence

Flood Risk Management Authorities

Durham County Council

Key Findings

33 **Durham County Council (DCC) is the Lead Local Flood Authority for County Durham and as such has been successful in obtaining funding for flood prevention schemes from the Flood Defence Local Levy, the Flood and Coastal Risk Management Grant in Aid receiving an award of £7.5m in 2013/14 and just over £4m for 2014/15 (in total from both funds). In addition discussion is taking place with partners to access funding from the EU funding programme. It was highlighted by the review group that there is a need to continue to maximise the funding opportunities available.**

34 **The evidence provided shows strong partnership working within County Durham between the Risk Management Authorities with regular liaison taking place on a regional basis via the Northumbria Regional Flood and Coastal Committee (NRFCC) and locally at monthly meetings of the Durham Strategic Flood Prevention Group. It was felt important that in the future the Environment and Sustainable Communities Overview and Scrutiny Committee receives the minutes of the NRFCC on a quarterly basis in their capacity as the Flood and Coastal Erosion Risk Management Committee.**

35 **That the Environment and Sustainable Communities Overview and Scrutiny Committee is updated on the work undertaken by DCC with private landowners to reduce surface water run-off.**

Discussion

36 Durham County Council (DCC) is Lead Local Flood Authority (LLFA) for County Durham as required by the Flood and Water Management Act 2010 and has the responsibility for leading on local flood risk management, which is defined as flooding from ground water; from surface water during and after heavy rain storms; and from what are designated as 'Ordinary Watercourses' – all rivers and streams that are not designated as 'main rivers', as well as canals. As a LLFA Durham County Council has a duty to develop, maintain, apply and monitor a strategy for local flood risk. The responsibilities of a LLFA include:

- Duty to produce a local flood risk management strategy providing a framework to deliver a prioritised programme of works and initiatives to manage flood risk in the area.
- Strategic leadership of local risk management authorities.
- Duty to co-operate with other risk management authorities (Environment Agency and Northumbrian Water Limited).
- Duty to exercise flood risk management functions in a manner consistent with the national strategy.
- Duty to investigate flooding – Durham County Council as LLFA has received 772 requests for flood investigations since the 1 April, 2012 with 661 investigations undertaken up to the 31 October 2014.
- Duty to promote and manage sustainable drainage.
- Duty to aim to contribute towards the achievement of sustainable development.

In addition, the Flood and Water Management Act 2010 designates Durham County Council (as LLFA) together with the Environment Agency (EA) and Northumbrian Water Limited (NWL) as Risk Management Authorities for County Durham.

37 Under the Act, Risk Management Authorities have a duty to co-operate with each other in exercising their flood risk management functions and provides for the establishment of Regional Flood and Coastal Committees (RFCCs) which are composed of elected representatives and officers from local authorities, the EA and NWL. The committee is responsible for raising and administering the local levy funds (North East £2.1m for 2013/14) to be used for flooding projects and for approving the EA's regional works programme. Durham County Council as LLFA has both officer and member representation on this committee (Northumbria Regional Flood and Coastal Committee). It was felt by the review group that the Environment and Sustainable Communities Overview and Scrutiny Committee should receive the minutes of of the NRFCC on a quarterly basis in their role as the Flood and Coastal Erosion Risk Management Committee.

38 As LLFA, DCC has a duty to establish a Sustainable Urban Drainage System (SuDS) Approval Body (SAB) to approve new SuDS drainage systems in County Durham. In future, the body will receive all applications for construction where there are drainage implications and assess their compliance with any national and/or local standards. The SAB will approve some SuDS which will become adopted by the Council and some drainage systems with connection to public sewers where SuDS are deemed by the SAB to be inappropriate. The SAB will maintain all adoptable SuDS in accordance with the national standards for sustainable drainage. The SAB duty was to come into operation in October 2014 however DEFRA has further delayed its introduction.

39 The LLFA is responsible for strategies for local flood risk management dealing with surface run-off, ground water and ordinary watercourses. A level 1 and 2 Strategic Flood Risk Assessment (SFRA) has been

completed for County Durham which produced an assessment of surface water flood risk, classifying risks as high, medium and low. The SFRA is a living document and will be reviewed in response to significant changes in planning policy or flooding data. As the strategic assessment operates at a large geographical scale, DCC has undertaken localised surface water risk assessments and identified Surface Water Risk Areas (SWRAs), using priority datasets including known surface water incidents, surface water modelling, EA areas susceptible to surface water flooding, potential development sites, critical infrastructure (schools, railway lines and major roads) and environmental designations. In total 139 SWRAs were identified across County Durham, 13 sites have been assessed in more detail as part of the Risk Assessment however the majority of SWRAs are located in the east of the County, in or around urban conurbations. Data collated from the SFRA and the SWRAs forms the foundations for the Surface Water Management Plan (SWMP) a requirement of the Flood and Water Management Act 2010.

40 The SWMPs for County Durham were published in August 2011 (currently being refreshed) and outline the preferred surface water management strategy in a given location. In this context surface water flooding describes flooding from sewers, drains, groundwater, and runoff from land, small watercourses and ditches that occur as a result of heavy rainfall. The SWMPs are high level, strategic documents which serve as a starting point for partners to address surface water flood risk. The SWMPs provides all three partners (DCC, EA and NWL) with information concerning surface water risks across County Durham, and recommend solutions to tackle key risk areas. The plans have the following objectives:

- Guide limited resources to critical drainage areas of greatest need (existing development).
- Ensure the level of future development does not exacerbate existing problems and identify opportunities for new development to provide benefits in terms of flood risk management.
- Inform emergency planning and feed into Durham County Council's Flood Plan.
- Protect and improve water quality in accordance with the objectives of the Water Framework Directive.

41 Currently County Durham has 10 SWMPs which are produced for high risk areas and outline the preferred surface water management strategy for that given location. The plans are live documents and can be updated when necessary. The SWMPs ensure a joined up approach between land owners, water infrastructure providers and planners during strategic growth and regeneration planning ensuring that local partners with responsibility for surface water drainage work agree the most cost effective way of managing the risk of surface water flooding.

42 Alongside the Act, the Flood Risk Regulations 2009 impose new duties and require a Preliminary Flood Risk Assessment (PFRA) to be undertaken which is a high level screening exercise to locate areas in

which the risk of ordinary watercourse, surface and ground water flooding is significant. In relation to County Durham:

- 11 areas were identified in the PFRA in June 2011.
- 2,100 residential properties in County Durham were identified in the PFRA as potentially at risk from surface water flooding.

43 In addition, DCC has a responsibility to consider flood risk when exercising the planning function. The Planning Authority must prepare, publish and use a local development framework which directs how land can be used. Durham County Council is in the process of producing the County Durham Plan which is a high level document which guides the future development of County Durham setting the planning policy framework for the next 20 years. Policy 46 of the Plan addresses water management considering both fluvial (main river) and pluvial (surface water) flood risk and requires all developers to consider the effect of a proposed development on flood risk (more detail in relation to planning and flood risk is provided from page 19-21 of the report).

44 DCC as LLFA work with private land owners advising on flood prevention. Private land owners are responsible for any watercourses within the boundary of their land and DCC mediates with land owners providing advice on various measures available to prevent flooding. In addition, DCC can take action to force private land owners to undertake preventative works or the council can carry out the work itself and seek reimbursement through a land charge. However DCC seeks to work sympathetically with land owners. It was suggested by the review group that the Environment and Sustainable Communities Overview and Scrutiny Committee be kept updated on the work undertaken by DCC with private land owners to reduce surface water run-off.

45 In relation to flood prevention DCC prepares bids for the Environment Agency's Medium Term Plan proposing various flood prevention schemes for funding via the flood defence local levy (North East £2.1m) and the Flood and Coastal Risk Management Grant in Aid Scheme (North East £47m for 2013/14) which resulted in funding of approximately £7.5m for flood prevention awarded to County Durham. In addition, further funding is available via:

- DCC revenue £0.2m per annum plus £0.25m for 2013/14 and 2014/15 which relates to inspection and preventative maintenance
- DCC capital £0.75m for 2013/14
- NWL fund schemes that meet their criteria

46 In addition, further funding has been received for 2014/15 for further flood prevention schemes within County Durham via the Flood Defence Local Levy and the Flood and Coastal Risk Management Grant in Aid Scheme totalling over £4m for 11 identified projects.

47 The group was informed that further funding opportunities exist as a result of the European Funding programme 2014-2020 for projects focused on improving economic growth (benefit new developments or existing commercial properties) from 2015/16 onwards. It was felt by the review group that there is a need to continue to maximise funding opportunities both now and in the future.

48 In addition to the Regional Flood and Coastal Committee, County Durham has established the Durham Strategic Flood Prevention Group. Consisting of representatives from the Coastal and Drainage Team, Planning and Civil Contingencies Unit (CCU) and key partners including the EA, NWL, Durham and Darlington Fire and Rescue and Natural England together with a member representative. DCC host and chair the meetings of the group which are held on a quarterly basis although the operational teams are in regular contact on a weekly basis The group has established excellent communication between key partners providing an opportunity to discuss projects in detail, liaise with partners, share information, develop and monitor various flood preventative schemes within County Durham.

49 The review group was informed that Durham County Council undertakes various preventative maintenance including the hiring of an additional gully tanker during 2013 to clear the backlog of gully cleansing and an additional £500,000 of revenue funding was to be used between 2013-2015 for culvert cleansing, inspections and preventative measures for DCC watercourses and highways drainage in high risk areas.

Environment Agency

Key Findings

50 **The Environment Agency (EA) under the Flood and Water Management Act 2010 has responsibility for the strategic overview for all forms of flooding by developing, maintaining and monitoring a strategy for Flood and Coastal Erosion Risk Management in England, together with designated responsibility for coastal and fluvial flooding from main rivers.**

51 **As a result of the responsibilities placed on the EA by the 2010 Act, together with the strong partnership working between the Risk Management Authorities within County Durham, this has resulted in the EA leading on eight flood prevention schemes in 2013/14 and five flood prevention schemes in 2014/15 including Stanhope River Wear Flood Alleviation Scheme, Tindale Beck Flood Alleviation Scheme and a scheme for the River Gaunless at South Church West Auckland.**

Discussion

52 DEFRA has overall responsibility for policy on flood and coastal erosion risk management and provides funding to flood risk management authorities through grants to the Environment Agency (EA). The Flood and Water Management Act 2010 defines clear accountability for the Environment Agency and the LLFA. It requires the EA to have a strategic overview for all forms of flooding by developing, maintaining, applying and monitoring a strategy for Flood and Coastal Erosion Risk Management (FCERM) in England. The FCERM sets out the statutory framework that will help communities, the public sector and other organisations to work together to manage flood and coastal erosion risk.

53 In addition, under the Flood and Water Management Act 2010 the EA is a Risk Management Authority together with DCC and NWL, with wide-ranging functions including physical work to protect properties and to improve drainage, restore natural processes and forecasting, warning and communicating flood risk information.

54 The Flood and Water Management Act designates responsibility for coastal and fluvial flooding from main rivers to the EA. The Act designates the EA as a Risk Management Authority and as such works in partnership with the LLFA and Northumbrian Water to develop the Flood Risk Management Plans (FRMP). It was confirmed that the FRMPs for the Northumbrian river basin were currently in development.

55 The EA is a statutory consultee to the SuDS Approving Body (SAB) on sustainable drainage that impacts on water quality or strategic flood risk. In addition, the EA is represented on the Regional Flood and Coastal Committees which are responsible for raising and administering the flood defence local levy and for approving the EAs regional works programme. .

56 The EA has responsibility for preparing the Catchment Flood Management Plans which provide an overview of the flood risk across river catchments. These plans recommend ways of managing risk both now and in the future and consider all types of inland flooding from rivers, ground water, surface water and tidal water. They also take into account other impacts such as climate change, how we use the land, how areas can be developed to meet present day needs. The plans that are relevant to County Durham are the rivers Wear and Tees. The EA is also responsible for the preparation of the Shoreline Management Plans which provide a strategic overview of the coast identifying areas at risk of coastal erosion, coastal flooding, future projections and policies and measures for managing risk.

57 In relation to partnership working, the EA have a number of current initiatives within County Durham where they are collaborating with partners, contributing towards activities and securing funding for specific projects. An integral part of the management of flood risk is access to

funding with partnership funding radically changing the way RMAs operate, ensuring that they work together. By working in partnership it means that integrated solutions are developed and funding maximised.

58 In relation to County Durham for 2013/14 the Environment Agency working with partners had undertaken eight projects including Stanhope River Wear Flood Alleviation Scheme, Tindale Beck Flood Alleviation Scheme and the River Gaunless scheme. A further five schemes have been identified and approved for funding in 2014/15 onwards including Staindrop Flood Alleviation Scheme, urgent works at Spring Gardens and further work at Tindale Beck Flood Alleviation Scheme.

Northumbrian Water Limited

Key Findings

59 **Northumbrian Water Limited (NWL) has a significant role in relation to flood risk management within County Durham, informing the planning process by advising on flood risk from sewers and future development including directing development to areas of capacity, highlighting incapacity in the current sewerage systems, providing robust sewer flooding risk data for responding to planning applications and identifying solutions for flooding via collaborative working.**

60 **NWL has provided significant funding for flood alleviation schemes regionally totalling £230m for 2005-2015 with a total of £30.4m for schemes within County Durham. In addition, NWL has responded to increased development within County Durham via investment within existing sewer treatment works. However, it was recognised that there is a need for capacity to be continuously reviewed to meet the demands of future development within County Durham.**

Discussion

61 Northumbrian Water Limited (NWL) provides water and sewerage services to 2.7 million properties throughout the North East region. It is responsible for 16,000km of public drains and sewerage with a further 13,500km of sewers and lateral drains from private individuals transferred in 2011. Under the 2010 Act NWL is a Risk Management Authority working with 12 local authorities in the North East.

62 NWL has an excellent relationship with Durham County Council attending the meetings of the Regional Flood and Coastal Committee and the Durham Strategic Flood Prevention Group providing an opportunity to coordinate investigations, develop work programmes and identify schemes for joint working. In addition, NWL operational teams and DCCs drainage teams are in contact on a weekly basis.

63 NWL assists in the planning process and has contributed to the development of the County Durham Plan looking at the impact of future development on the current sewer and drainage systems. NWL supports Durham County Council and the EA in relation to planning applications, attending planning meetings to explain issues in relation to sewerage capacity and although technically not a statutory consultee within the planning process, it was highlighted that within County Durham the relationship is such that they are treated in the same manner as a statutory consultee.

64 There is regular dialogue on surface water management with a lot of shared information in relation to the Surface Water Management Plan (SWMP) in preparation for Sustainable Urban Drainage Systems (SuDS) implementation.

65 The sharing of data by NWL has a number of benefits including: providing an evidence base to advise councils on flood risk from sewers and future developments; an opportunity to direct development to areas of known capacity and carry out drainage master planning for other developable areas; assesses impact of housing growth upon predicted risk; incapacity highlighted early through the Core Strategy process; identifies surface water separation and reduction opportunities; provides robust sewer flooding risk data for response to planning applications and an opportunity to prioritise investment and identify sustainable solutions for flooding by collaborative working.

66 NWL has an established regional investment programme and has provided the following flood alleviation schemes:

- 2005 to 2010 - £104m and 776 properties protected from the Sewer Flood Register.
- 2010 to 2015 - £126m and 1000 plus properties protected from the Sewer Flood Register.
- Unit rate circa £125k per property protected.

67 The following prioritisation process is operated by NWL in relation to the investment programme:

- Flooding location;
- Frequency;
- Severity;
- Cost benefit approach.

NWL also has a funding programme to be used on mitigation measures regionally of approximately £2m per annum which is used to protect between 200-300 properties by fitting preventative measures such as flood doors and gates.

68 The NWL investment programme for County Durham in relation to flood alleviation schemes has provided the following funding:

- 2005 to 2010 - £13.4m and 181 properties protected from the Sewer Flood Register.
- 2010 to 2013 - £17m and 158 properties protected from the Sewer Flood Register.
- 2014 to 2015 – 115 properties protected from the Sewer Flood Register.

69 NWL has started to predict where risk may occur by the use of drainage area studies. These studies build on a current model and look at new development, taking into account what impact it will have, look at ways of getting water out of the system and how it can be monitored and measured. County Durham has a total of 138 drainage areas of which 41 drainage area studies have been completed.

70 The studies consider growth and development including home extensions, urban creep (the loss of permeable surfaces within urban areas to block paving, patios and driveways) and climate change. The data from these studies is shared with DCC and is used to inform future investment plans and identify surface water removal/reduction opportunities.

71 It is recognised that urban creep is causing flooding particularly in areas of mature development where it is known that the sewers are well maintained. Urban creep is often associated with residents' hard paving over gardens to make way for hard standing including car parking areas. The cumulative impact of this happening in residential areas has resulted in localised flood events as the drainage network cannot cope with the surface water run-off after a prolonged period of rain. This is difficult to police. A study by Newcastle City Council showed that urban creep extends by 1 to 1.5% each year. It was confirmed that within County Durham the issue of urban creep will be regulated by Policy 46 of the County Durham Plan ensuring that there is no net increase in surface water run-off for the lifetime of new development. .

72 The Strategic Flood Risk Assessment Level 1 addresses the impact of development. Major developers are required to submit drainage designs as part of the planning process, NWL appraises these designs, carries out inspections as the design develops and then if the sewer has performed satisfactorily for a 12 month period it will then be adopted by NWL.

73 Increased demands on the sewerage system should not put properties at risk of flooding from storm events within a return period of one in twenty years, as recommended by the British Hydrological Society. Policy 46 seeks to separate, minimise and control surface water flows from development and has resulted in NWL being consulted at each stage of the development of the CDP and in relation to planning applications submitted.

74 Many of the problems relating to flooding after 2010 were the direct result of drainage overload regionally which has resulted in NWL developing a

£150m regional plan for 2010 to 2015 focusing on reducing surface water by using strategic studies, planning policy, customer education, network monitoring and drainage area studies.

75 In addition to drainage overload, NWL has identified further causes of flooding as the disposal of oils, fats and grease into the drainage system and root ingress. This has resulted in NWL undertaking extensive network monitoring including a robust inspection regime, CCTV installation programme, structural repairs to prevent damage from tree roots and proactive sewer cleansing totalling £35m across the region for 2015 to 2020.

76 NWL has invested £150-200m on sewerage treatment works in County Durham responding to increased development placing pressure on the existing treatment works. Consett treatment works has recently undergone renovations of £7m due to the addition of 2500 new houses. In addition, renovation of the Bowburn treatment works totalling £8m was completed with a study currently being undertaken at Tudhoe Mill which is currently working at full capacity and therefore further development within that locality could not be supported by NWL without improvement and investment. Further investment is planned for 2015-2020 at the following treatment works:

- Browney;
- Aycliffe;
- Chilton;
- Aldin Grange;
- Barkers Haugh;
- Tow law;
- East Stanley.

It was recognised that further discussions and liaison would need to be held between NWL and DCC in relation to the future capacity of various treatment works as a result of proposals for development within the County Durham Plan.

Planning

Key Findings

77 **Policy 46 of the County Durham Plan is recognised as an example of good practice in managing flood risk as it requires no net increase in run-off from greenfield sites, a 50% reduction in brownfield run-off together with specific requirements and detail in relation to Sustainable Urban Drainage Systems (SuDS).**

78 **The County Durham Plan has benefitted from information provided by Drainage Area Studies (DAS), 138 drainage areas within County Durham of which 41 studies have been completed. Each study identifies the capacity of sewers downstream of development sites,**

surface water separation opportunities and the impact on surface water reduction.

79 **As part of the engagement process with RMAs it was recommended by the review group that the Environment and Sustainable Overview and Scrutiny Committee receive an update on the development of Drainage Area Studies within County Durham.**

Discussion

80 The County Durham Plan (CDP) is the County's planning framework from 2015 – 2030 and has been shared with NWL and the EA as part of the extensive consultation process. The plan sets out information on the type of new development e.g. housing, employment and retail, locations and how they will be managed. It also provides planning policies for the future on which planning applications are determined. In relation to housing the plan identifies an additional 31,400 new homes in County Durham, 399 hectares of general employment land and 9500 square metres of new retail floor space.

81 The information shared with NWL and EA gives locations of sites for new developments, the type, size, construction rate and the large evidence base on which decisions have been based. The large evidence base includes water cycle studies showing how water is moved and dispersed; the Strategic Flood Risk Assessment (SFRA) showing where flood risks are, the type of flooding risk and the Surface Water Management Plan (SWMP) showing how flooding will be tackled. This provides a robust evidence base on which decisions can be based and ideas developed in relation to flooding.

82 Policy 46 of the CDP addresses water management and sets out the criteria for developers which includes:

- Requirements for Flood Risk Assessment (FRA) – all development proposals are required to consider the effect of the new development on flood risk both on and off site proportionate to scale of the development. Where appropriate a flood risk assessment will be required.

- Zonal approach to flooding risk – developers are directed to areas least susceptible to flooding.

- Sequential and Exceptions Test – the developer must prove that low risk areas have been considered and that the development will be safe without increasing flood risk elsewhere.

- Hierarchy for dealing with run-off – developers have to ensure that the best flood defences are included in new developments including where appropriate Sustainable Urban Drainage Systems (SuDS) for dealing with water run-off. Where greenfield sites are to be developed, the run-

off rates should not exceed the existing greenfield run-off rate and if possible reduce this rate. Where previously developed sites (brownfield) are to be developed, surface water run-off rates should be reduced by a minimum of 50% of the existing site runoff rate. Surface water runoff should be managed at source wherever possible with disposal to combined sewers the last resort once all other methods have been explored.

- Hierarchy for foul water disposal – in consideration of development proposals, the hierarchy of drainage options must be considered and discounted for foul water should be:

    - Connection to a public sewer.
    - Package sewerage treatment plant (which can be offered to the Sewerage Undertaker for adoption).
    - Septic Tank.

    - Explanation of Strategic Flood Risk Assessment (SFRA) and Water Cycle Studies (WCS).

The criterion ensures that developers recognise and consider the impact of their new development on flood risk both on and off site and adhere to procedures which address flood risk management. DCC is the first council to propose the adoption of a 50% reduction in flow rates on brownfield sites.

83 In addition, in 2008 the Government changed the planning regulations to prevent householders from paving their gardens with hard standing without first receiving planning permission with exceptions only made where residents use permeable surfaces such as permeable block paving, gravel or porous asphalt.

84 When supplying information for the planning purposes NWL supply maps using a traffic light system to show drainage areas with those areas at highest risk of flooding shown as red on the map. These maps are used for strategic studies. This data is then used to produce more detailed information identifying the impact of new development sites on existing sewerage networks (Drainage Area Studies – DAS) with further drilling down indicating individual properties that maybe at risk. In total, 41 drainage area models have been completed for County Durham from 136 drainage areas which has resulted in NWL investing £3.5m in the drainage system in County Durham. These models have enabled NWL to run a series of 'what if' scenarios and measure the impact of additional water flow from new development on current sewerage networks and the impact of urban creep, climate change and severe weather.

85 The CDP has benefitted from DAS (41 DAS completed for County Durham) by identifying the capacity of sewers downstream of development sites, surface water separation opportunities and the impact on surface water reduction. In the future it is anticipated that Drainage

Area Studies will provide additional information on drainage master planning and surface water management planning which will be used to inform the CDP allowing the development of collaborative solutions between developers and Risk Management Authorities during the planning process. It was recommended by the review group that the Environment and Sustainable Communities Overview and Scrutiny Committee as part of the engagement process with the RMAs receive an update on the development of Drainage Area Studies within County Durham.

Sustainable Urban Drainage Systems (SuDS)

Key Findings

86 **Durham County Council as LLFA has to establish a SuDS Approval Body (SAB) which is a section of the Council specifically established to deal with the design, approval and adoption of SuDS within any development consisting of two or more properties. The SAB for County Durham was due to be established by October, 2014 however the introduction of SABs has been further delayed by Government. It was felt that there was a need for the Environment and Sustainable Communities Overview and Scrutiny Committee to be kept updated on the development of the SAB for County Durham.**

87 **Durham County Council needs to establish the appropriate mechanisms to enable it to collect any charges in respect of SuDS which have been adopted by the County Council.**

Discussion

88 Traditionally surface water has been removed from built up sites using underground pipe systems, which prevent flooding locally by conveying the water away as quickly as possible. This has led, over time, to alterations of natural water flow patterns which often lead to problems elsewhere, usually further downstream, in the catchment area. New methods of planning for the control of surface water and run-off, in light of flooding in recent years, has resulted in the introduction of regulations in this area. Planning Policy Statement 25; Development and Flood Risk, states that surface water arising from a developed site should, as far as is practicable, be managed in a sustainable manner to mimic the surface water flows arising from the site prior to the proposed development.

89 The aim of sustainable drainage is to reduce damage caused by flooding; improve water quality; protecting and improving the environment and ensure the stability and durability of drainage systems. New developments can cause flooding issues however urban drainage systems mimic nature by using infiltration strips to collect surface water and reduce the flood risk. SuDS are designed to be part of the natural landscape and to hold water

for a short term. The council will be responsible for providing guidance on how SuDS should be designed and constructed.

90 The Flood and Water Management Act 2010 schedule 3 removes the automatic right for developers to connect to surface water drainage systems by making that right conditional on meeting national standards and obtaining approval from the approval body for new sustainable urban drainage systems in its area. The Council as LLFA has to establish a SuDS Approval Body (SAB) a section of the Council specifically established to deal with the design, approval and adoption of SuDS within any development consisting of two or more properties. Funding has been received from DEFRA to cover additional costs of establishing the SuDS Approved Body (SAB) for County Durham. The SAB for County Durham was due to be established by October, 2014; however the introduction of schedule 3 which includes the establishment of SABs has been delayed by Government.

91 The SAB will receive all applications for construction where there are drainage implications, assess their compliance with any national and/or local standards and approve or decline the application as appropriate. The SAB will adopt all drainage systems constructed in accordance with the SuDS Regulations where they drain more than one property. The SAB must maintain all adoptable SuDS in accordance with the national standards for sustainable drainage. It has been proposed that properties which are connected to SuDS would have an additional charge placed on their Council Tax bill however DCC will need to establish the appropriate mechanisms to enable it to collect any charges in respect of SuDS that have been adopted by the council.

92 It was felt that there was a need for the Environment and Sustainable Communities Overview and Scrutiny Committee to be kept updated on the development of the SAB within County Durham and the implementation of appropriate mechanisms by DCC to collect any charges in respect of SuDS.

Building Community Resilience (Flooding)

Key Findings

93 **Within Durham County Council the Civil Contingencies Unit has the lead role in responding to emergencies and work with local communities during emergency incidents to build community resilience.**

94 **A new approach has been developed in relation to flood engagement involving seven Civil Contingency Officers working in local communities based on specific geographical locations across Durham and Darlington. This approach allows officers to develop a detailed knowledge of local communities, for relationships to be built with all local community groups and provides the opportunity to**

work with local communities to establish, support and build community resilience across the County. The new approach is to be introduced in April 2014.

95 **It was felt by the review group that the Environment and Sustainable Communities Overview and Scrutiny Committee should be kept updated on the development of this new approach.**

Discussion

96 The Civil Contingencies Unit (CCU) is part of the Assistant Chief Executive's Service Grouping and has responsibility for creating emergency plans, informing the public and keeping them briefed during incidents and giving advice to businesses to enable business continuity. The CCU has the lead role in responding to emergencies and work with local communities during emergency incidents to build community resilience.

97 Previously, the CCU had employed a Community Flood Engagement Officer, the post was funded by the Environment Agency was full-time and covered County Durham and Darlington. The officer attended community events pre and post flood to offer advice and establish links with communities. As a result of the creation of this post links were formed with a number of community groups creating a link between the Council and the Community. It was recognised that the geographical area to be covered made it a difficult task for one person to engage effectively and develop detailed knowledge of every community together with the risks that they face.

98 From April, 2014 a new approach has been developed with an annual budget of £50,000 funded by the EA for a three year period. The new approach to flood engagement involves seven Civil Contingency Officers allocated separate geographical areas within Durham and Darlington (areas based approach) allowing for more detailed knowledge of local communities to be developed and for officers to build relationships with all community groups. It was felt by the review group that the Environment and Sustainable Communities Overview and Scrutiny Committee should be kept updated on the development of this new approach.

99 The new area based approach will allow officers to :

- Make contact with established community groups and build relationships.
- Build a picture of actual and perceived risks facing the community.
- Establish new community groups where appropriate.
- Help community groups in writing community emergency plans.
- Assist in the training of community members and the exercising of their plans.
- Provide residents with signposting to reliable information.

The aim of the project is to establish, support and build resilience into the communities across County Durham and Darlington from risks such as flooding, severe weather, power outages etc.

100 The objectives of the project are to identify existing community groups and know where the gaps are; to facilitate the creation of new community groups where appropriate; to facilitate the writing, training and exercising of community emergency plans and for community groups to understand the risks that their community face and to feel empowered to prepare for risks occurring.

101 Where community groups already exist there are opportunities to build and expand these groups for example Farm Watch Groups, that have the capacity and capabilities in terms of machinery that could be used to clear dykes and drains. Established groups already within the local community will have a detailed local knowledge and it is important that Civil Contingencies Officers are aware of and use this information for example Age UK would have information on the elderly which would indicate where more help would be needed. In addition, Town and Parish Councils can be used to provide information and are also a useful source of local information. Should it be felt that there is a gap in the local community and there is a need for an appropriate local community group to be developed then the Civil Contingencies officers can assist in the development of that group.

102 Communities need to be prepared and resilient therefore engagement includes the business community, schools (focusing on 7 to 11year olds), older vulnerable people and rapid response communities on the register compiled by the Environment Agency which identifies those areas which are in danger of flash flooding.

103 The CCU has been able to build upon the lessons learned from previous experience including that of Cumbria during recent flooding events and have produced a 10 step plan to creating an emergency plan, prepared the Community Emergency Plan template, the householder plan leaflet (available at customer access points) a Business Continuity Guide to fit inside a wallet (well received by the business community) and initial contact has been made with all AAPs.

104 It was felt by the review group that the Environment and Sustainable Communities Overview and Scrutiny Committee should be kept updated on the development of the new approach to building community resilience.

Flood incident response

Key Findings

105 **In relation to the response to flooding incidents, flood alerts are received from the Flood Forecasting Service (FFS) which combine the weather forecasts from the Met Office with the impact at ground**

level as predicted by the Environment Agency. The FFS gives an indication of the risk as green, yellow, amber or red, with disruption minimal, minor, significant and severe. A decision as to the appropriate level of response Operational (Bronze), Tactical (Silver) or Strategic (Gold) Command will be determined by the indication of risk (flood alert) and the actual weather conditions.

106 **In accordance with the Customer First Strategy flooding incidents are reported via a single point of contact number with Customer Services staff dealing with the initial report and then directing as appropriate. It was felt that use of a flood hotline number during flooding emergencies should be investigated.**

107 **Following a flooding emergency the Environment and Sustainable Overview and Scrutiny Committee in their role as the Flood and Coastal Erosion Risk Management Committee receive a comprehensive report detailing the response taken and lessons learned in relation to flooding emergencies within County Durham.**

Discussion

108 Flood alerts are received from the Flood Forecasting Service (FFS) which combine the weather forecasts from the Meteorological Office (Met Office) with the impact at ground level as predicted by the Environment Agency. The FFS gives an indication of the risk as green, yellow, amber or red, with the disruption from minimal, minor, significant and severe. The accuracy of these alerts had improved over the years, however they could not be entirely relied upon as being accurate as in 2012 a very serious unpredicted flood occurred in Barnard Castle. It was confirmed that Neighbourhood Services (NS) would prepare a response based on the flood alert and the actual weather conditions.

109 In relation to the role of Neighbourhood Services in dealing with Green and Yellow alerts these can normally be dealt with by normal day time and out of hours cover. If an Amber/Red alert is raised then extra resources would be mobilised and Operational (Bronze) Command would be on standby. Operational (Bronze) Command directs all operational resources and implements tasks, takes direction from Tactical (Silver) Command if actioned and provides updates every two hours to the Strategic Managers Group which would deal with communications and provide advice.

110 Concerning operational response, Neighbourhood Services receive the reports of flooding and requests for sandbags and aquasacs to protect property. However, it was confirmed that whilst they do supply sandbags and aquasacs they encourage those who are at serious risk of flooding to build up their own supplies so that should flooding occur they are prepared. In addition, the service deploys gully motors and high pressure pumps to clear flood water, close roads and implement diversions,

undertake emergency repairs to DCC maintained buildings and do post flood clean up and repairs.

111 Tactical (Silver) Command is in addition to Operational (Bronze) Command and is only established if there is significant or widespread flooding. Tactical Command translates strategy into actions and co-ordinates assets; it is multi-agency, led by the police and consists of a member of the Extended Management Team and two CCU Duty Officers who are on call 24/7 to advise Tactical (Silver) Command and co-ordinate.

112 Strategic (Gold) Command is in addition to Tactical (Silver) and Operational (Bronze) and is only actioned if there is significant, widespread and prolonged flooding. Strategic Command, identifies issues and determines priorities, is multi-agency, led by the police and consists of a member of the Corporate Management Team and two CCU officers who are on call 24/7 365 days to advise Strategic (Gold) Command and co-ordinate. It was confirmed that Strategic (Gold) Command would have additional support via a Government Liaison Officer and a Scientific Technical Activity Cell which would monitor the bacteriological content of the water. A Strategic (Gold) Command has never been established in County Durham in relation to flooding.

113 Residents and businesses wanting to report flooding incidents to the council currently use the single point of contact (Customer First Strategy) via the Highways Action Line with the calls answered by Customer Services staff who would then direct the calls as appropriate. In addition, leaflets with key contact numbers for flooding emergencies were available at Customer Contact Centres. However, it was felt by members that in flooding emergencies there was a need for a flood hotline number to be initiated and that following a flooding emergency the Environment and Sustainable Overview and Scrutiny Committee as the Flood and Coastal Erosion Risk Management Committee should receive a comprehensive report detailing the response taken and lessons learned in relation to flooding emergencies within County Durham.

114 In relation to the role of CCU in responding to emergency flooding events it was confirmed that their role includes:

- Maintaining multi-agency communication and maintaining communication with the public/communities affected by the flooding.
- Establishment of Rest Centre(s) and arrangement of transportation.
- Humanitarian assistance – assessments of homes to determine whether people can return to them, assessing financial needs and psychological support required.
- Liaising with the deployment of voluntary sector – services include the British Red Cross, Samaritans, Age UK providing support during and after flooding often to the most vulnerable and the elderly.
- Advising Gold/Silver Command – looking at what plans are in place and content, keeping them briefed on what is happening.

- Debriefing – a multi – agency debrief would be held to discuss what had worked well and whether improvements could be made.

115 The Council's Recovery Co-ordinating Group (RCG) would agree the 'clean-up' operation to follow a Tactical (Silver) Command or Strategic (Gold) Command emergency. The DCC Recovery Co-ordinating Group is initiated within 3 hours of the start of a Tactical (Silver) and Strategic (Gold) emergency with the last severe flooding event in County Durham requiring the deployment of the group taking place in May 2013 resulting from Thornhope Beck Bridge at Wolsingham collapsing. The collapse of the bridge left a community of 40 people with no alternative vehicle route into the village. Local businesses wanted transport links re-established as soon as possible and the RCG chaired by the Director of Regeneration and Economic Development identified the solution as the installation of a Bailey Bridge, a portable, pre-fabricated truss bridge.

Role of Overview and Scrutiny and local scrutiny in relation to flood risk management

Key Findings

116 **Overview and Scrutiny has a specific role requiring Flood Risk Management Authorities (LLFA, EA and NWL) to respond to requests for information and to reports from Overview and Scrutiny in relation to flood risk management. In addition, Risk Management Authorities must also have regard to Overview and Scrutiny Committee reports and recommendations.**

117 **In relation to Durham County Council, the Environment and Sustainable Communities Overview and Scrutiny Committee has been designated as the Flood and Coastal Erosion Risk Management Committee with responsibility for engaging with the Risk Management Authorities for County Durham. To date the committee has undertaken a reactive role receiving reports and presentations following flooding incidents within the County.**

118 **It was felt that there is a need for the Environment and Sustainable Communities Overview and Scrutiny Committee to engage with the Risk Management Authorities on a regular basis (annually) to ensure that they continue to work in partnership, have the relevant policies and plans in place and that they are refreshed to reflect local flood risk.**

119 **Having heard the experiences of local councillors in relation to flooding incidents within their communities, it was felt by the review group that those councillors should be kept updated on the progress made against the recommendations contained within the Flooding Scrutiny Review Report.**

Discussion

120 Overview and Scrutiny in recent legislation has been given a specific role in relation to flood risk management. The Pitt Review: Learning Lessons from the 2007 floods' focusing on flood risk management recommended a specific role for Overview and Scrutiny of reviewing the work of public sector bodies and service providers under a legal requirement to cooperate and share information.

121 The Flood and Water Management Act 2010 was the Government's response to the Pitt Review extending the reach of Overview and Scrutiny Committees of LLFAs to water and sewerage companies. Under the Act Risk Management Authorities (RMAs) have a duty to respond to requests for information from LLFAs Overview and Scrutiny Committees and to respond to reports in relation to flood risk management produced by an Overview and Scrutiny Committee. They must also have regard to committee reports and recommendations produced by Overview and Scrutiny Committees. The Act gives Overview and Scrutiny a significant role in holding the RMAs to account. Flood Risk Management Authorities must:

- Comply with a request from Overview and Scrutiny within 28 days beginning with the date of the request.
- Indicate what action (if any) the Risk Management Authority proposes to take, if a response to a report is requested; and
- For the Risk Management Authority to attend before an Overview and Scrutiny Committee to give information orally, if requested to do so by such a committee.

122 The Localism Act 2011 reinforces the 2010 Act with the Secretary of State making regulations (The Flood Risk Management Overview and Scrutiny (England) regulations 2011) to include provisions for the procedure to be followed in relation to requesting information, required notice to be given in relation to requests, exemptions from the duty and process to be followed for persons to attend and give information orally.

123 A number of Overview and Scrutiny Committees in various Local Authorities following the introduction of the 2010 Act have received reports detailing the requirements of the Act in relation to the Overview and Scrutiny function and the work of RMAs within their area. Many of the local authorities have continued to engage with the RMAs on a regular basis to ensure the continued development of the management of flood risk and have designated specific Overview and Scrutiny Committees with this role (Flood and Coastal Erosion Risk Management Committee).

124 In Durham the Environment and Sustainable Communities Overview and Scrutiny Committee has been designated the Flood and Coastal Erosion Risk Management Committee. However, Overview and Scrutiny involvement in relation to flood risk management has been reactive to date with the committee receiving presentations and reports following the severe flooding in 2012. It was felt by the review group that there is a need for the Environment and Sustainable Communities Overview and

Scrutiny Committee to engage with the Risk Management Authorities on a regular basis (annually) to ensure that they continue to work in partnership, have the relevant plans in place and that they are refreshed to reflect local flood risk.

125 In relation to local scrutiny, members who had experienced flooding within their local communities were invited to a scrutiny review group meeting to share their experiences on the 18th February, 2014 this was then followed by site visits to three of the affected areas(Chester-le-street, Waldridge and Witton Gilbert to see flood prevention work undertaken by DCC and partners.

126 The review group was informed that in 2012 substantial flooding occurred to homes close to the Cong Burn at Chester-le-street. The Cong Burn is a stream which runs through the centre of Chester-le-street via a concrete culvert before joining the River Wear. The high level of rainfall in June 2012 had led to silt and debris gathering in gullies and culverts which subsequently led to the culvert in the Market Place at Chester-le-street overflowing causing damage to 20 plus businesses in the immediate area whilst further along the Cong Burn where it meets the River Wear homes were flooded (Cone Terrace). As a result of the extent of the flooding Neighbourhood Services and the EA have undertaken works in the area including clearing and de-silting the culvert. In addition work has been undertaken to strengthen the riverbank of the Cong Burn and both large and small Tideflex valves have been installed to prevent flooding reoccurring. Tideflex valves open when there is a significant build-up of pressure from the water allowing the water to flow into the stream at a controlled velocity. The local member praised Neighbourhood Services and the EA for the joint work they had undertaken to mitigate flooding in the future. The photograph above shows an example of the Tideflex valve at Chester-le-street.

127 Flooding incidents had also occurred at Bowburn largely due to new developments feeding into the existing drainage system. The local member felt that there was a need for planners and NWL to look carefully at new development proposed to ensure that the existing drainage system can cope with the increased usage. A separate flooding incident had occurred at the community centre which had recently been refurbished resulting in substantial damage. It was confirmed by Neighbourhood Services that cleaning work had been undertaken to the culvert at the community centre and that routine maintenance work would also be carried out.

128 The review group was informed that flooding incidents had taken place at Oakenshaw where two homes had been affected on two separate occasions. The local member advised the Group that the local community had done all it could to help prevent flooding by purchasing sandbags however there was still a need for support and although some remedial work had taken place there was still a flood risk to one property in the village. The local member praised the work of Neighbourhood Services (Coastal and Drainage Protection Team) who had visited the village on several occasions to provide essential updates, advice and support to the local community.

129 Flooding had also occurred on the Waldridge Estate at Chester-le-street during the extreme rainfall of 2012 which had resulted in surface water runoff flooding nearby homes. The local member praised Neighbourhood Services and DCC for the support and advice provided and confirmed that funding had been secured recently from the E A for flood defence measures which included bore holes being drilled to help with the drainage of the water and a 120 metre flood wall which will be able to withstand up to 3 foot of water and protect up to 30 properties from flooding in the future. It was confirmed that the scheme was one of several to receive funding from the EA. The photograph above shows the erection of the flood wall at Waldridge.

130 The local member for Stanley explained that she had brought a local resident to share with the Review Group their experience of flooding. The resident had experienced flooding of her property on two occasions in 2007 and 2012 when a further five properties in the same street were also flooded. It was confirmed that Neighbourhood Services had cleared the drains however the resident was still concerned that in heavy rainfall the properties may still be subject to flooding. It was agreed that the Coastal and Drainage Protection Team would have a further look at the capacity of the current drainage system and at various measures to mitigate flood risk.

131 Flooding had also occurred at Witton Gilbert following the heavy storms in 2012 causing damage to many properties. The beck which runs through the village flooded leaving the water to run down the hill and collect. The EA Local Levy has provided funding of £300k to carry out flood alleviation work. The Scrutiny review group had the opportunity to visit the site where works will be carried out later

in 2014. The photograph above shows the extent of the flooding from the beck.

Section 4 - Response from Neighbourhood Services

132 The following response has been received from Neighbourhood Services:

Neighbourhood Services welcome the key findings and recommendations of the Flooding Scrutiny Review Report and would like to thank the Environment and Sustainable Communities Overview and Scrutiny Committee for reviewing this issue and helping to raise the awareness of the work undertaken by DCC and partners to mitigate flood risk. The report highlights the close partnership working within County Durham which has resulted in the development of a strong policy and planning framework which we will continue to build upon, maximising the funding opportunities available to carry out further flood mitigation projects in the future.

In addition, we will be pleased to provide updates to members of progress made in relation to the various recommendations contained within the review report.

Section 5 – Recommendations

133 The Scrutiny Review Group was established to investigate how Durham County Council manages flood risk and whether the policies and plans in place were 'fit for purpose' and minimised the impact of flooding within the County. The review group adopted the approach of examining: what policies and plans are in place to manage flood risk within County Durham; how DCC and partners work together to mitigate the risk of flooding; establish the roles and responsibilities of Neighbourhood Services and the Civil Contingencies Unit in responding to flooding incidents: the role of planning policies in mitigating the risk of flooding; investigate funding available to DCC and partners in relation to flood prevention; work undertaken in relation to building community resilience and establish how Overview and Scrutiny should discharge its role in relation to flood risk management.

134 After reviewing the evidence and key findings the Scrutiny Review Group recommendations for consideration by the Environment and Sustainable Communities Overview and Scrutiny Committee and Cabinet are:-

Recommendation 1

That Durham County Council continue to maximise the funding opportunities available for flood prevention schemes through the Flood Defence Local Levy, the Flood and Coastal Risk Management Grant in Aid Scheme and the EU funding programme 2014-2020.

Recommendation 2

That the Environment and Sustainable Communities Overview and Scrutiny Committee in their role as the designated Flood and Coastal Erosion Risk Management Committee formalise the process for engaging with the Flood Risk Management Authorities within County Durham by meeting on an annual basis. As part of this role the committee would receive information from Northumbrian Water Limited on sewerage treatment capacity within County Durham.

Recommendation 3

That the Environment and Sustainable Communities Overview and Scrutiny Committee receive the minutes of the Northumbria Regional Flood and Coastal Committee (NRFCC) on a quarterly basis together with regular updates on:

- The development of Sustainable Urban Drainage Systems Approval Body (SAB),
- Additional Drainage Area Studies (DAS) undertaken,
- The development of the new approach to building community resilience,
- Work undertaken with private landowners,
- Lessons learned from flooding incidents.

Recommendation 4.

That Durham County Council establishes the appropriate mechanisms to enable it to collect any charges in respect of Sustainable Urban Drainage Systems (SuDS) that have been adopted by the council.

Recommendation 5

That Durham County Council as part of the Customer First Strategy investigates the possibility of a flooding hotline number for use during flooding emergencies.

Recommendation 6

That a review of this report and progress made against recommendations will be undertaken six months after the report is considered by Cabinet and that those members who have experienced flooding incidents within their localities receive an update of the progress made against the recommendations.

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Appendix 1: Implications

Finance – The report identifies the importance of Durham County Council utilising all funding opportunities available to mitigate flood risk within the County including the Flood Defence Local Levy, the Flood and Coastal Risk Management Grant in Aid Scheme, DCC revenue and capital programmes, EU Funding Programme 2014-2020 and funding via Northumbrian Water Limited according to a specific criteria. In addition Durham County Council will need to establish the appropriate mechanisms to enable it to collect any charges in respect of Sustainable Urban Drainage Systems (SuDS) that have been adopted by the council.

Staffing – None.

Risk – As Lead Local Flood Authority Durham County Council has responsibility for preparing a strategy for local flood risk management.

Equality and Diversity Public Sector Equality Duty - In accordance with its agreed Equality and Diversity strategy, the Council will undertake an Equality Impact Assessment of the implications of flood risk upon vulnerable groups within County Durham. The report identifies groups that will be more at risk during flooding incidents. This includes older people, people with disability and younger people.

Accommodation – None

Crime and Disorder – None

Human Rights – None

Consultation – None

Procurement – None

Disability Issues – The report identifies groups that will be more at risk during flooding incidents which includes people with a disability. During emergency flooding incidents Civil Contingency officers will be aware of local residents who will require more assistance ensuring that support is provided to the vulnerable.

Legal Implications - None