

<b>OVERVIEW AND SCRUTINY REVIEW PANEL – FLOOD RISK</b>
<b>MANAGEMENT AND GULLEY CLEANSING</b>
<b>20 JANUARY 2014</b>
<b>FLOOD RISK MANAGEMENT AND GULLEY CLEANSING</b>
<b>REPORT OF HEAD OF DEMOCRATIC SERVICES</b>

**1. Purpose**

To review any flooding events which have taken place in 2012/13 and the effectiveness of the gulley cleansing regime since the implementation of the 3 Cities Good Practice Guide in 2012/13, if this has prevented any localised flooding during 2012/13 and how are customers' expectations being managed?

**2. Action required**

The Panel is asked to note the scope for flood risk management and the gulley cleansing regime in light of the remit set by the Overview and Scrutiny Committee.

**3. Background information**

- 3.1 At its meeting on 3 July 2013, the Overview and Scrutiny Committee commissioned a review on any flooding events which have taken place in 2012/13 and the effectiveness of the gulley cleansing regime since the implementation of the 3 Cities Good Practice Guide in 2012/13, if this has prevented any localised flooding during 2012/13 and how are customers' expectations being managed?
- 3.2 The Flood and Water Management Act 2010 introduced powers for overview and scrutiny committees to scrutinise activity in relation to local flood risk management and an update on the arrangements with partners was presented to the Overview and Scrutiny Committee on 3 October 2012. As a result of the large proportion of properties that were flooded in 2007 were away from watercourses the Pitt Review 2008 recognised that the threat from surface water flooding was not effectively covered so now County and Unitary authorities have the role of Lead Local Flood Authority (LLFA) and Nottingham City Council is the LLFA for this area.
- 3.3 Legislation relating to flood risk management includes:
- Pitt Review 2008;
  - Flood Risk Regulations 2009;
  - Flood and Water Management Act 2010.
- 3.4 The partner agencies have the following different responsibilities as detailed in the Department for Environment, Food and Rural Affairs document, 'Flood Risk Management: information for flood risk management authorities, asset owners and local authorities'<sup>1</sup>:

---

<sup>1</sup> Flood risk management: information for flood risk management authorities, asset owners and local authorities - <https://www.gov.uk/flood-risk-management-information-for-flood-risk-management-authorities-asset-owners-and-local-authorities>

**Unitary and County authorities** are responsible for developing, maintaining and applying a strategy for local flood risk management in their areas and for maintaining a register of flood risk assets. They also have lead responsibility for managing the risk of flooding from surface water, groundwater and ordinary watercourses.

**Environment Agency** – has responsibility for Main Rivers and new strategic overview role.

**Severn Trent Water** – has responsibility for the foul and surface water sewer network.

3.5 All partners above have a 'Duty to co-operate' under the Flood and Water Management Act 2010 with each other and to share data. A key theme of the Pitt Review was for flood risk management authorities to work in partnership to deliver flood risk management better to the benefit of their communities.

3.6 At the Overview and Scrutiny Committee on 3 October 2012, it was confirmed that over 10,000 properties were at risk of surface water flooding. Flooding events were reported as a result of major storms resulting in heavy rainfall on 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup> and 10<sup>th</sup> July 2012 and it was reported the following actions worked well:

- Keeping watercourse grills clear helped to avoid flooding.
- Identifying Broxtowe Borough Council's blocked grill and working with them.
- Although roads, gardens, outbuildings and cellars were flooded, no internal flooding was reported.
- Highway Services repeatedly cleared road gullies in known hot spot areas. Street Services assisted where possible.
- There was good live communication between Councillors, Emergency Planning, Highway Services and Drainage throughout the events.
- Additional Gully cleaning vehicles and drivers were on standby for out of hours demand.

3.7 A review panel was established to carry out this piece of work in a single session. Based on the remit set by the Overview and Scrutiny Committee, a scope for the review has been drafted and is attached at Appendix 1.

3.8 As initial background information for the review an introductory briefing note on the gully cleansing regime and flood risk management are attached at Appendix 2 and Appendix 3 respectively.

#### **4. List of attached information**

The following information can be found in the appendices to this report:

**Appendix 1** – Draft scope

**Appendix 2** – Gully cleansing regime

**Appendix 3** - Flood risk management

#### **5. Background papers, other than published works or those disclosing exempt or confidential information**

None

**6. Published documents referred to in compiling this report**

Report and presentation to Overview and Scrutiny Committee held on 3 October 2013

Minutes of the Overview and Scrutiny Committee held on 3 October 2013

Minutes of the Overview and Scrutiny Committee held on 3 July 2013

**7. Wards affected**

Citywide

**8. Contact information**

Contact colleague

Angelika Kaufhold

Overview and Scrutiny Review Co-ordinator

[angelika.kaufhold@nottinghamcity.gov.uk](mailto:angelika.kaufhold@nottinghamcity.gov.uk)

0115 8764296



## **Overview and Scrutiny Review Scope – Flood risk management and gulley cleansing**

### **What is the broad remit set for the review?**

Flood risk management and gulley cleansing since the implementation of the 3 Cities Good Practice Guide in 2012/13.

### **What is the specific focus for the review?**

To review any flooding events which have taken place in 2012/13 and the effectiveness of the gulley cleansing regime since the implementation of the 3 Cities Good Practice Guide in 2012/13, if this has prevented any localised flooding during 2012/13 and how are customers' expectations being managed?

### **What are we trying to influence?**

How effective the partnership arrangements between the Council and its partners and to identify any areas which may need improvement

### **Do we need any experts/ specialists to sit on the panel with us?**

- Chris Capewell – Team Leader, Bridge/Drains, Highway Design
- Fay Bull – Flood Mitigation Manager
- Chris Keane – Highways Services Manager
- Representatives from SevernTrent and Environment Agency

### **What information do we need and who do we need to speak to?**

- What monitoring information is available for gulley cleansing, how is this benchmarked and does the service have specific performance indicators
- Has there been any changes to the Council's Flood Risk Management responsibilities since October 2012, if so, what are these and how is the Council addressing these?
- In high risk areas of surface flooding, has the implementation of the gulley cleansing regime made any difference in preventing any serious localised flooding?
- What difference has the implementation of the new 3 Cities Good Practice guide for gulley cleansing made?
- How are citizens complaints and comments being monitored and fed back into service?
- How do you manage citizen/councillor reports of blocked gulleys? What are the service standards and how does the Council compare with its neighbours?
- How do you manage customer expectations?

### **What methods will we use to get the information needed?**

Desk top research

Briefing papers provided by Scrutiny team and partner colleagues

### **What are the timescales for the review?**

1 x single session review to be held on 20 January 2014.



## City Services

### BRIEFING NOTE

#### Gully Surveying and Cleaning Service

#### Q1. What the expectations of the service are (what it delivers)

##### The gully maintenance programme

The overriding service aim is that all public highway gullies are cleaned a minimum of once every 12 months under a new cleansing regime and Highway Services have developed a detailed delivery programme as appended. This provides an outline of when planned gully maintenance work will be carried out with a locality focus.

New electronic systems have been installed to monitor the progress of the service – incabin tablet devices are being used to record maintenance outcomes at each gully location (cleared and jetted, parked car, structural work required etc) and operatives have been trained to input the data to better manage the asset.

The focus is on speed and ease of use for drivers – further utilisation can be incorporated with the potential for using the above process to record how much silt is in the gully on each visit. A risk based approach could then be put in place – putting more emphasis on those that need cleaning more regularly.

##### Provisions in place during adverse weather

We monitor all flood warnings from the Flood Forecasting Office, Natural Hazards Partnership and the Met Office and endeavour to provide guidance and assistance to citizens throughout the day and over weekends. Highway Service has a dedicated callout service to assist and these personnel are trained to use gully machines in order to respond to incidents/requests.

All gully machines are put in service, patrolling the known problem areas and dealing with problems and reacting to further reports and requests where possible. All known hot spots are checked, clearing as required and will further react to citizen requests and continually monitor.

##### Structural maintenance and capital improvements

In addition to routine maintenance, throughout the year new gully bowls, grates and frames are routinely installed, gully frames and lids are reset, broken pipe work and channels replaced and drainage connections checked. To note in the region of £40k was spent in 2012/13 undertaking structural repairs and this forms part of the highway safety inspection regime.

In response to the City's position as Lead Local Flood Authority the service has secured £50k in extra funding from DEFRA to undertake structural repairs to highway drainage which was historically prone to flooding. To note works have been completed in Western Boulevard, Wollaton Vale and Derby Road. Further, around 40 gullies have been replaced on Queens Drive and these are now operating effectively reducing the risk of road flooding.

## **Q2. Frequency of gully cleaning**

The gully service currently comprises of 3 vehicles that operate on a locality basis with a developed cyclical programme to clear gullies once a year. This includes a dedicated vehicle employed to attend to areas with known hot spots, emergencies and to respond to citizen requests for reactive work.

With the benefit of new apparatus and clear route planning the service has been able record outcomes and to date a 70% success rate has been achieved on the annual programme. No previous monitoring took place and the next step is to ensure the service targets to 100%.

Improvements made include an evening shift developed utilising broader resources from Street Services; this has been operating for six months to carry out additional cleaning on Nottingham's main arterial roads. These are drains on main roads (bus routes, major junctions etc) which have proven difficult to reach during the day. This initiative maximises vehicle use and has proven to be successful and plans are in place to train further personnel from Street Services to further support the maintenance programme.

Service improvements planned include increasing vehicle provision, building upon the locality focus will include Neighbourhood Services committing to having 4 machines operating under North, South and Central Districts together with and a dedicated machine to respond to reactive requests.

## **Q3. Length of time it takes to respond to requests for gully cleaning**

Citizen requests are prioritised - emergencies and properties at risk of flooding at attended on the day and this is supported by callout services.

Routine requests are prioritised and responded to based on need and vehicle capacity and to date some non urgent requests have taken up to 14 days to respond. In terms of the proposed improvement measures being put in place it is proposed to implement a 3 day response period, of course emergency requests are excluded from this timeframe.

In the past year the service attended 598 enquiries (roads) and cleaned a total of 1,069 gullies in response to requests.

## **Q4. The effectiveness of the revised cleansing approach implemented in 2012 – what monitoring is in place and outcomes?**

For all gully cleaning activities a record of the outcome for each visit is now recorded electronically and uploaded to our corporate asset management system. This information can then be viewed in map format an [internal website](#) has been developed in partnership with the Council's GIS team. We anticipate being able to make the intranet map viewer live on the Council's website soon.

In addition all of our vehicles are tracked through the Masternaut GPS tracking system. GPS tracking can enable a record to record mileage, monitor daily progress and to view where vehicles are working in real time.

Delivering the programme will always have challenges including:

- Parked cars; it is not always possible to gain access to the gullies to clean them
- Busy roads; working time restrictions means that the gullies on some routes cannot be readily cleaned during normal working hours

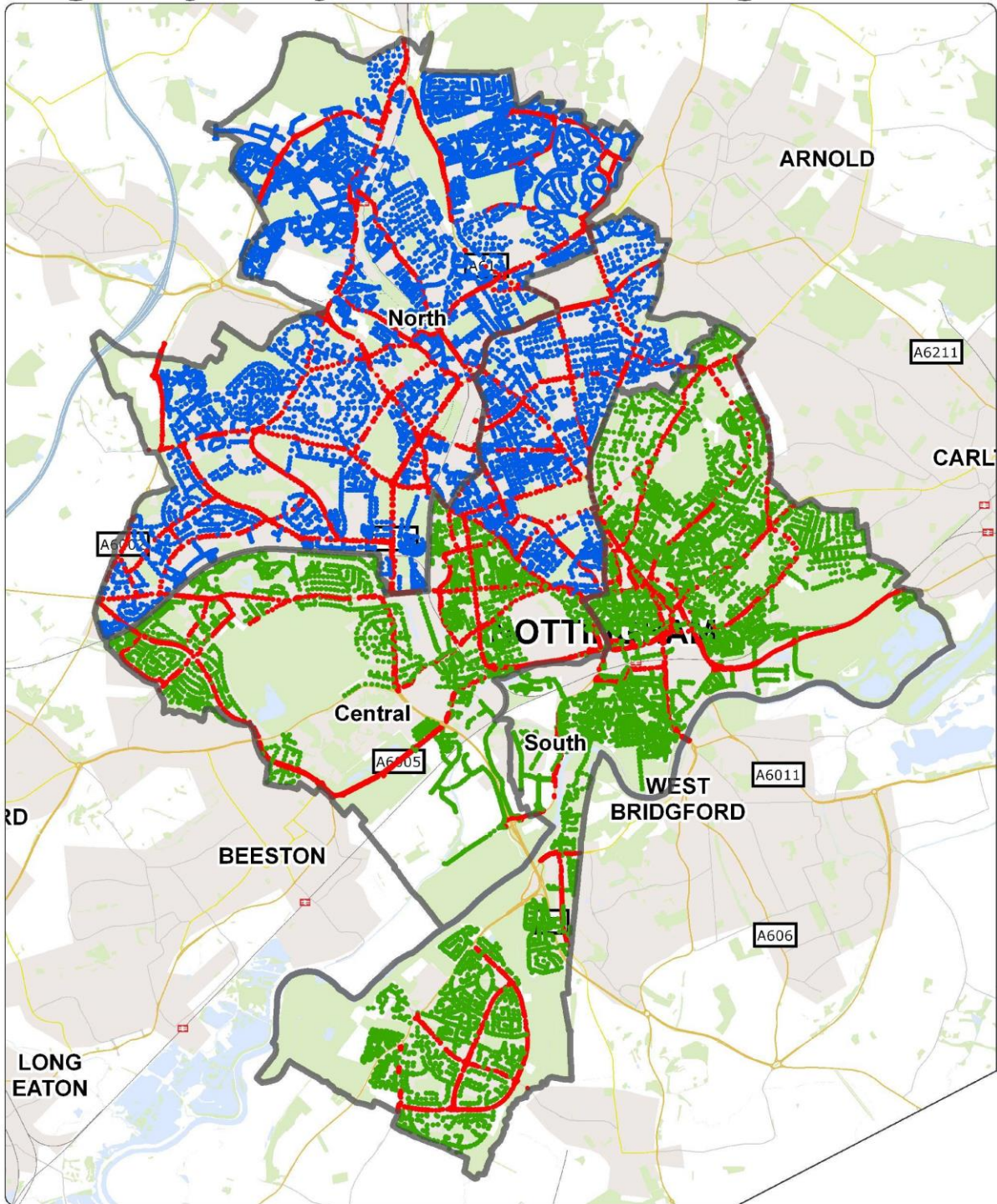
Subsequently it is not always possible to clean each gully each time the gully cleansing route is driven.



Improvements to date with increased asset knowledge, improved gully apparatus and the commitment to maximise vehicle use has assisted creating a good service with particular focus on response to citizens at risk and potential of flooding. Moving forward with new gully machines (increased fleet), monitoring processes and an integrated delivery approach utilising both highway and street services operatives will transform this into an excellent service.



# Highway Gully Maintenance Programme



Key

© Crown copyright and database right 2013. Ordnance Survey Licence number 100010217.

- Main Roads
- North
- South



### **Update on the Council's Flood Risk Management responsibilities and report of any flooding events since October 2012 and how effectively these were managed.**

#### **Background Information**

The Flood and Water Management Act 2010 (F&WMA) clarified and amended the roles of organisations involved in flood risk management and introduced a significant new role for the City Council as Lead Local Flood Authority. Flood risk management roles and responsibilities of the key organisations are summarised below:

- **The Environment Agency** has a strategic overview role for all forms flooding and are responsible for managing flood risk from major watercourses ('Main Rivers') including the River Trent, River Leen, Day Brook, Tottle Brook and Fairham Brook.
- **Nottingham City Council** is the Lead Local Flood Authority (LLFA) and Highway Authority. As LLFA, the City Council is responsible for managing flood risk from minor watercourses ('Ordinary Watercourses'), groundwater and surface water runoff.
- **Severn Trent Water** is the Water and Sewerage Company for the area. The organisation is responsible for the operation, maintenance and performance of the sewerage network across the City Council area.

All three organisations have a duty to co-operate and work together.

#### **Lead Local Flood Authority: Duties and Progress**

The Lead Local Flood Authority role is being introduced in stages as various parts of the legislation are enacted. No new sections of the Act have been implemented since October 2012, but in order to progress with implementing those new duties that had already been enacted, a new post of flood mitigation manager was filled in November 2012.

A summary of each of the main duties along with an update on progress is included below:

- **Local Flood Risk Management Strategy:** The City Council must develop, maintain, apply and monitor a strategy for managing local flood risk. 'Local' flood risk relates to flooding from surface water, minor ('Ordinary') watercourses and groundwater. The public must be consulted on the preparation of the Strategy.

In preparing for the Strategy, the first step has been to update the City Council's Surface Water Management Plan (SWMP). This document will be a key evidence base for the Strategy. The first draft of the Strategy document itself is being prepared and public consultation is planned for late spring.

- **Register of asset and features:** The City Council has received the most up-to-date data on flood risk management assets from key partners. This has been

collated into a simple geographical database to meet the requirements of the legislation. Over time, this will be improved by incorporating the register into the Council's asset management software, Confirm.

- **Formal flood investigations:** The City Council is responsible for undertaking formal flood investigations, but it is up to individual local authorities to determine when an investigation is necessary. The City Council is proposing to carry out formal investigations in the following circumstances:
  - Where five or more properties suffered internal flooding in a given location
  - In locations where internal flooding occurs frequently
  - In locations where the flooding mechanism is complex
- **Sustainable Drainage Systems (SuDS) Approving Body (SAB):** In April 2014 the final schedule of the Act is due to be implemented. This involves the City Council being responsible for approving surface water drainage design for new developments. Where a SuDS feature serves more than one property the LLFA will be required to adopt the feature and maintain it for the lifetime of the development. Defra has not yet released the final National Standards or guidance to support LLFAs in meeting this role, but the City Council continues to prepare for this new duty by setting up working groups.

## **Flood Events in the past 12 months**

### **November / December 2012 Flood Event**

In November and December 2012 prolonged rainfall across the Midlands caused levels in the River Trent to rise. The main impact on the City was the closure, on two occasions, of Queens Drive Park and Ride. The Park and Ride site is on the river-side of the flood defences and is expected to flood.

### **July 2013 Flood Event**

On 23rd July 2013, an intense summer storm passed over the north of the City, gaining intensity as it tracked north east into the County. The City Council's rain gauge at Bulwell measured 26mm of rainfall in just 30 minutes. Analysis has shown this to equate to a 1 in 36 year rainfall event.

The intense rainfall overwhelmed gullies and sewers across northern parts of the City resulting in overland flow and ponding in low lying areas. The main parts of the City that were affected include Bestwood, Bulwell, Sherwood and Top Valley.

The City Council received reports of over 100 domestic properties and 30 commercial properties suffering internal flooding. Wide spread areas were affected by external flooding of gardens and roads. In addition, there was extensive damage to the road surfaces and lifted manhole covers.

Highway Services worked through the night to support citizens that had been affected and make the highway safe. Over 250 sandbags were distributed to citizens, prioritised by those most at risk. Gullies and trash screens in key locations were cleared to ensure that they were operating effectively.



In order to support affected citizens the Drainage Team arranged for door to door enquiries to be conducted at all locations where internal flooding had been reported. Over 130 homes and businesses were visited. Where citizens were available, a door step interview was undertaken to gather vital information about the causes and impacts of flooding. Where citizens were not present, a questionnaire and letter were posted through the door and citizens were invited to respond by post. Over 70% of 'letter drops' were responded to. This information is vital to ensure that all organisations involved in flood risk management work can learn from this experience, and manage flood risk more effectively in the future.

### **Formal Flood Investigations**

In meeting the responsibilities of being a Lead Local Flood Authority, the City Council has initiated nine flood investigations under Section 19 of the Flood and Water Management Act 2010 following the flooding in July 2013. The broad locations of the investigations are included in Figure 1. These investigations are ongoing. Severn Trent Water is supporting many of these investigations by undertaking sophisticated computer modelling and CCTV surveying parts of the sewer network.

On completion the formal flood investigation reports will identify the source(s) of flooding and identify which organisation has responsibility for managing flood risk from this source. In addition to this statutory requirement, we will aim to outline broad options for managing flood risk at each site. These may involve changes to maintenance activities, capital works by the responsible organisation (subject to funding) and measures that citizens could take to reduce the impacts of flooding.

