

Place Select Committee

Scrutiny Review of Flooding Resilience



19 January 2017

Place Select Committee
Stockton-on-Tees Borough Council
Municipal Buildings
Church Road
Stockton-on-Tees
TS18 1LD

Contents	Page
Select Committee membership + acknowledgements.....	3
Scope.....	4
1.0 Executive Summary and Recommendations.....	5
2.0 Background.....	7
3.0 Evidence.....	8
Site Visit.....	10
APPENDIX 1.....	13
APPENDIX 2.....	15

Select Committee – Membership

Councillor Brown (Chair)
Councillor Bailey (Vice-Chair)
Councillor Barlow
Councillor Cunningham
Councillor Dixon
Councillor Perry
Councillor Proud
Councillor Walmsley
Councillor Woodhead

ACKNOWLEDGEMENTS

The Select Committee thank the following contributors to this review:

Rob Burrell.....	Highways Operations Supervisor
Andie Mackay.....	Commercial and Technical Services Manager
Phil Marshall.....	Partnerships and Strategic Overview Senior Advisor, Environment Agency
Simon Milner.....	Highway Network and Flood Risk Manager
Linzie Pentleton.....	Sewerage Network Controller, Northumbrian Water Ltd
Jane Salisbury.....	Principal Engineer for Flood Risk
Craig Willows.....	Care For Your Area Service Manager

Scrutiny Support

Graham Birtle, *Scrutiny Officer*
Tel: 01642 526187
Email: graham.birtle@stockton.gov.uk

Scope

What are the main issues and overall aim of this review?

The number and level of flooding incidents are increasingly of concern to residents. Climate change and urban design can exacerbate the risk of flooding (e.g. reduction in urban green space, increase in hard surfacing, increased density of development and, potentially, increased barriers to flood flows such as road embankments).

Following the summer flooding of 2007 and the Pitt Review in 2008, the Flood and Water Management Act was introduced in 2010. The Act provided new statutory duties and powers to risk management authorities; local authorities, the Environment Agency and water and sewerage undertakers. Local Authorities became Lead Local Flood Authority's and as such Stockton Council has a statutory duty for managing local flood risk.

The Committee will undertake the following key lines of enquiry:

The Council's resilience in terms of resources to deal with highway drainage, gully cleansing etc. in comparison with recent years. General maintenance and asset replacement in SBC owned ordinary watercourses; risk of flooding relating to trash screen blockage and surface water flood risk mitigation.

The Council's new statutory duty in relation to new development, the planning process, surface water discharge, sustainable drainage systems and resources.

The Council's emergency response and capacity to deal with flooding incidents. Equipment and resources.

Who will the Committee be trying to influence as part of its work?

Cabinet, Environment Agency, Northumbrian Water Authority, Emergency Planning, Tees Valley Strategic Flood Risk Partnership.

1.0 EXECUTIVE SUMMARY AND RECOMMENDATIONS

- 1.1 This review was undertaken to examine the Council and partner agencies response to the number and level of flooding incidents that were of increased concern to residents.
- 1.2 The Flood and Water Management Act 2010 requires effective partnerships to be formed between partners responsible for flood risk management and encourages more sustainable forms of drainage in new developments. It also provides new statutory duties and powers to risk management authorities, including local authorities, which became Lead Local Flood Authority's (LLFA) and therefore Stockton Borough Council has a statutory duty for managing local flood risk.
- 1.3 The Act also enables the EA to issue a levy (known as the Local Levy) to a LLFA in respect of flood and coastal risk management work undertaken in the respective area. Stockton has received significantly more than has been contributed for a number of flood mitigation schemes, with the most high profile being the Lustrum Beck flood alleviation scheme.
- 1.4 Other forms of funding were also identified as well as financial and partnership arrangements being shown to be working well, through the flood defences at Port Clarence and Lustrum Beck.
- 1.5 On 21 April 2016 Cabinet approved the Local Flood Risk Management Strategy, noted the new statutory consultee role in providing advice to the local Planning Authority, as well as the policy for future maintenance of sustainable drainage systems.
- 1.6 To better understand the scale of work being undertaken for the provision of flood defences within Stockton a site visit was arranged to Lustrum Beck so Committee Members could see the works that were ongoing, including Londonderry Bridge, trash screen replacement works and flood defence improvements. Members were impressed by the level and scale of the flood defence works being undertaken and felt the site visit was of great benefit.
- 1.7 A concern was the resilience to deal with surface water issues. During winter months there is generally sufficient operational staff to deal with potential flooding issues however, during the summer months there is no official call-out procedure in place and therefore responses to flooding instances relies on staff goodwill. The Committee therefore felt that SBC would benefit from having a team of suitably trained operational officers with appropriate equipment to deal with flooding issues all year round.
- 1.8 It is estimated that around 5,000 of the approximately 49,000 highway gullies are smaller than others within the Borough and are generally found in the older areas of the Borough. This could potentially increase the risk of surface water flooding during extreme weather events.
- 1.9 In order to assist in dealing with the above there are a number of computerised software systems available, which assist with future cleansing and maintenance programmes in addition to providing an asset management based replacement programme of gullies which would ultimately assist in reducing surface water flood risk.

RECOMMENDATIONS

- R1 SBC expand the annual report currently produced on flooding to ensure all flooding activities are formally recorded.
- R2 SBC further develop the expertise of the operatives currently engaged in dealing with flooding issues.
- R3 SBC produce a formal programme of replacement for older style gullies within the Borough in line with the principals of asset management and routine maintenance.
- R4 SBC evaluate the available bespoke software systems which can assist with future cleansing and maintenance programmes in addition to providing an asset management based replacement programme of gullies to ascertain if they would be suitable to use in this area moving forward in terms of resources, equipment and potential costs.

2.0 BACKGROUND

- 2.1 The original scope of the review was to address the number and level of flooding incidents that were of increased concern to residents.
- 2.2 Following the severe floods that occurred in England and Wales the government requested an independent review to examine flood risk management in the UK and identify what could have been done differently. On conclusion the review called for an urgent and fundamental change in the way the country dealt with the likelihood of more frequent and intense periods of rainfall making a number of recommendations.
- 2.3 The Government's response to the review was the introduction of new legislation, the Flood and Water Management Act 2010 which implements many of the changes recommended in the review. The Act aims to reduce the flood risk for people, homes and businesses. The Act also clarifies who is responsible for managing all sources of flood risk (see a list of responsible parties at Appendix 1), requires effective partnerships to be formed between partners responsible for flood risk management (see north east partnership at Appendix 2) and encourages more sustainable forms of drainage in new developments. It also provides new statutory duties and powers to risk management authorities, including local authorities, Environment Agency and water and sewerage undertakers. Local Authorities also became Lead Local Flood Authority's (LLFA) and therefore Stockton Borough Council has a statutory duty for managing local flood risk.
- 2.4 The Committee has undertaken the following key lines of enquiry:
- The Council's resilience in terms of resources to deal with highway drainage, gully cleansing.
 - General maintenance of SBC owned ordinary watercourses; risk of flooding relating to trash screen blockage and surface water flood risk mitigation.
 - The Council's new statutory duty in relation to new development, the planning process, surface water discharge, sustainable urban drainage systems and resources.
 - The Council's emergency response and capacity to deal with all sources of flood related incidents.

3.0 EVIDENCE

- 3.1 On 21 April 2016 Cabinet approved the Local Flood Risk Management Strategy and its objectives for the future management of flood risk within the Borough. The strategy set out five key objectives for managing flood risk within the Borough, these were:-
- a) Reducing flood risk to communities severely affected by recent flooding.
 - b) Reducing the incidence of surface water flooding.
 - c) Ensuring flood risk is managed in new developments.
 - d) Keeping our highways safe and passable.
 - e) Delivering wider benefits.
- 3.2 Each of the objectives had a number of tasks attached to them, which would all contribute to achieving the objective along with other duties and powers under the Flood and Water Management Act 2010 and Land Drainage Act 1991.
- 3.3 At the same meeting it was resolved that a new statutory consultee role placed additional responsibility on the Authority in relation to providing technical approval for sustainable drainage systems and an ongoing role in site supervision and inspections. As part of the lead authority arrangement with Darlington Borough Council also requested that SBC take on the statutory consultee role for their Authority.
- Sustainable Drainage Systems (SuDS)** are designed to control surface water run off close to where it falls and mimic natural drainage as closely as possible. One of their uses is to reduce the causes and impacts of surface water flooding (sometimes referred to as flash flooding).
- 3.4 The new statutory consultee role to the local Planning Authority and delivering the sustainable urban drainage system remit has put further responsibility on the Council particularly as an increased level of planning applications have been received than was originally envisaged. This includes pre-application advice and discharge of conditions. It is recognised that the new statutory consultee role is key to being proactive in reducing flood risk, across the Borough. The review therefore recognised the extent of the new duties and the pressure on resources this has produced.
- 3.5 The Committee took evidence from representatives of both the Environment Agency (EA) and Northumbrian Water Limited (NW). Their presentations detailed the roles and responsibilities of the respective organisations.
- 3.6 Northumbrian Water's Sewerage Network Controller advised the Committee, that investment in flood alleviation schemes has increased over the last 10 years, reducing the number of properties affected, within its area. In addition to the flood alleviation schemes the company invests in property level protection mitigating flooding for 200-300 properties annually, throughout its area. Property level protection includes providing flood doors, non-return valves on pipes, and air brick covers as simple measures to prevent water getting into properties.
- 3.7 The Environment Agency's Partnerships and Strategic Overview Senior Advisor highlighted that particular focus is on the co-operation with other risk management authorities to manage flooding and this has been developed by way of the now well established Northern Regional Flood and Coastal Committee (NRFCC). The NRFCC which is composed of Elected Members and Officers from local authorities, the EA and NW and has a remit under the Flood and Water Management Act to co-operate with each other in exercising their flood risk management duties. The committee is responsible for raising and administering the local levy funds to be used for flooding projects and for approving the EA's regional works programme. Stockton Borough

Council as LLFA has both officer and member representation on this committee by way of the Cabinet Member for Environment and Housing.

- 3.8 The Flood and Water Management Act also enables the EA to issue a levy (known as the Local Levy) to a LLFA in respect of flood and coastal risk management work undertaken in the respective area. Members were particularly interested in this element and enquired further how the levy worked.
- 3.9 The Local Levy was based on the number of Council Tax Band D properties in each local authority area therefore each area contributes a different amount with the largest contributors in the region being Durham and Sunderland Councils respectively. Overall the Local Levy is approximately £2.1m each year for the north east. It was noted that Stockton has received significantly more than has been contributed for a number of flood mitigation schemes, with the most high profile being the Lustrum Beck flood alleviation scheme.
- 3.10 Stockton Council also hosts the Tees Valley Strategic Flood Risk Management Partnership, which is attended by Officers and relevant Cabinet Members from the Tees Valley Local Authorities, Emergency Planning, the Environment Agency, and Northumbrian Water and has been highlighted by the EA as a beacon of good practice for the work the group has undertaken.
- 3.11 The Committee learned of the various funding sources available when working in partnership. Risk management authorities can apply for a Grant in Aid (GiA) from the Government's £2.3 billion capital funding to carry out Flood and Coastal Erosion Risk Management (FCERM) projects.
- 3.12 How much GiA funding risk management authorities can get is based on how much public benefit a proposed project will have. For example, how many households are better protected from flood risk or coastal erosion; how many of those households are in deprived areas and any benefits to wildlife.
- 3.13 If a project qualifies for GiA which only pays for a proportion of the works, it can still go ahead if it can 'top up' the funds through partnership funding or reduce its costs (or a mixture of both). Partnership funds can be sourced from anyone who will benefit from a local project, including local communities, businesses, local authorities or local developers.
- 3.14 Other forms of funding identified were the Local Levy, LLFA Funding, Developers, Businesses and possibly Communities, Local Enterprise Partnerships, and others.
- 3.15 Such financial and partnership arrangements were shown to be working well through the flood defences at Port Clarence and Lustrum Beck. The Port Clarence scheme had been completed to protect the area from tidal flooding of the River Tees. Planning is now underway to strengthen defences to the North of Port Clarence near Greatham Creek. Such defences not only protect Port Clarence but also Seal Sands and the infrastructure of industry, pipework, and major roads through the area that is located below sea level.
- 3.16 The flood defences are also examples of reacting to global warming and rising sea levels, which was an area Members explored enquiring whether the EA took into account scientific predictions.
- 3.17 The Committee also looked for assurances that wildlife was given consideration especially regarding natural habitation. The EA confirmed that care is given in International Designated Sites with extensive discussions with Natural England about

Cowpen Marsh. There is negotiated pulling back of defences (managed realignment) to allow areas to flood which have also been agreed with the RSPB.

Site Visit

- 3.18 To better understand the scale of work being undertaken for the provision of flood defences within Stockton a site visit was arranged to Lustrum Beck so Committee Members could see the works that were ongoing, including Londonderry Bridge, trash screen replacement works at Primrose Hill and flood defence improvements. Members were impressed by the level and scale of the flood defence works being undertaken and felt the site visit was of great benefit.
- 3.19 Londonderry Bridge on Durham Road, which is a major traffic route, was causing a restriction when flows were high during a weather event. The bridge was originally a 4 span bridge, two of which were completely blocked and was in the process of being demolished and replaced with a single span bridge of much greater capacity.



- 3.20 Other work involving walls and embankments was also taking place and a surface water scheme is being developed on the site of the former Wrensfield Adult Training Centre, which would collect surface water flows and store the water before releasing it back into Lustrum Beck.

- 3.21 The EA did a large amount of modelling of the beck to analyse the pinch points. The first pinch point found was at Primrose Hill culvert therefore it was decided to change the screen. The screen, which is the first of its kind, is a bespoke screen which can be lifted when there is a forecast of high water levels to stop the debris becoming trapped.



- 3.22 Phase 2 of the scheme is currently being planned involving natural flood risk management. This work in upland areas involves storing water on farmland before it actually gets into the beck being released slowly. The scheme on Lustrum Beck involves putting different types of measures in Coatham Wood and the Six Fields area to hold water back and release it more slowly. This will protect the residents downstream, and contribute to the earlier phases of the scheme, providing a standard of protection of 1 in 100 years. This means they will be able to purchase house insurance without additional penalties for increased likelihood of flooding.
- 3.23 Landowners have the main responsibility for safeguarding their land against flooding and as such farmland as featured in phase 2 of the scheme will be dependent on the way in which waterways that go through private land are maintained. Members were therefore interested to learn what powers SBC have to ensure farmers and landowners work with the Council.
- 3.24 Councils have limited powers under the Land and Drainage Act and officers stressed they were powers rather than duties with intervention only when there is a flood risk to properties which can involve a long legal process. SBC begin by talking to the land owners to avoid going through the legal process but if agreement is not reached then notice can be served. SBC would then be able to undertake necessary work and charge the land owner but any damage allows the Council to be countersued.
- 3.25 Whilst unable to influence what happens on farmers' fields SBC has previously allocated some of the highways budget to verges adjacent to highways where it was known there was water run-off. The verges were scraped which meant the carriageway was higher than the verge so the water wouldn't then flow onto the carriageway, alleviating the flooding issue.
- 3.27 A presentation was given by the Council's Commercial and Technical Services Manager which detailed the Council's operational procedures in dealing with flooding instances. It was highlighted that during winter months there is generally sufficient operational staff to deal with potential flooding issues however, during the summer months there is no official call-out procedure in place and therefore responses to flooding instances relies on staff goodwill.
- 3.28 The Committee felt that SBC would benefit from having a team of suitably trained operational officers with appropriate equipment to deal with flooding issues all year round.
- 3.29 There are approximately 49,000 highway gullies within the Borough and it is generally found that older areas of the Borough have smaller gullies which could potentially increase the risk of surface water flooding during extreme weather events. There are approximately 5,000 of this type of gully.
- 3.30 In order to assist with the above there are a number of computerised software systems available which are able to provide a robust evidence base, assist with future cleansing and maintenance programmes in addition to providing an asset management based replacement programme of gullies which would ultimately assist in reducing surface water flood risk.
- 3.31 There is a large amount of work being undertaken in the area of flood risk management and Members felt that there could be more awareness and publicity of this work.
- 3.32 The Committee observed the Stockton Borough Council Emergency Planning Unit's Exercise on 10 November which was based on dealing with a major flooding event in

the Borough. It was a table top exercise with the following aims and objectives to test the Major Incident Plan:

- To test the Ground Floor Conference room suitability as a Borough Emergency Centre.
- To test the roles and responsibilities within the plan.
- To test the lines of communication within the plan.
- Test recording of decisions and information.

- 3.33 The scenario was driven by the Cleveland Local Resilience Forum (LRF) risk register that places flooding in the very high risk sector. The exercise commenced with flooding in Yarm, this was followed by Lustrum at Oxbridge, Hartburn, and Newtown area.
- 3.35 Towards the end of the exercise, Lustrum Beck in the Tilery area flooded. The area has recently been incorporated into a revised flood warning area and has a large school (North Shore Academy) in the flood warning area. Therefore it was deemed an appropriate area to “stress test” the SBC response.
- 3.36 The scenarios led to requests for assistance from the Emergency Services for a range of services i.e. traffic management, rest centres, transportation, temporary defences and pumping equipment. The scenario also required input from SBC to various media outlets both traditional and social media.
- 3.37 Committee Members that attended thought the exercise was useful for them to get an understanding of the various roles that officers undertook and had a better appreciation of not adding to the workload of officers, with numerous requests for information that is being asked of councillors from residents.

RECOMMENDATIONS

The Committee recommend that:

- R1 SBC expand the annual report currently produced on flooding to ensure all flooding activities are formally recorded.
- R2 SBC further develop the expertise of the operatives currently engaged in dealing with flooding issues.
- R3 SBC produce a formal programme of replacement for older style gullies within the Borough in line with the principals of asset management and routine maintenance.
- R4 SBC evaluate the available bespoke software systems which can assist with future cleansing and maintenance programmes in addition to providing an asset management based replacement programme of gullies to ascertain if they would be suitable to use in this area moving forward in terms of resources, equipment and potential costs.

Flooding Responsibilities

Department for Environment, Food and Rural Affairs (Defra)	The lead Government department on flood policy and provides funding for Flood and Coastal Erosion Risk Management (FCERM) projects, predominantly through the Environment Agency and through grants in aid on a project by project basis to flood risk management authorities.
Department for Communities and Local Government (DCLG)	Impacts on flood risk management and recovery, for example through planning policy and through the funding it provides to local authorities.
Environment Agency (EA)	An executive non-departmental public body, sponsored by Defra. It is responsible for managing the risk of flooding from main rivers, estuaries, the sea and reservoirs. It is also responsible for taking a strategic overview of all sources of flooding and coastal erosion.
Regional Flood and Coastal Committees (RFCCs)	Established by the Environment Agency to direct flood risk management decisions in each region. They are comprised of members of the Environment Agency, the Lead Local Flood Authorities and independent members with relevant experience. The Environment Agency must consult with RFCCs about flood and coastal risk management work in their region and take their comments into consideration.
Lead Local Flood Authorities (LLFAs)	Stockton Borough Council as the unitary authority for the area is the Lead Local Flood Authorities (LLFAs) responsible for developing, maintaining and applying a local flood risk management strategy in the borough. The local strategy must be consistent with the national strategy and other risk management authorities must act consistently with the local strategy. LLFAs are also required to maintain a register of structures and features which are likely to have a significant effect on flood risk in their area. They also have lead responsibility for managing the risk of flooding from surface water, groundwater and ordinary watercourses.
Internal Drainage Boards (IDBs)	Independent public bodies carrying out water level management in low lying areas. They have permissive powers to manage water levels within their respective drainage districts. IDBs undertake works on ordinary watercourses to reduce flood risk to people and property and manage water levels to meet local needs.
Water and sewerage companies	Responsible for managing the risks of flooding from public sewer systems. These are usually in roads or public open spaces, but may run through private gardens.
Highways Authorities	Lead responsibility for providing and managing highway drainage and roadside ditches on the trunk roads and motorways.
Landowners	Main responsibility for safeguarding their land against flooding. The common law requires that property owners use their property or land in a way that does not increase the risk of flooding to a neighbouring property, for example by keeping drains clear within the property and maintaining any flood defences. The common law also allows property owners to take reasonable measure to protect their land and property from flooding, provided these measures do not cause harm to others.

The rights and responsibilities for those owning land or property which contains or is adjacent to a watercourse (known as riparian owners) have a responsibility to manage their own flood risk.

England and Wales: Roles and responsibilities for flood risk management delivery



