

BARNSELY METROPOLITAN BOROUGH COUNCIL

This matter is a Key Decision within the Council's definition and has been included in the relevant Forward Plan

**REPORT OF THE MATT GLADSTONE
EXECUTIVE DIRECTOR PLACE
TO CABINET ON 19 May 2021**

Barnsley Flood Recovery Report 2020/21

1. PURPOSE OF REPORT

1.1. This report provides an update regarding activity across the Borough following the November 2019 floods which directly affected 100 properties and 11 businesses. The report covers progress on the following key areas;

- Remedial works undertaken by the Council and partner organisations to date to reduce the likelihood and impact of further flooding;
- Measures being undertaken by the Council to bolster the response to any future flooding incidents;
- The "Section 19" report which identifies whether the relevant flood risk management authorities discharged their statutory duties or not; and
- The proactive steps being taken in conjunction with Sheffield City Region Combined Authority (SCR) to raise to profile of the lack of investment in to flood mitigation in South Yorkshire.

1.2. The response to the COVID pandemic has caused delay with recovery activities but nevertheless a significant amount has been achieved.

1.3. This report is intended to reassure Council Cabinet and residents of Barnsley that;

- Even in the midst of the response and recovery effort to the COVID emergency the Council has retained focus on improving and investing in the areas most susceptible to the impact of flooding; and
- Barnsley has been working at regional and national levels to raise the profile of the additional investment needed to protect the most vulnerable communities in Barnsley and across South Yorkshire.

2. RECOMMENDATIONS

2.1. For Members to note the flood recovery actions that have been taken to date and are planned for the next period.

2.2. To approve the attached Section 19 report on the effective discharge of statutory responsibilities with regard to flood risk management;

2.3. To note the ongoing collaborative work across the South Yorkshire region to attract greater levels of investment into the region to improve long term flood resilience.

3. INTRODUCTION

3.1. Between November 2019 and February 2020 severe flooding affected many parts of the United Kingdom, commencing with South Yorkshire in November 2019. The Met Office HAD-UK dataset shows it to be the wettest 5-month period ending October for the River Dearne and River Don catchment since 1891.

3.2. Storms Erik, Freya, Gareth, Hannah and Lorenzo brought strong winds and heavy rains prior to the November flood event with the Met Office reporting South Yorkshire as the wettest county across the country in autumn 2019, compared to the long-term average (1981-2010) with more than double its average rainfall for the season (425.4mm compared to an average of 208mm).

3.3. On 7th November 2019, persistent and intense rainfall fell across many parts of North England arising from a weather front that was stationary across the region from the early hours of Thursday 7th November for approximately 24 hours. The most intense band of rain was located over the four South Yorkshire Authority areas which had devastating effects on communities in those areas who are at flood risk. The November flood event has been estimated as 1:100 – 1:150 year event.

3.4. In response, a critical incident was declared and our emergency response teams mobilised to assist residents, businesses and support the emergency services. On the afternoon of November 7th the Emergency Control Room;

3.4.1. Received over 185 requests for assistance across the Borough;

3.4.2. Dispatched emergency teams to close 20 roads;

3.4.3. Installed flood board defences to 14 sites; and

3.4.4. Deployed tactical sandbags to 14 locations;

3.5. The Council's collective response to the November flood drew on resources from all Directorates and Berneslai Homes. In addition to co-ordinating our internal response, mutual aid was also dispatched to the neighbouring Authority of Doncaster in the form of 2000+ sand bags and active support from the Highways and Engineering department.

3.6. Progress on short and medium term remedial works

3.6.1. Following the November 2019 floods a number of high risk locations were identified and plans for remedial works established to improve future flood mitigation.

3.6.2. Key work being carried out is as follows;

3.6.2.1. Lundwood Flood Alleviation Scheme (FAS)

- The November 2019 floods affected around 70 properties on Lang Avenue, Lundwood.
- A range of flood alleviation measures are required at the location requiring a collective response from the Environment Agency, Yorkshire Water, Berneslai Homes and the Authority.

- The Authority had previously carried out a number of pro-active steps to protect properties including the installation of; 282 flood vents, 25 door guards and 15 waste pipe lock following the Floods of 2007, all of which offer a level of protection for internal areas
- As a follow-up, in June 2020 70 properties on Lang Avenue (previously affected by flooding) were visited to check that the property flood defences installed continued to be fully functional and identify any further works required.
- Recent media publications imply that the issues have not been fully addressed. In response, a Berneslai Homes led task and finish group has been established to determine the long term options for the area.
- In October 2020, Yorkshire Water completed a number of maintenance activities to a 500m stretch of the local drainage ditch which removed over 50 tonnes of debris, improving watercourse flow.
- All highways gullies in the immediate area have been inspected and maintained.
- An independent environmental consultancy agency has been engaged to carry out a flood threat assessment, including a solution/options appraisal and cost benefit analysis. The Stage 1 report was received in August 2020 with the draft Stage 2 report received in December 2020. Work is now ongoing to refine the Stage 2 proposals.
- Final options are now being reviewed, including refined costings. The recommended resilience work has an initial estimated cost of £525,000 with an upper limit of £1 million.
- Business Cases have been prepared and submitted to the Capital Oversight Board and categorised as an immediate priority (ref C22).
- The Lundwood Flood Alleviation Scheme has been identified as one of the 9 regional accelerator programmes put forward by SCR (Nov 2020), and has been allocated £150,000 to progress the development of the scheme.
- The scheme is also part of Barnsley's programme put forward to the Environment Agency for a grant funding contribution in the upcoming medium term plan which was finalised in March 2021.
- Proactive engagement has been on-going with local residents and elected members, the most recent of which was a virtual round table discussion and update on March 16th 2021 with Dan Jarvis MP, Cllr Chris Lamb, representatives from Highways and Engineering, Berneslai Homes and local residents.

3.6.2.2. Bulling Dike – Low Valley

- Categorised as a Flood Zone 2 location, the dike forms part of the River Dearne catchment.
- During the events of 2019 the River Dove overtopped its banks, some of the flood waters then entered Bulling Dyke. This combined with the flows in Bulling Dyke caused the Dyke to overtop, flooding properties on Station Road, Cotterdale Gardens and surrounding streets.
- The Danvm Drainage Commissioners Internal Drainage Board (IDB), who elect to maintain the watercourse, following consultations with BMBC have carried out approximately £0.1m remedial works along its length, during February 2020.

3.6.2.3. Worsbrough Reservoir

- Worsborough reservoir was built in 1793 and has a capacity of 266,000m³. This reservoir is flood categorised as 'A', a "High Risk" reservoir due to its size and potential for flooding 20 properties and businesses downstream.
- Prior to the November Flood events the concrete spillway was identified as requiring investigation and possibly requiring works to be carried out. At the request of the All Reservoirs Panel Engineer, a site visit took place on 7th November 2019.
- Despite taking mitigating actions to reduce the reservoir levels, the heavy rainfall meant that water was still flowing over the spillway. The Engineer's recommendation was to undertake the structural survey promptly without delay and to prevent, as far as possible, the use of the spillway. Given the levels of rainfall experienced over the 7/8th November 2019 it was anticipated that extensive re-construction work will now be required.
- Following the initial visit from the All Reservoirs Panel Engineer, a number of technical reports have been commissioned and delivered.
- The repair works are highly specialist and complex and there are a number of considerations, including, fish stocks, fish breeding season, potential for compensation claim from the anglers, water levels in the river Dove / flooding; displacement of invasive crayfish, loss of commercial income to the Council, access issues for plant / equipment / ballast, working on dangerous structure / height, and reputational issues.
- An inspector visited the site on 28 October 2020 to undertake the annual inspection and was satisfied that the plans to undertake the repairs to the Spillway were progressing and would address the identified issues.
- Following discussions with the inspector and procurement colleagues it was determined that specialist support would be enlisted to create a schedule of works and contract documentation that could then be used by BMBC to competitively appoint a rope access specialist contractor to carry out the spillway repair works. Availability of all parties to complete this procurement exercise means a contractor is not expected to be appointed until late Spring/Summer 2021.
- Advice is being sought from the Environment Agency's Fisheries team in respect of timings to actually conduct the repairs so as to minimise impact on fish stocks/breeding activity. It is currently predicted that the works cannot go ahead until July 2021 because of these considerations.
- In May, the inspector will return to undertake his five yearly inspection which is more detailed. Worsborough Reservoir is designated as a High Risk Reservoir by the Environment Agency and Section 10 of the Reservoirs Act 1975 places a statutory obligation on the Council to have a High Risk Reservoir inspected from time to time by an independent qualified civil engineer and to obtain from that engineer a report of the result of the inspection.
- £250,000 has already been released by the Senior Management Team to progress the investigation and commence the required repairs As well as the

spillway repairs, there is a requirement to undertake further analysis of embankment erosion and options for repair thereof. As that piece of work has more impact on site visitors/anglers, rather than posing a flood risk, it has been determined that all aspects of that work should be competitively procured. Timelines for completion of that procurement process are under discussion as internal resources are currently stretched.

3.6.2.4 Barnsley Culvert Replacement Programme

- Barnsley has a large number of watercourses which have been culverted, many of which date back hundreds of years.
- Most of the culverts are of unknown structural condition, ownership and in some cases location.
- Barnsley has put forward a programme of culvert identification, assessment and repair in to the Environment Agency Medium Term Programme and Sheffield City Region to secure funding to carry out structural and hydraulic surveys on some of these watercourses. Around £6 Million over 4 years is required to complete the programme.
- The watercourses which will be investigated will be prioritised based upon potential risk of flooding to properties and businesses.
- The project is at an early stage and recently secured £250,000 of initial investment to commence investigations in the 21/22 financial year.

3.6.2.4. Enhanced Highway Maintenance Programme

- In 2020, the Council invested an additional £1M to proactively investigate, repair and improve the drainage asset to accelerate the recovery from flooding.
- A program of enhanced maintenance and investigation has been carried out, prioritised by road classification and history of flooding.
- This programme of work has been very successful and has allowed some 5,200 problem locations to be investigated. This investigation programme has resulted in a significant number of non-operational gullies restored to working order and a further 230 schemes completed to improve resilience across the drainage network.

3.7. Section 19 Report

- 3.7.1. Following the widespread and serious flooding in England during June and July 2007, an independent review was carried out. Following this the Flood and Water Management Act was implemented, and Councils took on additional duties as Lead Local Flood Authorities. The Council, as a Lead Local Flood Authority has a statutory duty to investigate (under Section 19 of the Floods and Water Management Act 2010) on becoming aware of a flood in its area.

3.7.2. The scope of the investigation should cover;

- Which risk management authorities have relevant flood risk management functions, and
- Whether each of those risk management authorities has exercised, or is proposing to exercise, those functions in response to the flood.

3.7.3. The Council is required to:

- Publish the results of its investigation, and
- Notify any relevant risk management authorities.

3.7.4. The Council is required to carry out a Section 19 investigation following a flooding event but has discretion in terms of the depth of investigation undertaken and the degree of follow up. As a result, area specific investigations into the unique causes of flooding at specific locations are being progressed as part of individual work packages and are not contained within the Section 19 report. For example, the specialist technical reports which have been prepared for the Lundwood FAS and Worsbrough reservoir.

3.7.5. Appendix 1 contains the final full draft report summarising the impact of the November 2019 floods, the underlying cause of the flood event and, the identification of all Risk Management Authorities with relevant Flood risk Management Functions.

3.7.6. Council officers have engaged with key partners with flood management responsibilities: the Environment Agency, Internal Drainage Boards, Highway Authorities and Water Companies to produce the final version.

3.8. Revised Operational Flood Response Plan

3.8.1. Our Operational Flood Response Plan sets out the actions we will take during a flood event based on the resources we have available.

3.8.2. The plan sets out our strategy in 3 key areas;

- Routine maintenance activities to drainage assets under our control;
- The level of response we will provide to support communities at risk of flooding during a flood event; and
- The level of response we will provide to support the recovery process following a flood event.

3.8.3. The plan sets out the locations of key assets and high risk locations, including, detailed plans for each location, trigger river levels, flood store locations and flooding history.

3.8.4. The Plan has been revised with input from Heath Safety & Emergency Resilience Service and Highway Drainage Engineers to better reflect the lessons learned following the November 2019 flood event. Further revisions will take

place following the lessons learned from the February 2021 Storm Christoph event.

3.8.5. The plan was presented to the LRF in September 2020 for ratification and inclusion, as an appendix, into South Yorkshire's LRF Flood Plan.

3.8.6. Further collaborative working is required across partner agencies to develop a comprehensive catchment & investment plan linking up the LRF and SCR activities.

3.9. Leveraging investment

3.9.1. Following the November 2019 floods, the City Region Mayor and South Yorkshire Local Authorities Leaders jointly submitted a Business and Infrastructure Resilience Flood Priority Programme for South Yorkshire with an investment ask of £271m to protect over 2,800 businesses and 10,300 homes. The Programme was shaped by lessons learned from flooding in November and was designed to invest in new infrastructure and natural flood management measures to mitigate this type of flood event.

3.9.2. On May 5th 2020 the Secretary of State responded indicating that it was “contrary to funding policy to fill funding gaps” and instead redirected the Partnership back towards the annual funding cycle for flood investment administered by the Environment Agency and DEFRA (Department for Food and Rural Affairs).

3.9.3. The Government announced a doubling of investment for flood schemes in its March 2020 budget. Nationally this £5.2 billion of investment over the next 6 year programme between April 2021 and to March 2027. In light of this, the Environment Agency (EA) has been working with local authorities to refresh its spending programme for South Yorkshire. The Programme will take account of changes in local projects and reflect South Yorkshire's Flood Priority Programme as closely as possible.

3.9.4. Current proposals would see around 100 flood schemes implemented in total in South Yorkshire, with an estimated value of around £420 million. Projects range from small scale drainage works and property level protection measures to large scale flood defence schemes such as Rotherham to Kilnhurst (£24 million) and the Upper Don (£38 million). The schemes included in this Programme specific to Barnsley are;

Barnsley led:

- Lundwood Flood Alleviation Scheme (£1M)
- Barnsley Culvert Programme (£6M)
- Worsbrough Reservoir (TBD following further investigation)
- Church Street, Darton (TBD following further investigation)

Environment Agency led;

- Nature based Solutions Programme in Mid-Don (Barnsley and Rotherham)

- 3.9.5. The National Environment Agency investment programme (including the South Yorkshire regional element) is anticipated to be agreed and published by the end of March 2021, with annual reviews thereafter.
- 3.9.6. The development of the South Yorkshire flood priority programme provides a strong basis for further planning and development of joined up flood mitigation and adaptation activity at the South Yorkshire scale. Working in partnership with the Environment Agency, local authorities and other stakeholders a new Catchment Wide Flood Plan for South Yorkshire is in development, having been approved by the South Yorkshire Chief Executives in January 2021.
- 3.9.7. The plan sets out an integrated holistic policy and investment approach to addressing future flood risks across South Yorkshire, and the collective actions to respond to the climate and environment emergency. It will provide a strong, strategic level ambition to not only tackle the causes of flooding, but also the symptoms, and will aim to do this in a way that benefits all communities in South Yorkshire. The Plan provides an opportunity to do things differently and become a national example of innovation and excellence.
- 3.9.8. The plan is being driven by both the Sheffield City region and the South Yorkshire Flood Partnership and the Council is well represented on both groups. In addition the Yorkshire regional Flood and Coastal Committee environmental sub group is investigating a source to sea approach, evaluating a package of Natural Flood Management and hard engineering options.
- 3.9.9. Discussions have also taken place between the Mayor, Leaders and the Government which culminated in a South Yorkshire Flooding roundtable hosted by the Secretary of State on October 8th 2020.
- 3.9.10. Following the round table discussion, the MCA wrote to the Secretary of State for Environment, Food and Rural Affairs in on November 6th 2020 requesting additional funding support for priority projects. In addition, the MCA set out a proposal to make £5.5M of SCR funding available for a list of 9 accelerator projects, two of which (Lundwood FAS and Barnsley Culvert Programme) are named projects within the Barnsley area.
- 3.9.11. Subsequent discussions have now culminated in an allocation of £400,000 to accelerate the delivery of both the Lundwood FAS (£150,000) and the Barnsley Culvert Programme (£250,000).

3.10. Recent flood Events – lessons learned

- 3.10.1. Government restrictions and COVID secure ways of working introduce additional complexities for the deployment of resources in a flood response scenario.
- 3.10.2. Storms Alex (2-4 October 2020), Aiden (31st October 2020), Bella (26-27 December 2020) and Christoph (18-20 January 2021) were all high risk, heavy rain events that brought with them the potential for increased flood risk for the Yorkshire and Humber region.
- 3.10.3. Thankfully, these storms were of a size and scale that could be managed by our in house resource, supported by our traditional standby and

winter rosters. The events demonstrated that our revised safe systems of work for response worked effectively.

3.10.4. The impacts of these Storms were not of a significant enough scale or duration to put our full capacity and capability to the test, however a number of lessons learned were captured and referred back to the Senior Management Team for review. As a result, a number of recommendations for improvement have been made, which include;

- Expansion of the Corporate Emergency Resilience Team with additional roles of on-call Silver Officers;
- Further development of vulnerable persons intelligence arrangements and information sharing between response agencies (i.e. Fire and Rescue and South Yorkshire Police)
- Review the Operational Food Plan with the learning from the Storm Christoph flood response activities.
- Reviewing Flood Webpages and Flooding Key messages for inclusion in the Operational Flood Plan; and
- Strengthen links with community volunteers to further develop community based response resources and engagement.

4. FINANCIAL IMPLICATIONS

4.1. As this is an update report on activity undertaken so far, there are no direct financial implications as a result of the recommendations. Internal and external funding routes will continue to be explored and follow up approvals sought as necessary.

4.2. The long-term recovery and renewal of flood protection across the Borough will require considerable external investment. Medium Term Plan (MTP) bids have been submitted to the Environment Agency and allocations have been made for key projects as part of the annual budget setting programme.

4.3. The South Yorkshire Priority Programme will not be wholly funded by the Environment Agency's Medium Term Programme. Funding gaps will exist and will require other sources of investment. Leaders and the City Region Mayor have committed £5.5 million where this can help to leverage additional Government funding.

5. EMPLOYEE IMPLICATIONS

5.1. There are no employee implications arising from this report.

6. LEGAL IMPLICATIONS

6.1. The Council has a number of powers and duties in relation to the matters considered within this report, including the requirements specified within Section 19 of the Floods and Water Management Act 2010.

7. CONSULTATIONS

7.1. Discussions have been held with representatives from Barnsley Homes, Culture and Tourism and Communities in the preparation of this report.

8. PROMOTING EQUALITY, DIVERSITY AND SOCIAL INCLUSION

8.1. Flooding in Barnsley has affected people from a range of communities, ages and backgrounds. However, long-term impacts are exacerbated by pre-existing disadvantages, for example health problems, isolation and poverty. A strong focus on continued flood recovery and renewal in Barnsley by its very nature seeks to protect our most vulnerable populations from the disproportionate impact of future flooding on their wellbeing and life chances.

9. TACKLING HEALTH INEQUALITIES

9.1. Flooding has a significant impact on public health. The November floods generated a number of physical risks for people, from the direct risk of the incident itself to the contamination risk associated with clean-up activities. The November 2019 event also had a considerable impact on the emotional wellbeing of affected people, families and communities.

9.2. It is therefore crucial that focus remains on flood recovery and mitigation works to minimize the risks of significant future flooding and secure improved health and wellbeing outcomes for the residents of Barnsley.

10. GLOSSARY

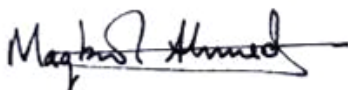
FAS – Flood Alleviation Scheme
MCA – Mayoral Combined Authority

11. LIST OF APPENDICES

12. Appendix 1: Section 19 Report

13. **Report author:** Matthew Bell

Financial Implications/Consultation



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(To be signed by senior Financial Services officer
where no financial implications)