



Committee and Date

**Communities Overview
Committee**

24 November 2021

Item

Public

2020 Flooding Update

Responsible officer

Steve Smith, Assistant Director of Infrastructure steve.smith@shropshire.gov.uk
01743 253949

1.0 Summary

1.1 This report provides an update to the Communities Overview Committee following the recommendations made by the scrutiny report produced in December 2020 linked to the significant flooding which impacted the County during February and March 2020.

1.2 Following the recommendations of the scrutiny report a significant amount of work has been undertaken by Shropshire Council. Further significant progress is however limited by staffing resources and current budgets. As such investment across several service areas would be required to ensure Shropshire Council could even more effectively prepare for and respond to future flood events.

2.0 Recommendations

2.1 The report suggests the following recommendations:

- Committee should note the work done to date to improve Shropshire Councils preparedness for future Severe Weather and Flood events across the County.
- Committee should be aware that the outputs of the updated Severe Weather Plan and updated Flood Action Plans will likely identify the need for additional funding and changes to ways of working, to ensure Shropshire is better prepared for future flood events.
- Committee should note the progress made in supporting communities following the 2020 and 2021 flood events and support the creation of Community Flood Action Plans.

3.0 Opportunities and risks

3.1 A review of progress in addressing issues identified as part of the Councils response to the February 2020 flooding, provided Shropshire Council and its partners the opportunity to analyse the strengths and weaknesses of the

response to these events. This review enables all partners to develop greater resilience to future flooding and understand the context in which Shropshire Council and its partner agencies, are preparing longer-term flood management schemes.

3.2 Flooding is the responsibility of various agencies and stakeholders with differing needs and responsibilities. An effective flood management plan requires effective partnership between all of these stakeholders to ensure that an holistic solution to flood management is in place. Failure for any of the stakeholders to effectively engage can undermine the response to flood management in the county.

3.3 A failure to provide adequate long-term management of flooding could place Shropshire and neighbouring local authorities at greater risk of severe flooding incidents in built up areas, alongside or close to rivers, causing significant damage to property and danger to human life.

4.0 Review of the February 2020 Flooding event

4.1 Over the winter of 2019/2020, the River Severn catchment saw some of the highest river levels ever recorded. Intense rain falling across an already saturated catchment, resulted in significant flooding across the entire River Severn Catchment and throughout Shropshire.

4.2 The Environment Agency described the speed and severity of the flooding during storm Dennis as unprecedented. Due to the catchment being completely saturated, the Environment Agency's flood models struggled to keep pace with events, making response planning extremely difficult.



The speed and severity of flooding both from rivers and surface water placed a significant strain on the resources of both Shropshire Council and the emergency services, with teams fully committed across the county throughout this period.

4.3 2020 Floods in summary:

- **2019 Weather:** Shropshire experienced the wettest June to October on record followed by the wettest February since records began.
- **8th Feb Storm Ciara** – Widespread surface water flooding across the County.
- **15th Feb Storm Dennis** – Intense rainfall across upper catchment resulted in new record river levels beings set on the River Teme in Ludlow, and

river levels in Shrewsbury and Bridgnorth reaching just below the record levels set during the historic floods of 2000.

- **29th Feb Storm Jorge** – topped up river levels which remained high until 4th March 2020
- Over 300 reports of properties flooding internally in Shropshire. The total number of flooded properties likely to be much higher.

4.4 Shropshire experienced further flooding in January 2021 during Storm Christoph which resulted in river levels reaching similar levels to the February 2020 event.

5.0 Impacts of Future Climate Change on Shropshire Flood Risk

5.1 In the lead up to the Cop26 Climate Conference, the Environment Agency published their updated predictions for the UK's future climate with a predicted 2°C global temperature rise.

5.2 The key projections include:

- Winter rainfall is expected to increase by approximately 6% by the 2050s and by 8% by the 2080s, compared to a 1981-2000 baseline.
- Summer rainfall is expected to decrease by approximately 15% by the 2050s, compared to a 1981-2000 baseline.
- River flows will be more extreme. Peak flows are expected to be up to 27% higher in the 2050s, while in the summer months river flows could be 82% lower by as soon as 2050.
- Public water supplies are expected to require more than 3.4 billion extra litres of water per day if no action is taken before 2050.

5.3 The impacts of these predictions in Shropshire are significant. The recent 2020 and 2021 flood events were the worst flooding experienced in Shropshire for the last 20 years, with levels reaching close to the highest recorded levels of the 2000 floods. These events are likely to become more regular in the future, with their frequency and intensity set to increase.

5.4 A 27% increase in river levels in Shrewsbury by 2050 could result in flood depths regularly exceeding 6m at the Welsh Bridge. This would exceed the height of the existing flood barriers and pose an extreme risk to life. It is therefore essential that Shropshire Council and partner agencies adequately invest and prepare for future flooding and severe weather events.

5.5 The River Severn Partnership was formed in September 2019 as a partnership of organisations drawn from across the entire River Severn catchment. It comprises all local authorities, includes water companies, key stakeholders and the Environment Agency and its purpose includes taking a holistic approach to what measures are necessary to mitigate and adapt to the impacts of climate change including flooding, drought, water security and quality. Shropshire jointly chairs the partnership with the EA as is working with partners to model potential and help plan a strategic programme of interventions.

6.0 Operational Planning for Severe Weather Events

- 6.1 Shropshire Council's response to the 2020 and 2021 flood events identified the need for improvements to the current procedures and the way that the Council responds to future Severe Weather Events. Work to update these plans is now underway.
- 6.2 **Severe Weather Plan Update:** In our role as a Lead Local Flood Authority, Highways Authority and Category 1 Responder under the Civil Contingencies Act, Shropshire Council have a responsibility to prepare for and respond to severe weather events. These types of events can include flooding from rivers and intense rainfall, prolonged or intense winter ice and snow or summer heat and high winds.
- 6.3 Although Shropshire Council and members of the public receive advance warning of severe weather from both the Met Office and the Environment Agency, severe weather can escalate quickly and can put a very significant strain on limited Council resources. The winter flooding in 2020 and 2021, and thunderstorms in summer 2020 identified several areas where improvements in our current operational, communications and recovery response were required.
- 6.4 In order to better understand how we respond during an event Shropshire Council commissioned WSP to undertake a review of the current working arrangements across all Council departments that have a role in responding to severe weather. This assessment has helped officers to fully understand the existing arrangements across these departments and determine where improvements to the operational plans, systems and resourcing levels can be made.
- 6.5 This review into the current arrangements has identified that whilst Council departments and officers do their utmost to respond effectively during events, there are significant improvements required around lines of communication and how available resources can be swiftly increased during a severe weather or flooding event.
- 6.6 WSP have subsequently been commissioned to produce a DRAFT Severe Weather Plan for Shropshire Council which will identify areas for improvement and different ways of working between teams. This draft plan will be produced based on the current and future working arrangements with our Term Maintenance Contractor (Kier) and informed by national best practice.
- 6.7 The DRAFT plan will include recommendations on how Shropshire Council can amend its current working arrangements, so that we are better prepared for events. It will set out how the council can escalate response quickly as an event develops to ensure the Council's full resources across multiple departments can be utilised to form a more proactive and effective response.
- 6.8 It should be noted that these recommendations will likely require changes to funding and resourcing across several Council services and the committee should note that without this Shropshire Council's ability to respond to more regular future severe weather events may be compromised. The highway service is currently investigating how existing budgets and resources can be better reallocated to assist in meeting this challenge within its own area.

7.0 Shrewsbury Flood Action Plan Update

- 7.1 In addition to the update to the Council Severe Weather Plan, lessons learned from the 2020 and 2021 flood events have been integrated into an updated Flood Action Plan for Shrewsbury.
- 7.2 Flooding in Shrewsbury is a longstanding issue with the town built around the loop of the River Severn. As a result, winter flooding has resulted in the flooding of properties and businesses and has impacted on transport infrastructure around the town. Although the Environment Agency (EA) erect flood barriers in both Frankwell and Coleham Head (protecting the Abbey area), areas such as Coleham, Smithfield Road, Chester Street and Coton Hill remain vulnerable and unprotected.
- 7.3 Shropshire Councils Highways role during flood events in Shrewsbury has evolved and now deploys planned traffic management, to manage the flow of traffic around the town as the flooding of highways mean that routes become inaccessible. This staged traffic management plan is deployed in a phased approach, based on river level information at the Welsh Bridge gauge provided by the Environment Agency. It is acknowledged however, that in the past drivers have ignored unmanned closures and that greater manned presence is needed to reinforce the dangers that such actions can have, not just to drivers but also potential rescuers, should the driver get in to trouble in flood waters.
- 7.4 Shropshire Council have undertaken a review of the current arrangements for the deployment of the traffic management plan and are currently working to improve our response to flooding in Shrewsbury town centre. These improvements include increasing contractor resources available during a flood events, to allow 24 hour supervision of road closures in strategic locations. Increased information for the public on road closures through the use of an updated Councils website and newly installed variable messaging signs (VMS) at strategic locations that can alert all road users before they enter the town centre.
- 7.5 The Council are also making improvements to public communications during flood events. The creation of a joint communications plan with the Environment Agency and Severn Trent Water, will ensure that the public are warned and informed throughout an event. Greater links with flooded communities have also been made through the establishment of flood action groups in our towns, and lines of communications have been improved in these areas, to ensure the Council provides better support before, during and after a flood event.
- 7.6 It should be noted that Shropshire Councils response to flooding in Shrewsbury and along the River Severn is entirely reliant on the readings from the Welsh Bridge gauge and other gauges in the upper catchment provided by the Environment Agency. The provision of an accurate flood forecast is essential to allow Shropshire Council and other partners to respond to events in a planned and structured manner.
- 7.7 During both the 2020 and the 2021 events the Environment Agency's gauge at Crew Green erroneously provided predictions of 11.35m, with the previous highest record being 6.57m. Crew Green gauge sits at the confluence of the

Rivers Severn and Vyrnwy and is therefore a strategic asset, which impacts on readings on a large number of EA gauges further downstream.

7.8

This prediction of a flood depth 4.78m higher than the previous record resulted in panic in the general public. The result of which was unprecedented demand on Shropshire Council for sandbags alongside significant increasing assistance. The impact of these requests and rapidly changing flood predictions from the EA had an enormous resource implication on Shropshire Council during both flood events. The EA have now undertaken works to address this issue and it is hoped that this will not re-occur during future events.

7.9

It should also be noted that whilst Shropshire Council intend to provide 24 hour supervision on strategic road closures, this is not possible in all locations and that in some cases members of the public made a choice to ignore these road closures. Such situations can also result in increased flood depth to properties caused by “bow waves” as cars drive through flood water, and increased resource pressure on the Council and emergency services should vehicles become stranded in flood water. It is hoped that improved community engagement and information will reduce these incidents during future events.

7.10

Flooding and Severe Weather Events can result in dynamic and fast-moving situations therefore it is possible that further issues may be identified and captured in future events. Wherever possible lessons learned will be integrated into the plan in the future.

8.0 Shropshire Flood Action Plans

8.1 Shropshire Council are aware that flooding does not simply affect Shrewsbury and other important towns and villages across the County are also heavily impacted during such events. The council seeks to work closely with these communities to improve the Councils response and engagement to make them more resilient and will seek to improve this level of engagement in the future through greater use of the National Flood Forum.

8.2 **Melverley and Pentre:** Flooding in the catchment above Shrewsbury affects large areas of farmland and has a significant impact on access to the villages of Melverley and Pentre with communities being effectively cut off for long periods of time. Although the community is resilient to flooding and takes its own actions to deal with this situation, the lack of access for emergency services and for day-to-day supplies can pose an issue during lengthy flood events. Shropshire Council are working with the local community to improve communications with the Council and wider TCG partners during an event and are trialling a daily situation report approach to ensure the community can more reliably gain access to support to services in a timely manner. This approach should also ensure that emergency services can be kept up to date with any issues and respond in a planned manner as opposed to incidents escalating and requiring an emergency response.

8.3 **Bridgnorth:** Although flooding in Bridgnorth from the River Severn affects several properties and businesses there is a limited impact on transport infrastructure throughout the town. Shropshire Council officers are working to update the traffic management plan for Bridgnorth and will be working with both the Town Council and a possible flood action group in the future to make the town more resilient to future flooding.

- 8.4 **Ludlow:** Flooding in Ludlow occurs during intense rainfall in Shropshire, with the Rivers Teme and Corve responding quickly to flood both properties and transport infrastructure in the town. Shropshire Council are currently working with the Ludlow Town Council and the Ludlow Flood Action Group to make the town more resilient to future flooding.
- 8.5 **Community Flood Action Plans:** Shropshire Council are working with the National Flood Forum and several Flood Action Groups across Shropshire on the production of Community Flood Action Plans.
- 8.6 Communities understand that during a flood event it will not always be possible for Shropshire Council or the Emergency Services to reach them therefore support in making preparations before a flood event are essential. These plans will establish the resourcing requirements for each community and identify what actions the communities can take to make themselves more resilient to future flood events.
- 8.7 Supporting our approach may require a small amount of investment by to provide signage and materials. The communities response needs to be carefully managed to ensure that members of the public are not putting themselves in danger. Support in this is being provided by the National Flood Forum, Shropshire Councils Highways and Emergency Planning Teams and the Emergency Services.

9.0 **Distribution of Flood Relief Grant Funding**

- 9.1 Following the 2020 floods the Department for Environment Food and Rural Affairs (DEFRA) announced a range of grant funding for properties and businesses affected by flooding.

These grants included:

- £500 cash payment to flooded property owners to help with damages
 - £2,500 Council Tax and business rate discounts for flooded properties and businesses impacted by floods
 - £5000 grant towards Property Flood Resilience Measures to be installed on properties
- 9.2 Although the announcement of these grants was well received by Shropshire Council, the delivery of the Property Flood Resilience Grant has been problematic resulting in resource implications for Shropshire Council and frustration from Shropshire residents engaged in the scheme.
- 9.3 **Property Flood Resilience Recovery Support Scheme 2020:** Immediately after the flooding in 2020 DEFRA announced that properties internally flooded in Shropshire were eligible for up to £5,000 funding towards making their properties more resilient to future floods though the installation of Property Flood Resilience (PFR) Measures.

- 9.4 PFR Measures can limit or slow the amount of water that enters a property during a flood event and can make the property easier to “return to normal” following a flood. Measures can include flood resistant doors or barriers attached to the property, the installation of sump pumps to manage flood water behind a barrier, or the tiling of floors and installation waterproof plasterboard to limit the damage flooding can cause.
- 9.5 Unfortunately, guidance from DEFRA on how Local Authorities could establish a grant process was delayed and required several revisions and clarifications. As a result, Shropshire was unable to commence with the grant until September 2020. Understandably, support from DEFRA to establish the grant process was limited and no additional funding was provided to Shropshire Council to facilitate its delivery. This resulted in Shropshire Councils Flood Risk Management Team diverting a large amount of time on the grant process as opposed to supporting recovery and making preparations for the subsequent flooding in 2021.
- 9.6 The grant criteria imposed on property owners in Shropshire by DEFRA is also extremely onerous with the responsibility for the identification, appointment and management of specialist contractors falling directly on homeowners. Homeowners must be able to demonstrate that features have been installed correctly before they are able to claim the grant funding meaning that any risks associated with the works lie with the property owner until completion. As the cost of PFR measures regularly exceed the £5000 grant allowance property owners must self-fund any additional costs to ensure their property is fully protected.
- 9.7 Within Shropshire 217 property owners successfully applied for funding through the PFR grant. Each of these applications were unique and required a detailed assessment by Shropshire Council before they could be approved, and funding claimed back from DEFRA.
- 9.8 Resourcing issues to deliver the PFR grant across the entire River Severn Catchment resulted in several Local Authorities securing funding through the English Severn and Wye Regional Flood and Coastal Committee (RFCC) for two Environment Agency posts to manage the delivery of the scheme on their behalf.
- 9.9 At the time of writing this report 50 property owners have completed their grant applications with PFR measures installed. In total £220,041.83 has been paid out to property owners by Shropshire Council with 167 applications remaining live. These remaining applications are being supported by the PFR Grant team however, all grants must be completed by the end of this current financial year when the scheme is closed by DEFRA.

10.0 Improving Community Support Post Flood

- 10.1 Direct Community Support Following Flooding: Shropshire Council are also working to improve support for affected communities following a flood event

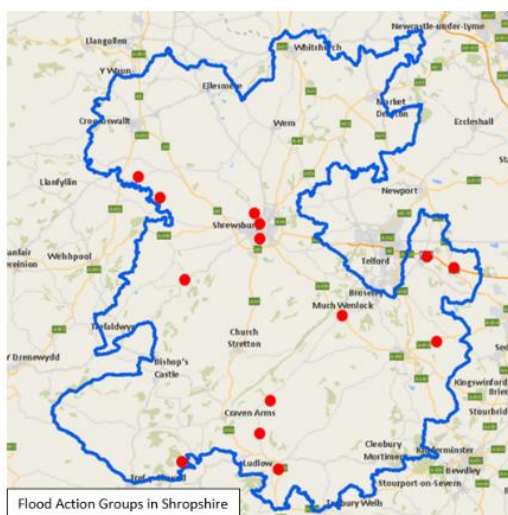
As water levels receded after the 2020 and 2021 flood events, members of the Councils Community Support Teams were quick to react with Council teams visiting areas of Shropshire impacted by the flooding to understand the impact, provide reassurance, gather information and offer the support of the Councils services to members of the public.



10.2 Although this proactive approach was well received by affected residents, Council officers bore the brunt of their initial frustrations, particularly where flooding had arisen from a river. Where Shropshire Council teams were joined by EA Community Information Officers this joined up partnership approach was more effective and ensured residents received the required information from the relevant agencies. Shropshire Council are now working on a pilot project with the EA to ensure a programmed partnership approach to community engagement is maintained in the future.

10.3 **National Flood Forum:** The National Flood Forum are a national charity established to support individuals and communities affected by flooding. This support can range from assisting individual property owners with engaging with insurance companies and accessing grant funding, through to supporting entire communities in the establishment of flood action groups to engage with a range Risk Management Authorities to deliver flood alleviation projects.

10.4 Shropshire Council benefit from an excellent working relationship with the National Flood Forum and their involvement in the aftermath of the 2020 and 2021 events was key in supporting a range of communities following the flooding.



There are currently 14 Flood Action Groups established and supported by the National Flood Forum in Shropshire with several other groups in development. It is likely that these groups will become fully established in the near future.

The National Flood Forum have also created the Shropshire Flood Action Group Forum which is made up of representatives from each of the Flood Action Groups in Shropshire. The Forum will allow the groups to learn from each other's experiences and also to engage with Shropshire Council and other agencies at a

more strategic level.

10.5 In order to ensure that the NFF continue to support flooded communities in the County, Shropshire Council are working with Telford & Wrekin Council on an agreement to joint fund a dedicated NFF officer to work with Flood Action groups in our region.

10.6 Funding to support the NFF for the rest of the financial year is about to be released before Shropshire and Telford & Wrekin look to enter into a 3-year funding agreement to provide NFF with ongoing financial support through to 2025.

11.0 Conclusion

11.1 The Council is not responsible for managing flooding and its resultant impacts alone but the Council can act as a catalyst in supporting, facilitating, enabling, providing information, signposting and providing reassurance along with other agencies and stakeholders.

Recent events have enabled a lot of learning to be collected and ensures that
 11.2 more effective and collaborative measures can be in place to better meet future demand and integrate into contemporary ways of working of other agencies and stakeholders.

11.3 There are often long gaps between flood events, with the back to back flood events seen in 2020 and 2021 unusual but likely to be less so in future years. This gap between events can lead to complacency and reducing of resources for other more immediate and contemporary needs by agencies involved in flooding, which leaves the county vulnerable when an event occurs.

11.4 Council officers are committed to supporting people in the communities we serve however become stretched far beyond capacity during times of emergency. It is recognised by senior management that there needs to be greater flexibility during flooding events to divert staffing resources not directly involved in flooding to provide support so that more officers are available on the streets swiftly in the affected communities to swiftly mobilise resources and target timely VFM support.

11.5 Scientific research shows that climate change is the most significant underlying factor in flooding. The council has made significant commitments to ensure that services contribute and endorse Shropshire Council's stated Environmental commitments.

<p>List of background papers (This MUST be completed for all reports, but does not include items containing exempt or confidential information) Report from Director of Place to Cabinet "<i>River Severn Partnership - Shropshire Flood Prevention</i>", 27 September 2020</p>
<p>Cabinet Member (Portfolio holder) Cllr Ian Nellins, Climate change, natural assets & green economy Cllr Dean Carroll, Physical Infrastructure (highways, built housing, assets)</p>
<p>Local member All</p>
<p>Appendices None</p>

