

# Somerset Rivers Authority Annual Report 2022-23

Foreword by Councillor Mike Stanton, Chair of Somerset Rivers Authority (SRA)

I'm pleased to introduce our eighth annual report since Somerset Rivers Authority's launch in January 2015. Our main purpose is to give Somerset an extra level of flood protection and resilience. So far, we have enabled more than 250 projects to go ahead. These have reduced flood risks, improved natural and built environments across Somerset, and helped people get on with their lives more easily and safely. This new report provides details of dozens of Somerset Rivers Authority (SRA) activities county-wide between 1 April 2022 and 31 March 2023. They range from reshaping river systems to resurfacing 13 metres of track. Different problems are approached in different ways because different parts of Somerset have different needs. What all SRA activities - and all SRA partners - share is a determination to respond to people's local priorities and together get more done.

During the devastating flooding that hit Somerset in 2013-14, a 20 Year Flood Action Plan was produced. The SRA emerged out of this Plan and now oversees it. The five workstreams featured in this report reflect the Plan's objectives.

The SRA is now working on renewing that Plan in light of experiences across Somerset since 2014, including the evident effects of climate change and the floods of January 2023. I know from speaking to many people that these floods caused disruption, a lot of worry, and significant damage to a few properties. The situation was however better than it might have been, and works funded by Somerset Rivers Authority since 2015 did reduce flood risks and effects. Rainfall and flooding patterns were obviously not the same as they were in 2014, and investigations are continuing into exactly what happened and why.

The River Parrett's capacity to carry flood water has been maintained by the SRA and its partners through water injection dredging in recent years. In January this year the dredging vessel Borr removed more silt than it ever has before, and was there for outfall-clearing so that pumps could be set up. Hundreds of natural flood management works over the years have also helped to slow the flow of water down through catchments across Somerset.

Partners in the SRA during 2022-2023 were Somerset County Council, the four district councils (Mendip, Sedgemoor, Somerset West and Taunton, and South Somerset), the Axe Brue and Parrett Internal Drainage Boards (IDBs), the Environment Agency, Natural England, and the Wessex Regional Flood and Coastal Committee. Since 1 April 2023, the five councils have been replaced by the single new Somerset Council, from whom the SRA still gets £3million a year through council tax, and the IDBs contribute £20,000.

Few public sector organisations give as much detail about what they do with their funding as the SRA does. And there is even more online on the SRA's website. I trust that you find this report useful and informative. Please get in touch with us if you have any comments or questions - and do look out for the public sessions to be held later this year about a revised Flood Action Plan.

## [Key Points from 2022-23, at a glance](#)

£5.89 million extra was spent in Somerset by Somerset Rivers Authority on flood risk reduction and greater resilience.

Hundreds of Somerset places benefitted, schemes of national importance advanced in Bridgwater and West Somerset.

Water injection dredging of the River Parrett dispersed 37,000 cubic metres of sediments from between Saltmoor and Andersea.

Bank raising continued and three outfall structures were upgraded as part of the River Sowy-King's Sedgemoor Drain Enhancements Scheme.

Natural Flood Management schemes and activities took place at more than 70 places countywide, including two ambitious stream restoration projects.

Nearly 50 inspections were carried out of Sustainable Drainage Systems (SuDS) at new developments, works near completion in Rode and Beckington near Frome.

Drainage improvements were made along the A358 near Combe Florey and at Creech Heathfield, flood studies advanced in Minehead, Shepton Mallet, Croscombe and North Petherton.

Nearly 23,000 highways structures got extra maintenance to reduce flood risks, a flood warning system was installed between the A303 and Martock, and a flood warning system was designed for Ham and Ruishton.

Support for communities affected by flooding, development of Climate Adaptation Toolkit, Community Flood Alerts and production of animations.

## [A note about the contents of this version of the SRA Annual Report 2022-23](#)

This document is a simple text version of the Somerset Rivers Authority Annual Report 2022-23. It is designed to be straightforwardly accessible and easily printed, with no graphics or pictures.

A more colourful 32-page version with graphics and pictures is available for downloading from the SRA website. That version may not be suitable for users of assistive technology.

The entire text of the report can also be read as separate pages on the SRA website, with links and illustrations, and some extra lists, for example of road drainage structures.

In this document, Workstream 1 is covered between pages 3 and 8. Workstream 2 between pages 9 and 15. Workstream 3 between 16 and 19. Workstream 4 between pages 20 and 24. Workstream 5 between pages 25 and 27. Then follows a financial summary, and a brief account of the history, objectives and review of Somerset's 20 Year Flood Action Plan.

## Workstream 1 Dredging and River Management

Somerset Rivers Authority spends more on Dredging and River Management than it does on any other workstream. Some projects are designed and delivered for the SRA by a variety of partners and contractors. Some projects are led by SRA partners - or other bodies such as the National Trust - and the SRA helps to pay for them. Most of the projects in this section are complex, which means they generally take more than a year to deliver.

### Water injection dredging and silt monitoring

Two weeks of maintenance dredging in January 2023 covered 3.75km (2.33miles) of the River Parrett between Saltmoor Pumping Station and Andersea. This activity was organised for Somerset Rivers Authority (SRA) by the Parrett Internal Drainage Board (IDB), working as a partner in the SRA. The IDB again deployed water injection dredging specialists Van Oord. For over 150 hours, the dredging vessel Borr pumped out high volumes of targeted water, so that 37,000 cubic metres of sediments were forced off the river bed and then dispersed through natural processes, downstream as the tide went out.

As has been the case every year since 2016, this dredging was combined with a programme of silt monitoring along sections of the Parrett and Tone, led for the SRA by the IDB.

January's dredging coincided with the Major Incident of flooding across the Somerset Levels and Moors declared by the Environment Agency, and so helped to free up capacity in the Parrett at a crucial time. In a special operation, the Borr's powerful side-jets removed silt built up around Elson's Clyde. This enabled two temporary pumps to be set up overnight to pump water from Park Brook into the Parrett.

### River Sowy – King's Sedgemoor Drain Enhancements Scheme (Phase 1)

For several years the SRA has funded extensive improvements to the River Sowy (Parrett Flood Relief Channel) - King's Sedgemoor Drain (KSD) system. The main aim has been to increase the amount of water that can flow, in a controlled way, from the Parrett into the Sowy through Monk's Leaze Clyde sluice near Langport, down to the KSD near Greylake, then back into the Parrett through Dunball Sluice north of Bridgwater. SRA partners have also needed to ensure that legally- protected wetlands of international importance are not made less wet, through more water being kept in river channels, and some moves have been made to improve habitats and to upgrade water level management control structures.

In 2021 and 2022 the Environment Agency, as a partner in the SRA, employed contractors Kier to raise banks so that more water could be kept in channel and not overtop. For environmental reasons, bank-raising works have largely had to be carried out in August, September and October. In 2021, 1.32 kilometres (0.82 miles) of the right bank of the lower Sowy was raised, between the A372 at Beer Wall and Sandy Lane near the A361, that was 21% per cent of the total length required along both banks of the Sowy. Seven ecological enhancements were completed. Progress was slowed by the coronavirus pandemic, wet weather, and particularly a shortage of skilled excavator drivers.

In 2022, further Sowy and KSD bank-raising was hampered by an unfortunate combination of very dry and then very wet weather. Firstly, summer and autumn drought conditions caused newly-constructed banks to shrink much more than expected, and some material was too dry to build banks with. Downpours from mid-October then made it extremely difficult to work with heavy plant on soft wet peaty ground. Nevertheless, with the help of a special extension granted for the continuation of works into November by Natural England, by the end of November the Sowy's left and right banks were raised where necessary, the KSD's right bank was raised where required down to Parchey Bridge, and progress was made along the KSD's left bank. Outfall structures were modified on two KSD side streams (Cossington Right Rhyne and Chilton Right Rhyne) and Parchey tilting weir installation works began in March 2023 (and were completed in May 2023).

Bank-raising works remain to be done along up to 1.8km of the left bank of the KSD. Three outfall structures also need to be upgraded (Level Rhyne, KSD Back Ditch, Chedzoy Tilting Weir). In March 2023, SRA Board members approved additional funding for these outfall works, and agreed that all SRA partners should work together to get the KSD left bank works finished. Ways of completing this job as cost-effectively as possible are being explored.

### [Bridgwater Tidal Barrier](#)

Bridgwater Tidal Barrier is a major project led during 2022-23 by the Environment Agency and Sedgemoor District Council (now Somerset Council), with financial support from Somerset Rivers Authority (SRA) and the Heart of the South West Local Enterprise Partnership (HotSWLEP). The project will reduce flood risks to more than 11,300 homes and 1,500 businesses. It has three main elements: a tidal barrier across the River Parrett between Express Park and Chilton Trinity; 4.3 kilometres (2.67 miles) of new flood defence banks and 2.8 kilometres (1.74 miles) of raised banks downstream at Chilton Trinity, Comwich and Pawlett; and fish and eel passage improvements at 12 sites upstream of the barrier.

Lot of activities took place in 2022-23, including: detailed design work on the barrier and its control building, downstream banks, fish and eel passes, and the bypass channel and in-river coffer dam that will be needed during construction; developing the Final Business Case for submission to HM Treasury; ground investigations; archaeological investigations; vegetation clearance and asbestos removal in preparation for building an access road for barrier construction vehicles; work with four local schools; drop-in sessions and meetings with local residents, landowners and businesses; and work with the Wildfowl & Wetlands Trust on new wetland site The Meads.

Updates about the barrier are published for the SRA's quarterly Board meetings; more information can also be read on the Bridgwater Tidal Barrier page of the Somerset Council website.

### [River Brue modelling](#)

A fresh look for the SRA at flood risks associated with the River Brue, because existing modelling done in 2014 is inadequate and out of date. Consultants have been studying how

much water the Brue conveys, and the ways in which water moves – and is moved – around the river’s lowland catchment. So, for example, a survey has been done in Highbridge to assess the effects of an upwards heave in the river bed (technically known as a rotational slip) that was noticed in 2018.

A revised model is expected by autumn 2023. It will be a valuable asset for organisations proposing projects along the River Brue, because it will provide new evidence for where a range of improvements should work best.

### Taunton Strategic Flood Alleviation Improvements Scheme (TSFAIS)

The main purpose of Taunton Strategic Flood Alleviation Improvements Scheme (TSFAIS) is to reduce flood risks to 1,031 properties arising from the River Tone and its complex network of tributaries. TSFAIS has been part-funded by the SRA since 2016. In 2016-17, the SRA contributed Growth Deal funding from the Heart of the South West Local Enterprise Partnership.

During 2022-23, two initial TSFAIS projects were led by Somerset West and Taunton Council (SWTC; since 1 April 2023 Somerset Council) and the Environment Agency.

1. River Tone Left Bank Flood Defences – raising low spots from Frieze Hill to Town Bridge. During 2022-23, contractors Binnies completed numerous studies and surveys and began designing improved flood defences. A planning application is expected by December 2023.

2. Raise Firepool Lock gates and build up to 750 metres of River Tone flood defence, from Firepool Lock to the A358 Obridge Viaduct. In spring 2022, consultants WSP completed a range of studies, then in summer 2022 a public consultation was held about the proposed flood defence alignment, landscaping and ecological mitigation. In response to people’s comments, WSP then amended designs where possible. A planning application is expected by December 2023.

### ‘Resetting’ the River Aller in West Somerset

Backed by Somerset Rivers Authority, the National Trust has been carrying out pioneering works to reconnect part of the River Aller on Exmoor to its original floodplain.

Major works on the Trust’s Holnicote estate in West Somerset have been inspired by the success of ‘Stage 0’ river restoration schemes in the United States. The aim is that the river should no longer run along a single incised channel but instead form part of a complex waterscape with channels, pools, wetland and marshes.

It’s the first time that ‘Stage 0’ techniques have been used on such a large scale in the UK. Part of the National Trust’s multi-million-pound Riverlands initiative, the 15-hectare River Aller project has been part-funded by the EU’s Interreg 2Seas Co-Adapt programme, the Environment Agency, the SRA, the Green Recovery Challenge Fund and Frugi.

Works in 2022-23 followed a successful 2019 pilot on a tributary of the Aller, in the area between Selworthy church and the A39, which was also part-funded by the SRA. The project will benefit wildlife by creating new habitats and rejuvenating the local area. It will help to tackle the impacts of climate change by holding water in the landscape. Slowing the flow of water will also help to reduce flooding downstream in places such as Allerford and Bossington.

Earthworks in autumn 2022 created shallowly-skimmed areas carefully designed to 'reset' the valley bottom and allow for a natural river flow. Around 4,000 tonnes of soil were moved, and 600 tonnes of large timbers were pinned or partially buried into the floodplain to slow flows, and help develop more hydrological and ecological diversity. These timbers all came from non-native tree species clear-felled on the Holnicote estate. Floodplain wildflower seeds were sown. In spring 2023, further habitat-enrichment work included the planting of about 25,000 native trees such as willow, bird cherry and black poplar.

Somerset Rivers Authority is part-funding a 125-hectare extension of the River Aller project upstream at Tivington Farm. This will help to further reduce flood risks for nearly 100 properties downstream in places such as Allerford and Bossington and roads such as the A39 between Porlock and Minehead. A planning application for this work was approved by Exmoor National Park Authority in August 2022. More information about Tivington Farm is on the SRA website.

Structures, storage, strategy

#### Langport flow station

Progress was made during 2022-23 with several other measures. At Langport, high water levels in the River Parrett delayed the completion of a new flow gauge station, jointly funded by the SRA and the Environment Agency. The station is due to enter service with the Environment Agency this year. It will measure how much water is going down the Parrett from a catchment of approximately 770 square kilometres (478 square miles). Such information is especially valuable in times of flood. Used in combination with data from existing gauges at Chiselborough, Yeovil, Donyatt and Stathe, figures from Langport flow station will help people to make important decisions about how best to respond in difficult situations.

#### Dunball Sluice

At the bottom end of the Sowey-KSD system, at Dunball Sluice, part-funded by the SRA, the Environment Agency has been carrying out a major £4.2million 18-month programme of improvements. Refurbishing and renewing mechanical and electrical components, along with a range of environmental and health and safety improvements, will help to keep this crucial piece of infrastructure going for another 25 years.

## Water storage trials

In December, members of the Moor Association on Curry Moor took part in an Environmental Land Management (ELM) trial designed to help the Department for Environment, Food and Rural Affairs (Defra) assess the practicalities of paying farmers and landowners for storing water on their land. Storing water in suitable places at suitable times can help to relieve flood pressures elsewhere. This exercise was organised with the Farming & Wildlife Advisory Group SouthWest (FWAG SW), in consultation with the Environment Agency and the Parrett IDB. It was part-funded by the SRA.

All 33 Association members agreed that between them they would hold 418,000 cubic metres of water on their land for six days instead of expecting it to be quickly pumped away. On Curry Moor's lowest fields this volume of water equates to about 31 centimetres of water, that is just over 12 inches. Plans were devised to ensure that flood risks were not increased.

Moor Association members on Aller Moor are also being given grants for their engagement with the process of making arrangements for a trial, although the exact conditions that had been agreed for a water storage exercise were not met. The situation here was complicated by the onset of January's Major Incident and the very large volumes of water that entered the Sowy-KSD system.

A Moor Association representative from Curry Moor told the SRA Board in March: "We very much hope that it is the start to a change of thinking in the way that water is used particularly to assist the flood management for the wider community and the ways which farmers are compensated for the services they provide."

Lessons learned from the trial are being debated by the SRA Board, SRA partners and Defra, as while there is general agreement that water storage is crucial, there is not currently a consensus about which areas should be selected for water storage payments.

## Strategic Approach to Mitigation

Also with an eye to the future, Natural England – as a partner in the SRA – is developing what is called a Strategic Approach to Mitigation for projects on the Somerset Levels and Moors. Its five main objectives are to reduce costs and risks; enable projects to go ahead; secure environmental benefits; support local community, farming, business and tourism interests; and satisfy local and national policies.

To help root these ambitions in fertile evidence, the British Trust for Ornithology has completed an analysis of wintering bird data. Two other reports by Natural England are nearly finished. These cover Functionally Linked Land (areas of land or sea outside the boundaries of designated sites but critical to the success of those sites), and future alternatives to Raised Water Level Areas (RWLAS). RWLAS are areas of land engineered so that water levels can be held higher than they are in surrounding areas. This is done to provide better breeding and wintering conditions for waders and wildfowl inhabiting the

Somerset Levels and Moors. In December 2022, consultants JBA began researching a possible framework for the updating of Water Level Management Plans.

As a result of all this work, Natural England says it will be able to assess the impacts of flood defence schemes more easily, give stronger advice about necessary mitigation activities and understand better where conservation efforts should be made now to bring benefits in future.

#### Dulverton Weir

The Weir across the River Barle in Dulverton is in a poor state. Following a successful application for SRA funding in March 2021, the Weir's owner Somerset West and Taunton Council commissioned Mann Williams (Consulting Structural and Civil Engineers) to produce designs for reconstructing the Weir. A detailed report was duly completed in November 2022. Mann Williams estimated then that it would cost just over £1million to repair the Weir. Ownership of the Weir has since passed to the new Somerset Council. If the Weir can be restored - along with the Leat that loops off from the Barle through Dulverton - then Dulverton Leat Trust has agreed in principle to lease them both, and to pay for their future maintenance.

#### Desilting Structures

Two structures were de-silted in 2022-23 by Somerset County Council as a partner in the SRA. They were: Leggs Bridge, Bruton, which takes the A359 across the River Brue and North Petherton & Bypass Culvert, North Petherton, including the open channel downstream through the Community Centre car park in the town centre. Somerset County Council budgets allowed for structures to be de-silted when there was a threat to structures themselves. Extra SRA funding allows for works in and around structures that also improve watercourses – and that benefit nearby roads, land and properties.



## Workstream 2: Land Management including Natural Flood Management (NFM)

Somerset Rivers Authority funds many land management and Natural Flood Management (NFM) activities across Somerset. Various techniques are used, singly or in combinations designed to suit to local needs and conditions. All share the aim of reducing local flood risks, by slowing the flow of water down through catchments in ways that work with nature. This workstream is led for the SRA by the Farming & Wildlife Advisory Group SouthWest (FWAG SW). Activities generally go under the popular local branding of Hills to Levels. In the government's Environmental Improvement Plan 2023 (also known as the first revision of the 25 Year Environment Plan that was published in 2018), Hills to Levels is picked out as a case study for its success in addressing flood risks and creating wider environmental benefits.

In 2020-21 and 2021-22 the coronavirus pandemic meant schemes dipped, but in 2022- 23 numbers happily rose again to 16. In Mendip, FWAG SW efforts were entwined with a strand of NFM work led by Mendip District Council's flood risk consultants Calm Engineering. Calm identified and prepared the way for a range of NFM opportunities, some of which have already come to fruition. For example, at Walton Windmill, off The Cockrod road atop the Polden hills, two attenuation scrapes, a connecting channel and a bund were created to reduce runoff towards South Drain.

A few other brief descriptions may serve to illustrate the range of schemes across Somerset, from simple effective moves to sophisticated stream restorations and wetland creation.

At Halse Farm near Halse, 130 metres of cross-slope hedge was planted to slow the flow of water down to Halse Water, a tributary of the River Tone.

In Dulcote wood, above the River Sheppey, Dinder and the A371, 70 trees were planted to reduce the amount of water and soil coming off a steep slope recently cleared of dead ash trees.

At Withycombe Farm near Wiveliscombe, three schemes including the de-silting of a pond and the clearing of a disused reservoir were carried out to help reduce flows downstream to the B3227 and Wiveliscombe recreation ground.

At Cornish Farm west of Orchard Portman, the landowner agreed to a request from Highways England to help reduce flooding on the M5 at Shoreditch. Numerous visits were made by FWAG SW advisers, funded by the SRA. As mainly recommended, Highways England improved and desilted an existing concrete channel. Several measures were then taken to reduce water run-off and sediment flow from nearby fields down to that channel. Moves included 285 metres of ditching and hedging, three new gateways, and 750 metres of fencing to stop livestock from getting into watercourses and trampling banks and muddying them up. A large open field area has been split into smaller paddocks to help improve soil structure, grass management, and grazing rotation.

At Merriott north of Crewkerne, in a finely designed scheme part-funded by the SRA, 300 metres of the Merriott Stream has been de-culverted. It now boasts a meandering channel

and a range of features that will help to reduce flood risks to Merriott, improve habitats for wildlife and allow fish to move upstream and downstream more easily.

At Cannwood Farm near North Brewham, north-east of Bruton, the SRA funded the first phase of a wetland habitat creation project, in an area about 240 metres long and at its widest about 50 metres across. NFM activities included making a series of scrapes, ponds and bunds, partially filling-in an existing drainage ditch and re-meandering a stream channel. Several further moves have been discussed, such as planting reedbed areas, and installing woody flow spreaders and leaky woody dams. FWAG SW advisers say the scheme has been a great success, with benefits demonstrated almost immediately for holding back peak flows of water. This scheme and the Merriott Stream work are both similar in spirit to the 'Stage 0' work on the National Trust's Holnicote estate described on pages 5 and 6.

Other 2022-23 NFM schemes, in summary, were:

- Alhampton, two schemes on Mill House land, not far from the River Alham, Brue catchment, a 636 square metre pond and two swales, along with 0.247 hectares of tree planting part-funded by the SRA, near the pond, to help further slow the flow of water.
- Brompton Ralph, two schemes on Old Rectory land, two scrapes and a soil bund to direct water into two ponds, then a series of leaky dams to further slow the flow.
- Lydeard St Lawrence, Higher Preston Farm, flow pathway into Doniford Stream, pond de-silting, coir rolls installation.
- Maidenbrook country park, for West Monkton Parish Council, four leaky dams and a bank regrade to create a larger backfill pool of water.
- Maundown, near Wiveliscombe, six concrete cross- drains and six woody debris flow spreaders along the Challick Wood House track to help reduce runoff down to Blackwater Lane.
- Wheddon Cross, Triscombe Farm, part SRA-funded, pond de-silting, stream re-profiling, brushwood bundles, tree planting.

[Online Natural Flood Management \(NFM\) auction schemes in 2022-23](#)

Farmers were invited to bid for a range of land management and NFM measures on their land in an online auction organised for the SRA by FWAG SW. Online auctions involve bidders in very little paperwork, and they are designed to appeal to farmers' detailed knowledge of their own land. Consequently, since 2018, auctions have led to numerous measures that slow the flow of water down through catchments and produce other benefits. For instance, the SRA's main interest in grassland subsoiling and slitting is that they aerate the ground so more rainwater can filter in. For farmers, they also improve the soil.

This year the Parrett and Tone catchments were excluded to avoid duplication with a similar EnTrade programme. Many Somerset farmers still got involved but as with the Sowy-King's Sedgemoor Drain Enhancements Scheme, activities later in the year were unfortunately hit by the weather. Drought conditions made it a poor season for grass growing, which meant more grazing and silage-cutting later into the autumn and fewer opportunities for jobs like grassland slitting and subsoiling, especially when downpours then began.

Places achieving better maize management:

- Green Farm, Downhead, 8.47 hectares
- Sharpshaw Farm, Nunney, 38.47 hectares, plus 0.38 hectares of buffer strips in maize fields near watercourses
- New Manor Farm, Witham Friary, 9.976 hectares, plus 42 metres of new grassed shallow ditch

Grassland slitting:

- Little Oak Farm, Theale near Wedmore, 42.71 hectares
- Lane End Farm, Brinscombe, 13.65 hectares, plus 114.65 metres of hedge planting

Grassland subsoiling:

- Stroudes Farm near Oakhill, 5.62 hectares
- Stoke Farm, Stoke St Michael, 12.36 hectares
- Higher Farm, Shepton Montague, 6.5803 hectares

At Carslake Farm near Stogumber, a large pond (0.0457 hectares) was created to collect run-off, and further measures are planned.

At Frith Farmhouse, Shaftesbury Lane, Wincanton, 0.476 hectares of cross-slope tree planting in a 210 by 20 metre belt at the base of a field is already showing NFM benefits.

FWAG SW advisers got involved with 14 'highway referrals', helping Somerset County Council's Highways Department to assess whether road flooding problems could be reduced through better management of land nearby. They also followed up a few cases from previous years, to ask, for example, if things were going well or if any more advice was needed.

Places visited included:

In South Somerset –

- Blackford between Compton Pauncefoot and Maperton
- East Coker and West Coker near Yeovil
- Misterton near Crewkerne
- Shepton Beauchamp

In Somerset West and Taunton –

- land near the A358 at Combe Florey
- Crowcombe

- Langford Budville and the lane between Chipley and Spring Grove, both north of Wellington
- Preston Bowyer north-east of Milverton
- Stoke St Gregory
- Westford west of Wellington (two landowners)

In Sedgemoor –

- land near Ashford Reservoir west of Cannington

Ideas discussed with farmers and landowners to reduce runoff included using coir matting, putting in a hedgebank, installing a gully and sleeping policeman, creating buffer areas and ditch-digging.

For more on Combe Florey, as a detailed example of involvement, see page 20.

#### Natural Flood Management (NFM) for Doniford catchment farms

An ongoing initiative to help reduce flooding problems across the catchment of the Doniford Stream in West Somerset. Three new schemes were completed this year, following four in 2021-22.

At Birchanger Farm near Monksilver, fencing and gateways were installed to help manage stock around new wet woodland, all SRA-funded.

At Triscombe Farm, Triscombe a cascade of six leaky dams was created along a tributary of the Doniford Stream, using coppiced hedgerow materials.

At Higher Preston Farm, Lydeard St Lawrence, 50 wet woodland trees (such as alder, willow, birch and hazel) were planted across flow pathways below a new barn.

#### Somerset Beaver Strategy

So that well-informed, evidence-based and science-led decisions can be taken about beavers in Somerset, and suitable plans agreed, the SRA Board agreed in 2021 to fund the development of a Somerset Beaver Strategy. Subsequent work by FWAG SW and Somerset Wildlife Trust was slowed by the coronavirus pandemic, then a pause for a government consultation about beavers in England, which resulted in October 2022 in them becoming a protected species.

A Somerset Beaver Strategy is now expected by autumn 2023, covering three main subjects.

Firstly, scientific evidence of the many benefits but also the risks of beavers, their new legally-protected status and their current Somerset habitations.

Secondly, mapping opportunities and risks across Somerset, taking the Somerset Frome catchment as a detailed example, as beavers are breeding there.

Thirdly, various needs:

- the need for Beaver Management Groups (BMGs) and guidance about how they should work
- how to finance BMGs and support land managers who have beavers on or near their land
- and the need for places for beavers to live, if they need to be moved from where they are

#### Somerset Levels and Moors peat trials

In March 2022, the SRA agreed to part-fund the running of a trial scheme of payments for the preservation and restoration of peat in two to four small areas of the Somerset Levels & Moors. Areas of wet low-lying peaty land are important to the SRA because they can act as a buffer against flooding. The Department for Environment, Food & Rural Affairs (Defra) is keen for lessons to be learned from a trial so that Environmental Land Management schemes (ELMs) can “reward farmers and land managers for producing public goods”, such as preventing carbon dioxide (CO<sub>2</sub>) loss from lowland peat.

Talks have been held by FWAG SW with more than 50 landowners, and three possible locations have been identified: Lang Moor near Westonzoyland, Chilton Moor near Gold Corner and Queen’s Sedgemoor near Glastonbury. Subject to final agreements being reached, and Internal Drainage Board consents being given for raised water levels, it is hoped to run trials later in 2023.

#### Wellhams Brook water storage study

In March 2022, the SRA Board agreed to fund a study assessing the feasibility of creating a 4-acre storage pond on land near Wellhams Mill in the Wellhams Brook catchment between the Houndstone and Lufton side of Yeovil and Martock. Water from Wellhams Brook flows down to the River Parrett.

In autumn 2022, for the SRA, FWAG SW appointed consultants JBA to model catchment flows and examine the practicalities and potential flood risk reduction benefits of a large new water storage area. Control measures have been looked at, as have the ideas of creating an acre of wetland upstream, re-establishing natural flood areas, reducing phosphates and irrigating farmland. A report with estimated costs and a possible construction programme is expected by summer 2023.

#### Trees for Water Action Fund

Trees for Water is an SRA-backed Fund for tree and hedge planting that helps people across Somerset to reduce local flood risks arising from surface water run-off. It’s designed to suit small sites where local knowledge and expert analysis suggest that planting will make a difference.

Planting is usually carried out by landowners and enthusiastic volunteers. Momentum built up over the last three years has encouraged more landowners to come forward, and shaped people involved into experienced and effective teams. The project is led by Reimagining the Levels, working with FWAG SW.

During 2022-23, 32 places were planted with a total of 2791 trees, 3327 shrubs, 1987 metres of hedgerow and 69 hedgerow trees. To guard against chomping by livestock and wildlife, 2398 metres of fencing was also provided.

Public sites to benefit were Keinton Mandeville playing field, the Diamond Jubilee Wood just outside Barton St David and Linden Meadow at Westford, owned by Wellington Town Council (the proposal came through Transition Town Wellington).

Charities included the Pitcombe Rock Falconry Rescue and Rehabilitation Centre, close to Cole near Bruton, the Geranium Trust's Court House at Stoford near Yeovil, an able2achieve venue for people with disabilities, and Paddington Farm at the foot of Glastonbury Tor. Here one acre was planted on land which slopes down to the splendidly-named Splotts Moor which drains to the Brue. 175 trees and 175 shrubs extended existing woodland and a wild fruit orchard intended to provide forage for birds and wildlife.

Farms included Parsonage Farm (the home of Parson's Choice Cider) on the A361 near West Lyng. Here 60 trees and 60 shrubs were planted in a field which gets very wet, and which is also near to an agricultural contracting business where lots of vehicles get washed off. The aim is to help stop water from draining down to Bankland, then Northmoor Main Drain, then the River Parrett at Moorland. At Jerrards Farm in Brewham, 55 trees and 65 shrubs were planted in a buffer strip along three fields bordering the Brue, along with fencing to keep cattle out of the river paid for by the Environment Agency's Brue Headwaters Multi-Benefit Project.

Other places have included:

In Mendip –

- Chesterblade north- east of Evercreech
- Haybridge near Wells
- Pilton
- Spargrove near Batcombe
- Upton Noble
- Walton Hill

In Sedgemoor –

- Farrington near North Petherton
- Shipham
- Stoughton Cross near Wedmore
- Warrington Batch between West Stoughton and Ashton
- West Stoughton near Wedmore

In Somerset West and Taunton –

- Helland near North Curry
- West Bagborough

In South Somerset –

- Chilthorne Knap near Chilthorne Domer
- Compton Dundon
- Draycott
- Higher Easthams Farm east of Crewkerne
- Huish Barn near Somerton
- Knole near Long Sutton
- Newtown near Kingsbury Episcopi
- Pitney
- Up Mudford near Yeovil
- Wick west of Langport

More details can be found on the SRA website.

## Workstream 3: Urban Water Management

The main aims of Somerset Rivers Authority's Urban Water Management workstream (W3) are to reduce local flood risks and make places better to live and work. When it rains, SuDS help to control the run-off of water from hard surfaces like roads, roofs and pavements. SuDS use techniques inspired by nature – such as permeable paving and plants and ponds – to absorb water and hold it back. SuDS can make places greener and more attractive, healthier for people and better for wildlife, with less pollution.

In 2022-23, as in previous years, a lot of close attention was devoted in this workstream to examining Sustainable Drainage Systems (SuDS) at new developments.

Very few formal SuDS inspection processes are in place across England: Somerset is ahead in checking new developments. The SRA and its partners want to ensure that SuDS are built in accordance with the exact designs that were approved by local planning authorities, and that they work as they are meant to work. Inspectors check schemes for compliance against 16 different criteria. Local planning authorities have the power to enforce changes to constructed SuDS schemes, and where necessary they use this power. Special attention is also paid to handover arrangements for future maintenance, which is crucial for SuDS operation.

The SRA funded inspections of SuDS at 48 places in 2022-23. Generally most places were found to be acceptable.

Places inspected in Somerset West and Taunton:

- Bishop's Hull, Phase 1 & 2; Phase 3 Abbeyvale; Phase 4, land south of Kinglake
- Carhampton, Townsend Farm
- Corfe, Corfe Farm
- Dunster, Higher Marsh Farm
- Henlade, land at Stoke Road; Longforth Farm, Phase 1 (highway drainage)
- Minehead, Ellicombe
- Monkton Heathfield, Farriers Green (Tanpitts Farm), West Monkton; Local Centre; Phase 1
- North Curry, Loscombe Meadow, Overlands
- Porlock, Villes Lane
- Staplehay, Amberd Lane
- Taunton, Cheddon Road; Creechbarrow Road; Killams Lane Original & Phases 1 - 4A; Richmond Court
- Wellington, Rylands Nurseries, Bagley Road
- Williton, land to the East of Aller Mead Way also known as Watery Lane
- Wiveliscombe, Sandys Moor; Style Farm

Places inspected in Sedgemoor:

- Axbridge, land off Cheddar Road



- Bridgwater, All Saints Terrace
- Burnham on Sea, former BT Radio Station
- Cannington, Grange Farm
- Lympsham, West Road
- North Petherton, Royal View, Taunton Road (A38); Stafflands Park
- Pawlett, land at Chapel Road
- Puriton, Riverton Road
- Wedmore, Westholme Farm, (east of Wedmore Primary School) Phases 1 & 2
- Westonzoyland, Liney Road
- Woolavington, (Lavers Close), 17 Higher Road.

Places inspected in South Somerset:

- Chard, Mitchell Gardens; Thorndun Park Drive; Willow Way, Cedar Close
- Misterton, Bradfords Yard, north of Railway, Station Road; south of Railway, Station Road
- Yeovil, Bunford Heights; Lyde Road

Places inspected in Mendip:

- Evercreech, Prestleigh Road
- Glastonbury, land north west of the A39; Old Wells Road
- Wells, former Nutricia factory, Glastonbury Road; Haybridge, Portway; land at Wookey Hole Road

[Somerset-specific SuDS guidance and SuDS website](#)

In January 2023, the SRA Board approved additional funding from the SRA's contingency budget for updating Somerset-specific guidance about SuDS for planners and developers, and revising materials for an associated Somerset SuDS website. For example, some changes had to be made to incorporate new elements of Local SuDS Standards, some others were needed to reflect the launch in April 2023 of the new Somerset Council. The extra money given was also intended to cover activities such as an e-learning seminar and a launch event. The guidance and website are due to be formally published by summer 2023.

[Wells catchment study](#)

In March 2022, the SRA Board approved funding for a new city-wide study of Wells. Its main aims are to identify joined-up ways of reducing flood risks, increasing resilience and improving the management of water and land. The project got under way with a workshop event for numerous organisations involved with Wells and the collection and analysis of existing data.

## Minehead 25 Year Action Plan

The SRA is the main funder of the development of a 25-year action plan for dealing with serious flood risks from all sources across the whole catchment in and around Minehead. Other funders – and also project leaders - are Somerset Council (as it now is) and Wessex Water.

In 2022-23, consultants WSP finished building a 2D Integrated Catchment Model, to get a much better understanding of the combined impacts of river, surface water and drainage flood risks. Sensitivity runs were also conducted to assess the impact of the tide on local infrastructure.

After the model's outputs were reviewed and validated, the project team identified potential flood alleviation measures across the catchments that flow into Minehead. A final report is expected by summer 2023, which will particularly take into account the effects of new developments around Minehead and climate change.

## River Sheppey Catchment Action Plan

After the flooding of 26 homes and of roads including the A371 in Croscombe and Shepton Mallet in October 2020, Somerset Rivers Authority gave Mendip District Council funding for a major study. Its purpose: to understand more about the causes of local flooding, so that plans could be devised for reducing flood risks and making places more resilient to flooding. Work began in 2021, continued throughout 2022-23 and is now nearly complete. Investigations were led by Mendip's flood risk consultants Calm Engineering, working with Somerset County Council, the Environment Agency and Wessex Water, Carroll Environmental, Ghyston Engineering, Hydro-Morph, FWAG SW and the Wild Trout Trust.

Together they studied the sub-catchments of Croscombe and Shepton Mallet, including Charlton, Bowlish and Darshill along the River Sheppey and other places such as Ham, Downside and Boddin. Titwell Wood stream, Coombe Lane Brook, Collett Park stream, Bullimore Brook and Doultling Stream have been assessed, along with springs that emerge to the east of Shepton Mallet including St Aldhelm's well, an ancient holy well reputed never to run dry. Other notable local features include the swallow hole along Thrupe Lane above Croscombe, which takes water from a small stream into a cave system about 120 metres deep. This water reappears in Wells. It is a common feature of investigations into water in Somerset that the closer people look, the more strange and complex worlds open up! Project teams have reviewed large amounts of existing information about (for example) previous flooding incidents, carried out additional investigations (two new CCTV surveys in 2022), studied flood risks and how to mitigate them, and looked at how local people could improve local resilience.

At times the project team worked in tandem with the SRA's community engagement officers, who were supporting the Croscombe Flood Committee. In April 2022, this Committee became a working group which now provides advice and makes recommendations to the parish council. It also has equipment and materials funded by the SRA through Somerset Prepared.

In March 2023, two project team members gave a presentation to Shepton Mallet Town Council in which they picked out numerous issues, grouped according to SRA workstreams.

Workstream 1 issues:

- historic modification of the river channel
- condition of culverts
- riverbed level changes
- channel obstructions

Workstream 2 issues:

- land use in upper catchment, e.g. winter grazing, maize-growing, runoff from farm tracks

Workstream 3 issues:

- an almost complete lack of sustainable urban drainage systems, with large swaths of impermeable paved areas in Shepton Mallet
- need for additional guidance and changes in local policies

Workstream 4 issues:

- capacity and condition of parts of the drainage network

Workstream 5 issues:

- accessibility of flood information
- community awareness of flooding and local resilience measures
- lack of resources to respond to flood incidents
- need for additional property level resilience measures

A final report is now being prepared. It is likely to include around 120 very specific recommendations, right down to individual culverts.

In some simpler cases, SRA partners such as the Environment Agency and Somerset Council's Highways Department have already begun to make improvements.

## Workstream 4: Resilient Infrastructure

Two of the six main objectives in Somerset's 20 Year Flood Action Plan are about making Somerset's infrastructure more resilient. They urge that access should be maintained for people and businesses travelling within Somerset or through the county. As it oversees the Flood Action Plan, Somerset Rivers Authority therefore deals with flooding along highways as well as waterways.

### A358 near Combe Florey

Somerset Rivers Authority funded drainage improvements to the section of the A358 near Combe Florey that was hit by three mudslides in 2022.

In March 2023, Somerset County Council's Highways Department, as a partner in the SRA, upgraded drainage grips along the eastern side of the road near Yarde Farm, to allow water to better drain off the road surface.

The SRA has also been helping to address the underlying causes of problems along this important stretch of road. The A358 is one of only two main routes into – and out of – West Somerset, and it is classed as a county freight route.

In August and September 2022, the road was shut twice after mudslides dumped tonnes of soil, potatoes and surface water run-off onto the road. A smaller slip in December shut the road again.

The SRA funds a system known as 'highways referrals', whereby answers to problems affecting roads are sought in better management of land nearby. Through this partnership arrangement, Farming & Wildlife Advisory Group SouthWest (FWAG SW) advisers have made several visits in recent years to land adjoining sections of the A358 near Combe Florey. These visits resulted in measures being taken which have helped to reduce flooding and soil erosion problems.

The day after the August 2022 mudslide, a FWAG SW adviser visited the field where potatoes were being grown, analysed the situation, and made recommendations. For short-term protection of the road and nearby West Somerset Railway line, three filter fences were dug into the ground across flow pathways to slow any further run-off and silt loss. Unfortunately, intense rain in early September overwhelmed these temporary defences.

It was agreed with the landowner that after the tenant farmer's remaining potatoes had been harvested in late September, the field should revert to being lower-risk grassland. Other recommendations made in a detailed report produced by FWAG SW included carrying out a deep primary cultivation of the soil to allow for more infiltration of water into the ground, planting a cover crop to reduce erosion, installing more filter fencing and planting trees in a particularly troublesome area. The field has reverted to grassland and at his own expense the farmer has installed a series of swales and check dams to divert runoff away from the road.

## Creech Heathfield culvert replacement

Around 30 properties in Creech Heathfield near Taunton have benefitted from SRA-funded moves to reduce surface water flooding. Somerset County Council's Highways Department and contractors Milestone installed a new culvert and gullies in Charlton Road in March 2023 to improve drainage. Thorough site investigations and clever design resulted in a scheme that was 70% cheaper than first estimated.

## Marston Magna

Works to reduce regular flooding on the A359 through Marston Magna were carried out in October 2022, by Somerset County Council's Highways Department. Repairs and improvements were made to benefit local residents and road-users travelling between Yeovil and the A303. The scheme followed on from extensive research done for Somerset Rivers Authority into the Mill Stream catchment, which includes Rimpleton and Marston Magna. Works included: repairs to the highway drainage system which helps to remove surface water; repairs to a section of retaining wall, adjacent to a watercourse, which provides protection from high water levels; and de-silting of a section of watercourse to improve its flow and capacity. Since these works were done, Highways have had no reports of the A359 flooding here.

## Rode and Beckington

The main aims of SRA-funded work in Rode have been to reduce flood risks to more than 25 properties (in Long Street, High Street, The Brewery plus the primary school) and nine roads, and to enhance parts of the local environment through techniques of Natural Flood Management (NFM).

This project grew out of an earlier SRA-funded programme of investigations into sub-catchments across Mendip that could benefit from extra maintenance.

Work in Rode has been delivered for the SRA by Mendip District Council's flood risk consultants Calm Engineering, working with other SRA partners and contractors.

Works in Rode began in February 2023, and have included:

- removal of debris, jetting and CCTV
- replacement and repair of culvert roofing
- structural lining of pipes; replacement of pipes
- root cutting and removal
- clearing ditches and improving connections to them

Completion is expected by summer 2023.

SRA-funded works in Beckington have been led and designed by the same team as in Rode. Their purpose is to reduce risks of systemic drainage failures causing widespread flooding,

especially to Goose Street and properties at the bottom of Warminster Road / Frome Road (more than 25 properties in total).

Beckington works were completed by March 2023 save for two jobs planned for July. They have included:

- replacement of surface water drainage pipes
- root cutting and removal
- removal of debris and clearance by jetting
- repair and/or replacement of culvert roofing
- replacement and/or repair of existing manholes
- installation of new manholes for improved accessibility and maintenance
- structural lining of surface water drainage pipes
- and CCTV surveying

Wessex Water have been making foul sewer improvements, paid for by Wessex Water. Residents have been encouraged to learn about and fulfill riparian responsibilities for maintenance, and about ways in which all villagers can help to reduce the risks of unpleasant sewer overflows.

#### Chadmead

In summer 2022, a 13-metre section of the track that connects Northmoor Corner and Kitches Lane in Chadmead was levelled and surfaced. Verge marker reflector posts were then installed, to warn drivers off veering into Bankland stream. These two jobs were delayed from the year before because of coronavirus pandemic complications. Their SRA-funded completion marked the end of a one-off Somerset County Council's Rights of Way Department project to preserve vehicular access to and from Chadmead in times of flood. Local thanks have been received.

#### Flood warning systems

Four solar-powered flood warning signs and a flood sensor were installed along Stoke Road in Martock, between the link road down from the A303 and the junction with the B3165 Church Street. Stoke Road is vulnerable to flooding and Martock's flood warden co-ordinator Gordon Swindells, an ex-policeman, led a local campaign for a real-time flood detection and warning system that would help to keep people safe, particularly at night. The Stoke Road system was designed for the SRA by an engineer in Somerset County Council's Road Safety section.

A new flood warning system funded by Somerset Rivers Authority has also been designed by Somerset County Council's Highways Department for Lane End in Ham and Lipe Lane in Ruishton.

Both roads get busy with local traffic and motorists seeking to avoid delays on the A358 east of Taunton, and as both roads flood seasonally, cars quite often get abandoned and driven into ditches. To try to deter drivers from risking lives and vehicles, five variable-messaging

digital signs will be activated by sensors in rising flood waters. Installation of these signs is expected by summer 2023. Local residents, Ruishton Parish Council, Ham Village Flood Defence Committee, and the SRA's Community Engagement team all helped to develop this scheme.

#### North Petherton flooding study

The SRA Board originally gave Sedgemoor District Council funding for an investigation into the causes of flooding affecting properties and the road in Baymead Lane, North Petherton. This study was expected to focus on a part of the Mill Stream culvert system known to be undersized. However, following flash flooding around North Petherton in summer 2021, it was decided to look at six other pinch-points as well.

Progress in 2022 included topographical and CCTV surveys, reviews of flood risks and the drafting of proposals for works to reduce those risks – such as a Mill Stream culvert re-design.

Final reports and recommendations are expected in summer 2023.

#### Enhanced maintenance of road drainage structures

Four programmes of enhanced maintenance were organised for the SRA by the Somerset County Council (SCC) Highways Department. They helped to keep roads open, make them safer, preserve access for communities, and safeguard properties from flooding. All places where works were done can be seen, at a glance, on this map.

#### Gully-emptying

In 844 places, SRA funding enabled SCC's Highways Department to give a record 22,513 of the 23,218 highest-risk gullies countywide a second round of emptying, six months after their first council-funded clearout. A full list of places is on the SRA website.

#### Silt trap emptying

In Mendip silt traps were emptied 13 times (four in Rodney Stoke), once in Sedgemoor, twice in Somerset West and Taunton (both in Kingston St Mary), 33 in South Somerset.

#### Trash screen clearing

Seventeen trash screens were cleared, two in Mendip, 15 in Somerset West and Taunton, most of these in Carhampton, Dunster, Minehead, Sampford Brett, Stogumber and Wootton Courtenay.

## Drain jetting

132 drains were jetted for the SRA in 2022-23, by district as follows: 6 in Mendip; 19 in Sedgemoor; 33 in Somerset West and Taunton; 74 in South Somerset. Under existing budgets, the Highways Department can only afford to jet drains when a bad blockage has occurred. SRA funding allows for earlier preventative maintenance at locations known to suffer problems with flooding.

A full list of sites is on the SRA website.

It includes 22 jettings in Ilminster (eight in Herne Rise and four in Springfield), 17 in Winsham, and in Yeovil, six in Reckleford and one in Reckleford Triangle.

Selections of drains for jetting are made using local knowledge and professional judgement.

## Asset upgrades at frequently jetted sites

Since 2016, the SRA has paid for more drain jetting at many places, 132 in 2022-23. Some drains have had to be jetted many times over the years, which indicates intrinsic problems it makes sense to fix.

Records show that Charlton Hill in North Cheriton parish has been jetted five times since 2014.

Drainage improvements were therefore made here by Somerset County Council's Highways Department, as a partner in the SRA, using Milestone as contractors. Works included building a pond outfall, installing two precast concrete circular chambers, removing an old gully and fitting a new one.



## Workstream 5: Building Local Resilience

One of the six main objectives of Somerset's 20 Year Flood Action Plan is to "Increase resilience to flooding for families, agriculture, business, communities and wildlife". This SRA workstream seeks to fulfill that aim in several different ways. For example, through encouraging practical moves that help people to get better prepared for any flooding. Also through fostering greater understanding of local flood risks, of the implications of climate change and of possible adaptations to that, and of the riparian responsibilities that come with owning watercourses and structures such as drains and culverts.

In 2022-23, activities in this workstream were somewhat curtailed because the SRA Community Engagement Officer and the SRA Community Engagement Support Officer left to work for the Environment Agency in Wessex and the RSPB in Scotland, respectively. A lot, however, was still done across the county, through supporting local communities affected by flooding (in places such as Chard, Forton and Tatworth, Ilminster, Martock, Shepton Mallet and Croscombe), making school visits (such as to Bridgwater College Academy), and giving talks (such as to landowners in Combe St Nicholas about riparian responsibilities). Two new officers are due to be recruited in 2023.

### Somerset Community Resilience Day 2022 and Somerset Water Forum

The fourth annual Somerset Community Resilience Day was held at West Monkton Village Hall in October and was well-attended and well-received. Around 100 people enjoyed a day of talks, workshops and stimulating activities.

Subjects included the SRA's Flood Action Plan review, riparian rights and responsibilities, climate adaptation, equipment for dealing with flooding and the art of throwing life-saving gear to people in water.

The Lord Lieutenant of Somerset officiated at the prize-giving ceremony for the new Somerset Community Champions award, set up to honour individuals and groups in Somerset who have made their communities more resilient.

Both the resilience day and the award were organised by the Somerset Prepared partnership, which has 11 organisations as full members, and was then co-chaired by the SRA.

In June, with Somerset Catchment Partnership (SCP), the SRA also part-funded the first Somerset Water Forum. This was a day of presentations and discussions about water-related issues in Somerset, with a strong focus on what Somerset is doing differently.

Subjects included flooding, climate change, farming, water quality and phosphates, ways of working with nature, and lowland peat restoration.

The keynote speaker was Taunton Deane MP Rebecca Pow, in her role as minister with responsibility for flooding and other water-related matters at the Department for Environment, Food and Rural Affairs (Defra).

The Forum was chaired by Anthony Gibson of the SCP, and like the resilience day, was a popular get-together.

### Somerset Prepared Grants

The SRA funds a small number of grants for equipment and training given to Somerset communities by Somerset Prepared.

Three grants were given in 2022-23:

- Martock, for hydrosnakes
- Sampford Brett, for sandbags, storage sheds, shovels and wheelbarrow
- Tatworth and Forton, for pumps, spades, torches and two storage sheds

### Community flood alerts

A trial of very localised early flood warning systems, using smart, low-cost, low-maintenance devices at places known from experience to show that if x is happening with water there now, then problems downstream can be expected very soon. After a long period of technical investigations and discussions, made more difficult by the coronavirus pandemic, significant progress was made during 2022-23, thanks to the combined determination of the SRA's community engagement officer, SRA partners, parish councils, flood wardens, flood group members and residents.

A range of equipment paid for by the SRA is now due to be installed in 2023 at Croscombe, Roadwater and Luxborough, Sampford Brett, Monksilver and Porlock. This will be linked to an online platform giving faster and more detailed information about specific local flood risks than it has previously been possible to provide through the Environment Agency's system of alerts and warnings. In 'rapid response' catchments with high-sided valleys and deep lanes, flood waters can rise very quickly when there is heavy rain on the hills, putting people's lives at risk.

### Adapting the Levels

One of the aims of Somerset's 20 Year Flood Action Plan is to facilitate "better management of the most vulnerable and challenging parts of the Somerset Levels, with the consent of owners and occupiers, with the intent of helping them to remain profitable and build greater resilience to climate and economic change."

Between 2019 and the end of March 2023, the SRA and the EU's Interreg 2 Seas European Regional Development Fund therefore funded a major project on the Somerset Levels and Moors called Adapting the Levels. The main aim was to get local people and organisations co-operating and adapting to the water-related effects of climate change (flooding and drought). One important aspect has been the development and encouragement of Moor Associations, groups set up and run by local farmers and landowners working together for their mutual benefit. Out on the ground, Adapting the Levels was led by the Farming &

Wildlife Advisory Group SouthWest (FWAG SW), Somerset Wildlife Trust and Somerset County Council, with support from the SRA's Community Engagement team.

#### [Climate adaptation toolkit](#)

Activities in 2022-23 included the production of a 28-page 'Climate Adaptation Toolkit'. This was designed for parish and town councils, community groups and individuals who want to make positive local moves but feel they could do with some useful and friendly ideas to help them along various pathways. Although prompted by a project centred on the Levels and Moors, the Toolkit is a good resource for people and organisations across Somerset. Topics covered include emergency plans, property flood resilience measures, rain gardens and water butts, watercourse maintenance, Sustainable Drainage Systems (SuDS), natural flood management, tree planting, funding, consents and permits, and more. An Appendix includes suggestions about how to plan projects.

#### [Animations about Somerset's peat, and Floodplain connections](#)

To further stimulate debate, the project team also worked with data visualisation experts to produce two animations, about Somerset's Peat and Floodplain Connections. The first piece explores the value of keeping peat wet and in the ground, the second looks at taking a balanced and careful approach to re-connecting rivers to floodplains. Both videos relate to activities covered elsewhere in this annual report, such as peat trials (W2) and schemes such as the Stage 0 works on the National Trust's Holnicote estate, the Merriott Stream de-culverting, and the wetland creation at North Brewham. Both videos are on the Adapting the Levels YouTube Channel.

## Financial Summary

### Background

The SRA gets annual funding from two sources. Firstly, council tax. In the 2022-23 financial year, £2,941,205 came via Somerset County Council and the four district councils (Mendip, Sedgemoor, Somerset West and Taunton, and South Somerset). Secondly, the Parrett and Axe Brue Internal Drainage Boards (IDBs) each gave £10,000. Local Partner Funds thus totalled £2,961,205.

In March 2022, the SRA Board moved extra funds out of contingency and set a budget of £3,089,000 for the SRA's 2022-23 Enhanced Programme of works. Further funds of £304,000, carried forward from the previous year, were allotted to four full-time staff and a part-time Technical Adviser, administration and overheads, and Flood Action Plan review work. The total budget was £3,393,000. The 2022-23 Enhanced Programme contained 21 schemes and activities, all designed to advance Somerset's 20 Year Flood Action Plan. Flood Action Plan review work during 2022-23 is described on 29.

### Spending of Local Partners Funds in 2022-23

Many actions and initiatives are completed within one financial year. Some require longer-term research, design, planning and implementation. The chart below gives a breakdown of SRA spending during 2022-23, workstream by workstream. The table below summarises the SRA's financial position at the start and the end of the 2022-23 financial year.

The SRA's spending in 2022-23 totalled £5,890,000. By workstream, it was as follows:

Workstream 1, Dredging and river management, £3,718,000, that is 63.1% of the total.

Workstream 2, Land Management including Natural Flood Management, £420,000, that is 7.1% of the total.

Workstream 3, Urban Water Management, £294,000, that is 5% of the total.

Workstream 4, Resilient Infrastructure, £1,021,000, that is 17.3% of the total.

Workstream 5, Building Local Resilience, £115,000, that is 2% of the total.

Spending in these five workstreams made a sub-total of £5,568,000.

To them was added SRA core work and development, £76,000, that is 1.3% of the total, and SRA administration and staffing, £246,000, that is 4.2% of the total.

At the start of the 2022-23 financial year, the SRA possessed total allocated funds of £10,517,000. Spending £5,890,000 in 2022-23 meant the amount carried forwards to the 2023-24 financial year was £4,627,000.

## Flood Action Plan Review

### Background and objectives

The Somerset Levels & Moors Flood Action Plan was published in March 2014, in response to that winter's devastating floods. Those floods cost Somerset an estimated £148 million and - directly or indirectly – affected everybody across the county. When Somerset Rivers Authority (SRA) was launched on 31 January 2015, the Flood Action Plan was widened to include the whole of Somerset.

The SRA oversees the Flood Action Plan. The Plan has six main objectives. All actions in the SRA's annual Enhanced Programmes are scored and ranked against these objectives:

1. Reduce the frequency, depth and duration of flooding.
2. Maintain access for communities and business.
3. Increase resilience to flooding for families, agriculture, businesses, communities, and wildlife.
4. Make the most of the special characteristics of Somerset (with internationally important biodiversity, environment and cultural heritage).
5. Ensure strategic road and rail connectivity, both within Somerset and through the county to the South West peninsula.
6. Promote business confidence and growth.

The SRA and its partners have worked hard to complete many of the actions within the original Plan. Nearly a decade on from its publication, it needs to be updated to set out strategic SRA priorities, with a plan for how to achieve them in the short, medium and long-term.

### Activities in 2022-23

Since April 2022, consultants from WSP have been working on an SRA strategy and action plan with SRA Board members, Technical Group members, staff, partners and stakeholders. Numerous issues covered in various events have included flood risks and protection, resilience and adaptation, ways of encouraging more collaboration across river catchments, climate change, water quality, environmental enhancements and last and far from least, local priorities.

Some unforeseen delays in late 2022 meant the Plan's expected completion date had to be put back until December 2023. The SRA will be engaging with partners, stakeholders and people across Somerset before a final strategy and action plan is published.