

York 13th August 2018 Section 19 Surface Water Flood Investigation



Revision Schedule
City of York Council

Rev	Date	Details
1	18/01/19	SW first draft for comment from partners
2	18/02/19	SW Final report inc partner comment

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Annex 1

Executive Summary

Intense rainfall fell on the city of York and the surrounding area on the afternoon of 13th August 2018, rainfall intensities in excess of 100mm per hour were recorded at a number of locations in the city.

Annex 1 of this report details 123 locations of recorded flooding ranging from flooded roads, flooded gardens and in a small number of cases flooding of property.

City of York Council investigated all recorded incidents and worked on further investigations with partners in Yorkshire Water and the Foss (2008) Internal Drainage Board to gather further information on the impacts and causes of flooding.

Highway drainage and sewerage infrastructure is designed to collect and convey a wide range of expected rainfall events, however, a rainfall intensity of 100mm per hour would test and exceed the drainage capability of any infrastructure in any town or city. Standing water on roads and surrounding areas is inevitable in storms of such intensity, Annex 1 reports the locations where no significant defects were found in highway or sewerage infrastructure and the resultant flooding is expected to be a consequence of the intensity of the rainfall alone. However, Annex 1 does recommend improvements in some of these locations in an attempt to improve the resilience of the drainage network in future storm events.

The likelihood of flooding in a number of locations was potentially increased due to identified defects in the drainage infrastructure, these are detailed in Annex 1 and further detail on the causes of flooding at these locations is provided in section 3 of this report.

In many locations investigations and resulting works have resolved these issues but a number of interventions are still to be carried out, these are detailed in section 5 of this report.

In all cases the underlying issues arose from the intensity of the rainfall, in some cases existing infrastructure was unable to cope and in others identified defects in the infrastructure is likely to have increased the chances of flooding occurring. In recognition of this a range of strategic recommendations are made alongside site specific interventions in section 5, these aim to provide increased understanding and awareness of the risk of surface water flooding across our communities.

Steve Wragg

Flood Risk Manager

City of York Council

January 2019

Introduction

1.1 LLFA Investigation

City of York Council (CYC) as the Lead Local Flood Authority (LLFA) has a responsibility to record and report flood incidents as detailed within Section 19 of the Flood and Water Management Act (2010):

Section 19

(1) On becoming aware of a flood in its area, a lead local flood authority must, to the extent that it considers it 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 carries out an investigation under subsection (1) it must:

(a) publish the results of its investigation, and

(b) notify any relevant risk management authorities.

It was deemed necessary to complete an investigation into the flood incident on 13th August 2018 as a significant number of properties, businesses and many roads were reported as flooded.

This report provides the details of the conditions leading to the flooding, the impacts of the flooding, and the roles and responsibilities of all operating authorities in the area. Recommendations and conclusions are given, and further investigations from relevant authorities may be required to deliver these.

1.2 Site Location

More than 40mm of rain fell on large areas of the city in just over 15 minutes on the 13th August 2018, the intense nature of the storm led to significant areas of the cities road network being impacted by standing water and drainage systems were unable to cope. A number of properties were internally flooded and outbuildings and gardens of a greater number of properties were similarly affected.

Figure 1 below details the locations that were affected on the day. Council officers have led investigations in all 123 locations detailed in Annex 1 supported by all partners. Due to the intensity of the rainfall a wider area of the city experienced standing water on the highway and other locations may have been affected even if not reported in Annex 1, a number of the recommendations in Section 5 reflect this.

Figure 1 shows the location of significant flooding detailed in Annex 1, wider areas of the highway network which suffered from standing water and temporary blockages are not shown on the map.

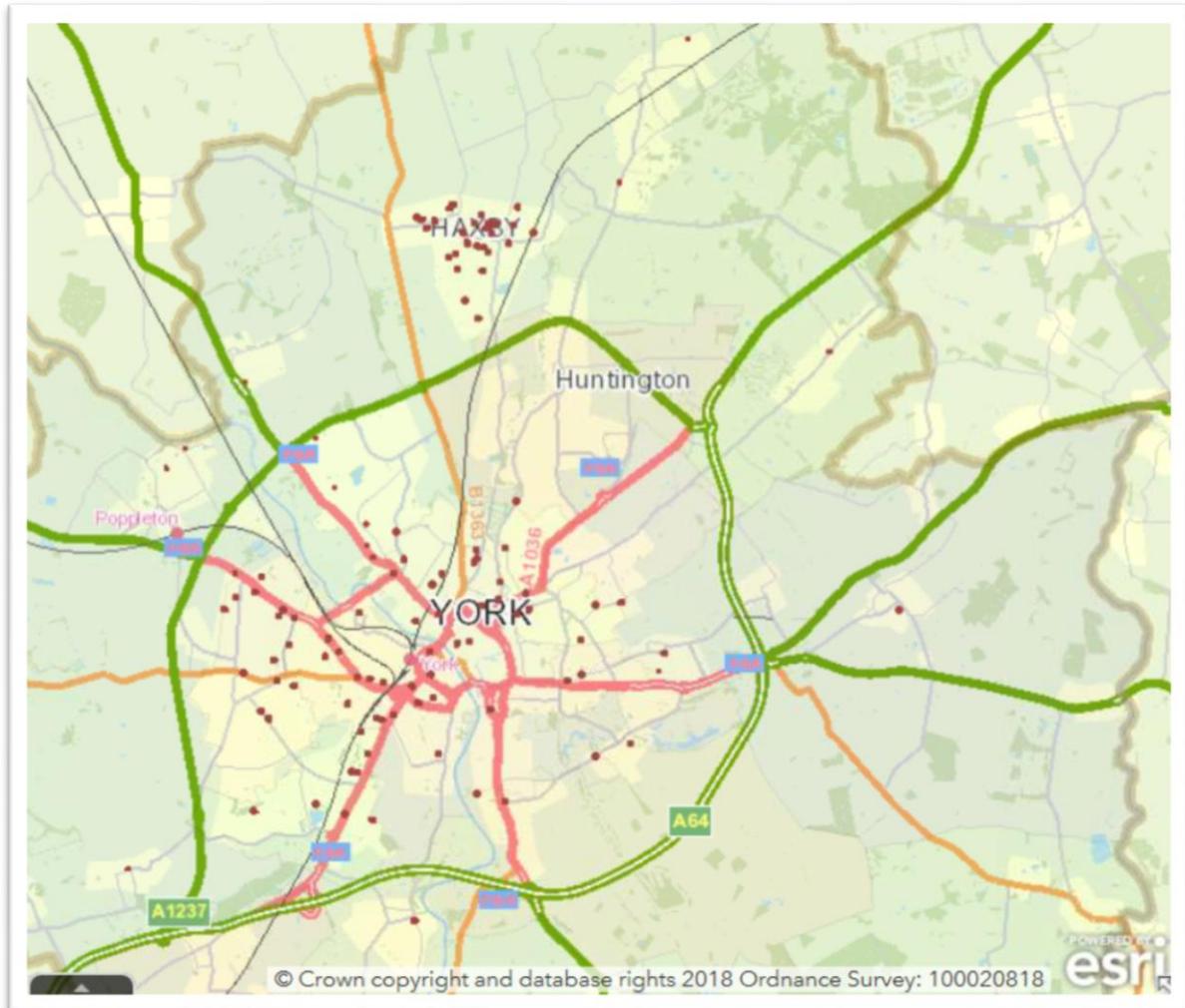


Figure 1 – indicative map of flooded locations

1.3 Local Drainage System

The city of York is located in the Vale of York on the confluence of the rivers Ouse and Foss. Centred on this urban core, the administrative area extends to include villages of varying sizes and largely rural land with the River Derwent forming the eastern boundary.

Being on the confluence of the Rivers Ouse and Foss, York is well known for flooding from those rivers, with approximately 3400 homes and businesses at risk.

Surface water flooding occurs when rainfall exceeds the capacity of open or piped systems or cannot soak into the ground. It typically occurs because of high intensity rainfall and can be aggravated by pipe or ditch blockage.

Surface water flooding is difficult to predict and record due to its very localised effects and usually brief duration. The effect of events that have been recorded, notably in the summer of 2007, 2012 and 2013, are of localised flooding at various locations, different on each occasion, across the city. This pattern is typical in the Councils area as a whole and is considered to be due to the flat topography which does not cause rapid runoff on a large scale.

The Environment Agency (EA) produced the Updated Flood Map for Surface Water (uFMfSW) to assist LLFAs in assessing surface water flood risk this shows modelled predicted flood effects of two events (1 in 30 annual chance and 1 in 200 annual chance) and two depth bandings (greater than 0.1m and greater than 0.3m flooded depth).

On the basis of observed events, it has been found that the uFMfSW is a reliable indicator of potential surface water flood risk locations.

The Council's Surface Water Management Plan (SWMP) established that there was a lack of knowledge of the location, extent and condition of surface water infrastructure in the council's area. It identified that ineffective maintenance resulted in problems with blocked drains compounded by the flatness of the Councils area that can increase surface water flood risk on a local scale. It also concluded that the areas that have been affected by surface water are unconnected with those suffering fluvial (river) flooding and that, throughout the Councils area, there is not considered to be a link between the two types of event. Surface water flooding in 2012 and 2013 further confirmed this conclusion.

Since the publication of the SWMP CYC have invested in the investigation, cleansing and logging of all gully asset data on an in-house developed database and digital data capture system. This multi year programme will finish in 2019/2020, at this time all gullies across the city will have been cleansed and their condition identified and recorded to inform future cleansing needs, see recommendations in section 5.

Rainwater falling on impermeable surfaces in developed areas drains into either surface water or combined sewers (which convey both surface water and sewage) or directly to watercourses. Until approximately eighty years ago the use of combined sewers was standard practice, with excess flow in times of storm discharged through combined sewer overflows to an adjacent watercourse. A large part of the central core of the city of York is still drained in this way. Post 1930s development is largely drained by separate sewerage systems with surface water sewers ultimately discharging to local watercourses. Flooding can result when the sewers are overwhelmed by intense rainfall and this can be aggravated by inadequate capacity or blockage.

Yorkshire Water Services (YWS) is the water and sewerage company serving the York area. Overall, the sewerage system has remained largely unchanged over the years, but at some locations, schemes have been implemented to address local flooding issues.

Reduced hydraulic capacity from siltation is a particular problem in York due to the flatness of the area and the difficulty in designing sewerage systems that are self

cleansing i.e. provides sewer flow velocities sufficient to pick up and disperse solids. This is also the case with piped and open systems in other ownerships.

2. Drainage History

2.1 Previous Surface Water Flood Incidents

Surface water events have been spread over isolated areas of the city on a number of occasions in the last 10 years, in some instances minimal rainfall has been recorded in parts of the city when others have had roads, gardens and in extreme circumstances flooded properties following cloudbursts.

Surface water flooding affected the city in the summer months of 2007, 2012, 2013 and 2014. A small number of properties were affected in 2007, 2012 and 2013.

2.2 13th August 2018

The forecast for 13th August 2018 highlighted the potential for thundery downpours, on Sunday 12th August the Flood Guidance Statement indicated a very low likelihood of a significant impact occurring, this was updated at 10.30am on the 13th to detail a low likelihood of significant impact see Figures 2 and 3.

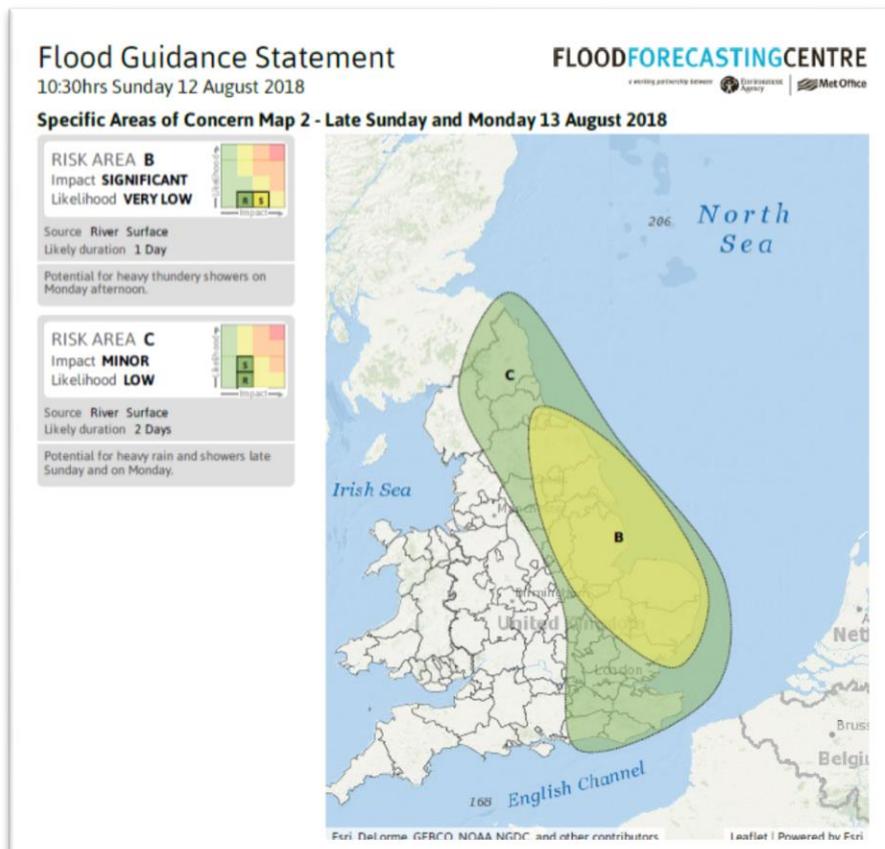


Figure 2 – Flood Guidance Statement 10:30hrs 12 August 2018

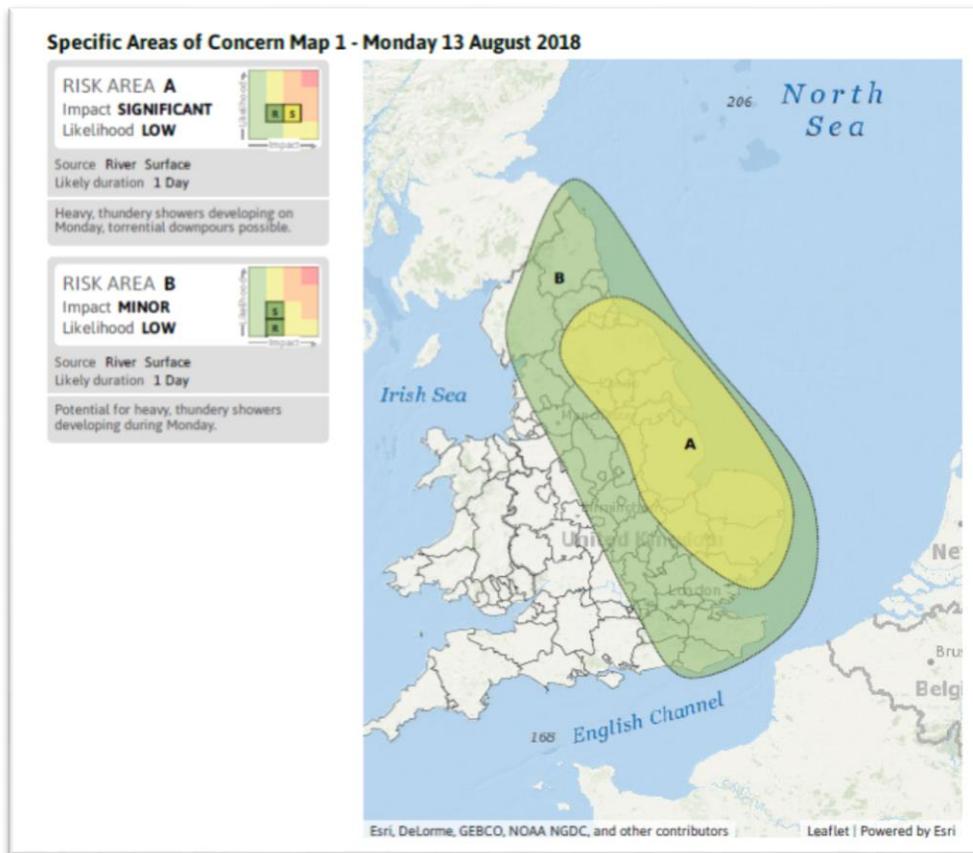


Figure 3 – Flood Guidance Statement 10:30hrs Monday 13 August 2018

Two bands of rain were forecast with the earlier band of rain at 1pm leading to visibly heavy rainfall and an expected disruption to pedestrians and road users but no notable impacts were recorded. The forecast detailed that a further intense band of rain would hit the city during the late afternoon, although the intensity of the rainfall >32mm/hr was accurate the duration was longer than expected. This is a common problem with forecasting of intense summer rainfall events.

Figure 4 details the outputs from the Met Office Hazard Manager tool available to CYC, the sequence of figures illustrate how the intense rainfall - >32mm/hr – slowed and sat over the city leading to significant rainfall volumes falling on already surcharged drainage systems.

Rain gauges recorded more than 40mm of rainfall in less than 20 minutes in some parts of the city, this is in excess of 120mm/hr.

Two CYC tankers and crews were on standby and mobilised for both rainfall events and the crews attended a range of reported issues during the afternoon and early evening, Annex 1 details the reports received by the council, via the media and via partners information.

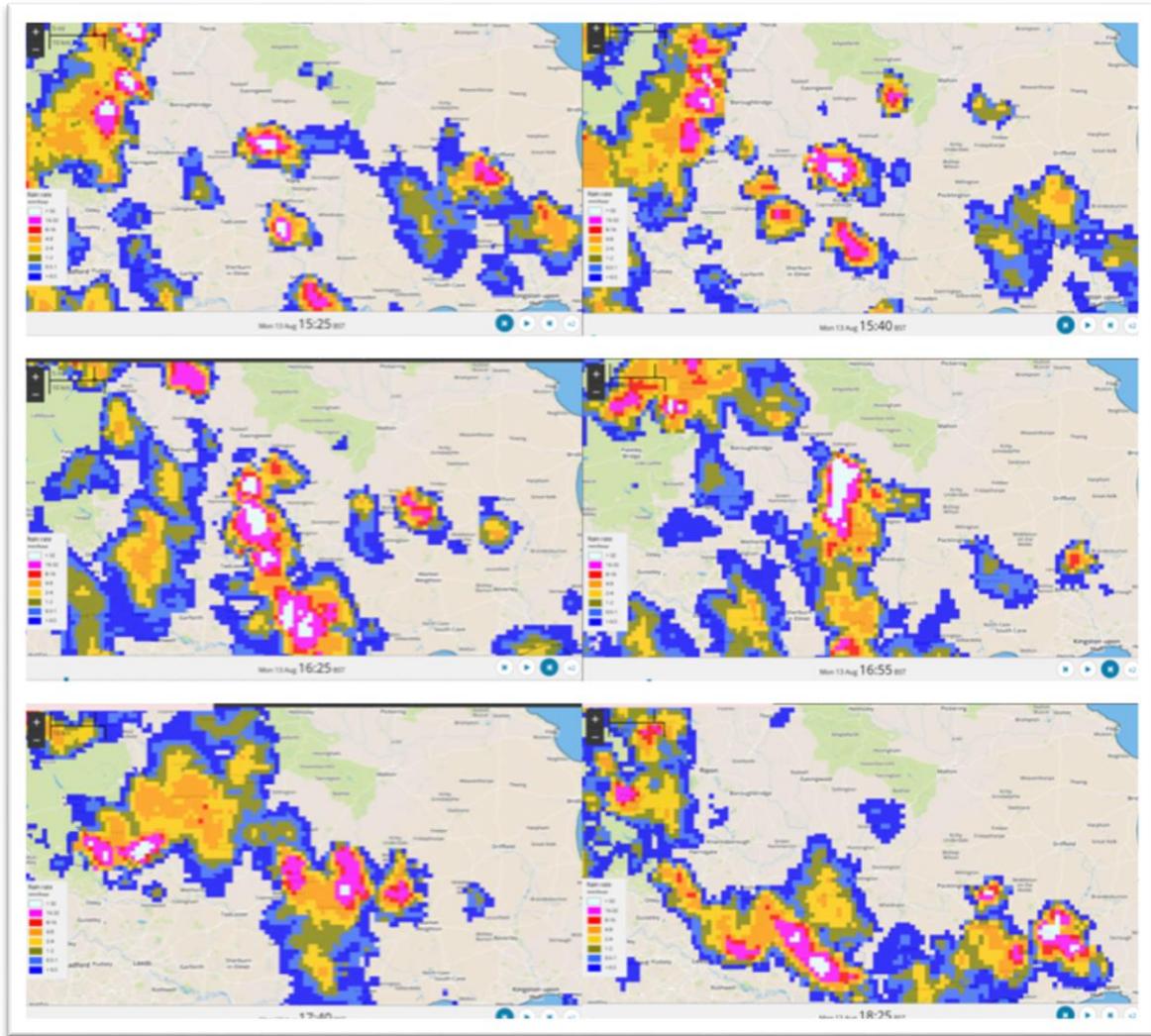


Figure 4 – Hazard Manager Rainfall Radar 13 August 2018

3. Possible Causes

The following section identifies the key issues identified in the event across all areas of the city and should be read in conjunction with Annex 1 of this report where individual roads, their investigations and recommendations are fully referenced.

The reports of issues were obtained from council reports, emergency services records, media reporting and social media posts. It is not expected that the 123 reports in annex 1 of this report are an exhaustive list of all issues experienced and further reporting of issues will be followed up as required.

Given the extreme rainfall rate across the city it is highly likely that problems would have occurred as any drainage system would struggle to convey such flows, however a number of reoccurring issues have been identified and these are detailed below and in Annex 1. In many cases they have been resolved but we will work with partners to deliver potential solutions in remaining areas. This may require

investment (from CYC and/or partners) to manage exceedance rainfall events in excess of normal practice, however this may be required to reduce the impact to properties and key arterial transport routes in the city.

Acomb

A wide range of areas in the Acomb ward were affected due to the intense nature of the rainfall, however, investigations have shown locations where CYC and Yorkshire Water infrastructure required relatively simple maintenance – see lines 6 and 8 in annex 1 – but on some occasions these were repeat problems and works have been required on several occasions. Yorkshire Water are aware of the ongoing issues on Front Street and the work carried out will have made the system more resilient to future storm events, we will continue to monitor this closely. Other locations such as the affected section of Wetherby Road have been highlighted as requiring a more frequent gulley cleanse, this is considered in the Recommendations section.

A collection of reoccurring problems were experienced around the Carr Lane / Sitwell Grove / Cranbrook Avenue area. Investigations have shown that the surface water drainage system in this area has been amended through subsequent road improvements, other developments and changes made to accommodate services below the road/footway surface. The area where the Boroughbridge Road highway drainage meets the surface water drainage from Carr Lane and the Sitwell/Cranbrook surface water drainage served by the Carr Drain culvert has very little gradient and changes to the levels in the intersecting drainage infrastructure has led to a reduction in flow rates in the pipe work leading to elevated levels and a system that can be easily 'surcharged' (where water within below ground drainage infrastructure exceeds its capacity and floods above ground through manholes, road gulley's etc) in heavy rain.

A capital works scheme is being developed to improve the system and to restore a more efficient conveyance, this scheme is intended to be delivered before the end of the 2018/19 financial year.

Bishopthorpe

Although a significant number of roads, footways and open land were likely to have suffered from standing water as a consequence of the intensity of the rainfall only one location has been reported as being significantly affected in annex 1, reactive maintenance was carried out on this occasion.

Clifton

The outstanding issues in Clifton Ward are predominantly linked to the significant highway flooding which has historically occurred along the length of the culverted section of Burdyke. The watercourse is culverted and in times of flooding flows are pumped into the River Ouse by the pumping station in the grounds of St Peters School. The pumping station is to be considered as part of the York Flood Alleviation Scheme and any improvements could provide surface water drainage benefits for the area around Clifton Green. However, this is a complex set of drainage

infrastructure with river, sewerage and surface water infrastructure in close proximity with some interaction between the systems, a recommendation is made in this report for a holistic study of the system to be carried out to identify any required improvement works.

Dringhouses & Woodthorpe

A range of investigations in Dringhouses and Woodthorpe have identified minor maintenance requirements on the CYC and Yorkshire Water maintained infrastructure, repeat problems on Tadcaster Road and White House Dale require continued investigation from both authorities.

Fishergate

The two incidents reported in the ward have both been investigated and minor works have been carried out/planned.

Fulford & Heslington

All issues in the ward were related to surface water flooding of roads, a small number of minor maintenance issues have been found and implemented.

Guildhall

Investigations and minor works have been carried out across the incidents reported in the ward, the drainage infrastructure in King Square requires regular cleansing to effectively drain this area and regular reports are received after heavy rainfall in this area, recommendations on the design of drainage infrastructure in regeneration projects are made in relation to this.

Haxby & Wigginton

A significant number of all reports were centred on this ward, see Annex 1, issues ranged from minor road flooding through to significant blockages of roads or flooded gardens and unfortunately in a number of cases internal flooding of properties.

Surface water drainage in Haxby & Wigginton effectively drains in two separate directions, the majority of flows drain south and west to Westfield Beck and are pumped by the Westfield Beck pumping station in times of flood, flows in the north east of the ward drain towards the Strensall system, Figure 5 below gives an indicative illustration of the area that drains to the Westfield Beck Pumping Station.

The pumping station is essential to ensure that the surface drainage system can discharge effectively and levels within the highway and surface water sewerage system that discharge to it are as low as possible. However, a range of investigations identified issues that were affecting the efficient drainage of the immediate highway or sewerage connections irrespective of the influence of the pumping station.

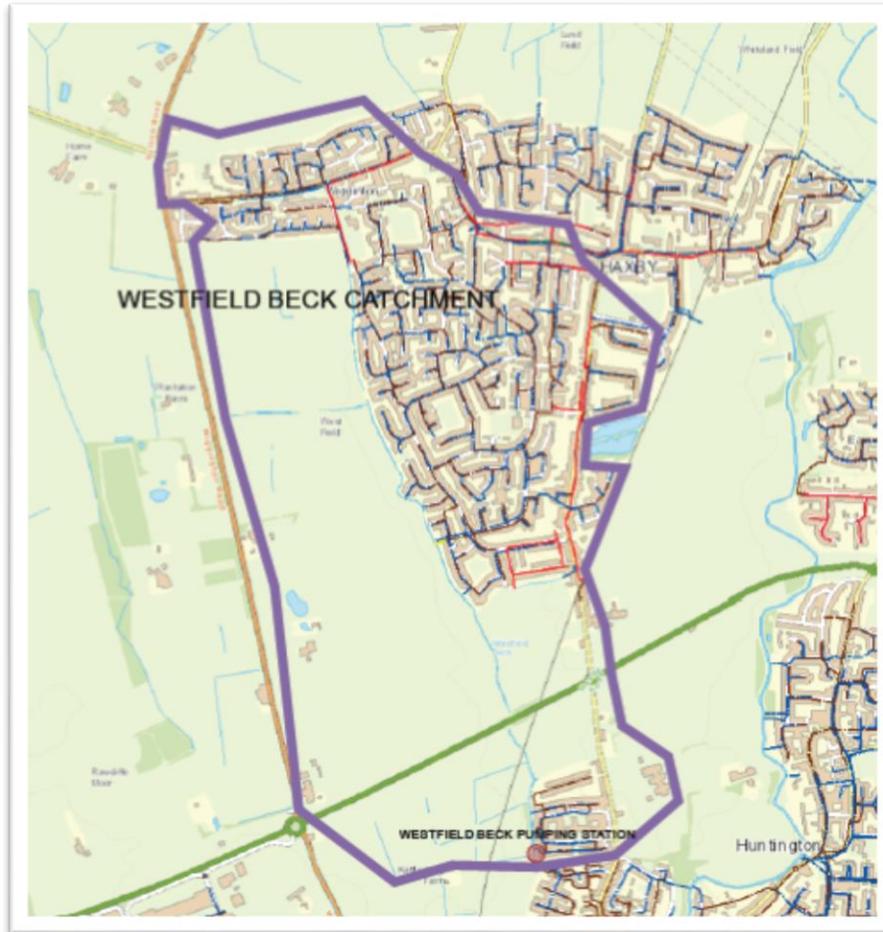


Figure 5 – Indicative illustration of area draining to Westfield Beck

- Area Draining to Westfield Beck

Ascot Road (41 in Annex 1) has flooded in the past, internal flooding of properties occurred during the event and the road was flooded to a considerable depth. Investigations found blockages on the Mill Lane and Delamere Close sewerage infrastructure, it is recommended that Yorkshire Water consider a capital scheme to consider relaying sections of the system to promote more effective drainage and reduce the risk of blockages.

Issues on Gateland Close (47), Lockey Croft (53), Longcroft (54) and Steeple Close (62) have all been resolved following investigation and reactive works by City of York Council and/or Yorkshire Water. Ongoing investigations are required at Abelton Grove (40), Greenshaw Drive (48), Kennedy Drive (52), Ripley Grove (59) and The Village (66).

Westfield Beck Pumping Station

Westfield Beck pumping station is located to the north west of New Earswick, see location on Figure 5. In normal flow conditions river flow on Westfield Beck passes through the station and continues along the beck which ultimately joins the River Foss just upstream of the New Earswick and Huntington Link Road bridge.

In flood conditions a flow control penstock closes to restrict flows in the downstream section of Westfield Beck to 1 cumec (1 cubic metre of water per second) and all other flows are diverted in culvert to the River Foss in the east. This operation provides protection to communities in New Earswick.

Historically the pumping station is operated by Yorkshire Water but the weed screen which protects the station from significant blockage from debris has been cleansed by the Foss (2008) Internal Drainage Board which is operated as part of the York Consortium of Drainage Boards. The IDB uses its permissive powers to carry out wider maintenance of Westfield Beck.

On the 13th August 2018 the IDB responded to reports and attended site to cleanse the weed screen as considerable debris build up was elevating river levels upstream, similarly Yorkshire Water were contacted by local residents regarding elevated levels in Westfield Beck.

Residents and the IDB confirmed that Yorkshire Water were initially slow to accept responsibility to attend the pumping station and take action, their control centre did not have the asset included on their systems and the operative who attended had limited knowledge of the layout or operation of the site. This delayed response and elevated levels in Westfield Beck caused concerns for residents in New Earswick and will have reduced the capacity and capability of the surface water drainage network in Haxby & Wigginton.

The IDB found significant difficulty in cleaning the screen manually and a machine had to be brought in to complete the task, the board were in attendance until 10:30pm and have reported difficulties in providing such response out of hours with only three operatives available.

Investigations have found that the automated penstock was not opening sufficiently, this will elevate levels upstream in normal flows as more flow is sent to the pumps, in addition to this one of the pumps was found to be not working, the IDB confirmed both issues were observed on the day.

Ownership and responsibility of the pumping station has been a recurrent issue in recent years, however, City of York Council have a legal document from 2005 prepared in agreement with Yorkshire Water, the IDB and the council confirming that ownership of the pumping station rests with Yorkshire Water and the IDB are responsible for the clearance of the screens. Yet continued confusion exists as to the status of the asset.

This responsibility has further been confirmed in discussions between Yorkshire Water and the Environment Agency as part of the preparation of the York Flood Alleviation Scheme on the 29th November 2018.

Although the extent to which the issues detailed above will have impacted on flooding problems experienced on the 13th August 2018 Annex 1 of this report has concluded that it will have been a contributing factor in the flooding to locations at lines 42, 55, 56, 58, 60, 61, 64 and 65.

A range of recommendations are made in relation to this.

- Area Draining to the North East

Internal flooding affected Carmires Avenue (44), investigations have found that the Yorkshire Water sewer system required maintenance to remove a blockage, Yorkshire Water have completed these works. Further issues have been resolved by City of York Council and/or Yorkshire Water at the following locations – Elder Grove (45), Folks Close (46) and Usher Park Road.

Further investigations are required at Hall Rise (49) and North Lane (51).

Heworth

All issues in the ward were related to surface water flooding of roads, a small number of minor maintenance issues have been found and implemented and further investigations are being carried out at Heworth Green (71).

Holgate

A number of highway flooding issues occurred across Holgate ward, the majority have been resolved through reactive works, investigations at Ainsty Avenue (73) and Holgate Park Drive (75) still require resolution.

Repeat flooding on Holgate Road (76) by the Fox public house causes significant disruption to traffic on a key arterial route into the city. There is potential for a capital scheme to disconnect road gullies from the Yorkshire Water sewerage network and drain surface flows directly to Holgate Beck, this will be considered and developed further.

Hull Road

Investigations have concluded in the ward and actions have been carried out, Millfield Lane (83) investigations identified no defects and the flooding here was likely a consequence of the severity of the storm being outside of the design standard of 'normal' drainage systems, however, the system will be considered in future storms to monitor its effectiveness.

Huntington & New Earswick

All investigations and actions completed.

Micklegate

A range of investigations in the ward have identified a number of streets where ineffective, damaged or the layout of gullies is affecting efficient drainage in significant storms, further investigations and works are required at Moorgarth Avenue (90), Mount Vale Drive (91, 92), Station Rise (95) and Tadcaster Road (96).

A business in Blossom Street has suffered repeat flooding, the CYC Flood Risk Management team have responded on a number of occasions and discussions have been held with the business owner. The problems arose following changes to the road and pedestrian crossing layout by CYC, Levels of the footway have been amended to accommodate a good design for the pedestrian crossing but this has consequently presented a flow route for surface water from the road in times of significant rainfall. A redesign of the system/installation of new gullies will be carried out and a recommendation is made to raise awareness of highway design issues, this is similarly linked to the issues observed at Kings Square.

Nunthorpe Road (93) previously flooded in summer 2015, drainage in the area was affected by a partial sewer and gulley blockages. The rainfall intensity in the 2015 storm, although not as significant as the 13th August 2018 storm, would have likely caused issues in this area but the condition of the drainage infrastructure likely increased the impact. No significant blockages were found in this investigation but clearly an ongoing vulnerability exists here. Improvements to the drainage system will be investigated and a property flood resilience scheme will be considered with residents, where possible CYC will add resilience to the properties through adaptations to boundary walls or the fabric of the buildings.

Osbalwick & Derwent

Although a relatively small amount of issues have been identified in the ward a range of ongoing investigations are necessary to better understand the issues. It is likely that the intensity of the rainfall exceeded the normal capacity of the drainage in most cases but CYC and Yorkshire Water will identify if any improvements can be made to make the systems more resilient.

Rawcliffe & Clifton Without

The majority of investigations have been concluded in the ward, like others the intensity of the rain is likely to be the major contributory factor to what was mainly reported as road flooding.

Property flooding occurred on Eastholme Drive (104) and was avoided through emergency response on Shipton Road (107), further investigations by CYC and Yorkshire Water are required. It is recommended that Yorkshire Water consider a capital scheme to reduce the impacts of flooding on Shipton Road which threatened property, improvements to the gullies at this location will further be considered by CYC.

Rural West York

A number of ongoing investigations are in progress in the ward, internal flooding occurred in Nether Way (114) and Portal Road (115). CYC are investigating issues at Netherway and will work with Yorkshire Water who have previously installed a capital scheme at Portal Road to relieve flooding issues, to identify if further works can be provided to increase resilience.

Strensall

Investigations and works are extensively complete in this ward, remaining investigations will be completed as necessary.

Westfield

All investigations and remedial works have been completed in this ward.

4. Roles and Responsibilities

The roles and responsibilities surrounding flood risk management are complex and can often be difficult to interpret. A detailed breakdown is given in Section 6 of the City of York Council Local Flood Risk Management Strategy:

https://www.york.gov.uk/info/20007/planning_and_building/1237/local_flood_risk_strategy

Section 1.1 of this report details that a Lead Local Flood Authority should identify the following detail as part of a Section 19 investigation:

- (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.

The detail in Annex 1 indicates the key issues and the lead organisations, these are predominantly City of York Council and Yorkshire Water, both organisations are sharing information and carrying out appropriate investigations.

The Environment Agency are included in a number of recommendations where future investigations or improvements are likely as part of the York Flood Alleviation Scheme, City of York Council are working in partnership with the EA on all aspects of the schemes and key outcomes and recommendations from this report will be included as necessary.

The Foss (2008) Internal Drainage Board have supplied information and support into the considerations surrounding Westfield Beck, the board have debated the issues at their meetings and CYC are a member of the board and will work with the IDB on relevant recommendations from this report.

5. Recommendations

The impacts of the 13th August 2018 storm event were spread wide across the city, Annex 1 details all significant impacts reported to the council, emergency services or the media. However, a much wider area of the city will have been impacted through ponding of water on roads and footways which is a likely occurrence when a storm of this intensity is experienced.

Drainage infrastructure is designed and implemented to convey 'normal' rainfall, City of York council and partners will deliver service improvements where people and property are impacted and a number of recommendations below deal with this, however, we need accept that we cannot expect all rainfall to be instantly conveyed into below ground drainage in such storms.

Recommendation 1 – City of York Council to work with all partners to develop a programme of increased resilience awareness. The refresh of the Local Flood Risk Strategy in 2019 and the development of communications and legacy awareness campaigns from the York Flood Alleviation Scheme will be key vehicles for this.

Although the investigation in Annex 1 detail a range of areas where the highways drainage infrastructure were found to be free, or relatively free of blockages and defects future gulley cleansing funding requirements should be supported to ensure an effective and efficient programme of gulley maintenance is adopted in the city.

Recommendation 2 – City of York Council to support the findings of the current and future reviews into highway gulley maintenance.

In addition to this we need to all better understand our role in the management of surface water, for example: homeowners hard paving gardens, developers delivering sustainable drainage solutions and highways managers designing and implementing new highway schemes.

Recommendation 3 – Advice and awareness on surface water management techniques and best practice will be developed and shared with a wide range of stakeholders and partners.

Recommendation 4 – CYC Flood Risk Management team to work with CYC highways design engineers to reinforce best practice in designing drainage provision in their schemes

Rainfall data in the 13th August 2018 event has been obtained from a wide range of sources, historic rain gauge data that has been used in past events was out of commission on this occasion, we are therefore reliant on third party data to carry out investigations. Real time rain gauge data is not readily available during an event, the speed in which the event unfolded on this occasion would not have benefitted from upto date rainfall data but this could be used to direct responses in other events.

Initial investigations following the event have shown that a limited network of rain gauges could be installed in the city for a relatively small cost, the data could be shared with neighbouring Local Authorities to further reduce costs.

Recommendation 5 – CYC Flood Risk Management team to prepare a report for CYC Executive identifying the need to develop a network of digital rain gauges and recommending appropriate budgets are made available to support this.

The investigations in Annex 1 are substantively complete across all parts of the city, however, some investigations require further work. A generic recommendation is made for all partners to conclude investigations, this is followed by specific recommendations detailing key locations.

All recommendations have been shared and agreed with all partners before publication of this report, City of York Council will monitor progress against all outstanding recommendations.

Recommendation 6 - All outstanding investigations in Annex 1 are to be completed and necessary steps taken in response to the findings.

Recommendation 7 – Yorkshire Water consider the development of a capital scheme to improve the hydraulic capacity of the Ascot Road/Mill Land/Delamere Close drainage system.

Recommendation 8 – Yorkshire Water consider a capital scheme to re-line the sewerage system on Shipton Road (part of) to remedy collapse and tree root damage as identified in investigations.

Recommendation 9 – City of York Council consider a capital scheme to deliver property flood resilience measures in the Nunthorpe Road /Gray Street area.

Recommendation 10 – City of York Council consider a capital scheme to deliver highway resilience adjacent to the Fox public house on Boroughbridge Road.

Recommendation 11 – City of York Council consider a capital scheme to ease issues in the Carr Lane / Sitwell Grove / Cranbrook Avenue area.

Recommendation 12 – Environment Agency / City of York Council – investigation to better understand the interaction between Main River, surface water and the sewerage system on Burdyke and any necessary improvements to the pumping station.

Recommendation 13 - Westfield Beck, Yorkshire Water to ensure all aspects of the pumping station are included in their customer centre records to enable effective response when contacted by the public and partners.

Recommendation 14 - Westfield Beck, Yorkshire Water to ensure a full review of pump and penstock condition is completed and all necessary works are completed. Operational and control specifications for the station to be confirmed with City of York Council, IDB and Environment Agency.

Recommendation 15 - Westfield Beck, Foss (2008) IDB to work with Yorkshire Water to ensure a safe and sustainable approach to screen clearance is in place at the asset.

Recommendation 16 - Westfield Beck, Environment Agency and City of York Council to consider future improvement needs for the pumping station to deliver the benefits required as part of the York Flood Alleviation Scheme.

6. Conclusion

The rainfall experienced on the 13th August 2018 would have tested any urban drainage infrastructure, the rainfall intensities in excess of 100mm per hour are far in excess of the normal design standards across the industry. It is therefore inevitable that standing water will be observed in future storms of this nature.

Annex 1 identifies where infrastructure was found to be working at or near its design capability and in many locations no further actions are planned, recommendations made in section 5 of this report will work to develop awareness and understanding of how future storm events may impact on the city and how we can take action as home owners, businesses or developers to reduce the pressure on our existing drainage infrastructure.

In some locations recommendations aim to provide improvements to this existing infrastructure to increase their resilience in future severe events to reduce the likelihood of highway or property flooding.

A number of locations were presented with an increased risk of flooding due to defective or blocked infrastructure, some of these locations may well have been affected directly as a consequence of the rainfall intensity but the defects found following investigation could have increased the likelihood of flooding. Many works have been completed but a range of recommendations for City of York Council and partners are made to resolve the issues in some locations.

All recommendations in section 5 have been shared and agreed with partners, progress and delivery will be reviewed by the City of York Council Flood Risk Management team and where necessary reported to the Decision Sessions of the Executive Member for the Environment.

Annex 1

	= priority 1: property internally flooded
	= priority 1: serious 'external' flooding e.g. across a whole road, close to property flooding
	= priority 2: flooding of more than one gully
	= priority 3: flooding of single gully
	= priority 4: no action for investigating organisations - private landowner/business issue
	= Yorkshire Water responsible for investigation

Ref	Ward	Location	Internal/ External Flood	Priority	Issue Description	Investigation	Recommendation(s)
1	Acomb	Carr Lane	External	2	Surface water flooded road Business' car park flooded	Recurring flooding issue. Minimal silt in gullies. Linked to issue with Cranbrook Avenue and Sitwell Grove	Replace 10 defective gullies on Cranbrook Avenue and excavate junction with Almsford Road to unblock. Capital scheme programmed at Boroughbridge Road to provide relief drain.
2	Acomb	Cranbrook Avenue	Internal	1	Surface water flooded properties under floor and flooding attached garages. Surface water	Carr Drain culvert drainage is not effective. Linked to Sitwell Grove	Replace 10 defective gullies on Cranbrook Avenue and excavate junction with Almsford Road to unblock. Capital scheme

					across road and into gardens. Sewage had come up to surface for properties.		programmed at Boroughbridge Road to provide relief drain.
3	Acomb	Front Street	Internal	1	Businesses internally flooded	Yorkshire Water sewage system surcharged. Jetted, checked with CCTV	Issue resolved. Defective gully needs replacing by CYC
4	Acomb	Norman Drive	External	3	Surface water flooded across whole road	Gully cleared	No further actions required
5	Acomb	Rosedale Avenue	External	2	Surface water flooded across whole road	Ongoing CYC investigation	Ongoing CYC investigation
6	Acomb	Sherwood Grove	External	2	Surface water flooded road	Gullies cleared	CYC to consider gulley improvements
7	Acomb	Sitwell Grove	Internal	1	Surface water flooded a single property's attached garage	Yorkshire Water investigated garden issues. Carr Drain culvert drainage is not effective. Linked to Cranbrook Avenue	Replace 10 defective gullies on Cranbrook Avenue and excavate junction with Almsford Road to unblock. Capital scheme programmed at Boroughbridge Road to provide relief drain.

8	Acomb	Wetherby Road	Internal	1	Surface water flooded non-attached garages and driveways	Road gullies cleared. Low spot and recurring surface water issue.	CYC to consider more regular cleanse. Install an extra gully
9	Acomb	Wheatlands Grove	Internal	1	Surface water into floor void and into attached garages. Surface water flooded across the whole road and into gardens	Gullies had minimal debris. Issue reoccurred on 7th November. Yorkshire Water sewage system blocked by tree roots.	Yorkshire Water considering re-lining of the sewerage system.
10	Acomb	Millgates	Internal	1	Surface water flooded attached garages Road flooded full width	Yorkshire Water sewage system surcharged. Tree roots and debris found in Yorkshire Water sewage system. Sewage system cleared	CYC to review highway drainage after heavy rainfall. Yorkshire Water to check their sewage system after heavy rainfall.
11	Bishopthorpe	Acaster Lane	External	3	Surface water flooded road	Gullies cleared	No further actions required
12	Clifton	Newborough Street	External	3	Surface water flooded across the road and onto the pavement	Ongoing Yorkshire Water investigation	Ongoing Yorkshire Water investigation
13	Clifton	Rose Street	External	3	Surface water flooded road	Gully cleared	No further actions required

14	Clifton	St Olaves Road	External	2	Surface water flooded driveway	Gullies cleared	No further actions required
15	Clifton	Sycamore Terrace	External	3	Surface water flooded road	Gullies blocked	Parking suspension to be arranged to clear gullies
16	Clifton	Water Lane (issue 1)	External	1	Surface water flooded across the whole road	Recurring flooding issue	CYC and the Environment Agency to investigate the impacts of Burdyke pumping station on Water Lane.
17	Clifton	Water Lane (issue 2)	External		Overflowing Yorkshire Water manhole	Yorkshire Water sewage system issue	Ongoing Yorkshire Water investigation
18	Dringhouses & Woodthorpe	Aintree Court	External	2	Surface water flooded road	Gullies cleared prior to event. Road profile prevents effective drainage to gullies	Additional gully to be installed
19	Dringhouses & Woodthorpe	Bracken Road	Internal	1	Surface water flooded properties' attached garages Road flooded full width	Gullies cleared on streets surrounding Bracken Road.	Additional gully to be installed
20	Dringhouses & Woodthorpe	Chalfonts	External	3	Surface water flooded road	Gully cleared	No further actions required
21	Dringhouses & Woodthorpe	Ganton Place	External	1	Surface water flooded road and non-attached garages	Gully cleared. Road in front of garages not Local Authority responsibility	No further actions required

22	Dringhouses & Woodthorpe	Lowick	External	2	Surface water flooded road	4 gullies not operational	CYC excavation required
23	Dringhouses & Woodthorpe	Tadcaster Road	External	3	Surface water flooded road	11 gullies not operational - cleansed. Tree root lockage to Yorkshire Water sewage system	Ongoing Yorkshire Water investigation
24	Dringhouses & Woodthorpe	White House Dale	Internal	1	Surface water flooded property through airbricks	Gullies cleared, minimal debris. Repeat surface water issue, low spot.	Ongoing CYC investigation
25	Fishergate	Fishergate (issue 1)	External		Yorkshire Water manhole cover collapsed	No further investigation required	Yorkshire Water to replace manhole cover
26	Fishergate	Fishergate (issue 2)	External	3	Surface water flooded road	Gullies cleared	No further actions required
27	Fulford & Heslington	Atcherley Close	External	3	Surface water flooded road	Gullies cleared prior to event, minimal debris - cleared again.	Yorkshire Water to check combined sewer after heavy rainfall
28	Fulford & Heslington	Main Street (issue 1)	External	3	Surface water flooded road	Gully cleared	No further actions required
29	Fulford & Heslington	Main Street (issue 2)	External		Yorkshire Water manhole cover making noise when cars drive by	Ongoing Yorkshire Water investigation	Ongoing Yorkshire Water investigation

30	Fulford & Heslington	School Lane	External	3	Surface water flooded road	Gullies cleared	No further actions required
31	Fulford & Heslington	Heslington Lane	External	3	Surface water flooded road	Gully cleared	No further actions required
32	Guildhall	Bootham	External	2	Surface water outside businesses	Gully was full of residue from business Gully cleared	CYC to write to businesses to inform correct disposal
33	Guildhall	Davygate	External	2	Surface water flooded across the road and onto the pavement	Gullies cleared	No further actions required
34	Guildhall	Fern Street	External	3	Surface water flooded road	Gullies cleared	No further actions required
35	Guildhall	Fountayne Street	External	2	Surface water flooded across the whole road	Gullies cleared	No further actions required
36	Guildhall	Grove Terrace Lane / Huntington Road	External	1	Surface water flooded across the whole road	Gully cleared	Parking suspension required for further inspection
37	Guildhall	Kings Square	External	2	Surface water flooded road	Gullies regularly blocked. Gully design inhibits its effectiveness	Consider more frequent cleanse. Look into re-designing the system
38	Guildhall	Layerthorpe	External	2	Surface water flooded cycle paths	No significant issue identified	No further actions required

39	Guildhall	Vyner Street	External	2	Surface water flooded back lane	Gullies cleared	No further actions required
40	Haxby & Wigginton	Abelton Grove	External	1	Surface water flooded across the whole road	Gullies clear Yorkshire Water sewage system surcharged	Yorkshire Water to jet sewage system
41	Haxby & Wigginton	Ascot Road	Internal	1	Surface water flooded ground floors of properties	Recurring flooding issue. Gullies blocked on Mill Lane and now cleared. Blockage to sewage system on Delamere Close causing restriction	Recommended Yorkshire Water clear sewage system on Delamere Close and Mill Lane. Recommended Yorkshire Water consider a capital scheme to reduce the likelihood of reoccurrence.
42	Haxby & Wigginton	Barley View	External	1	Surface water flooded road and into gardens	Gullies clear. Malfunction at Westfield Beck Pumping station - 50% failure of pumps and penstock operation likely caused beck to back up into IDB / YWS drainage system	Ongoing discussions with the IDB and Yorkshire Water to reinforce operations at Westfield Beck pumping station. Environment Agency considering improvements as part of York FAS
43	Haxby & Wigginton	Birch Lane	External	2	Surface water flooded across whole road and into gardens and non-	Gullies clear. Yorkshire Water sewage system surcharged	Ongoing Yorkshire Water investigation

					attached garages		
44	Haxby & Wigginton	Carmires Avenue	Internal	1	Surface water into floor void and into attached garages.	Blockage in Yorkshire Water sewage system. Buried Yorkshire Water manhole uncovered and blockage released	No further actions required
45	Haxby & Wigginton	Elder Grove	External	3	Surface water flooded road	Gullies cleared	No further actions required
46	Haxby & Wigginton	Folks Close	External	2	Surface water flooded road	Gullies cleared	No further actions required
47	Haxby & Wigginton	Gateland Close	External	3	Surface water flooded road	Gully cleared	No further actions required
48	Haxby & Wigginton	Greenshaw Drive	External	2	Surface water flooded road and was close to flooding properties	Yorkshire Water sewage system surcharged	Awaiting Yorkshire Water clearing of blockages in sewage system
49	Haxby & Wigginton	Hall Rise	External	1	Surface water flooded across the whole road	Gully had minimal debris. Yorkshire Water sewage system surcharged - debris cleared.	Further investigation after heavy rainfall

50	Haxby & Wigginton	Hawthorn Avenue	External	2	Surface water flooded across the whole road and into gardens and non-attached garages	Yorkshire Water sewage system surcharged downstream. Linked to Birch Lane issues	Further investigation after heavy rainfall
51	Haxby & Wigginton	North Lane	External	2	Surface water flooded gardens and was close to flooding properties.	Gully repaired. Yorkshire Water sewage system backed up but no defects identified	Further investigation after heavy rainfall
52	Haxby & Wigginton	Kennedy Drive	External	2	Surface water flooded road	Gullies cleared. Potential link to Ableton Grove	Ongoing CYC investigation
53	Haxby & Wigginton	Lockey Croft	External	3	Surface water flooded road	Gully cleared	No further actions required
54	Haxby & Wigginton	Longcroft	External	1	Surface water flooded road and driveways	Gullies cleared	No further actions required
55	Haxby & Wigginton	Minster View	External	2	Surface water flooded road	Gullies clear. Malfunction at Westfield Beck Pumping station - 50% failure of pumps and penstock operation likely caused beck to back up into IDB / YWS drainage system	Ongoing discussions with the IDB and Yorkshire Water to reinforce operations at Westfield Beck pumping station. Environment Agency considering improvements as part of York FAS

56	Haxby & Wigginton	Mulberry Drive	External	2	Surface water flooded road	Gullies clear. Malfunction at Westfield Beck Pumping station - 50% failure of pumps and penstock operation likely caused beck to back up into IDB / YWS drainage system	Ongoing discussions with the IDB and Yorkshire Water to reinforce operations at Westfield Beck pumping station. Environment Agency considering improvements as part of York FAS
57	Haxby & Wigginton	Oaken Grove	External	3	Surface water flooded road	Gullies clear. Yorkshire Water sewage system surcharged. Linked to Birch Lane and Hawthorne Avenue issues.	Ongoing Yorkshire Water investigation
58	Haxby & Wigginton	Old Orchard	External	2	Surface water flooded across the road and onto the pavement	Yorkshire Water sewage system surcharged Potential issues relating to Yorkshire Water sewer, headlands culvert, and/or Westfield Beck.	Ongoing discussions with the IDB and Yorkshire Water to reinforce operations at Westfield Beck pumping station. Environment Agency considering improvements as part of York FAS
59	Haxby & Wigginton	Ripley Grove	External	2	Surface water flooded road	Surface water sewer serves highway	Ongoing CYC investigation and to re-check gullies.

60	Haxby & Wigginton	Sandyland	External	3	Surface water flooded road	Malfunction at Westfield Beck Pumping station - 50% failure of pumps and penstock opening too restrictive caused beck to back up into IDB / YWS drainage system	Ongoing discussions with the IDB and Yorkshire Water to reinforce operations at Westfield Beck pumping station. Environment Agency considering improvements as part of York FAS
61	Haxby & Wigginton	Stanley Avenue	External	2	Surface water flooded road	Private road and not responsibility of CYC. Malfunction at Westfield Beck Pumping station - 50% failure of pumps and penstock operation likely caused beck to back up into IDB / YWS drainage system	Ongoing discussions with the IDB and Yorkshire Water to reinforce operations at Westfield Beck pumping station. Environment Agency considering improvements as part of York FAS
62	Haxby & Wigginton	Steeple Close	External	2	Surface water flooded road	Yorkshire Water sewer system surcharged. Yorkshire Water cleansed sewage system.	No further actions required

63	Haxby & Wigginton	Usher Park Road	External	2	Surface water flooded road	Gullies cleared, had minimal debris	No further actions required
64	Haxby & Wigginton	Westfield Grove	External	3	Surface water flooded road	Gullies clear. Malfunction at Westfield Beck Pumping station - 50% failure of pumps and penstock operation likely caused beck to back up into IDB / YWS drainage system	Ongoing discussions with the IDB and Yorkshire Water to reinforce operations at Westfield Beck pumping station. Environment Agency considering improvements as part of York FAS.
65	Haxby & Wigginton	Westfield Road	Internal	1	Surface water flooded property through airbricks	Gullies cleared Malfunction at Westfield Beck Pumping station - 50% failure of pumps and penstock operation likely caused beck to back up into IDB / YWS drainage system	Ongoing discussions with the IDB and Yorkshire Water to reinforce operations at Westfield Beck pumping station. Environment Agency considering improvements as part of York FAS.
66	Haxby & Wigginton	The Village (Haxby)	Internal	1	Surface water flooded the ground floor of a single property	Gullies cleared, one gully not operational Station Road business reported issues with toilet backflow	Systems working effectively, further investigation after heavy rainfall, consider more frequent gulley cleanse.

67	Heworth	Burnholme Drive	External	2	Sewage flowed across the road and onto the pavement	Repeat issue of sewage flowing over road	Yorkshire Water responsibility
68	Heworth	Fifth Avenue	External	2	Surface water flooded road	Gullies cleared	No further actions required
69	Heworth	Fossway	External	2	Surface water flooded road	Gullies cleared	No further actions required
70	Heworth	Glen Road	External	2	Surface water flooded road	Gullies cleared	No further actions required
71	Heworth	Heworth Green	External	2	Surface water flooded across the whole road	Repeat flooding issue. Previous repair not fully effective	Yorkshire Water to look into installing new manhole CYC to install 2 new gullies
72	Heworth	Huntington Road	External	2	Surface water flooded across the whole road	Slow running gully	No further actions required
73	Holgate	Ainsty Avenue	External		Surface water flooded road Yorkshire Water manhole cover lifted due to flow in sewer and flooded drive and garage of property	Yorkshire Water responsibility	Yorkshire Water to investigate
74	Holgate	Hamilton Drive	External	2	Surface water flooded road	Gullies cleared	No further actions required
75	Holgate	Holgate Park Drive	External		Yorkshire Water manhole cover lifted due to flow in sewer	Yorkshire Water responsibility	Yorkshire Water to investigate

76	Holgate	Holgate Road	External	1	Surface water flooded across the whole road Two Yorkshire Water manhole covers lifted due to flow in sewer on Acomb Road	Road floods even after gully clearing.	Review the potential of a capital scheme for a new surface water drain to Holgate Beck and new gullies.
77	Holgate	Howe Hill Close	External	2	Surface water flooded across the road and up to garage	Gully cleared	No further actions required
78	Holgate	Inman Terrace	External	2	Surface water flooded across the road and up to garage	Gullies cleared	No further actions required
79	Holgate	Poppleton Road	External	3	Surface water flooded road	Gullies cleared	No further actions required
80	Holgate	Salisbury Terrace	External	3	Surface water flooded road	Gullies cleared	No further actions required
81	Holgate	Watson Terrace	External	2	Surface water flooded across the road and onto the pavement	Gullies cleared	No further actions required
82	Holgate	Wilton Rise	External	4	Surface water flooded driveway	CYC has no responsibility as private road	No further actions required

83	Hull Road	Millfield Lane	External	2	Surface water flooded across the road	No issue identified. Suspected sewage system under capacity	System working effectively, further investigation after heavy rainfall.
84	Hull Road	Millfield Avenue	External	3	Surface water flooded road	Gullies cleared prior to event. Gully had minimal debris - cleared again. Yorkshire Water found no defects in their system	No further actions required
85	Huntington & New Earswick	Huntington Road	External	2	Surface water flooded across the whole road and was close to entering property	Gullies cleared	No further actions required
86	Micklegate	Bishopthorpe Road	External	3	Surface water flooded road	Gullies cleared	No further actions required
87	Micklegate	The Mount	Internal	1	Business internally flooded	Gullies cleared	Additional gullies to be installed CYC capital scheme to be developed
88	Micklegate	Dewsbury Terrace	External	3	Surface water flooded road	Gully cleared	No further actions required
89	Micklegate	Kensington Street	Internal	1	Surface water flooded ground floors of properties	Gullies cleared. Side of road impacted had a lower camber	Clean gullies more regularly

90	Micklegate	Moorgarth Avenue	External	2	Surface water flooded road	Gullies cleared Linked to Mount Vale Drive issues	Review the possibility of installing additional gullies
91	Micklegate	Mount Vale Drive	External	1	Surface water flooded across the road and onto the pavement	Gullies cleared	Review the possibility of installing additional gullies
92	Micklegate	Mount Vale Drive	External	1	Surface water flooded across the road and onto the pavement	Gullies cleared	CYC to improve traps in two gullies
93	Micklegate	Nunthorpe Road / Gray Street	Internal	1	Surface water flooded ground floors of properties and basement/cellars	Gullies cleared 1 gully not operational	Yorkshire Water combined sewer to be checked after heavy rainfall. CYC to support residents in the development of a property flood resilience scheme
94	Micklegate	Scarcroft Road	External	3	Surface water flooded road	Gully cleared	No further actions required
95	Micklegate	Station Rise	External	2	Surface water flooded footpath	1 gully not operational	Gully needs repairing
96	Micklegate	Tadcaster Road	External	1	Surface water flooded across the whole road	Gullies cleared	Consider more frequent cleanse. Review the possibility of installing additional gullies
97	Micklegate	The Mount	External	3	Surface water flooded road	Gully cleared	No further actions required

98	Micklegate	Trentholme Drive	External	1	Surface water flooded across the road, down drives and around properties	Repeat flooding issue. Gullies cleared. Yorkshire Water sewage system surcharged. Potentially linked to issues on Tadcaster Road and Mount Vale Drive	Ramp at junction into Trentholme Drive estate to be raised. Ongoing Yorkshire Water CCTV investigation
99	Osballdwick & Derwent	Church Road	External	2	Surface water flooded roads	Gullies cleared. Repeat flooding issue. Yorkshire Water to investigate their sewage system	Ongoing Yorkshire Water investigation
100	Osballdwick & Derwent	Greencroft Lane	External	2	Surface water flooded across the road and onto the pavement	Gullies cleared, repeat flooding issue	Ongoing CYC investigation
101	Osballdwick & Derwent	Meadlands	Internal	1	Surface water flooded a property through airbrick	Gullies cleared, repeat flooding issue	Ongoing CYC investigation
102	Osballdwick & Derwent	Shallowdale Grove	Internal	1	Surface water flooded the ground floor of a single property	Gullies cleared. Low spot vulnerable to surface water	System working effectively, further investigation after heavy rainfall

103	Rawcliffe & Clifton Without	Melton Avenue	External	3	Surface water flooded road	No issue identified	System working effectively, further investigation after heavy rainfall
104	Rawcliffe & Clifton Without	Eastholme Drive (issue 1)	Internal		Attached garage flooded	Yorkshire Water responsibility	Yorkshire Water to investigate
105	Rawcliffe & Clifton Without	Eastholme Drive (issue 2)	External	3	Surface water flooded road	Gullies cleared	No further actions required
106	Rawcliffe & Clifton Without	Galtres Grove	External	3	Surface water flooded road	3 gullies not operational. Linked to Shipton Road	Ongoing CYC investigation
107	Rawcliffe & Clifton Without	Shipton Road	External	1	Surface water flooded driveway and was close to entering property	Gullies cleared recently prior to event. Tree roots and collapse found in Yorkshire Water sewage system. Yorkshire Water repaired sewage system	Yorkshire Water to consider capital scheme to re-line the sewage system. CYC to look into gully with a bigger trap
108	Rawcliffe & Clifton Without	Somerset Close	External	3	Surface water flooded road	Gully cleared	No further actions required

109	Rawcliffe & Clifton Without	Rawcliffe Croft	External	2	Surface water flooded road	Ongoing CYC investigation	Ongoing CYC investigation
110	Rural West York	Burtree Avenue	External	3	Surface water flooded road	Gully cleared	No further actions required
111	Rural West York	Church Lane (Nether Poppleton)	External	3	Surface water emerged from manhole in road	Cause of issue still to be determined	Ongoing CYC and Yorkshire Water investigation
112	Rural West York	Main Street (Nether Poppleton)	External	3	Surface water flooded road	Gully cleared	No further actions required
113	Rural West York	Main Street (Askham Bryan)	External	2	Surface water flooded road	Gullies cleared Suspected issue with Yorkshire Water surface water sewer	Ongoing Yorkshire Water investigation
114	Rural West York	Nether Way	Internal	1	Surface water flooded the ground floor of a single property	Recurring flooding issue	Ongoing CYC investigation
115	Rural West York	Portal Road	Internal	1	Surface water flooded ground floors of properties	Gullies cleared Historic issues with Yorkshire Water sewage system	Ongoing Yorkshire Water investigation

116	Strensall	A1237 Shipton Road To Hopgrove	External	2	Surface water flooded across the whole road	Weeds impacting gullies. A1237 weed sprayed	Road sweeper to clear A1237 once current CYC roundabout schemes are complete
117	Strensall	Heath Ride	External	3	Surface water flooded road	No issue identified	No further actions required
118	Strensall	Strensall Road	External	3	Surface water flooded road	Potentially linked with leaves in gullies	Ongoing CYC investigation
119	Strensall	The Village (Stockton on the Forest)	External	3	Surface water flooded road	Gullies cleared	No further actions required
120	Westfield	Gale Lane	External	3	Surface water flooded road	Gully cleared	No further actions required
121	Westfield	Lown Hill	External	2	Surface water flooded road	Gullies cleared Yorkshire Water cleared tree roots in sewage system	No further actions required
122	Westfield	Milner Street	External	3	Surface water flooded back lane	Gullies cleared	No further actions required
123	Westfield	Tudor Road	External	2	Surface water flooded road	Gullies cleared	No further actions required