



REPORT OF THE SERVICE DIRECTOR, PLACE

FLOOD RISK MANAGEMENT UPDATE AND REVISED STRATEGY 2021 – 2027

Purpose of the Report

1. To provide an update for Members on the latest position in relation to the Council's duties and responsibilities under the Flood Risk Regulations (2009) and the Flood and Water Management Act 2010.
2. To provide an update on current major flood investigations and progress on major flood protection schemes.
3. To seek approval to publish Nottinghamshire County Council's revised Flood Risk Management Strategy.

Information

4. Following severe flooding during the summer of 2007, the government commissioned an independent review (the 'Pitt Review') which in 2008 recommended that local authorities should lead on the management of local flood risk, working in partnership with other organisations. Two key pieces of legislation have brought this forward; the Flood Risk Regulations (2009) which transpose the EU Floods Directive into UK Law and the Flood and Water Management Act (2010). Currently 85,000 properties are estimated as being at risk of flooding across the County.
5. Since 2010 the Council has been a Lead Local Flood Authority (LLFA) having powers and statutory duties to manage and co-ordinate local flood risk management activities. The County Council does this by working together with other organisations including the Environment Agency, who manage flooding from generally larger rivers (known as Main Rivers, such as the River Trent), Internal Drainage Boards managing low lying areas, District, Borough, Parish and Town Councils and infrastructure/ utility providers, such as Severn Trent Water and the Highways Agency. Partnership work is overseen by a joint Strategic Flood Risk Management Board with Nottingham City Council which meets every six months.
6. Local flood risk means flooding from surface water (overland runoff), groundwater and smaller watercourses (known as Ordinary Watercourses).

Lead Local Flood Authority Statutory Duties Update

7. As a Lead Local Flood Authority, the County Council continues to deliver on all its statutory duties and obligations under the Flood and Water Management Act 2010

A key duty is to develop, maintain, apply, monitor and review a Flood Risk Management Strategy and Action Plan that identifies key objectives to shape the delivery of the flood risk management services in Nottinghamshire. Our original strategy was formally adopted and published in 2016 and has been subjected to a thorough review this year, the following summarises our approach and outcomes of the review:

- The revised strategy covers the period 2021-2027 and has been structured to provide clarity on the Authority's role, our visions and targets for flood risk management. It builds on the knowledge and experience we have gained in our role as a Lead Local Flood Authority over the past five years. The strategy is supported by an Action Plan that provides further details on our approach to managing local flood risk.
- The original strategy was a 71-page document supported by 6 appendices, some containing many pages and complex data and our review felt the document no longer reflected the approach taken by the Authority in delivering its Flood Risk duties. The revised document, attached as Appendix A to this report, is now a 12- page document supported by a tabulated Action Plan. It focusses on 5 objectives supported by real examples of our achievements over the last 6 years. This approach should allow all our customers to access and understand the Authority's approach to managing flood risk across Nottinghamshire.
- The appendices contained in the original document will be retained and updated in the future and made available for reference as necessary however will not form part of the revised strategy.
- Between October and November 21 the Strategy was subject to a one-month online public consultation process and sent direct to partner organisations for comments. A link to the consultation was also emailed direct to the 14,619 Flood Bulletin subscribers. Over 70 responses have been made online and the feedback is summarised below. A number of our partner organisations have made direct responses which are overwhelmingly positive with The Environment Agency suggesting that our approach is presented as best practice across other Lead Local Flood Authorities.
 - The consultation asked the following six questions with a high percentage of responses registering as agreeing or strongly agreeing with the questions posed. Almost 30% of responders neither agreed nor disagreed and a small percentage registered as disagree / strongly disagree.
 - An assessment has been carried out on those responses that either disagreed or strongly disagreed and it appears that the majority have raised localised rather than strategic issues of concern with a number of those falling outside of our role and responsibilities. Comments made

regarding our strategic approach have been considered and will be addressed going forward.

- With Committee's approval it is proposed to publish the Local Flood Risk Management Strategy 2021-2027 on 1 December supported by the Flood Risk Management Action plan. **Appendix A** and **Appendix B**.

Other statutory duties include:

- Co-ordinating activity with other local bodies and communities through public consultation, scrutiny and delivery planning.
- Co-operating with other Risk Management Authorities to improve effectiveness, delivery and efficiencies.
- Carrying out physical works to manage local flood risks in Nottinghamshire.
- Maintaining a register of assets – these are physical features that have a significant effect on flood risk across the county. Currently our register holds around 2000 records relating to bridges, culverts, historic structures, retaining walls and other drainage structures. This information is publicly available on the County Council's flood risk web pages. An inspection regime is in place which covers all Critical Assets across the County, some of which will be undertaken now using our new Drone technology. Utilising our powers to designate specific features as flood risk management assets gives a degree of protection from damage and removal.
- Investigating significant local flooding incidents and publishing the results of such investigations in a Section 19 report. Significant for NCC equates to 5 or more properties suffering internal flooding in any one catchment. To date we have produced and published 37 bespoke reports.
- Using the powers under the Land Drainage Act 1991 to regulate our 1600 miles of ordinary watercourses (outside of internal drainage districts) to maintain a proper flow. This is achieved by means of issuing Consents for altering, removing or replacing certain structures or features on ordinary watercourses; and enforcing obligations to maintain flow in a watercourse and repair watercourses, bridges and other structures in a watercourse. During the last four years over 400 applications have been considered for consenting works on an ordinary watercourse. Our processes have recently been updated and streamlined to be more efficient and cost effective. Online applications and payment systems are now available to applicants and a fast track service and compliance checking charges for the larger developments implemented. Since the introduction of this there have been 40 Land Drainage consent applications, generating an extra £3000 through compliance checking, of which 8 have been completed with others awaiting construction before inspection can be completed
- Undertaking a statutory consultee role providing technical advice and comments on surface water drainage to local planning authorities on major and sensitive developments. Over 4560 planning applications have been received since April 2015, 3239 of those have been responded to with bespoke responses. Last year the service responded to 99.49% of applications in the required 21 days and in the last 6 months 12,440 homes have been considered as part of our planning responses. The County Council is committed to ensuring new developments adopt sustainable approaches to

surface water management. To this end, the flood risk team are integrating local flood risk management into the planning process and supporting sustainable growth at every opportunity. We encourage and promote the use of Sustainable Drainage Systems (SuDS) in all new developments.

- Playing a lead role with emergency planning and with recovery after a flood event. Local authorities are 'category one responders' under the Civil Contingencies Act and must have plans to respond to emergencies, and control or reduce the impact of an emergency.
- Managing flood risk to properties from surface runoff, ordinary watercourses and groundwater. Over 1300 localised reports of flooding have been investigated in the last eighteen months. The service has developed a robust approach to the prioritisation of schemes to manage flood risk. We have identified areas at greatest risk from local flood sources and make the best use of available information to develop, resource and prioritise including working closely with Via East Midlands Ltd. where there is an overlap.
- In the last seven years 1,047 properties have been internally flooded in the county.

Year	Totals	Business	Residential
2015	2	2	0
2016	50	4	46
2017	0	0	0
2018	87	20	67
2019	532	180	352
2020	376	69	307
2021	0	0	0
Totals	1,047	275	772

- Investigating flooding events and pursuing possible solutions. Where we have areas in the County that do not meet the criteria for flood mitigation schemes, we will consider carrying out work funded by the £100k Land Drainage Budget. Following a prioritisation process and working with Local Communities, Elected Members and other Risk Management Authorities we organise that work into a annual programme.

Resilience Update

8. As a Lead Local Flood Authority, we are committed to reducing the risk of flooding across the County. The Flood Risk Management team provides a service for all residents within the County, both domestic and commercial, with an aim to educate, support, influence and empower. We look to support communities through flood resilience intelligence that is site specific and bespoke, assisting communities to understand how to proactively manage flood risk and resilience measures.
9. We continue to work with communities to enable them to become more resilient to flooding and to understand their land drainage responsibilities, with the ambition to enable some 199 communities to 'Prepare not Repair' and engage with decision making across the 10 Risk Management Authorities. Utilising knowledge sharing, community participation, actions and leadership to reduce economic impacts of flooding and protect our customers quality of life. We currently have active working relationships with Clarborough, Clayworth, Bleasby,

Kimberley, Normanton on Soar, Gotham, Tollerton, Thurgaton, Southwell, Lowdham, Balderton and Caunton and will continue to expand this initiative across the county. We are currently working closely with Burton Joyce and colleagues in Emergency Planning to assist with the setting up of a new flood warden scheme. The progression of flood risk management technology including the MyNotts Application and improvements to our online resources will assist with this important aspect of our work.

Update on Flood Investigations and Schemes and Section 19 Investigations

10. The current flood risk investment programme is facilitating the delivery of 5 significant schemes across the county with a total estimated value of £8.3m. A further 23 schemes are in being considered for feasibility and design. In 2020/21 the FRM team secured external funding of over £665k towards flood alleviation schemes, which complements the £900k brought in last year. We will continue as ever to seek external funding opportunities wherever possible.
11. In July 2020 DEFRA announced that they will cover any costs associated with Flood Defence Grant in Aid funded scheme delays caused by the Covid 19 restriction that result in an exceedance of approved funding. We will review our financial position on Southwell and Hucknall Titchfield Park Flood Alleviation Schemes and will make claims if applicable.
12. In the last 18 months the County has been subjected to two significant flooding events: February 2020 and June 2020. An isolated event in August also led to internal flooding of 5 businesses. A total of 376 properties are recorded as having suffered internal flooding. In the March Budget 2020 the Chancellor announced that the flood and coastal erosion risk management funding was to be doubled to £5.2bn for the next 6 years, from the 1st April 2021. The HM Treasury have announced that £140m of the £5.2bn will be made available to be spent this financial year 20/21 to accelerate schemes and maximise the number of properties that can be better protected. A forward plan of schemes across the County is in development to maximise the offer of assistance over the next six year term and a number of schemes have been accelerated as detailed below under the SR20 spending review.
13. **SR20 (Defra Spending Review 2020)** – The Flood Risk Management team have recently been successful in securing a total of £520k DEFRA funding to complete hydraulic studies on a number of catchments across the County. These studies cover West Bridgford (£200k), Mansfield (£100k), Bleasby (£25k), Rhodesia (£20k), Clarbrough (£45k), Shireoaks (£25k), Retford (£75k) and Gotham (£30k) and are all programmed to be completed by 31 March 2022. It is hoped that the outputs from these studies will identify areas for potential further flood mitigation investment. Our approach to delivering these studies and improvements will see us liaise with all other relevant Risk Management Authorities and communities where applicable. It is hoped that the outputs from these studies will identify areas for potential further flood mitigation investment.
14. The additional funding secured through DEFRA for the emerging flood risk schemes across the County is essential. However, there is an understanding that looking wider for funding opportunities and forging new relationships will go some way to further support the ambitions of the authority. Initiating conversations and working with businesses to secure resources through initiatives such as Corporate Social Responsibility (CSR) days and team building days to securing partnership funding for Capital schemes is being investigated.

15. **Southwell** - NCC successfully negotiated the rigorous Environment Agency approval process and in February 2018 secured a total of £4.4 million for the engineering scheme and £350k of Local Levy funding for the Natural Flood Management scheme. Nottinghamshire County Council as the Lead Local Flood Authority are responsible for the overall delivery of all elements of the Southwell Flood Alleviation project. The project management is overseen by a Project Board, made up of the key partners.

Project Board key partners are:

- Nottinghamshire County Council – Project Lead
- Via East Midlands Ltd. – Design and Construction of engineering schemes
- Southwell Flood Forum – Community Representatives
- Trent Valley Internal Drainage Board – Watercourse Management
- Southwell Town Council – Community Representatives
- Newark and Sherwood District Council – District Representatives
- Trent Rivers Trust – Natural Flood Management delivery
- Environment Agency – Lead Funding Partners
- Severn Trent Water – Utility Company

16. The funding package was supported with further additional partnership contributions including £600k investment from the County Council, £220k from Newark and Sherwood District Council, £120K Southwell Town Council, £25k Southwell Flood Forum, an additional £300k Local Levy for the flood mitigation scheme and £233k Renew and Repair grant community contributions from a central government fund.

17. The flood defence proposals have two key elements: physical engineering solutions being designed and delivered by Via East Midlands Ltd. and Property Flood Resilience measures being designed and delivered by Whitehouse Construction Ltd. Development of detailed design for the physical engineering proposals is progressing well with Via East Midlands Ltd. Construction commenced in Autumn 19 with completion by the end of ?. Whilst every effort has been made to continue with the project during the Covid 19 situation along with complications on planning and archaeological negotiations it has resulted in a predicted 6 month extension to project.

18. The Property Flood Resilience works are being delivered by Whitehouse Construction, following a competitive tendering process. At the time of writing (September 2021) protection measures had been installed to over 100 properties. We will be continually reviewing which properties are protected by each element of the project as the designs develop. We are also looking at ways of providing protection to a number of Listed Buildings in the catchment and are liaising with the Conservation Team at Newark and Sherwood District Council in order to agree the proposals.

19. The Natural Flood Management proposals within the catchment are now all complete and operational.

20. Part of the wider catchment flood mitigation proposals includes a project to retrofit sustainable urban drainage features at Lowes Wong School. This work was substantially completed late

November 2019 and has been designed and delivered using Via East Midlands Ltd. The project was joint funded by NCC Property Team and has a total value of £550k. Bad weather towards the end of 2019 prevented final completion of the project which was further complicated by both the weather and Covid 19 this year. However, the project team of Via and their contractors worked closely with the School management team to complete any works necessary and ensure they could open their doors as safely as possible once the restrictions on Schools were relaxed. The final smaller details of this project will be completed by the end of March 2021. During the storm events of November, February, and June there was no internal flooding reported in Southwell and a member of the Southwell Flood Forum reported no surface water runoff from the Lowes Wong site during the heavy rain on 23rd December, significant evidence of the success of the project. As the project continues towards completion the project team are reviewing the outputs the final scheme will deliver to ensure as many properties in the catchment as possible benefit for a reduced risk of flooding.

The Planning application for Potwell Dyke has been submitted and will go to Planning Committee early next year. Stakeholder updates are ongoing and the archaeological survey works on the Higgons Mead are complete. The second phase of Lower Kirklington Road has completed including the installation of a zebra crossing and works on Church Street are now complete.

21. **Egmanton** – The first part of this scheme concerning the village centre was completed in 2017 and the final element of the scheme, consisting of an above ground storage area, was completed in August 2020. The project was delivered by the Trent Valley Internal Drainage Board with support from the County Council.
22. **Hucknall Titchfield Park Brook Scheme** - A project to protect 86 properties from flooding along the Titchfield Park Brook catchment that received an allocation of £912k of Flood Defence Grant in Aid and Local Levy funding for delivery in 20/21 with support from NCC capital is now complete. The project has three discreet elements and has been delivered utilising expertise available from Ashfield District Council (as landowners of Titchfield Park), Via East Midlands Ltd. and Whitehouse Construction. The project has been completed within budget and delivers a significant reduction in the risk of flooding to the area.
23. **Lowdham** - The Environment Agency are continuing to develop the outline business case for a flood alleviation scheme to protect Lowdham with a view to submitting their business case in late 2021. Officers from the Flood Risk Management Team are liaising the Environment Agency and the Lowdham Flood Action Group to help support progress of both the project and community resilience where necessary. In July DEFRA announced an additional £5m contribution to this project to help secure its deliverability. Further improvements to realign misplaced drainage pipes and within the Old Tannery Drive estate was completed in October. These improvements were funded by NCC.
24. **Thurgarton** - The IDB have identified their preferred option for reducing the risk of flooding to the catchment and currently looking at funding options. NCC have made an allocation of £65k available as a contribution to support any viable proposals.
25. **Shireoaks** - Following a successful bid to DEFRA via the SR20 programme for £25k work is due to begin shortly by our contractors to survey the condition of the drainage network

serving the village. It is hoped this work will identify any faults which when repaired will reduce the flood risk to the community. The County Council are also working in collaboration with the Trent Rivers Trust to survey the upper catchment of Shireoaks with a view to implementing Natural Flood Management measures. The aim of this project will be to store water on the land surrounding Shireoaks hopefully lessening potential future flood impacts. The feasibility study for this project will be completed by April 2021.

26. **Retford** - Following a successful bid to DEFRA via the SR20 programme for £75k the County Council are working in partnership with the Trent Rivers Trust to survey the catchment of the Retford Beck to assess the suitability for Natural Flood Management. Work has now begun with landowners to negotiate the installation of these natural methods of surface water management. It is hoped that these measures, once installed will slow the flow to the Beck whilst also complimenting the proposed engineered flood mitigation scheme managed by the Environment Agency. Work will also include working with the Isle of Axholme IDB to survey the Carr Dyke and its relationship with the River Idle. There are properties along Darryl Road in Retford which are subject to a significant flood risk from the Carr Dyke. It is hoped this work will generate a scheme which could reduce this risk in future.
27. **Worksop** - Following the major flood event in November 2019, which saw 324 properties internally flooded, the County Council are continuing to work in partnership with the Environment Agency, Bassetlaw District Council and the Canal and Rivers Trust to investigate the incident and work towards mitigating against the risk of repeat flood events. Regular multi-partnership meetings attended by County Councillors are underway and the outcome of these meetings are published on NCC website. The Environment Agency are modelling a computer simulation of the event to understand how it occurred, this work will be completed shortly. Once completed, potential flood defence options will be tested to prove effectiveness and inform a preferred flood mitigation scheme.
28. Bassetlaw District Council are currently perusing a significant bid via the Levelling Up Fund to facilitate improvements to the town centre which if successful will link in with the EA proposals for managing the flow of water through the town centre. New resilience stores and sandbag supplies have been secured and an operational protocol has been established for times of flood. Flood Warden training is underway with volunteers in the local community and every effort is being made to keep the local community informed of progress and to provide information to assist them in becoming resilient to the risk of flooding in the future.
29. **Calverton** - The early partnership working between NCC and Severn Trent Water in this catchment has led to the utility company securing significant investment to deliver a capital improvement project in the catchment. The project is currently in detailed feasibility stage and once options are identified we will work together to identify ways of delivering mutually beneficial outputs in the catchment. NCC are currently liaising with Severn Trent Water's team to programme in a delivery date, however this is dependent on the outcome of feasibility / design. Once a preferred option has been agreed arrangements will be made to share these with the wider community. Meetings to discuss progress and next steps are set to take place in the autumn, following which Members will be updated.
30. **Arnold** - Nottinghamshire County Council have completed the Section 19 report into the devastating flooding that happened in June 2019. We are continuing to work closely with residents and our partners Severn Trent Water and Gedling Borough Council to clarify

responsibilities and identify potential measures to reduce and mitigate the risk of flooding events in the future. Due to its history of flooding this area has been included as part of the Daybrook Upper Catchment Study detailed further in paragraph 32. Several properties affected within Arnold have now been fitted with Property Flood Resilience measures this project has been led by Severn Trent to add an additional level of protection to properties in the area. NCC are additionally installing Property Flood Resilience measures on properties in the area of which were not included in the Severn Trent programme.

31. **Daybrook Upper Catchment Study** - In order to understand the complex interaction between surface water assets in the upper Daybrook (Arnold) catchment, NCC secured £99k of Local Levy to carry out a detailed study. The study has been carried out by Severn Trent Water and their specialist contractors and the final report was completed in July. An executive summary of the report was presented to local Members in 2020 prior to submitting final amendments for the document. A final review of the document by County Council Members and Partners was completed this October and subsequently the report has been published. Key outputs of the study include a prioritised approach to 9 areas of known flood risk as shown in the table below. It was agreed that each lead RMA would own their respective allocations and develop them through their internal investment decision processes as stand-alone issues. Any decisions made regarding investment will be shared with the other RMAs both for information and to allow any impacts on other areas to be considered. This approach was considered the most effective and has been made possible due to the significant level of detail and understanding afforded by the wider report. The study was made possible by utilising the support, skills, knowledge and experience from across the partners: Severn Trent Water and its Consultants - WSP, Gedling Borough Council, The Environment Agency and Nottinghamshire County Council, and was completed in 2020. The significant local knowledge contained within the partner group has been an invaluable contributor to the success of the study.

DAYBROOK UPPER CATCHMENT FLOOD STUDY HOTSPOTS - LEAD RMA AND INVESTMENT DECISION			
Location (alphabetical)	Lead Risk Management Authority (RMA)	Partner RMAs	Investment Decision timescales* <small>Please note these are targeted timescales for reaching an investment decision and do not guarantee investment. Timescales are from June 2021</small>
Arno Vale Road	NCC	STW / GBC	Long - 36mths+
Arnot Hill Park	GBC	NCC / STW	Medium - 18-36mths
Bestwood Lodge Drive	STW	NCC / GBC	Long - 36mths+
Calverton Road	NCC	STW / GBC	Long - 36mths+
Coppice Road / Bentwell Avenue / Brookfield Road	GBC	STW / NCC	Short + Long (two phase approach)
Front Street	NCC	STW / GBC	Short - <18mths
Jubilee Ponds	STW	EA / GBC / NCC	Long - 36mths+
Thackerays Lane Park	EA	GBC / NCC / STW	n/a
Thornton Avenue / Upper Mansfield Road	STW	NCC / GBC	Long - 36mths+
<small>* These timescales allow the Lead RMA to consider ways of reducing the risk of flooding in the area in more detail, identify available funding streams to support investment and deliver any viable improvements. The Lead RMA will be supported in this process by the Partner RMAs.</small>			

32. **Newthorpe** - Severn Trent Water as lead authority are currently carrying out detailed feasibility on the catchment. NCC have contributed to the feasibility study to allow a comprehensive study into all sources of flood risk in the area. Preferred options will be progressed through Severn Trent Water's investment process with financial support from NCC capital funding and a Section 106 contribution. Currently data collection is being finalised within the community, after which the final design will be assessed and proposed. Following this exercise information will be shared with Members and the local community.

33. **Girton**- Girton has a significant history of repeat flooding, its small size makes a traditional flood defence approaches very difficult in order to achieve a positive cost benefit ratio. NCC are committed to finding a way to assist this incredibly resilient community to find some level of protection against flooding and provide some peace of mind for the residents. A recent bid to the Innovative Flood Resilience Programme, though unsuccessful has provided several innovative ideas to assist the community. External funding sources are being pursued to facilitate Natural Flood Management solutions to store water away from the village.
34. **Sutton on Trent** - Following severe flooding in 2018 NCC worked closely with Trent Valley Internal Drainage Board to understand the causes of the flooding and ways to reduce the risk of future occurrences. The IDB have identified their preferred option for reducing the risk of flooding to the catchment and are currently looking at funding options, with a view to submitting an application for Flood Defence Grant in Aid in 2021/22. NCC have made an allocation of £50k available as a contribution to support any viable proposals. NCC have completed a comprehensive Property Flood Resilience scheme on one property in the catchment that is most vulnerable to repeat flooding. This work will protect the elderly resident in their home and reduce the likelihood of future evacuations.
35. **Normanton on Soar** – A scheme to help resolve surface water and highway flooding in Normanton is currently being considered by Severn Trent Water Ltd. This scheme necessitates a pragmatic approach to problem solving from all parties affected including Highways, Severn Trent Water, Normanton on Soar Parish Council, the Environment Agency and NCC Flood Risk Management and on completion will see benefits delivered to all involved.
36. **Willoughby on the Wolds** - NCC are working closely with Severn Trent Water to identify both short and long term solutions to prevent localised flooding and pollution of a watercourse. NCC have been working with residents to clear the watercourse of silt and debris, whilst Severn Trent Water continue to investigate the operation of their drainage network. Severn Trent Water are liaising with the Parish directly and NCC will retain an overview of the situation.
37. **Clarborough** - Following a successful bid to DEFRA for £45k via the SR20 programme and to the Trent Regional Flood and Coastal Committee for £30k of Local Levy; the County Council are working with the Trent Rivers Trust to run a Natural Flood Management project in Clarborough. This project began in July 2020, working with local landowners to identify the optimum areas to install Natural Flood Management measures. The project is now completed ahead of schedule with installed measures capturing surface water and reducing the level and risk of flooding. Alongside this work we are appraising a shortlist of options for an engineered flood mitigation scheme for Clarborough. We continue to update the Parish Council on developments and assist the community in becoming self-resilient to the risk of flooding in the future.
38. **Gotham** - Section 19 reports have been published for both significant flood events suffered by the residents of Gotham in November 2019 and February 2020. Driven by the severity of those events and similar events historically, the County Council are working with the Trent Rivers Trust to survey the catchment with a view to implementing Natural Flood Management measures. The aim of this project is to store water on the land surrounding Gotham hopefully

lessening potential future flood impacts. The feasibility study for this project has been funded by a successful bid to DEFRA for £30k via the SR20 programme. Considerable work has already been undertaken by the County Council, Severn Trent Water, local organisations and the Parish Council to repair and improve the condition of the existing drainage system.

39. **West Bridgford** – Following the significant rain storms last August which caused some severe surface water flooding across the catchment, Via East Midlands Ltd, Rushcliffe Borough Council, Severn Trent Water, Emergency Planning and the Flood Risk Management team are working together to investigate and address a number of concerns on the network. NCC are working closely with key Risk Management Authorities in the area to manage and understand the risk of flooding in several locations across the catchment, several on site meetings have been held with varying members of the public and risk management authorities to gather additional data to feed into investigations across West Bridgford.
40. **Tollerton**- Following the devastation of the flooding events in November 2019 and February 2020 we have completed detailed investigations into surface water drainage assets on Tollerton Lane and Cotgrave Lane. Improvements including works to the highway drainage system on Cotgrave Lane, riparian owned watercourses, culverts and Property Flood Resilience for 5 properties on Tollerton Lane are now completed. Via East Midlands Ltd. completed a work programme undertaking a large variety of improvements in the area including, over 300-metre of highway drainage and a replacement of a 12-metre culvert under the highway. The works undertaken should ensure surface water in the area is managed as effectively as possible and reduce the likelihood of future internal flooding.
41. **Radcliffe on Trent** – Following several reported incidents of flooding across the catchment, we are currently pursuing maintenance based improvements in a number of areas in Radcliffe on Trent. We are also working with riparian owners to ensure existing surface water systems operate as effectively as possible.

Local Levy 2020/2021 Update

42. Central Government is currently investing £2.6bn nationally in a six-year Flood and Coastal Erosion Risk Management programme, of which approximately £170m will be spent in the Trent RFCC region. The local levy is vital in supporting this programme of schemes and studies and directly helps reduce flood and coastal risk to communities. It helps to ensure we maximise the use of central Government funds and funds locally important schemes where helping our communities, including local businesses. In many cases the use of local levy has enabled schemes to progress sooner and attract a significant amount of additional national funding, further increasing our capability to address areas of flooding.
43. Since 2014 Nottinghamshire have been very successful in bidding into the Levy securing approximately £2.8 million for flood risk schemes in the county, to work with communities to reduce flood risk. NCC have previously supported the Levy with an annual contribution and it is likely that this will continue for 2022/23 and we will continue to pursue Local Levy funding for our future capital schemes where applicable.

Digital Media

44. As a Lead Local Flood Authority, we are committed to ensuring all residents, users and interested bodies can access a wealth of information to better understand the risk of flooding within Nottinghamshire. The Flood Risk Management Strategic Action Plan identifies a need

to increase knowledge on the risks of flooding as well as providing guidance, support and greater knowledge to those at risk and those of who have already suffered flooding. Currently we are working with our key business partners within Nottinghamshire County Council to better understand how to update and present our information in a clear and succinct manner to better disseminate that information to our key users. We are working with other teams within the authority to ensure a level of continuity to the advice provided to our customers.

Telemetry

45. Planning and preparing for flooding as a community can reduce the impact it has, knowing when to act. Flood telemetry systems monitor watercourses and keep track of water levels, they provide data that indicates when flooding may occur. Based in and around local watercourses telemetry technology can give you enough time to prepare for flooding and take action. A combination of telemetry and camera monitored sites across the County in key high-risk locations are proposed as part of a telemetry pilot scheme. This scheme will assist in the managing and analysing Risk Management Authorities responses to flooding and help inform how to better manage these high-risk locations. Across Nottinghamshire County there are large number of critical drainage assets including: trash screens, culverts, weirs, grills and other structures that function to collect debris, manage flows and prevent blockages of our watercourses. These key high-risk locations form part of our current asset inspection programme. Following the trial, a review will take place on the effectiveness of the assets to inform a decision for a potential County wide roll-out initiative.

Drones

46. NCC have internally recruited and trained 5 volunteers this year to become Civil Aviation Authority approved trained drone pilots within the Place department. Several test flights have been successfully undertaken and following a review of these early stages we will be looking to roll out and provide this service to others both internal and external to the business. Flights to date have provided intel for building inspections, planning matters, dispute resolution and facilitated imagery of sites that are extremely difficult to access on foot safely. Digital imagery is currently being gathered to create an insight as to the capabilities of the drones and their potential uses for the authority which we hope to share with Members at a later Committee.

Flood Resilience Programme

47. Following the significant flood events in November 2019 and February 2020, the County Council identified the need to implement Property Flood Resilience measures (PFR) to properties in areas vulnerable to flooding but not covered by Central Governments Flood Protection Grants. At Full Council on the 27th February 2020 it was proposed that funding in the region of £2m be set aside to be put towards flood prevention schemes in Nottinghamshire, with the ambition that this funding be matched by partners including the Environment Agency. £1m of funding is being utilised to fund the Property Flood Resilience.
48. To help accelerate the provision of flood defences to flood victims a PFR prioritisation tool has been developed to ensure those areas in need are effectively and justifiably targeted. These reliance measures are for those most susceptible to flooding and look to reduce the likelihood of water entering properties at ground level. Proposals for parts of Jacksdale, Ollerton, Cropwell Bishop and East Markham are all currently being developed with a view to deliver agreed measures over the coming months. The work will be delivered by Whitehouse Construction Ltd. who have been procured by NCC through the Environment Agencies PFR framework. This programme is evolving and will be further developed in the

coming months and reported back to Committee. The installation of flood doors has been temporally suspended pending revised paperwork from the British Standards Institute following a revision to the testing standards nationally for flood doors. We are confident that Whitehouse's products will pass the necessary testing procedures which are due to conclude shortly.

COP 26

49. The Flood Risk Team have been working closely with other NCC colleagues to create a submission for the COP26 Regional Roadshow for the East Midlands. The focus is the increase in our usage of technology and engineering advancements to change the way in which Flood Risk is managed across the region. By utilising different aspects of technology, we are looking to decrease our overall carbon footprint and strengthen resilience to decrease the re-build requirement after major flooding events. The role of local authorities during flood events has a range of tasks and roles, from collecting data, providing advice, guidance, and support, assisting with the vulnerable and undertaking maintenance and clearance on key flood risk assets across the authority. The increase in flooding has seen a greater need to ensure our resources are focussed for our most vulnerable and our most at-risk communities. This challenge is being met in part by using advancements in technology. By using new technology such as telemetry and drones we can decrease the amount of third-party input needed for tasks across both our authority and our neighbouring authorities. Our drones have the potential with certain tasks to both greatly reduce our carbon emissions and reduce the number of individuals needed for a task therefore reducing the number of vehicles needed on the road. Although ensuring our communities are more resilient to avoid the loss of homes, livelihoods, and lives, we also want to ensure we are reducing our impact on the climate at every possible level.

Flood Risk Management Trainee Position

50. To support succession planning in the team and to breathe new life into the industry it is proposed to create a Trainee post within the existing structure. This post is designed to bring an enthusiastic individual into our area of responsibility to help address the lack of resources available in this specialism. It is hoped the wide range of skills and experience within the existing team and our partners will allow the post holder to shape a successful future within the industry. The post will be funded via recharges to our existing capital programme and if approved, will be advertised late 2021. **Appendix C and D.**

Scheme Delivery Partners

51. NCC are actively engaged with several key partners to enable better scheme delivery and communication across the county. Flood Risk Management works in collaboration with multiple partners and consults with these agencies to assist in the development of pipeline schemes, new initiatives and improvements to processes. We have an influence on regional (Catchment wide) and national policy through being part of the networks below:

- The Environment Agency
- Canal and Rivers Trust
- City, Town, District and Parish Councils and Meetings
- Local Flood Forums

- Local Residents and Businesses
- Severn Trent Water
- Trent Valley Internal Drainage Board
- Trent Regional Flood and Coastal Committee
- Association of Drainage Authorities
- Trent Rivers Trust
- National Flood Forum
- Nottingham Trent University
- Via East Midlands Ltd.
- HS2
- Department for Food and Rural Affairs
- Association of Directors of Environment, Economy, Planning and Transport
- Midland Service Improvement Group
- Specialist Service Providers

Summary

52. Flooding devastates communities and since taking on the role of Lead Local Flood Authority, Nottinghamshire County Council has strived to protect and serve our vulnerable communities. We have secured multi million pound external investments for flood alleviation schemes, demonstrating our partners confidence in NCC ability to deliver. NCC will continue to work closely with partners and communities to identify ways of proactively reducing the risk, likelihood and consequences of future flooding events. We will ensure our communication gives cohesive and clear messages to all those effected by what we aim to achieve.
53. In the last year alone our role as Statutory Consultee has seen us protect over 25,000 new properties from the risk of flooding through the planning process. Our ability to respond to flooding incidents and prepare and publish Section 19 reports in a concise and timely manner is admired across our flood risk colleagues in the Midlands. We continue to look for opportunities to maximise the efficiencies of the delivery of our service and draw in additional contributions to enhance our offer. We will strive to increase levels of awareness within local organisations and communities, so they can become more resilient to flooding and understand their land drainage responsibilities. Flood Risk Management recognises the importance of partnership working and we will continue to take an active role in developing local flood risk management partnerships and seek to collaborate with local stakeholders to achieve common goals.

Other Options Considered

54. To do minimum works which would leave communities at a significant risk of future flooding.

Reasons for Recommendations

55. The recommendations are designed to ensure the most effective and efficient route towards the management of surface water flood risk across the County.

Statutory and Policy Implications

56. The County Council has a number of statutory duties and powers under the Flood and Water Management Act 2010 and the Flood Risk Regulations 2009 including duties to manage and co-ordinate local flood risk management activities.

57. This report has been compiled after consideration of implications in respect of crime and disorder, data protection and information governance, finance, human resources, human rights, the NHS Constitution (public health services), the public sector equality duty, safeguarding of children and adults at risk, service users, smarter working, sustainability and the environment and where such implications are material they are described below. Appropriate consultation has been undertaken and advice sought on these issues as required.

Financial Implications

58. The cost of these schemes will be contained within existing budgets and externally secured funds.

Implications for Sustainability and the Environment

59. It is anticipated that the recommendations will ultimately result in delivery of a sustainable projects that reduce flood risk across the county whilst also reducing the negative impacts the flooding has on the environment, the economy and our communities.

RECOMMENDATIONS

- 1) The Committee calls on all agencies involved to seek and implement suitable measures to alleviate flooding in Nottinghamshire as soon as reasonable possible.
- 2) Committee approve the publication of the Local Flood Risk Management Strategy 2021-2027.
- 3) Committee approve the creation of a Flood Risk Trainee post (paragraph 50) within the existing structure.
- 4) The Committee endorses the work outlined in the report.

Adrian Smith
Corporate Director, Place

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HR Comment (JP 08/11/2021)

60. Any HR implications are contained in the body of the report.

Constitutional Comments (SJE 15/10/2021)

61. This decision falls within the Terms of Reference of the Transport & Environment Committee to whom responsibility for a) the exercise of the Authority's functions relating to flood risk management and statutory flood risk management scrutiny; and b) the approval of the relevant departmental staffing structures has been delegated.

Financial Comments (GB 20/10/2021)

62. The 2021/22 and 2022/23 Transport and Environment Committee capital programme includes £6.2m of funding to carry out capital works identified in this report. Should the Authority secure any further external funding there will be a requirement to vary the capital programme accordingly through the usual processes.

Background Papers and Published Documents

Except for previously published documents, which will be available elsewhere, the documents listed here will be available for inspection in accordance with Section 100D of the Local Government Act 1972.

- Flood Risk Management Strategy - Appendix A.
- Flood Risk Management Action Plan – Appendix B.
- Team Structures Flood Risk Management – Appendix C and D.

Electoral Division(s) and Member(s) Affected

- All