

What will Somerset Rivers Authority (SRA) do with its local funding in 2020-21?

Nearly £2.7million of Somerset Rivers Authority's local funding for 2020-21 will be spent on 23 different projects and activities across Somerset.

All of these actions are listed below. Some will take longer than one year to deliver.

The SRA has local funding of £2.944million for 2020-21. That is all money raised through council tax, except for £20,000 contributed by the Axe Brue and Parrett Internal Drainage Boards. Just over £250,000 of the SRA's local funding will be used for staff, overheads, a small projects budget and allowance for advice from Natural England.

The SRA's council tax charge is still at the same level it was in 2016.

During 2020-21, the SRA will also use Growth Deal funding from the Heart of the South West Local Enterprise Partnership. This will help the SRA to pay for pioneer dredging, River Sowey/King's Sedgemoor Drain (KSD) enhancements, and North Drain Pumping Station improvements which will benefit the catchment of the River Brue. The SRA will also use its Growth Deal funding to contribute to a £1.8million Wessex Water flood prevention scheme in Highbridge.



HM Government

Some local funding from previous years has also been reserved for dredging and Sowey/KSD works.

More information about the SRA's budget and programme of works for 2020-21 is available on the SRA's website, on the page devoted to the SRA Board meeting on Friday 6 March 2020. If you would prefer to read the information contained in this document online you can do so on the SRA's website in the Flood Risk Work section.

This PDF is provided as a detailed supplement to the one-page summary and basic map that you have also been sent. Project code numbers on the map are also given in titles below.

The aim of the extra information in this document is to give you more insight into how the SRA operates, and why it does what it does as a unique partnership.

If you have any questions or comments, please contact Somerset Rivers Authority by emailing sra@somerset.gov.uk or calling 01823-355111.

HILLS TO LEVELS - Land Management and Natural Flood Management to Slow the Flow - FWLM01-21

Somerset Rivers Authority funds the biggest range of natural flood management activities in the UK, as part of Hills to Levels. This work has so far won two national awards. Plans for 2020-21 follow on from earlier successful initiatives, introduce a new service, and measure what is being achieved.

There are six main elements, all to be delivered for the SRA by the Farming and Wildlife Advisory Group SouthWest (FWAG SW).

- 1.** Design and implement 25 small-scale natural flood management schemes to hold back water in upper catchments and reduce peak flows. This includes match-funding investments made by the EU's Interreg 2 Seas Triple C programme. It also includes match funding for a large Environment Agency Multi-Benefits Project near Crewkerne, de-culverting 300m of Merriott Stream just upstream from Merriott.
- 2.** Increase uptake of better soil management techniques and cropping changes to improve the infiltration of water, and reduce run-off, on 50 farms. This includes 10 split-field trials, 20 soil husbandry reports and five workshops.
- 3.** Respond to 40 referrals of cases where better land management could help to fix problems such as roads flooding because of run-off from fields. In such cases it makes sense to address causes as well as symptoms. Extra SRA funding enables this to happen with partners working together to tackle issues beyond their usual limited remits.
- 4.** Run another online auction countywide, excepting only land in lower-lying Internal Drainage Board areas, as the main purpose of natural flood management (NFM) activities in Somerset is to slow the flow of water down through higher parts of river catchments. Farmers will be able to select for themselves different NFM activities, pick out parts of their land where they believe those activities will produce the best flood prevention results for themselves and for local communities and then bid for funding for those activities. Two previous auctions have led to hundreds of successful bids for various extensive improvements.
- 5.** Trial an innovative Soils Patrol in the Back Stream and Halse Water catchments of the River Tone. Learning lessons from an original experiment in the Midlands, a stick and carrot approach will be taken. For two days a week, for 12 months, a qualified officer will be seconded from the Environment Agency to increase regulatory threats for land managers who are not managing soils responsibly. On the flipside, FWAG SW will offer advice on better soil husbandry.
- 6.** Modelling or monitoring at sub-catchment scale to demonstrate the effectiveness of natural flood management measures that have already been installed. Earlier modelling in the Wellhams Brook catchment near Yeovil has posited substantial reductions in peak flows down towards Martock and the River Parrett.

RODE flood management project - LAMDC06

A package of works in Rode near Frome, resulting from the SRA's 2019-20 programme of investigations across Mendip into areas that would benefit from Enhanced Maintenance. Works will reduce flood risks to more than 25 properties and nine roads and also enhance parts of the local environment and provide outdoor educational opportunities at the village school.

Works will include:

- CCTV survey of culverted watercourse to review capacity and condition
- Repair and remove blockages / debris where necessary
- Assess the need for additional measures for reducing blockages in the future (i.e. trash screens)
- Consultation with landowners on potential changes to land management practices to reduce rapid runoff
- Enhancements to existing upstream flood attenuation features and potential creation of new features where deemed necessary
- Naturalisation of the existing watercourse (de-culverting) including an online wetland area
- Tree planting upstream

ADAPTING the Levels - WS5 COAD2

A major climate change project. Adapting the Levels is about getting lots of different people working with each other and with nature to help the Somerset Levels and Moors cope with increased risks of flooding and drought. This project began in February 2019 and will continue until September 2022. Sixty per cent of funding comes from the EU's Interreg 2 Seas Co-Adapt programme (unaffected by Brexit), with the SRA match-funding work on three main strands.

- 1.** Measures such as improved droves, stock-handling facilities and wetland machinery to help farms to adapt, along with moves to manage water more naturally, including small-scale investments incubated by local communities.
- 2.** Moor Associations so that land managers and residents can work collaboratively. Initial efforts are being focused particularly on the Langport and Wedmore areas (Wet, West, Tealham and Tadham moors).
- 3.** Long-term plans that acknowledge future uncertainties and therefore seek to build in lots of intelligent flexibility, so that adjustments do not happen too early or too late, in the wrong places, in the wrong ways, but when and where and how is best. Local partners in Adapting the Levels are Somerset County Council, Somerset Wildlife Trust and the Farming & Wildlife Advisory Group SouthWest. Other Co-Adapt projects are being carried out in Porlock Vale, part of the River Culm's catchment in the Blackdown Hills and overseas in France, Holland and Belgium. The aim is for lessons learned to give Somerset stronger landscapes and communities.

Somerset Levels Environmental Land Management WATER STORAGE auction - FWAGSW ELM

This project will try out a new approach to the controlled storage and management of water on the floodplains of the Somerset Levels. There has been much talk nationally about whether farmers and landowners should be paid for taking floodwater onto their land as a public service. A pioneering Somerset trial will discover how much appetite there is among farmers and landowners for performing this service, what it might cost and what difference it might make. A reverse auction approach will be taken, following on from the success of two recent SRA-funded auctions in Somerset for Natural Flood Management measures. In a reverse auction, the winners are those who make the lowest – not the highest – bids. All bids are checked for feasibility and cost-effectiveness.

The Department for Environment, Food & Rural Affairs (Defra) will fund the organisation of this auction as part of its Environmental Land Management (ELM) Tests and Trials programme. The SRA will fund the best bids. The SRA Board agreed in June 2018 that the SRA should help to develop new Environmental Land Management approaches in the Somerset Levels, so the area could try to shape its own distinctive future.

Local Interventions in the TAUNTON Strategic Flood Alleviation Improvements Scheme (TSFAIS) - LASWT01

Extra SRA funding will help Somerset West and Taunton Council and the Environment Agency to design three Taunton flood risk reduction projects and manage their delivery. The council estimates that a single major flood could cost Taunton's economy up to £50million. The number of Taunton properties currently at risk is 1031. By 2019, because of climate change, that number is expected to rise to 2548 – so action has to be taken. The council and the Environment Agency, backed by the SRA, have been studying how to reduce flood risks from the River Tone and its complex network of tributaries, particularly the Galmington, Sherford and Mill Streams.

Eleven options are favoured. The first three being lined up for delivery, backed by the SRA, are:

- 1.** Optimising flood water storage at Longrun Meadow through building 1500m of raised embankments up to 1.8metres high. This will benefit 687 properties.
- 2.** Raising low spots in the River Tone's flood defences from Frieze Hill to Town Bridge. This will benefit 508 homes, businesses and facilities such as the police station and council offices, BT exchange and French Weir surgery, plus the A3027 and A3088.
- 3.** Raising Firepool Lock gates to prevent River Tone floodwater entering the Bridgwater and Taunton Canal at Firepool, which reduces the risks of overtopping into Maiden's Brook and then Allen's Brook in Bathpool, and also raising 750metres of River Tone defences between Firepool Lock and the A258 Obridge Viaduct. This will benefit 219 properties.

Somerset West and Taunton Council has put aside £6million for building projects 1 and 2. Further funding for project 3, and other TSFAIS elements, is being sought. Developing future investment strategies will be a key part of the new Taunton Flood Action Plan being backed by the SRA in 2020-21 (see below).

YEOVIL Surface Water Management Plan - LLFA23

Yeovil has several significant areas at high or medium risk of surface water flooding. These include sections of the busy A30, A37 and A3088. Better understanding flood risks across Yeovil, and producing a long-term action plan to reduce those risks, will bring numerous benefits. It will enable much stronger bids to be made for national Flood Defence Grant In Aid payments for tackling specific problems. It will improve the delivery of local maintenance activities and investments in infrastructure. It will increase public engagement and understanding, and influence land use planning, emergency planning and future developments.

Somerset Rivers Authority is funding the creation of a Yeovil Surface Water Management Plan in partnership with Somerset County Council's Flood and Water Management Team, because that Team alone does not have enough money for a Plan of this size and scope. Other SRA partners will be involved, to make sure that all angles are considered and that all parties will find the Plan an essential guide. Yeovil Rivers Community Trust will be among those contributing valuable local knowledge.

TAUNTON Flood Action Plan – LLFA24

A 25 Year Taunton Flood Action Plan will be produced to better co-ordinate the management of flood risks from all sources and boost investment. One major ambition is to join up the work done as part of the Taunton Strategic Flood Alleviation Improvements Scheme into risks from the River Tone and its many tributaries (fluvial flooding) with other efforts focused more on surface water and rainfall (pluvial flooding).

Elements brought together will include Somerset County Council's surface water management plan, the county council and Wessex Water's integrated catchment modelling, Wessex Water's drainage and wastewater management plans, the Environment Agency and Westcountry Rivers Trust's Tone catchment strategy, Somerset West and Taunton Council's Strategic Flood Risk Assessment and Taunton Garden Town plans, and the county council's partnership work on highways flooding hotspots, Sustainable Drainage Systems and the EU's Project Sponge2020.

This work will be led for the SRA by Somerset County Council, working closely with Wessex Water and numerous other partners. The county council is proposing to contribute to the costs of developing a Taunton Flood Action Plan.

In line with the SRA's remit, the Plan is intended to open up new collaborative ways of getting funding and spending it efficiently. It should also help to provide environmental benefits such as better water quality and better habitats for wildlife. The overarching aim is to make Taunton a safer, healthier and more attractive place to live.

Across Somerset enhanced GULLY EMPTYING – LHA03-21

Gullies in places most at risk of flooding across Somerset are cleansed once a year by Somerset County Council. Extra SRA funding means that 22,872 gullies can be emptied twice a year. The aim is to help keep roads open in places highly susceptible to flooding, make them safer, preserve access for communities, and safeguard properties from flooding, all in line with the objectives of Somerset's 20 Year Flood Action Plan. This year gully-emptying is part of a six-pronged attack on highway flooding problems countywide, along with drain jetting, asset upgrades at frequently jetted sites, de-silting of structures, silt-trap emptying and the Hills to Levels system of highway referrals to reduce run-off from land onto roads. Together these works benefit residents, businesses and visitors.

Across Somerset enhanced SILT-TRAP EMPTYING – LHA122-21

Silt-traps are designed to reduce flood risks by collecting silt washed out from land near roads and preventing it from clogging up highway drainage systems. Somerset has around 80 silt-traps (not including cattle grids) at places known to be susceptible to flooding. Extra SRA funding enables Somerset County Council's Highways Department to carry out a programme of proactive cleansing, so that traps themselves do not get blocked up, but work as they should. Across Somerset Enhanced Silt-trap Emptying is part of a six-pronged SRA attack on highway flooding problems, along with drain jetting, de-silting of structures, asset upgrades at frequently jetted sites, gully-emptying and the Hills to Levels system of highway referrals to reduce run-off from land onto roads. Together these works help to keep roads open, make them safer, preserve access for communities, and safeguard properties from flooding. They reduce annoyance and inconvenience for residents, businesses and visitors.

Across Somerset enhanced DRAIN JETTING – LHA04-21

Extra SRA-funded drain jetting targets places across Somerset at high risk of flooding. Drains are usually only jetted by Somerset County Council on a reactive basis: that is, once they have become blocked. Pro-active jetting is designed to stop drains from getting blocked in the first place, by removing silt and debris. The aim is to keep roads open during times of flood. Across Somerset Enhanced Drain Jetting is part of a six-pronged SRA attack on highway flooding problems, along with gully-emptying, de-silting of structures, asset upgrades at frequently jetted sites, silt-trap emptying and the Hills to Levels system of highway referrals to reduce run-off from land onto roads. Together these works help to keep roads open, make them safer, preserve access for communities, and safeguard properties from flooding. They reduce annoyance and inconvenience for residents, businesses and visitors.

A39 & Eastbury Road CARHAMPTON drainage survey and works – LHA127

The A39 through Carhampton is the main route in and out of West Somerset but floods regularly to a depth that can make it impassable. Eastbury Road in Carhampton is part of the secondary route for people travelling between places such as Bridgwater, Taunton and Williton and Dunster, Minehead and Exmoor. Eastbury Road floods along with the

A39, because water running off private land overwhelms existing drainage systems. Several properties are also affected by flooding.

Somerset Rivers Authority is determined to reduce flood risks in Carhampton. In the first phase of this two-year scheme, a topographical survey will be carried out for the SRA by Somerset County Council's Highways Department to help establish the best options and produce detailed designs. Drainage improvements will then be delivered by the Highways Department using contractors Skanska. Carhampton Parish Council will help to get landowners to fulfil their obligations to clear adjacent water courses. This major scheme follows on from other smaller improvements funded by the SRA in and around Carhampton, and ties in with two other ongoing SRA-funded projects being led by Somerset West and Taunton Council, for drainage improvements in the Hill Lane area and wooden silt-traps along Bridicott Stream.

Appointment of full-time SUDS inspector – LLFA25

SuDS are designed to control and reduce flows of water from hard impervious surfaces such as roads, roofs and pavements. If heavy rain cannot infiltrate into the ground, run-off can increase local flood risks. SuDS seek to quash this problem by using natural measures such as streams, ponds and reed beds and techniques such as rainwater harvesting, permeable paving and tree-planting. In such ways SuDS can also reduce pollution, improve water quality and make places greener and more attractive for people and wildlife. However, a recent major SRA review of SuDS across Somerset found significant evidence of defects and weaknesses in the national approach to managing water at new developments.

As well as funding the production of new Somerset-specific SuDS guidance for developers, to encourage more high-quality design and better place-making, the SRA is therefore also beefing up inspection processes. Sites will be inspected at various points during their construction either through proactive engagement with developers or through following up notifications by local planning authorities. Key activities will also be checked. The aim is to ensure that SuDS not adopted by a Water & Sewerage Company, district council, highway authority or other public body are constructed and function as designed and approved through the planning process. As SuDS inspections are far from the norm across England, lessons learned will be of national interest.

KINGSTON ST MARY drainage works - Lodes Lane – LHA123

Properties in Kingston St Mary have flooded 37 times since 2006 and there are 98 records of flood-related calls to Somerset County Council's local area highways office. Funding from Somerset Rivers Authority will enable the county council's highways department to design and implement a scheme for Lodes Lane that will benefit 27 homes, The Swan Inn and many drivers going through this village between Taunton and the Quantocks. The plan is for detailed preparatory survey work to be followed by the installation of a new high-capacity drainage system. In partnership with the Farming & Wildlife Advisory Group SouthWest, the parish council and Kingston St Mary's current county councillor, farmers will also be encouraged to make changes to reduce soil erosion and run-off from their land. The aim is to avoid problems being caused by

streams silting-up and road drainage systems getting blocked. The SRA is funding this scheme because it would otherwise take up the whole local area highways office budget for this type of work. However, the local office is contributing £20,000 and the county councillor has also said he will contribute some of his limited 'Prevention' budget.

Sub-catchment analysis and development of integrated schemes – SRALP01

The first stage of a long campaign designed to reduce flood risks on selected watercourses. This work follows on from the success of some detailed and extensive SRA-funded studies done across Mendip in 2018-19 and 2019-20. Approaches taken in Mendip will be carried over to other Somerset districts. Catchments will be divided up into sub-catchments. They will be analysed against various data sets, such as records of flooding and flood risk maps, and prioritised according to need. The SRA will use its knowledge of what other work has been, and is being, delivered by different Flood Risk Management Authorities (FRMAs) to identify opportunities for collaboration – and to spot gaps in provision. Gaps will be tackled by the development of integrated ways of tackling problems, in addition to the usual work of FRMAs, in line with the SRA's remit of giving Somerset extra flood protection and resilience. The works being planned at Rode in this year's SRA Enhanced Programme are an example of a scheme that has come about through research, site visits and discussion. This scheme combines different methods of reducing flood risks, rooted in local knowledge, wider analysis and extra SRA funding and co-operation.

LANGPORT flow station – EA16

Extra SRA funding will enable the Environment Agency to install a permanent flow gauge in the River Parrett at Langport. Used in combination with data from existing gauges at Chiselborough, Yeovil, Donyatt and Stathe, information from a new Langport flow station will benefit approximately 770 square kilometres, that is the catchment area above Langport for the Parrett, Isle and Yeo and all of their tributaries. Getting better information will allow for earlier and more flexible operation of key control structures on the River Parrett, River Sowey and King's Sedgemoor Drain. It will strengthen flood warning systems for local people and businesses, and help with the implementation of Water Level Management Plans. As the SRA is going to increase the capacity of the River Sowey in 2020, this Langport flow station scheme is also timely. SRA funding will specifically cover matters such as flow gauge infrastructure design, kiosk, webcam, outstation, stilling tube, timber instrument mounting platform and concrete plinth and ducting.

Across Somerset DE-SILTING OF STRUCTURES – LHA01-21

De-silting increases the flow of water through bridges and culverts and cuts the risk of flooding on roads and in nearby properties. It removes watercourse 'bottle necks' allowing whole systems to work more efficiently. It also reduces the risk of structural damage to bridges or culverts caused by heavy loads of silt pressing against them, or by floating debris colliding and getting stuck. Sites that would benefit from de-silting are identified by Somerset County Council's Highways Department through records kept by local highways officers, or concerns raised by other authorities or members of the public.

SRA funding is required as structures are not routinely de-silted by Somerset County Council. The work is part of a six-pronged SRA attack on highway flooding problems countywide, along with drain jetting, gully-emptying, targeted edge of road clearing, silt-trap emptying and the Hills to Levels system of highway referrals to reduce run-off from land onto roads. Together these works benefit residents, businesses and visitors.

Trees for Water Action Fund (TWAF) – FWLM02

A tree and hedge planting action fund to help local communities reduce flood risks resulting from surface water run-off issues. This SRA initiative could fund up to 21,000 trees or 40,000 hedge plants, depending on the eventual balance between hedge planting and tree planting. Parish councils and local community groups (such as flood wardens and tree wardens) will be helped to arrange planting at suitable sites by the Reimagining the Levels group and the Farming & Wildlife Advisory Group SouthWest. Smaller sites in strategically important locations in Mendip and South Somerset are expected to feature prominently. TWAF is particularly designed to suit sites not large enough for Countryside Stewardship grants and not special enough to concern Natural England. The SRA wants this scheme to be flexible, bespoke and un-bureaucratic. Innovative, environmentally-sensitive agroforestry approaches will be encouraged.

RIMPTON & MARSTON MAGNA catchment survey - LHA125

Records show that 18 properties and several roads in Rimpton have been affected by flooding, while roads hit in Marston Magna include the A359. One common factor is the Mill Stream which flows west through Rimpton and then alongside and under the A359 in Marston Magna, near the church and village hall. A survey of the Mill Stream catchment will be carried out for Somerset Rivers Authority by Somerset County Council's Highways Department using contractors Skanska. The survey's purpose is to identify improvements and strategies that will reduce flood risks to people's homes and local roads.

Asset upgrades at frequently jetted sites – LHA128

A countywide programme of enhanced maintenance for road drainage systems known to be highly susceptible to flooding. An analysis carried out for the SRA shows that drains at 26 locations have been jetted many times since 2014. This indicates intrinsic problems that it makes sense to fix. The plan is to investigate these problems, possibly by excavating sites, and then either repair sections that have collapsed or make systems larger. It is impossible to guarantee exactly what will happen where and when, because exact problems need to be identified and costs confirmed, but sites on the target list include: School Hill/Middle Street in Misterton (jetted 11 times), Chapel Leigh Road in Lydeard St Lawrence parish (10 times), Bakers Lane in Chilcompton (7) and Stalbridge Road/High Street/Ash Walk in Henstridge (7).

CCTV surveys of riparian culverts – LLFA22

CCTV surveys of privately-owned culverts help to pinpoint problems that are putting people at risk of flooding. Detailed, accurate information means that Somerset County Council's flood risk team can encourage the owners of watercourses and structures to

take responsibility for maintaining them – as common law requires they should. If need be, CCTV survey results also help the flood risk team to take enforcement action against owners. Somerset Rivers Authority funds extra CCTV work because the flood risk team's own budget for surveys is – in line with its statutory duties – almost wholly restricted to drainage systems on land owned by the county council or close to roads. SRA-funded surveys may also supplement formal investigations into flooding carried out under Section 19 of the Flood and Water Management Act 2010. The overarching aim is to allow for extra work with communities to secure the best outcomes for flood risk management.

NORTH PETHERTON Mill Stream culverts re-design – LASDC03

Baymead Lane in North Petherton has a history of flooding, affecting properties and the road. One major problem is the inadequate size of the Mill Stream culvert, where matters have recently been made worse by leaking. Another nearby culvert is also undersized. SRA funding will be used by Sedgemoor District Council, working in partnership with Somerset County Council's Highways Department, to assess the situation and produce a design for the upgrading or replacement of the Mill Stream culvert and an increase in the capacity of the other culvert. Up to 50 properties could potentially benefit. This work will complement earlier SRA-funded improvements made along Mill Stream in the grounds of North Petherton Primary School.

WEST CAMEL drainage improvements – LHA126

Seven properties in the Urgashay Road area of West Camel are affected by surface water flooding. This Somerset Rivers Authority scheme will reduce flood risks for local residents and road users. The plan is to install or replace about 350m of highway drainage; re-construct five gullies and construct one new gully with a silt trap; and build a headwall fitted with a trash screen for connection into an existing ditch. Small lengths of ditch work will help to make sure this new system functions well. Works will be delivered for the SRA by Somerset County Council's Highways Department using contractors Skanska.

Community flooding information pilot part 2 - WS5 PILOT2

A small number of communities, probably in Mendip and Sedgemoor, will be given the opportunity to help develop very localised early flood warning systems. This exercise will follow recent SRA-funded trials around Martock in South Somerset and around Roadwater, Nettlecombe, Monksilver, Yarde and Sampford Brett in the Washford and Monksilver catchments in West Somerset. Local flood wardens, flood group members and residents will help to choose key locations for setting up low-cost, low-maintenance flood gauges linked to website dashboards to provide accessible information. One aim will be to identify the best ways of alerting local communities. Lessons learned from all pilot projects will go into a published guide for community groups who would like to develop their own local systems. The scheme's overarching ambition is to increase community resilience through giving people better, more localised information about specific flood risks than can be provided by the Environment Agency's system of alerts and warnings.