

**Flood Investigation Report  
Hawkley Hall, Wigan**

**June 2016**

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## Revision Schedule

Wigan Council

Flood Investigation Report

### Revisions

Rev	Date	Details	Prepared	Reviewed	Approved
1	23/06/2016		LM	AC	MT
2	03/09/2016	Numbers amended	LM	AC	MT
3	15/12/2016	EA Response added	LM	AC	MT

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## **Executive Summary**

This Flood Investigation Report has been completed by Wigan Council under our duties as the Lead Local Flood Authority (LLFA). Section 19 of the Flood and Water Management Act 2010 (FWMA) states that on becoming aware of a flood in our area, when appropriate, we must investigate the relevant flood risk management authorities involved and find out which flood risk management functions have been, or will be taken, if any.

In June 2016 local residents from the Colby Road, Fulbeck Avenue and Atholl Grove area of Wigan reported surface water surcharging from the public sewers and Hawkley Brook.

It was deemed necessary by Wigan Council to complete an investigation of the above flood incident. This report provides a summary of the actions being carried out by each of the authorities involved; activities include general inspection, man entry surveys of the culverted watercourse, as well as engaging with landowners and the local Community.

Surface water flooding was reported by local residents in June 2016 which required the attendance of council staff to assist in the deployment of sandbags and removal of surface water.

The flooding on Colby Road and Fulbeck Avenue has been attributed to localised, unprecedented rainfall that saw the levels in Hawkley Brook rise to a point that discharge of the public sewers to the Brook was not possible, leading to the sewers backing up and surcharging through the manholes. The residents of Atholl Grove reported issues due to fluvial flooding from Hawkley Brook. The Brook overtopped to the rear of 47 Atholl Grove and flowed across to flood 14 and 16 Atholl Grove causing damage to furniture and fittings.

## 1. Introduction

Wigan Council as the Lead Local Flood Authority (LLFA) has a responsibility under Section 19 of the Flood and Water Management Act 2010 to investigate and report flood events in the Wigan Borough.

Section 19 states that:

- (1) On becoming aware of a flood in its area, a lead local flood authority must, to the extent that it considers necessary or appropriate, investigate
  - a. Which risk management authorities have relevant flood risk management functions, and
  - b. Whether each of those risk management authorities has exercised, or is proposing to exercise, those functions in response to the flood.
- (2) Where an authority carried out an investigation under subsection (1) it must –
  - a. Publish the results of its investigation, and
  - b. Notify and relevant risk management authorities.

**A formal investigation will be undertaken when one or more of the following occurs:**

- There is a risk to life
- Weight of public, media, political and planning interest
- Impact on critical services
- Internal residential property flooding of more than 5 properties
- Economic disruption
- Impact on critical infrastructure and installations
- Frequency of flooding.

### 1.1 Flood Event

An investigation into the recent and previous flood incidents at this location was executed due to more than one residential property flooding internally.

On the 14<sup>th</sup> June 2016 a total of 20 properties flooded internally within the area due to the unprecedented level of rainfall that fell in a short period of time throughout the Borough, with 16 of those being within the Hawkley Hall Area.

#### Properties flooded

Numbers	Address
1,3,5,7,14,15,16,18,44	Colby Road, Hawkley Hall, Wigan. WN3 5NP
14,16	Atholl Grove, Hawkley Hall, Wigan. WN3 5NB
4,6,8,10	Cavendish Drive, Winstanley, Wigan. WN3 6HH
46,48,54,56,58	Fulbeck Avenue, Hawkley Hall, Wigan. WN3 5QN

The council has no record of flooding occurring at Fulbeck Avenue or Colby Road prior to this event. However, the resident at 47 Atholl Grove has previously experience flooding to her garden due to Hawkley Brook overtopping.

Sandbags and pumps were deployed to site to limit damage to properties.

## 2. The Drainage System

The primary source of flood risk is caused by a combination of Hawkley Brook and the public sewer system.

Hawkley Brook is classified as a main river at this location and as such the Environment Agency has a responsibility to monitor its status against the objectives set.

The public sewers are the responsibility of United Utilities.

The main cause of flooding on the 14<sup>th</sup> June 2016 has been attributed to high levels in Hawkley Brook not accepting discharge from the surface water sewer, leading to water backing up through the sewer system and surcharging through manholes.

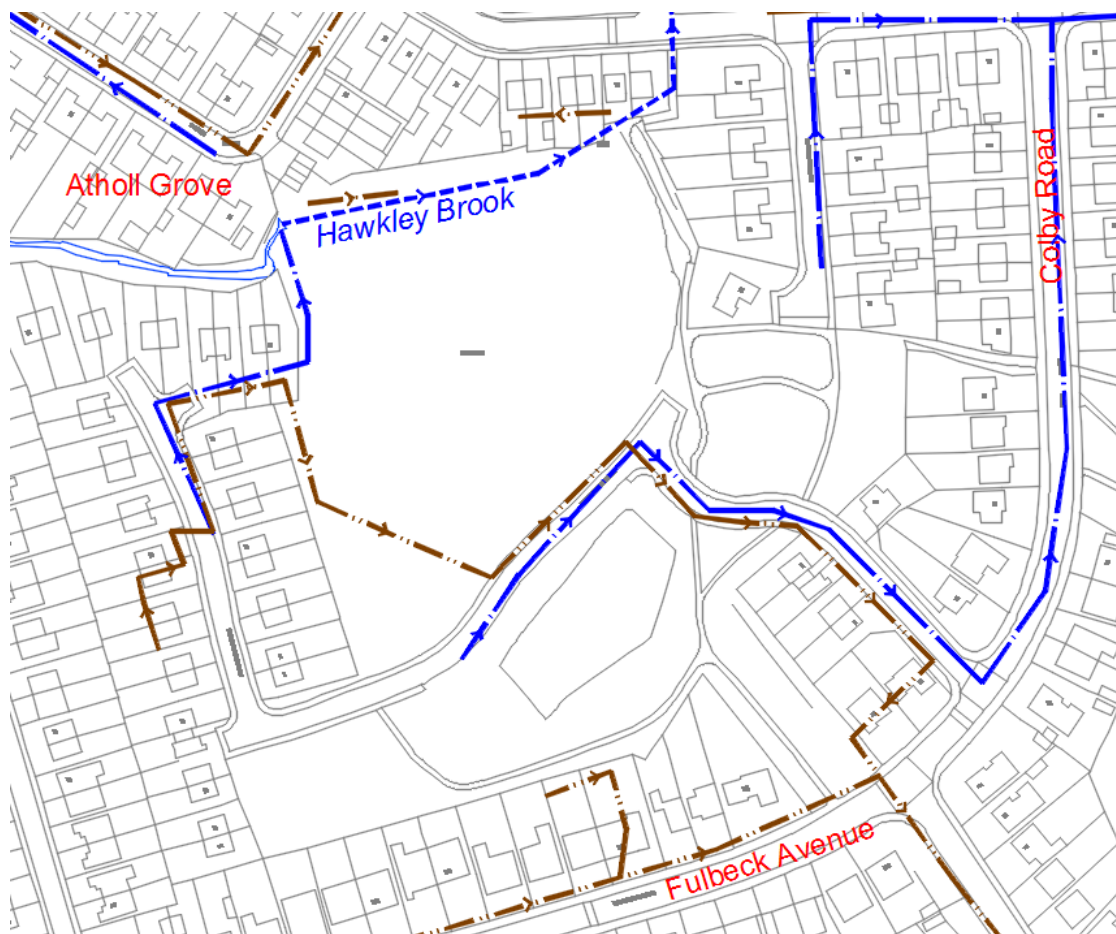


Figure 1 – Public Sewer Plan

### **3. Flood History**

The council hold no records of previous flooding to any property on Colby Road or Fulbeck Avenue.

However, there are a number of records for 47 Atholl Grove, with the resident experiencing flooding to her garden on 3 occasions prior to this event. All of which have been due to issues with Hawkey Brook overtopping to the rear of her property.

### **4. Rights and Responsibilities**

#### **4.1 Lead Local Flood Authority**

As stated within the introduction, Wigan Council as the LLFA has a responsibility to investigate flood incidents under Section 19 of the Flood and Water Management Act. The Act gave the Council a strategic role in overseeing the management of local flood risk i.e. flood risk from surface water runoff, groundwater and ordinary watercourses such as streams and ditches. It gives the Council the following new responsibilities:

- To develop, maintain, apply and monitor a record about each structure or feature, including the ownership and state of repair of assets which have a significant effect on flooding
- To designate structures and features that affect flooding
- To keep record of flooding hotspots across the Borough.

As the LLFA, Wigan Council will be looking for support from other authorities to ensure flood incidents are reported, and any assets which have a significant effect on flood risk are recorded on the asset register.

While Wigan Council can suggest possible causes of flooding and make recommendations to ensure flood risk is mitigated as far as possible, the Flood and Water Management Act does not provide Wigan Council with the mandate or funding to tackle all identified causes of flooding.

Wigan Council also have powers under Section 25 of the Land Drainage Act 1991 to serve notice on any persons impeding the flow of a watercourse and causing an increase in flood risk.

#### **4.2 Environment Agency**

The Environment Agency (EA) has permissive powers to carry out maintenance work on main rivers under Section 165 of the Water Resources Act.

The EA will also encourage third party asset owners to maintain their property in appropriate condition and take enforcement action where it is appropriate. They may consider undertaking maintenance or repair of third part assets only where it can be justified in order to safeguard the public interest and where other options are not appropriate.

The frequency of EA maintenance activities is primarily risk based, and activities comprise of vegetation management and clearance of blockages as and when is required.

#### **4.3 United Utilities**

United Utilities maintain a register of properties at risk of flooding due to a hydraulic overload in the sewerage network, known as the DG5 register.

The DG5 register is a register of properties and areas that have suffered or are likely to suffer flooding from public foul, combined or surface water sewers due to overloading of the sewerage system more frequently than the relevant period.

As part of their obligation to Ofwat, United Utilities are required to undertake capacity improvements to alleviate sewer flooding problems on the DG5 register during the current Asset Management Period (2010 – 15) with priority being given to more frequent internal flooding problems. It is important to identify solutions that are robust and cost beneficial.

An essential flood risk management duty is defined under the Section 94 of the Water Industry Act 1991, which states that Water and Sewerage Companies (WaSCs) have a duty to provide, maintain and operate systems of public sewers and works for the purpose of effectually draining an area.

However, there is no legal duty or responsibility relating to highway drainage, land drainage and watercourses, with the exception of that WaSCs can accept highway drainage by agreement with a Highway Authority.

United Utilities have no records of call outs to the area on this occasion. The area engineer explains that the storm events were found to be of a 1 in 210 year return period which would account for a lot of overland flow, but as they have had no requests for visits they have not yet carried out any investigations in the area.

#### **4.4 Residents**

Wigan residents who are aware that they are at risk of flooding should take action to ensure that they and their properties are protected. Community resilience is important in providing information and support to each other if flooding is anticipated.

Actions taken can include laying sandbags and moving valuable items to higher ground, to more permanent measures such as installing floodgates, raising electrical sockets and fitting non-return valves on pipes.

Anyone affected by flooding should try to document as much information about the incident as possible. Wigan Council should be contacted and will make a record of the details provided.

If flooding occurs due to a main river residents are advised to report incidents to the EA, by calling 0345 988 1188.



## 5. Recommendations

The method for prioritising works on watercourses varies for each risk management authority involved, and is dependant on factors such as resources available, operational area, and interpretation of flood risk.

**Table 1** Recommendations

<b>Authority/ Stakeholder</b>	<b>Recommended Actions</b>
LLFA (Wigan Council)	<ul style="list-style-type: none"> <li>• Facilitate sharing of information between risk management authorities, and the community.</li> <li>• Keep a record of all flood incidents and significant flood risk assets within the area.</li> <li>• Ensure the owners of culverts and watercourses within the area are aware of their responsibilities.</li> <li>• Where the condition of a watercourse is such that ordinary flows are being impeded and the risk of flooding increased, the LLFA should ensure the owner of that watercourse remedies the condition.</li> <li>• Determine any application to works affecting the watercourse and ensure such proposals are appropriate.</li> </ul>
Environment Agency	<ul style="list-style-type: none"> <li>• Continue to work in partnership with other authorities, providing information and comments when appropriate.</li> <li>• Assist with finding a solution as the cause of flooding was partially due to overtopping of the main river.</li> </ul>
Residents	<ul style="list-style-type: none"> <li>• Take measures to protect themselves and their property when flooding is imminent.</li> <li>• Document and photograph flood incidents where possible, report flooding to the EA, UU and Wigan Council.</li> </ul>

## 6. Conclusions

The Environment Agency, using existing hydraulic modelling, have investigated the feasibility of a raised flood wall/fence solution which would prevent flood water spilling from Hawkley Brook onto Atholl Grove during a 1 in 50 and 1 in 100 year flood, whilst using the area of woodland on the opposite bank to provide extra flood storage. Unfortunately the existing hydraulic model does not have the required detail to confidently justify the design and build of such a scheme. In addition, the culvert immediately downstream of this location has limited capacity meaning that this may be the main driver of flood risk. A more detailed hydraulic model will need to be built to fully understand the flood risk.

Next year, the Environment Agency will be conducting Initial Assessments in flood prone areas, particularly those affected by flooding during and since the winter floods of 2015. An Initial Assessment looks at various methods that could be implemented to reduce flood risk and provides a cost-benefit score for those methods. Results of these allows the Environment Agency to prioritise where they spend money to reduce risk. Hawkley Brook and its unnamed tributary are included (for their full main river lengths). The Environment Agency will investigate gaining better access to the open channel section (adjacent to Atholl Grove) for their Operations Teams. This alone would reduce flood risk because channel clearance works will be better enabled.

## **Useful Contacts and Links**

### **Wigan Council**

The Environment Services Helpline Tel: 01942 404364

E-mail: [eshelpline@wigan.gov.uk](mailto:eshelpline@wigan.gov.uk)

Out of office hours in an emergency, Central Watch – 01942 404040

### **Land Drainage in Wigan**

<http://www.wigan.gov.uk/Services/Environment/DrainsSewers/Landdrainageditchesandstreams.htm>

### **Environment Agency**

General Enquiries 03708 506 506 (Mon-Fri, 8am - 6pm)

Incident Hotline 0800 80 70 60 (24hrs)

EA Floodline 0845 988 1188 (24hrs)

e-mail: [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)

### **United Utilities**

Tel 08456020406 (24Hrs)

<http://www.unitedutilities.com/default.aspx>

### **Highways Act 1980:**

<http://www.legislation.gov.uk/ukpga/1980/66/contents>

### **Water Resources Act 1991:**

<http://www.legislation.gov.uk/ukpga/1991/57/contents>

### **Land Drainage Act 1991:**

<http://www.legislation.gov.uk/ukpga/1991/59/contents>

### **EA - 'Living on the Edge' a guide to the rights and responsibilities of riverside occupation:**

<http://www.environment-agency.gov.uk/homeandleisure/floods/31626.aspx>

### **EA - River and Coastal Maintenance Programmes:**

<http://www.environment-agency.gov.uk/homeandleisure/floods/109548.aspx>

### **EA - Prepare your Property for Flooding:**

How to reduce flood damage

Flood protection products and services

<http://www.environment-agency.gov.uk/homeandleisure/floods/31644.aspx>

### **The National Flood Forum**

[www.floodforum.org.uk](http://www.floodforum.org.uk)

Tel: 01299 403 055