# Nottingham City Council

## Flood Investigation Report

### Prepared under Section 19 of the Water Management Act 2010

## Daron Gardens & Edern Gardens, Top Valley, Nottingham, on 23rd July 2013


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Nottingham City Council

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## FLOOD INVESTIGATION REPORT SUMMARY

Nottingham City Council is a Lead Local Flood Authority (LLFA) under the Flood and Water Management Act (2010).

Section 19 of the Act states that on becoming aware of a flood the LLFA must, where appropriate, investigate which Risk Management Authorities have relevant flood risk management functions and whether they have exercised, or are proposing to exercise, those functions in response to the flood.

A number of thunderstorms passed over the City on 22nd and 23rd July 2013. On the evening of 23rd July 2013 an intense storm passed over the north of Nottingham causing over 100 residential properties to flood across the City. A total of 11 properties suffered internal flooding in the Daron Gardens and Edern Gardens area of Top Valley.

Due to the number of properties that flooded in this location it was considered necessary to undertake a formal flood investigation. This Flood Investigation Report has been completed by the City Council in consultation with relevant Risk Management Authorities. The report summarises the formal investigation that has been undertaken, including the causes and impacts of the flood event, roles and responsibilities and future actions.

# 1 INTRODUCTION

## 1.1 What is a Formal Flood Investigation?

Flooding has a devastating impact that affects people, property, business, the environment and transport. There are many different sources of flooding including rivers, sewers, surface water and groundwater and there are a number of Authorities and organisations involved in managing the risk of flooding from these different sources. Flooding can be caused by a complex interaction of different sources that can be difficult to resolve, particularly in urban areas.

Nottingham City Council is a Lead Local Flood Authority (LLFA) under the Flood and Water Management Act (2010). In recognition of the complex nature of flooding and the number of different Authorities that can be involved, Section 19 of the Act places a duty on the City Council to investigate the causes of flood events in their area, as appropriate. The legislative requirements of Section 19 are included below.

**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.

## 1.2 Which Authorities are involved?

The Flood and Water Management Act (2010) identifies organisations that have flood risk management responsibilities as 'Risk Management Authorities'. Table 1 shows the key responsibilities of Risk Management Authorities that operate in the Nottingham City area.

Due to the number of different organisations involved, the City Council is responsible for leading on flood investigations and works in partnership with relevant Risk Management Authorities. Through leading the investigation, the City Council will identify which Risk

Management Authorities have flood risk management functions in relation to the flood event and what actions they propose to take, if any, to reduce flood risk in the future.

**Table 1: Risk Management Authorities in Nottingham City Council's administrative area.**

| Risk Management Authority | Flood Risk Management Functions |
|---|---|
| **Lead Local Flood Authority & Highway Authority: Nottingham City Council** | • River (fluvial) flooding from minor watercourses ('Ordinary Watercourses')<br>• Surface water (pluvial) flooding<br>• Groundwater flooding<br>• Provision and maintenance of highway drains and road gullies |
| **Water and Sewerage Company: Severn Trent Water** | • Providing effectual drainage<br>• Maintaining adopted public sewerage network |
| **Environment Agency** | • River (fluvial) flooding from large watercourses ('Main Rivers')<br>• Flooding from the Sea and estuaries<br>• Reservoir flooding |

## 1.3 When are Formal Flood Investigations undertaken?

The City Council has developed thresholds and triggers for when a formal investigation will be undertaken following a flood event. The thresholds relevant to this Flood Investigation Report are summarised below:

**Nottingham City Council Thresholds for Initiating Flood Investigations**

For a residential dwelling such as houses or flats including Nottingham City Homes properties a Section 19 flood investigation shall be carried out where:

- internal (over the doorstep) flooding affects five or more properties and the properties are either in close proximity or the flooding is hydraulically linked.

The flood event on 23rd July 2013 caused the internal flooding of seven properties on Daron Gardens and four properties on Edern Gardens. This Flood Investigation Report has been

compiled because the number of properties that experienced internal flooding exceeds the thresholds that have been set by the City Council.

# 2 DESCRIPTION OF THE LOCAL AREA

## 2.1 Location of the flooding incident and the local area

Daron Gardens and Edern Gardens are located approximately 6km north-west of Nottingham City Centre in the area of Top Valley. This is predominately a residential area with a large, flat open playing field to the east and Southglade Park to the south west (Figure 1). A series of footpaths and alleyways link the properties on Daron Gardens and Edern Gardens with the surrounding road network. There is an approximately 500m$^2$ impervious parking area at the rear of properties on Daron Gardens.

As shown in the elevation map (Figure 1), Daron Gardens is situated near the head of a valley that runs downslope from the flat playing field area on Beckhampton Road to the east and down towards Southglade Park in the south west. Edern Gardens is situated downslope of Daron Gardens and is located at a low spot within the surrounding area. Ground levels fall from approximately 93 metres Above Ordnance Datum (mAOD) at the playing fields to the east to 82 mAOD in Southglade Park where the valley continues to fall in the direction of the River Leen to the west.

The area was developed in the 1970's prior to this development the area was open fields as part of Southglade Farm to the south west.

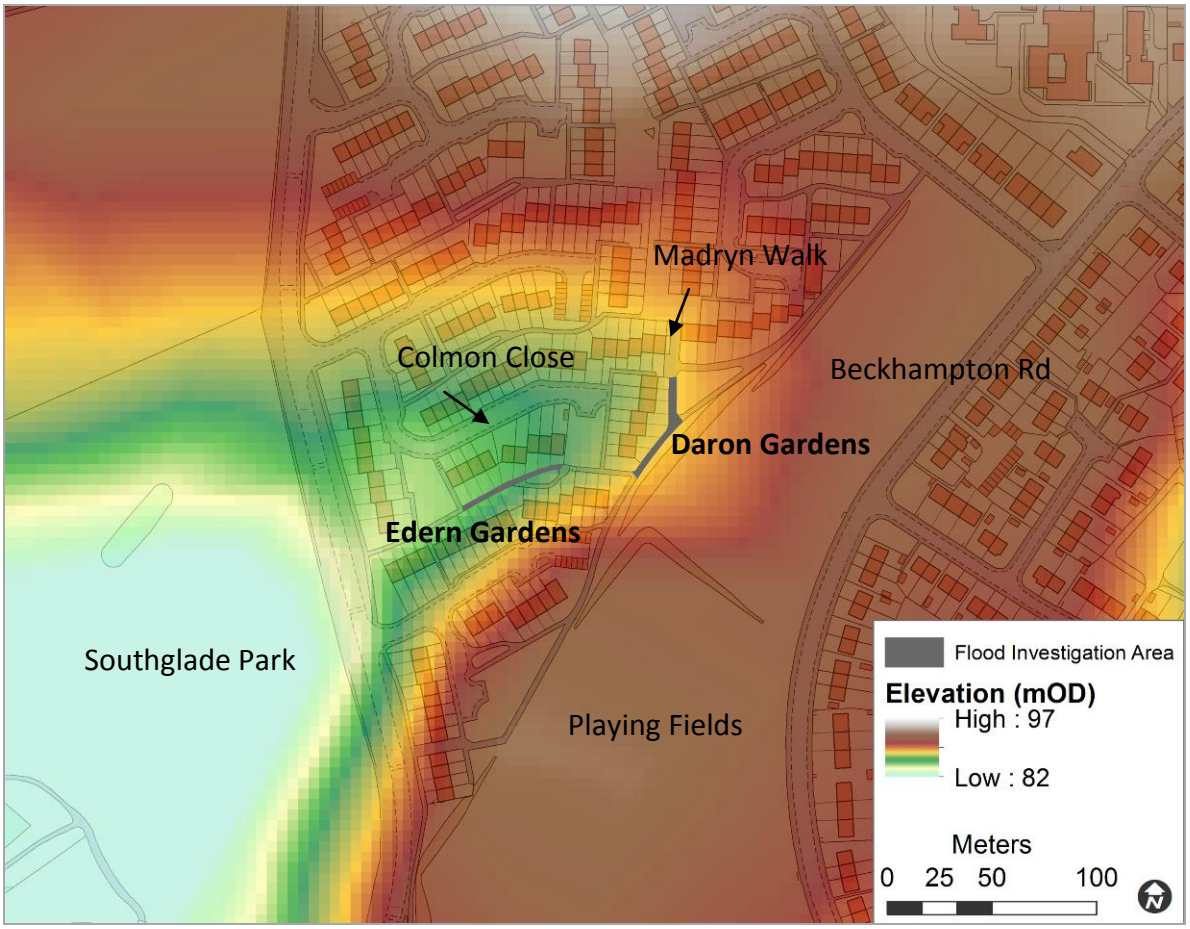


**Figure 1: Site Location and Topography.**



## 2.2 Local river and drainage systems

The River Leen is located 1.2km to the west of Daron Gardens and there are no nearby rivers or watercourses that could have an impact on flood risk in this area.

Daron Gardens and Edern Gardens are served by a separate surface water and foul water public sewer networks close to the head (top) of the drainage catchment.

Severn Trent Water's public sewer records show Daron Gardens is serviced by a single surface water sewer that runs along the front of the properties from 3 Daron Gardens towards Madryn Walk. Here the surface water sewer joins the surrounding drainage network and follows the natural topography of the land along Colmon Close, past the west side of Edern Gardens and south west towards Southglade Park. A separate foul water sewer follows the same line as this surface water sewer from Madryn Walk towards Southglade Park. Both service the properties on Daron Gardens and Edern Gardens.

The public surface water sewer increases in size from 250mm to 325mm from Daron Gardens to Colman Close. The public foul water sewer remains at 225mm from Daron Gardens to Southglade Park. The surface water sewer increases in size to accommodate the additional flows as more pipes connect together from the surrounding drainage network.

Small gully pots are located at various locations along the interconnecting footpaths to intercept surface water.

### 2.3 Historical flood events

Nottingham City Council and Severn Trent Water hold no records of internal or external flooding as a result of rainfall in this area of Nottingham prior to the flood event on 23rd July 2013.

A resident has reported that the properties on Daron Gardens may have flooded in the mid-1970's. There is no further evidence of the properties flooding on Daron Gardens or Edern Gardens prior to the event on 23rd July 2013.

### 2.4 Areas predicted to flood

The Environment Agency's Flood Map for Surface Water is a national dataset that shows areas that are predicted to be at risk of flooding from surface water. The Map was made publically available on the Environment Agency's website[1] in December 2013.

The Flood Map for Surface Water shows that properties on Edern Gardens are at a high risk of surface water flooding, meaning that the area is expected to experience flooding in rainfall events up to and including a 1 in 30 annual probability event. The properties on Daron Gardens are predicted to be at a very low risk of flooding, meaning the area is expected to experience flooding in rainfall events less than 1 in 1000 annual probability.

The Map also shows that the flood flow route follows the natural valley towards Southglade Park identified in Section 2.1.

An extract from the Flood Map for Surface Water is included in Appendix A.

[1] Environment Agency Flood Map for Surface Water, available online at maps.environment-agency.gov.uk, select 'Risk of Flooding from Surface Water'

# 3 CAUSES AND IMPACTS OF FLOODING

## 3.1 Weather conditions before and during the event

General conditions in the weeks leading up to the 23rd July 2013 were dry. Rainfall data from the City Council's rain gauge network shows that between 21:00 on 22nd July 2013 and 12:30 on 23rd July 2013 three rainfall events occurred. The Bulwell Riverside rain gauge, which is located 2km south west of Top Valley, recorded a total of 24mm of rain during this time (Figure 2, Events 1, 2 & 3).

At 17:00 on 23rd July 2013 an intense storm moved south west to north east across the north of Nottingham City, including the Top Valley area (Figure 2, Event 4). Rainfall data from the Bulwell Riverside rain gauge recorded 25.8mm of rain in 29 minutes. At the peak of the storm 17mm of rain was recorded in 10 minutes. It is important to note that rainfall can vary greatly over distance and that the rainfall data reported here was recorded at Bulwell. The flood event started during the intense rainfall event at 17:00 on 23rd July 2013.

The City Council commissioned a report to undertake detailed analysis of the rainfall data from the rain gauge network. This concluded that the main storm at 1700 was a 1 in 36 annual probability event which means a 2.77% chance of occurring each year.

The intensity of the rainfall event is important because nationally the public sewer network is designed to accommodate the 1 in 30 annual probably rainfall event. Sewerage systems are designed to the modern water industry standard and are ordinarily expected to accommodate the 1 in 30 year event. The rainfall event exceeded the design standard and Severn Trent Water therefore class the event as 'extreme'.

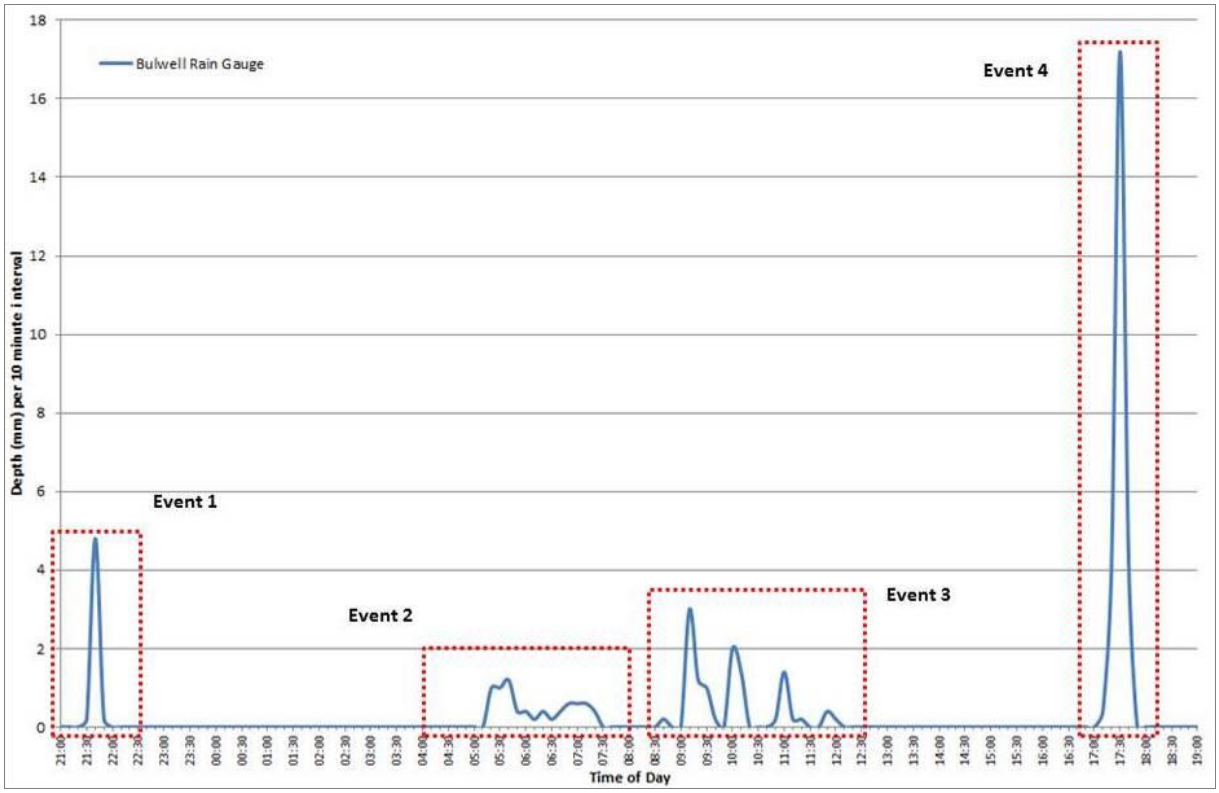


**Figure 2: Rain gauge data from Bulwell for the evening of 22nd July 2013 and throughout 23rd July 2013.**

## 3.2 Flooding mechanisms and impacts

### 3.2.1 Observed flooding mechanism

The flooding of properties on Daron gardens and Edern Gardens occurred during and after the intense rainfall event at 1700 on 23rd July 2013. It is likely that rainfall in the 24 hours before the main rainfall event (Figure 2, Events 1-3) had saturated areas of green open space both locally and within the wider Top Valley area. This, combined with the intensity of the main rainfall event, resulted in rapid overland flow and ponding of surface water in low lying areas.

Torrential rain caused sheet run off from the playing fields at the top of the valley where the steep embankment allowed water to flow rapidly downslope. Residents report that this sheet flow also transported soil and debris from the playing fields downslope and into gully pots. Bitmac footpaths acted as conduits for the water directing the flow towards Daron Gardens and Edern Gardens. Due to the intensity of the storm the highway drainage was overwhelmed and unable to take water.

It is likely that surface water from Penllech Close and Colmon Close will have contributed to overland flow towards Edern Gardens. Low spots in the topography will have allowed water to pool and so contributing to flooding.

It was reported by a resident on Daron Gardens that faeces and black sludge were present in the flood water suggesting that the foul water sewer network was also overloaded.

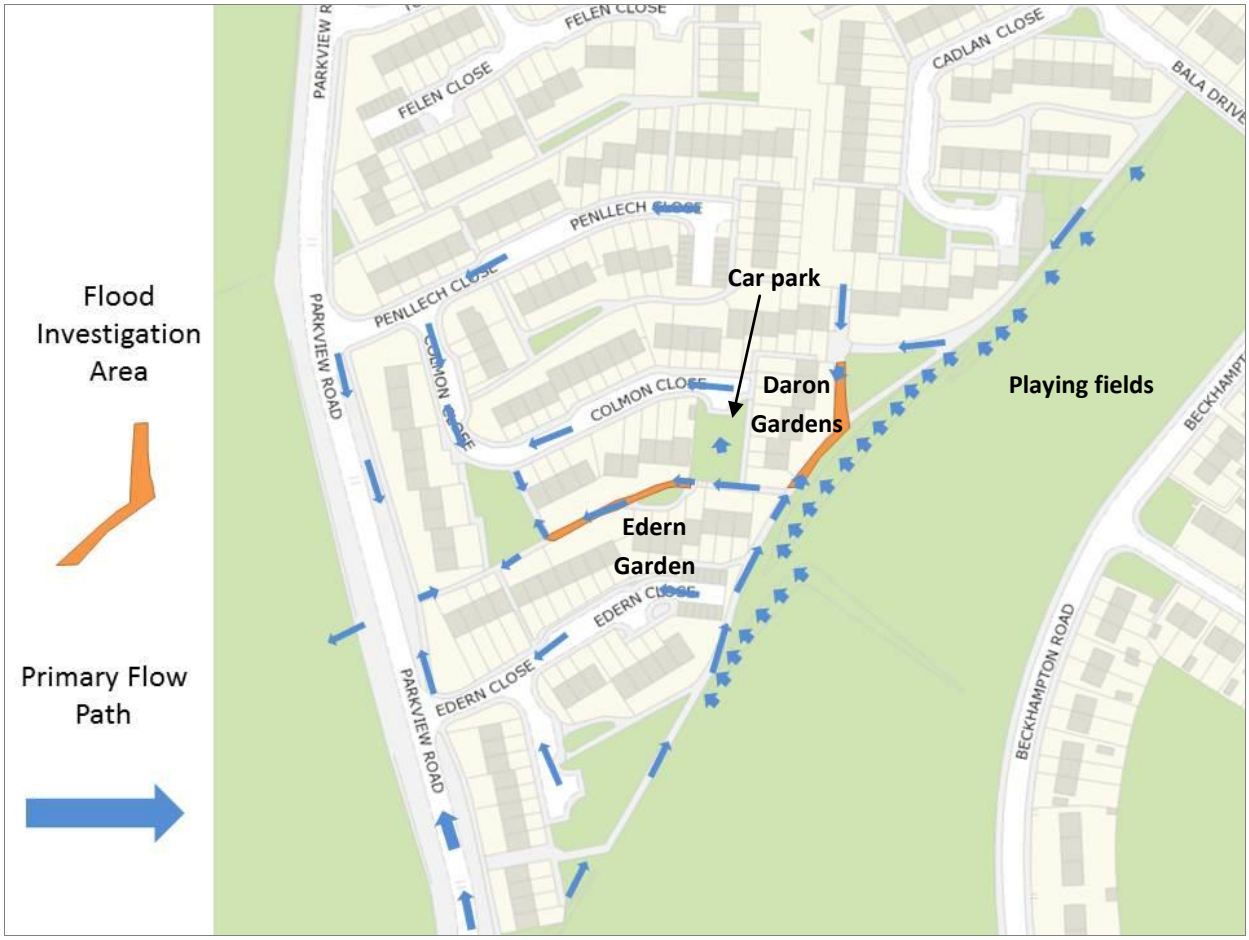


**Figure 3: Primary routes of surface water during the flood event.**
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### 3.2.2 Daron Gardens

Residents at Daron Gardens reported that the overland flow predominately came from the east off the playing fields and along the footpaths connecting Parkview Road and Bala Drive to Daron Gardens. Saturated ground conditions from the storms preceding 5pm 23rd July 2013 meant that water could not infiltrate into the ground and caused sheet flow from the steep grassed bank, contributing to overland flow (Figure 3). This reportedly washed silt and debris from the slopes into the footpath gullies.

The properties on Daron Gardens are located in a slight hollow with the thresholds at a lower level than the footpath at the front (Figure 4). Once the gully network was overwhelmed and the kerb was breached water pooled and entered the properties via wall vents, air bricks and door frames. One resident reported the water exited the property via the back door and back garden and continued downslope.


**Figure 4: Daron Gardens showing natural hollow in the landscape and steep embankment of the playing fields. (NE Facing)**

A dividing brick wall located at the north end of Daron Gardens may have acted as a barrier to flood flow and allowed water to pool (Figure 5) before contributing the flooding of properties.


**Figure 5: Brick wall potentially creating a barrier to flow at the north side of Daron Gardens. (N Facing)**

Once the footpath gully became overwhelmed water was able to breach the kerb and pool within the hollow of the houses. Water was unable to continue travelling downslope until the water levels overtopped the grass verge at the south east end of Daron Gardens.

This overland flow led to internal flooding of 7 properties on Daron Gardens and residents report that external flood levels reached 600mm and 50mm internally (Figure 6). There is some evidence that the foul water sewer network was overwhelmed and contributed to flooding though due to the location near the head of the drainage catchment it is unlikely this was significant.

**Figure 6: Reported external flood levels on Daron Gardens.**

### 3.2.3 Edern Gardens

During the storm, surface water flowed rapidly downslope using footways and roads as conduits directing the water towards Edern Gardens. It is likely that the footway that runs along the front of Edern Gardens and which ultimately connects to Daron Gardens acted as a primary conduit for overland flow that originated from the playing fields and surrounding impervious areas.

Properties on Edern Gardens are located at a lower elevation than both Colmon Close at the rear and the footway at the front where there is a slight natural hollow in the landscape (Figure 7). Two road gullies are located at a low spot on the bend of Colmon Close that will have collected surface water from Penllech Close and uphill on Colmon Close (Figure 8). During the storm it is possible that these gullies were overwhelmed and could not take water due to the public surface water sewer potentially being at capacity. This would have allowed water to pool at this point and ultimately breach the kerb and so contributing to the flooding of properties on Edern Gardens.


**Figure 7: Edern Gardens showing slope of land. Taken from car park behind Daron Gardens. (W Facing)**


**Figure 8: Low spot on Colmon Close showing properties on Edern Gardens at a lower elevation. (SE Facing)**

Surface water from the footpaths and saturated green areas on Parkview Road may also have contributed to overland flow towards Edern Gardens because the properties are at a lower elevation than Parkview road itself. This natural low spot on the footpath in front of Edern Gardens allowed water to pool and exacerbate flooding to properties.

Overland flow led to the internal flooding of a reported 4 properties on Edern Gardens. There is no report of sewerage in the flood water from Edern Gardens.

**Table 2: Flooding impact on properties during the flood event.**

| Location | Number of Properties | Flooding Source | Impact |
|---|---|---|---|
| **Daron Gardens** | 7<br><br>(of which 3 are Council owned, 2 are Housing Association and 2 are private) | • Surface Water<br>• Sewer Flooding | • Residents had to vacate properties whilst repair work was carried out.<br>• Internal flooding with damage to flooring, walls, kitchens and furniture |
| **Edern Gardens** | 4<br><br>(of which 1 is Council owned and 3 are private) | • Surface Water | • Internal flooding damage to flooring, kitchens, walls, doors, plaster, furniture. |

# 4 RESPONSIBILITIES, AGREED ACTIONS & RECOMMENDATIONS

## 4.1 Which Risk Management Authorities have flood risk management functions in relation to the flood event

The flooding that occurred on Daron Gardens and Edern Gardens was as a result of intense rainfall that generated large volumes of surface water runoff and overwhelmed drainage systems causing water to pond in low lying areas. The following authorities therefore have flood risk management functions in relation to the flood event:

- **Nottingham City Council** is responsible for managing flood risk from surface water and for providing and maintaining highway drainage systems.
- **Severn Trent Water** is responsible for providing effectual drainage on the public sewer network.

## 4.2 Actions taken by Authorities and the Community before the event

The City Council has an annual, cyclical maintenance regime of road gullies within the City Council area. As a minimum, each road gully is cleansed annually and requests for maintenance are responded to within three working days. Nottingham City Council is responsible for cleaning both the road gullies and footpath gullies on adopted highways around Daron Gardens and Edern Gardens. It is likely that the road gullies and highway drains in the flooded area and the wider catchment were overwhelmed by the volume, flow and depth of surface water flowing down roads and footpaths. Soil and debris entering the footpath gullies from the playing fields may have reduced the functionality of these gullies prior to and during the storm.

Severn Trent Water has a programme of serviceability inspections on the public sewer network to inspect the condition of sewers and remove blockages. It is expected that the sewerage system is designed to modern water industry standards and can ordinarily accommodate up to the 1 in 30 year storm event.

Interviews with affected residents have shown that the area may have flooded approximately thirty years ago. Due to the length of time since previous flooding residents were unaware of the flood risks and did not have any preventative measures available to deploy against the ingress of water to the properties. Some residents reported attempting to unblock gullies on the footpaths around Daron Gardens however due to the flashy nature of the storm this was ineffective.

### 4.3 Agreed future action plan

Surface water, highway drains and public sewers are closely linked. During this flood there is evidence of surface water being unable to drain into the highway drainage system. Any future solution to reduce the risk of flooding to the affected area would need to be undertaken in partnership between Severn Trent Water and Nottingham City Council.

Nottingham City Council gully cleaning records show that postdating the event of 23rd July 2013 road gullies surrounding Daron Gardens and Edern Gardens have been maintained yearly as per the annual maintenance regime. This shall continue to maintain the functionality of road gullies in the area. Nottingham City Council is also responsible for maintaining the surface water gullies on the adopted footpaths on Daron Gardens and Edern Gardens. These are also subject to the annual maintenance regime though access for vehicles and equipment is limited.

Nationally, the modern public sewer network is designed to accommodate the 1 in 30 annual probably rainfall event. The rainfall event exceeded the modern design standard and Severn Trent Water therefore class the event as 'extreme'. Severn Trent Water prioritise investment in capacity improvements to the sewerage system based on risk, with the priority given to the most frequent and severe internal flooding. Currently, flooding in an extreme weather event beyond the design standards of the sewerage system does not meet criteria for a capacity improvement scheme at this time.

Due to the number of flooded properties on Daron Gardens and Edern Gardens Nottingham City Council has targeted the area to improve the flood risk and protect existing properties. Site visits have revealed the potential for a long term solution for diverting surface water away from the properties and towards Southglade Park.

Nottingham City Council funding bids were submitted to central Government in March 2014 and the partial funding has indicatively been allocated for the construction works for a surface water flood management scheme to be completed subject to the securing of full funding. Nottingham City Council is currently working to fill the funding gap. Feasibility and design work will commence in advance of this date and the community will be invited to comment on the proposals as part of this process.

Central Government has made available grant funding for homes and businesses affected by severe flooding in 2013/2014 under the Repair & Renew Grant. Applications for the funding will be made available to residents by Nottingham City Council. Nottingham City Council will ask residents/homeowners if their funding from the Repair & Renewal Grant can contribute to the wider surface water flood risk scheme at Daron Gardens and Edern Gardens.

Nottingham City Council is aware that the playing fields that are bounded by Beckhampton Road have been identified within the Land and Planning Policy (LAPP) for community

development. It is recommended that any future development of the site must consider Sustainable Drainage Systems (SuDS) to provide betterment of surface water runoff from the playing fields.

In addition to the proposed works, other future actions are recommended, which focus on improving community preparedness and resilience. The Action Plan below summarises the actions that have been agreed between Nottingham City Council and Severn Trent Water.

| **Nottingham City Council Actions** | **Status** |
|---|---|
| Submit funding bid to central government for Flood Defence Grant Aid to deliver a surface water flood risk management scheme in the Daron Gardens and Edern Gardens area. | Completed bid March 2014. Partial funding has been secured from DEFRA subject to the funding gap being filled by Nottingham City Council. |
| Commission an Optioneering study to model different surface water management options at Daron Gardens and Edern Gardens to decide the most cost-effective solution for the funding that has been allocated. | To be completed in 2015 |
| Topographic survey to be carried out on Daron Gardens and Edern Gardens to support an optioneering study. | To be completed 2015 |
| Construct surface water flood risk management scheme for Daron Gardens and Edern Gardens. | To be completed with the release of funding from Government and once partnership funding is secured |

| | |
|---|---|
| Continue to maintain road gullies on a regular basis to ensure that the maximum volume of surface water is transferred to the public sewer network. Gullies on Daron Gardens are to be placed on the Targeted Gully Cleansing Regime for more regular maintenance. | Ongoing maintenance activity. Gullies have been placed on Targeted Gully Cleansing Regime. |
| **Severn Trent Water Actions** | **Status** |
| Ensure flooding of the 23rd July 2013 is included on Severn Trent's records. | Completed |
| Maintain serviceability of public sewer system by inspecting and undertaking necessary remedial action (blockage removal etc). | Ongoing |
| Monitor any future reported internal or external flooding incidents and the nature of the storm that causes flooding to identify any triggers for capital investment. | Ongoing |

### 4.1 Recommendations for affected residents and/or landlords

The table below contains recommendations for individual residents and/or landlords to improve resilience and preparedness of properties on Daron Gardens and Edern Gardens.

| **Recommendations for Residents and/or Landlords** | **Further Advice*** |
|---|---|
| Residents should recognise that their property is vulnerable to future flooding in extreme rainfall events and make a **Flood Plan**, which involves ensuring that you have all of the information available that you may need in a flood event and helps you to consider what actions you will take if another flood occurs. | Environment Agency Personal Flood Plan Guidance: https://www.gov.uk/government/publications/personal-flood-plan |
| Residents should consider installing appropriate property level flood protection measures such as flood resistant doors and smart airbricks on their properties to prevent water entering the | Environment Agency 'What to do before, during & after a flood': |

| | |
|---|---|
| property and reduce the impact of future intense rainfall events. | https://www.gov.uk/government/publications/flooding-what-to-do-before-during-and-after-a-flood |
| Residents should maintain adequate flood insurance cover for the property. The National Flood Forum provides advice on flood insurance cover. | National Flood Forum website: nationalfloodforum.org.uk |
| Residents should report any blocked road gullies to Nottingham City Council so that the City Council can act quickly to resolve the issue. | See 'Contacts' on Page 19 |
| Residents should report any future external or internal flooding to both Nottingham City Council and Severn Trent Water. If this information is reported it will support evidence for future capital investment to reduce flood risk. | See 'Contacts' on Page 19 |

** Most documents referred to are available on the internet. These can be provided by Nottingham City Council in hard copy format upon request. See 'Contacts' section on page 19*

## 5 CONCLUSIONS

A total of 11 residential properties were flooded internally on Daron Gardens and Edern Gardens in Top Valley. A series of three heavy rainfall events passed over the City on 22nd and 23rd July 2013 that saturated the ground in the area. A fourth rainfall event passed over Nottingham at 17:00 on 23rd July 2013 resulting in the flooding of 11 properties and extensive flooding of external areas. The properties that were affected are in low lying areas of the natural valley that extends from the playing fields on Beckhampton Road to Southglade Park.

Nottingham City Council and Severn Trent Water are the Risk Management Authorities that have flood risk management functions in relation to the flood event. Nottingham City Council is responsible for managing the risk of flooding from surface water and highway drainage and Severn Trent Water is responsible for providing effectual drainage and public sewers (surface water sewers and foul water sewers). Due to the complex nature of the interactions between surface water and public sewers the City Council and Severn Trent Water have worked in partnership to investigate the flooding and agree an action plan.

Due to the extreme nature of the rainfall event the flooding incident does not trigger Severn Trent Water's capital investment programme and therefore the actions that the City Council and Severn Trent Water have agreed focus on the continued maintenance of the existing drainage systems so that they operate at maximum efficiency during rainfall events.

Nottingham City Council has bid for funding from central Government and has indicatively been awarded funding from Flood Defence Granting Aid to improve the level of flood risk to the properties in the Daron Gardens and Edern Gardens area. A preliminary investigation will be carried out in 2015 to identify the most cost effective surface water flood risk management option with funding due to be released to carry out improvement works subject to the securing of future partnership funding.

Due to the extreme nature of the rainfall event the flooding incident does not meet Severn Trent Water's criteria for capacity improvements at this time. The City Council and Severn Trent Water will continue to undertake maintenance of the existing drainage systems so that they operate at maximum efficiency during rainfall events.

A number of recommendations have been made for residents to improve the level of preparedness and resilience of their properties. It is also important for residents to report any future flooding issues to Nottingham City Council and Severn Trent Water.

## 6 DISCLAIMER

This report has been prepared as part of Nottingham City Council's responsibilities under the Flood and Water Management Act 2010. It is intended to provide context and information to support the delivery of the local flood risk management strategy and should not be used for any other purpose.

The findings of the report are based on a subjective assessment of the information available by those undertaking the investigation and therefore may not include all relevant information. As such it should not be considered as a definitive assessment of all factors that may have triggered or contributed to the flood event. Nottingham City Council expressly disclaim responsibility for any error in, or omission from, this report and the supporting technical assessment Report arising from or in connection with any of the assumptions being incorrect.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the time of preparation and Nottingham City Council expressly disclaim responsibility for any error in, or omission from, this report arising from or in connection with those opinions, conclusions and any recommendations.

The implications for producing Flood Investigation Reports and any consequences of blight have been considered. The process of gaining insurance for a property and/or purchasing/selling a property and any flooding issues identified are considered a separate and legally binding process placed upon property owners and this is independent of and does not relate to the City Council highlighting flooding to properties at a street level.

Nottingham City Council does not accept any liability for the use of this report or its contents by any third party.

## 7 CONTACTS & USEFUL LINKS

| Nottingham City Council Contacts & Links | | |
|---|---|---|
| **Drainage Team** | 0115 8765275 or<br>01158765279<br>*Monday to Friday 9:00-17:00* | *For advice on improving the level of protection to your property* |
| **Highway Services Team** | 0115 9152000<br>*Monday to Friday 9:00-17:00*<br>Online reporting:<br>www.nottinghamcity.gov.uk/article/26940/Report-a-fault | *To report problems with blocked road gullies or flooding incidents during office hours* |
| **Emergency Contact** | 0115 9152222<br>*Out of office hours* | *To report emergency flooding incidents normal out of office hours* |
| **Useful Web Pages** | http://www.nottinghamcity.gov.uk/article/25423/Flooding | |
| **Severn Trent Water Contacts** | | |
| **Emergency contact** | 0800 783 4444<br>*24 hours* | *To report flooding incidents or blockages on sewers* |
| **Environment Agency** | | |
| **Floodline** | 0345 988 1188<br>*24 hours* | *For advice on current flood warnings* |
| **Useful web pages** | https://www.gov.uk/government/publications/flooding-what-to-do-before-during-and-after-a-flood | |
| **Emergency Services** | | |
| **Non Emergency Contact** | 101 | |

# 8 APPENDIX A: MAPS AND POLICY

**Table A1: Nottingham City Council Thresholds for Initiating Flood Investigations on residential properties. (Section 19 Flood Investigation Policy)**

| Threshold / Trigger | Included | Excluded |
|---|---|---|
| • All incidents where internal flooding affects five or more properties and the properties are either in close proximity or the flooding is hydraulically linked.<br>• Where there is uncertainty around the cause of flooding or the responsible Risk Management Authority, regardless of the number of properties affected.<br>• Where the frequency or impacts of flooding are particularly severe, regardless of the number of properties affected. | 'Internal' flooding relates to:<br>• Flooding of any area of a property that was originally intended to be habitable at ground floor level and above e.g. kitchen, reception rooms, sleeping accommodation.<br>• Flooding of a sub-surface structure, such as a basement or cellar, where the floodwater contains sewage or other contaminants that cause concern for public health. | The following exclusions relate to the definition of 'internal' flooding:<br>• External areas such as gardens, driveways and paths.<br>• Structures that were not originally designed to be part of the habitable property such as sheds, summer houses, conservatories or garages.<br>• Flooding of a sub-surface structure, such as a basement or cellar, where the floodwater does not cause concern for public health. |

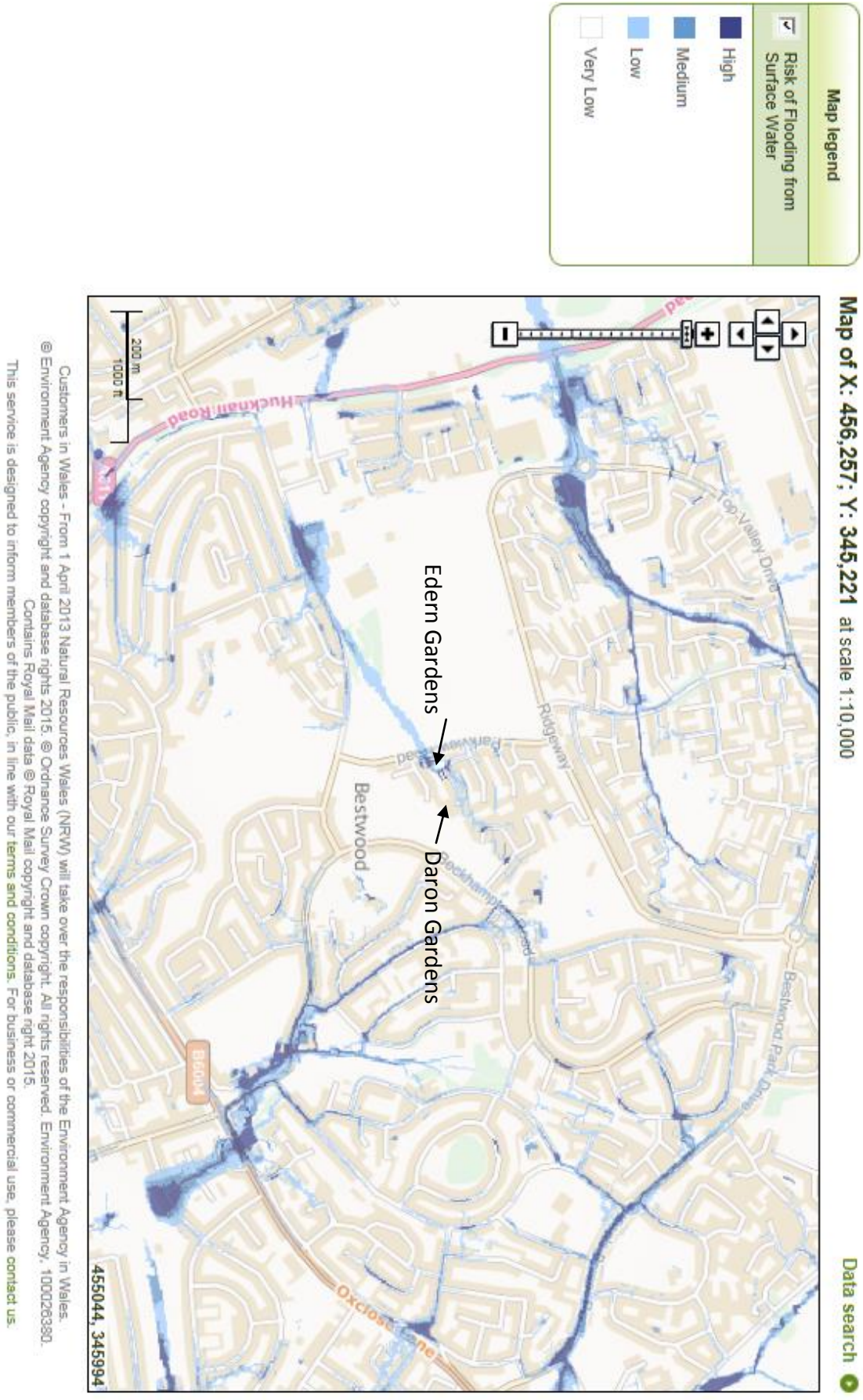


**Figure A1: Environment Agency Flood Map for Surface Water**