

## Somerset Rivers Authority (SRA) is a unique partnership

Our partners work together to achieve more for Somerset













Our core purpose is to reduce the risks and impacts of flooding

## **Executive Summary**

Somerset Rivers Authority's core purpose as a partnership is to reduce the risks and impacts of flooding across Somerset.

Our partners are Somerset Council, the Parrett and Axe Brue Internal Drainage Boards (IDBs), the Environment Agency, Natural England, the Wessex Regional Flood & Coastal Committee and Wessex Water.

The idea for Somerset Rivers Authority (SRA) arose during the winter floods of 2013-14, the wettest winter for 250 years. Around 150km<sup>2</sup> of the Somerset Levels were submerged for weeks: 165 homes were flooded, 7,000 businesses affected, 81 roads closed. The cost to Somerset was up to £147.5 million.

During this flood, a range of organisations from across Somerset pulled together a 20 Year Flood Action Plan. One of this Plan's main recommendations was that a partnership should be set up to improve local water management. Somerset Rivers Authority was duly launched in January 2015.

Our partners work together as the SRA to achieve more than it would be possible for them to achieve individually. SRA membership enables our partners to go above and beyond what they usually do, to carry out additional schemes and activities, to do extra work on local priorities.

So that more can be done, annual funding is raised through council tax solely for the use of the SRA. We get around £3million a year through council tax. The IDBs give another £20,000.

We've written this new Strategy to shape how we spend this money across Somerset. It includes lessons learned from the SRA's own history, from Somerset flooding and the intensifying impacts of climate change. We have studied partners' own plans and strategies, held extensive talks with partners, and listened to the desires and frustrations expressed by residents, businesses and stakeholders across Somerset.

Accordingly, themes flowing through the SRA's Strategy are:

- Working with communities
- Strengthening operations, boosting maintenance
- Building resilience, encouraging adaptation
- Protecting the economy from flooding
- Conserving and enhancing the special environments of Somerset

What gives SRA works their own distinctive fingerprint is the combination of these themes.

Our core purpose, principles and themes are encapsulated in the following objectives. Between 2024 and 2034, we will develop and fund selected schemes and activities that advance these objectives:

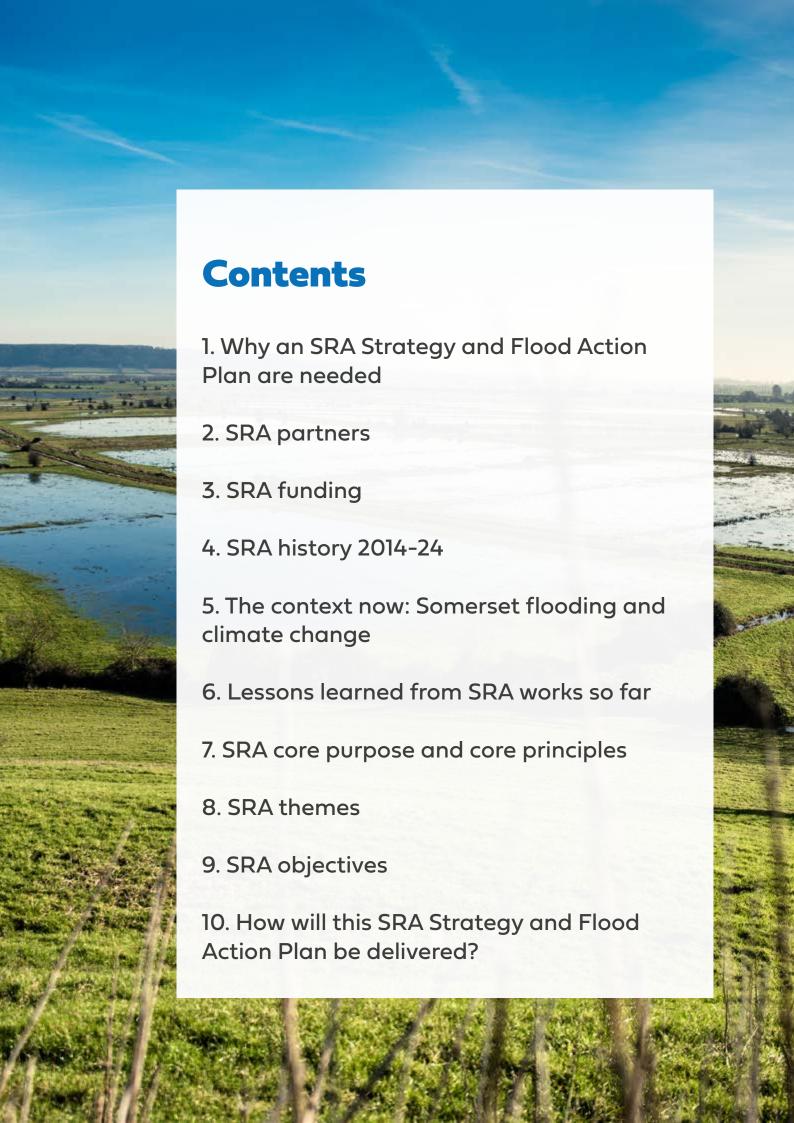
- 1. Reduce the risks and impacts of flooding across Somerset.
- 2. Maintain access and connections during times of flood for communities and businesses across Somerset.
- 3. Increase the resilience of people, places and the environment to flooding, while adapting to climate change.
- Protect Somerset's economy from the impacts of flooding, promote business confidence and encourage new opportunities.
- Conserve and enhance Somerset's special environments (natural, built, social, cultural) for all who live and work in Somerset and visit.

The SRA will take a catchment-based approach towards fulfilling these objectives. A catchment is an area of land from which water - especially rainwater - drains and flows down into streams, rivers, lakes and often the sea.

We will analyse catchments to understand problems with excessive amounts of flood water and we will select issues about which the SRA can do most in line with our objectives.

Approaches will be taken which balance investment between upper, mid and lower catchment areas, and combine different measures.

We will fund proposals which reduce the risks and impacts of flooding, and benefit Somerset people and places in as many ways as possible.



# Why an SRA Strategy and Flood Action Plan are needed











165 homes flooded



81 roads



estimated cost

Somerset has suffered many significant floods over the centuries. The wettest winter for 250 years was the winter of 2013-14. Around 150km<sup>2</sup> of the Somerset Levels were submerged for weeks: 165 homes were flooded, 7,000 businesses affected, 81 roads closed. The cost to Somerset was estimated as being up to £147.5 million.

During this flood, Somerset partners pulled together a 20 Year Flood Action Plan. One of its main recommendations was that a partnership should be set up to improve local water management. Somerset Rivers Authority (SRA) grew out of this Plan and we now oversee it.

Much has been achieved. Between the SRA's official launch in January 2015 and March 2024, we allocated an extra £29million of SRA funding – and £13million of Growth Deal funding from the Heart of the South West Local Enterprise Partnership for works to reduce the risks and impacts of flooding. Hundreds of schemes and activities have been completed.

A lot has also changed since 2014. More works of different kinds now need to be done, with people and places joining together to tackle varying problems with flooding across Somerset and to look to the future. With climate change expected to bring more intense floods to towns, villages and landscapes across the county, worse than those already being experienced now, people and places need to be prepared.

Ten years on, the time has come for a Strategy and updated Plan crafted specifically for the SRA, that both draw upon the experiences of the last decade and continue to serve the people of Somerset well.



extra SRA funding



Growth Deal funding



## **SRA** partners

Pictured above, works on the River Frome in Frome town centre Somerset Rivers Authority (SRA) is a partnership, launched in January 2015 after the devastating floods of 2013-14. Our partners are Somerset Council, the Parrett and Axe Brue Internal Drainage Boards (IDBs), the Environment Agency, Natural England, the Wessex Regional Flood & Coastal Committee (WRFCC), and Wessex Water. Representatives of all these Flood Risk Management bodies sit on the SRA Board. The Board directs the SRA and approves budgets and programmes of work.

Our partners work together as the SRA to achieve more than it would be possible for them to achieve individually. Partners' own flood risk and water management responsibilities are not lessened in any way by involvement in the SRA (nor indeed are those of landowners who have watercourses adjoining, running through or under their land). SRA membership enables our partners to go above and beyond what they usually do, to carry out additional schemes and activities.

We have also worked with many other organisations and groups, most notably the Farming & Wildlife Advisory Group SouthWest (FWAG SW) on the award-winning Hills to Levels project, which helps to slow the flow of water down to vulnerable areas.

In the years to come, as part of the implementation of this Strategy, we expect and want to work with many more different organisations, communities, businesses and individuals.

#### What the SRA does not do

We do not generally get involved in coastal flood risk activities, although the SRA Board may consider cases where a coastal flood risk project supports our objectives further inland. We are not involved in emergency responses to flooding or in flood recovery efforts. We do not comment on planning applications, because our partner organisations do this as part of their day-to-day business and we do not duplicate what they do.

## 2024

# **3** SRA funding

+10.9%

## **SRA** income from council tax

2016-17

2024-25

£2,757,000

£3,059,000

2016

So that Somerset Rivers Authority partners have money to achieve more, annual funding is raised through council tax solely for the use of the SRA.

In December 2015, the government gave Somerset County Council and the five district councils that then existed the power to raise for the SRA an additional amount of money equating to 1.25% of these councils' 2016-17 total council tax charges. In 2016-17, the amount raised in this way for us was £2.757 million.

The power to raise funds for the SRA has since passed to the single new Somerset Council launched in April 2023. The charge is still at the same level as it was - 1.25% of the 2016-17 total - although the actual amount raised has increased, just because Somerset now has more households paying council tax. By 2024-25 the SRA's income from council tax had risen to £3.059 million.

The Parrett and Axe Brue Internal Drainage Boards also give the SRA a total of £20,000 each year.

Somerset is currently the only place in the UK that has this specific financial arrangement.

We use our funding to pay for extra works across Somerset, works to reduce the risks and impacts of flooding that otherwise would not be done.

## 4 SRA History 2014-24

# The Somerset Levels & Moors Flood Action Plan

During the floods of 2013-14, organisations from across Somerset drew up a 20 Year Somerset Levels & Moors Flood Action Plan.

While recognising that nobody could ever stop flooding completely, that Plan recommended that different bodies should work together firstly to make flooding less likely, and secondly to help people get better at coping with flooding, when it did happen.

The Plan therefore proposed formally instituting a new joined-up approach to complex problems of water management, with strong local leadership and an integrated mix of whole catchment actions.

When the SRA was officially launched in January 2015 to embody this new joined-up approach, the Plan's scope was expanded to cover the whole of Somerset, and we began to oversee it.

#### Progress with the 2014 Flood Action Plan by March 2024





Dredging in 2014

The original Plan made 61 recommendations for actions by a range of different organisations. Some were done very swiftly. For example, in summer 2014, the Environment Agency dredged eight kilometres (five miles) of the River Parrett and River Tone at a cost of £6million. A few months later, Somerset County Council's Highways Department raised a road at Muchelney, so that people could still get in and out of the village during times of flood. This £2.6million scheme – paid for by the Department of Transport – won a national award. In total, 40 of the Plan's original recommendations have been completed; 12 are still in progress; nine have not progressed for various reasons (chiefly to do with costs, intrinsic difficulties, problems being addressed in other ways, and better ideas being conceived).



Tax

Deal

In furtherance of the Plan's overall objectives, between 2015 and March 2024 the SRA approved funding for around 250 schemes and activities, quite often with many individual elements. Detailed descriptions can be found in the Flood Risk Work part of our website.

In total, between 2015 and March 2024, we allocated an extra £42million for works to reduce the risks and impacts of flooding across Somerset: £1.9million given to us by the Department for Environment, Food and Rural Affairs (Defra) for 2015-16, £27.1million from council tax and Internal Drainage Board contributions, and £13million of Growth Deal funding from the Heart of the South West Local Enterprise Partnership.



Cheddar

Different parts of the county have different needs, so there is no single answer to Somerset's many flooding problems. That is why we were set up as a partnership, so that people could work together more powerfully on combinations of different approaches. The SRA has funded an impressive depth and breadth of actions, grouped into five workstreams:

- 1. Dredging and River Management
- 2. Land Management including Natural Flood Management
- 3. Urban Water Management
- 4. Resilient Infrastructure
- 5. Building Local Resilience

These workstreams reflect the local priorities of the original Flood Action Plan and of Somerset people, and the need to approach different challenges in different ways.

In practice, our activities have included:

- extra maintenance, repairs and improvements
- innovations
- collaborations
- enabling major projects to go ahead
- studies, reviews, and investigations
- long-term initiatives
- moves that respond to Somerset's special characteristics
- · combinations of the above

This new SRA Strategy and a new Flood Action Plan will be seen to include elements of the original Plan that are still relevant and in progress, but they are otherwise now about what we want to achieve in future.

A changed context requires us to evolve our own ambitions for Somerset.



Taunton, 1960

## The context now: Somerset flooding and climate change

#### Somerset flooding

Somerset has flooded for centuries, in many places and in many ways. The worst incident ever known was in January 1607, when around 200 square miles of Somerset were submerged, plus other areas adjoining the Bristol Channel. Around 2,000 people died.

More than 4000 events are recorded in the Somerset Historical Flooding Database. Hardly anywhere in Somerset is more than a few miles from somewhere that has flooded and places that have not been directly affected by flooding have still been affected indirectly. The result is a county whose folk memory is riddled with anxieties about flooding.

Across Somerset floods continue to occur. Take January 2023 to January 2024. In January 2023, a Major Incident was declared on the Somerset Levels and Moors, following a period of very wet weather - the eighth wettest since 1891. Extensive flooding was averted by rain suddenly giving way to a period of unusually dry weather (less than 2cm in six weeks), and by a massive programme of Environment Agency pumping.

Hook Bridge, January 2023



In May 2023, in the east of Somerset, another Major Incident was declared. In the area worst hit, North Cadbury, Galhampton, Yarlington and Woolston, 10 centimetres of rain fell in 90 minutes one afternoon, an estimated 1-in-1,600 year event. Water levels in the River Cam rose over two metres in five hours and the river gauge at Weston Bampfylde recorded its highest ever level. In 16 villages and hamlets, around 180 properties were flooded inside. Outside, the force and volume of water moved cars and outbuildings. Parts of Wincanton, Bruton and Castle Cary also flooded.

In September 2023, around Taunton and in the west of Somerset, huge volumes of rain fell again during one storm. Over 10 centimetres was recorded at Roadwater; eight centimetres near Porlock, at Maundown near Wiveliscombe and at Kingston St Mary; just under 7 at Washford (the highest 24-hour total recorded there for at least 30 years). Around 50 properties and businesses were affected.

The period between July and November was the fourth wettest since 1871. After Storm Ciaran caused flooding in Bathpool near Taunton, in November the Environment Agency began deploying temporary pumps on the Somerset Levels and Moors. In December, extra pumps followed as the Levels and Moors filled. A Major Incident was declared in Marston Magna as surface water flooding cut off access to the village, and there was flooding in Bathpool, Wookey, a holiday business near Ilminster, South Petherton, Langport and a caravan park near Martock. In January 2024, Storm Henk caused significant flooding in places including Shepton Mallet, Croscombe and Frome with some watercourses reaching their highest ever recorded levels.

During this one year, more than twice as many properties were flooded as there were in 2013-14. And all of the cases of flash flooding referred to above followed earlier incidents in the 2020s in places such as Croscombe, Chard, Ilminster and Milverton.

This unpredictable, intense and changing pattern reinforces the need for a new Strategy.



West Somerset, September 2023

#### Climate change

When we are talking to people about their recent experiences of flash floods across Somerset, one subject that persistently comes up is climate change. People are taken aback by the ferocity, the heaviness, the 'incredible intensity' of downpours causing flooding.

The original 2014 Somerset Flood Action Plan was a document specifically written to reflect and assuage public concerns arising from the flooding that was then submerging large parts of the Somerset Levels and Moors. It referred to climate change just once, in relation to national planning policy and drainage systems on new developments, whereas now climate change is an all-encompassing threat. Major surveys by organisations such as the Office for National Statistics show that around three quarters of the UK's population feel concerned about climate change, and more than half are very concerned.

Just as people's feelings are rooted in their own observations and experiences, so SRA partners are seeing through their work that floods now occurring across Somerset are intensifying because of climate change.

SRA partner Somerset Council's Climate Emergency Strategy lists the following water-related impacts of climate change:

- 1. Increased risk of coastal, pluvial and fluvial flooding
- 2. Increased flash flood risk from extreme weather events
- 3. Further stress on already under pressure water resources
- 4. Increased competition for water between agriculture, industry, households and the needs of the natural environment
- 5. Drought impacts on water quality and supply

Increased risk is predicted to include more rain in winter months and heavier and more intense rain on the very wettest days of all seasons, particularly summer. Peak river flows are expected to increase: different possibilities for Somerset can be explored at a very local level by using the Environment Agency's interactive Climate Change Impacts tool. This draws upon fresh evidence to estimate the impacts of climate change on river flood peaks for every 1km square of catchments.

We will take account of the water-related impacts of climate change when deciding which schemes and activities to support with SRA funding. We will continue to learn from previous SRA-funded and climate-related projects like Adapting the Levels. Our central purpose will always be to reduce flood risks for Somerset.

In practice, we know that actual future impacts will always depend upon local conditions and how different factors combine. We know the most damaging and disruptive impacts often occur when different kinds of flooding overlap.

What we cannot know is what exactly is going to happen where and when. We will therefore need to plan and prepare more in ways which explicitly seek to take into account increased uncertainties and unpredictabilities. A more flexible kind of readiness will be required. Programmes of work should ideally be agile enough to allow for different actions to be taken at times when evidence from a changing world and changing climate suggests they will be most effective. Not too early, not too late, but as carefully judged as possible to reduce flood risks, to help people cope with flooding if flooding does occur, and to adapt successfully when need be.

West Somerset Railway line, September 2023



## Lessons learned from SRA works so far

Some of these points may appear, in theory, to be obvious. But we list them here because years of experience have shown them to be of particular relevance, in practice, to SRA activities across Somerset and to the shaping of this SRA Strategy and a new Flood Action Plan.

## 6.1 Our joined-up approach works

A "renewed, co-ordinated and joined-up approach" to addressing flooding issues - as called for in the 2014 Flood Action Plan then ever since enshrined in the SRA's Constitution - does bring benefits of various kinds for projects big and small. Particularly in highly protected environments, where works are legally bound to comply with numerous regulations, we have found that partners working together means more can be achieved more quickly and more easily. A joined-up approach is also very useful when partners want to go beyond their usual boundaries to get at the root causes of problems. For example, teaming up with the Farming & Wildlife Advisory Group SouthWest has enabled council highways officers to look beyond carriageways and roadside verges and ditches to places where water and mud and debris are actually coming from in problematic quantities, and to slow their flow and lessen flooding through working with farmers and landowners. Over the years many different measures have been agreed, including some changes in the overall use of fields.



## 6.2 New ideas and different approaches

Our special funding arrangements, layered partnership structure, nonbureaucratic flexibility and focus on going above and beyond, all make it easier for people to experiment with new approaches and different combinations of approaches. Local innovations funded or part-funded by us have consequently included the development of water injection dredging techniques on a tidal river, the use of 'Stage O'-inspired methods of river restoration and floodplain re-connection, the trial of payments for water storage to associations of farmers and landowners, the running of online auctions to engage farmers and landowners with natural flood management, and the detailed review and inspection of Sustainable Drainage Systems (SuDS) countywide. Such activities have put Somerset at the forefront nationally for addressing new challenges and opportunities in flood risk management.



River Aller works, courtesy of National Trust and View It 360



## 6.3 NFM as part of a series of moves

Flood risk management can be successfully combined with environmental improvements, particularly through working with natural processes, but there are limits with regard to how much can be achieved and where. The ongoing 'Stage O' scheme on the River Aller on the National Trust's Holnicote estate in West Somerset, part-funded by the SRA, shows that river restoration and floodplain reconnection can recreate more space for water, allow for more dynamism in a system, and quickly bring impressive environmental benefits, but this approach needs careful planning and monitoring and (ideally) lots of space away from infrastructure. It is not suitable for everywhere.

Our experience across Somerset has also been that the installation of NFM schemes can rarely be planned in the abstract. At some places that might be identified on a map as very suitable, landowners may not agree to works being done, or may not want to be obliged to maintain them. The best strategic results often emerge from situations where there has been good community involvement and communication, and offers to landowners can be couched attractively.

More generally, as a means of flood risk reduction, natural flood management (NFM) on its own is not enough to cope with more severe events. Our experience across Somerset has been that NFM works best in smaller sub-catchments (such as Wellhams Brook near Yeovil, the Marcombe Valley near Ashbrittle and the Horner and Aller near Porlock) where numerous schemes have been put in place which have a cumulative effect in holding back water. This can then allow for more control and flexibility in other parts of a catchment's system.



Water injection dredging, courtesy of Van Oord and Colin Turner Photography



## 6.4 Better knowledge, understanding, ambition and imagination

We have found that it has become increasingly difficult for organisations to carry out or to fund non-statutory studies and investigations. Part of the problem is that water management in Somerset is an exceedingly complex subject, with multiple variables and uncertainties. The SRA is well-placed to help but ultimately we need studies and investigations, tests and trials to lead to actions that support SRA objectives.

A model case has been the ongoing development of water injection dredging as a technique, through experiments with different vessels and equipment, through detailed academic analysis, and through regular sophisticated silt-monitoring which has served to build up a mass of useful evidence about how the River Parrett works and what should be done in response.



## 6.5 Tighter focus on catchments and sub-catchments

SRA policies and grant guidelines call for the development of programmes of work that are balanced geographically and by type of activity, with judgement used to assess that balance.

Between 2015 and 2023, the geographic requisite was taken to mean that there should be a reasonable division of spending between the different district council areas that then existed.

Flooding problems exist across Somerset and people living in different parts of the county naturally like to know that they are getting useful and important works done in return for their funding of the SRA.



Rode Bridge

bound to focus on works that fell within their council boundaries. However, council boundaries are rarely an exact match with river catchment boundaries, and this lack of congruence could be a limitation.

Generally speaking, this previous approach to SRA programme development worked well. It produced many worthwhile projects across the county from Rode and Beckington in the east to Dulverton in the west. But one drawback was that when district

councils proposed schemes and activities as partners in the SRA, they were

One benefit for us of the shift in April 2023 to a new single Somerset Council was the removal of the old district boundaries within Somerset. This helped to open up a space for us where we can instead more explicitly foreground catchments and sub-catchments. We want in future to be able to better understand flooding problems across catchments and to understand what issues will benefit most from SRA support. We want to set out distinctive SRA local priorities so that people proposing projects to the SRA will need to respond to those issues, not just their own.

Hence the creation of this SRA Strategy and a new Flood Action Plan, to get the best results with the money we have.

# 7 SRA core purpose and core principles

Our **core purpose** as a partnership is to **reduce the risks and impacts of flooding across Somerset**. Everything we do has to include this aim.



By acting on local priorities and working together, we can do extra. We concentrate on what we identify as being important for Somerset, we call upon technical expertise and detailed knowledge, we agree on the issues about which we can do most.

We can do this because as the SRA we have been given freedom and money to do things differently. The Flood Risk Management Authorities (FRMAs) who are SRA partners have daily statutory duties to carry out, bound by national stipulations and calculations. We provide a more flexible local space, a space where people working together can be more wide-ranging, proactive and creative in the approaches they take to Somerset's flood risk management needs. Things can be more joined-up between organisations, within catchments and across Somerset.

When people look at things in a more joined-up way, more possibilities arise. It becomes easier for us to spot opportunities for bringing schemes and activities together. It also becomes easier to identify areas where there are gaps. Through a process of assessing which of these areas should be our local priorities, and by working together with communities to reduce the risks and impacts of flooding, we can then set about doing extra works.

#### **W** Working together

We connect different people, different places, different sources of funding, different approaches and ideas across Somerset. Working together, making concerted efforts means that more gets done than would otherwise be possible, in ways that provide good value for local people. Somerset benefits from the collective experience and knowledge of everybody involved with the SRA.

With so many people coming at things from different angles, the SRA expects occasional tensions to arise. People involved with the SRA are encouraged to work through such tensions constructively as a means of getting better results. Setting an example, at Board level, SRA partners may challenge and hold each other to account about different schemes and approaches for the overall good of the partnership and Somerset council tax payers, but they also cooperate, support each other, and take on collective responsibility for SRA Board decisions.

Bringing people together in the ways it does, the SRA serves as a public forum and co-ordinating force for informing and inspiring communities. The more people understand local flood risks, the more people get involved, the more can be done to act on local priorities.

## **Doing** extra

Our partners work together as the SRA to achieve more than it would be possible for them to achieve individually. Thus while partners continue to take care of their own flood risk and water management responsibilities, SRA membership enables them to go above and beyond what they usually do, to carry out additional schemes and activities, to do extra work on local priorities.

The SRA funds additional schemes and activities that otherwise would not happen. The SRA:

- raises extra money
- funds extra work
- provides more information
- · gives people more opportunities to work together



A303 near Martock, 2023

## **SRA themes**

Rippling out from its core principles, the SRA has five themes flowing throughout its work. These express in broad terms what it is important for the SRA to be doing. They are practical propositions for action.

The themes incorporate lessons learned from Somerset flooding, climate change and the SRA's own history. They also flow from study of SRA partners' own plans and strategies, from workshops with partners about this new Strategy, and from desires and frustrations expressed by residents, businesses and stakeholders across Somerset.

- Working with communities
- Strengthening operations, boosting maintenance
- Building resilience, encouraging adaptation
- Conserving and enhancing the special environments of Somerset
- Protecting the economy from flooding

What gives SRA works their own distinctive fingerprint is the combination of these themes.

The following sections flesh out what each theme means:

## 8.1 Working with communities

The aim of working with communities is to get more done than would otherwise be possible, and done in better ways. We are open to working with all sorts of people, groups, and places. The only rule we insist upon is that to get SRA funding, schemes and activities must benefit communities. The next most important thing is seeking to build a culture of mutual understanding and support, with people contributing and learning from each other in different ways. Then there are endless possibilities. Something that sets the SRA apart is its practical enthusiasm for and encouragement of ideas that bubble up from communities for dealing with flooding problems. We like to help people with good ideas but a lack of technical expertise and confidence turn them into action.

We also want to help more Somerset people learn about flood risks, so that even more may be motivated to get involved in suitable schemes and activities, through which they may help themselves and their neighbours to protect and strengthen the places where they live.

We will therefore continue to help create and reinforce groups and networks, through a range of practical measures. We will strengthen the SRA's position as a source of useful extra collated information, so that more people understand who is responsible for what as regards flood and water management, and people better understand flood risks.



## 8.2 Strengthening operations, boosting maintenance

In a changing world, some basic needs persist.

Flooding is disruptive and at times damaging. Summer deluges – as seen in 1997 and 2012 when some parts of the Somerset Levels and Moors were inundated for weeks – are especially damaging for farmland and protected wildlife sites, when crops are growing, and birds and animals are breeding. Flood risks are predicted to get worse, and the SRA and its partners cannot control the weather or promise to prevent flooding. But carefully-targeted efforts must still be made to protect people and places.

In many places across Somerset, effective management of water levels will continue to be crucial for residents, businesses including farmers, road users and wildlife. This is particularly true of the low-lying landscape of the Somerset Levels and Moors, criss-crossed with artificially-created drainage channels, and studded with a panoply of thousands of water level control structures. Effective management includes having capacity to convey water away from troublesome areas.

Through the SRA, more funding can be given for maintenance and improvement works enabling greater operational flexibility, control and safety in the management of water systems. Types of work done may include dredging, riverbank-raising, repairs, replacements and upgrades, jetting, emptying, clearing and cleaning, and installations of new equipment.

More will need to be done to slow the flow of water down to vulnerable locations and to store water in suitable places, and people will need to adapt to a changing world. Such moves will be gradual and operational management, conveyance and maintenance will continue to be important.

## 8.3 Building resilience, encouraging adaptation

'Resilience' and 'adaptation' mean different things to different people, and frequently feature in glossaries with varying definitions. What is meant by them here?

Put very simply, in the context of flooding, 'resilience' is best taken to refer to a state of mind or a way of behaving that is one stage on from 'resistance'.

'Resistance' would like to see flooding prevented by big, expensive, imposing measures - like a tidal barrier - which mean that life can still go on pretty much as it does now.

'Resilience' would prefer to keep things as they are, but it accepts that flooding cannot be prevented. So, it is important to prepare for flooding in ways that mean people and places suffer as little damage as possible, and afterwards recover as quickly as possible. As part of recovering, 'resilience' learns some useful lessons for next time, then things largely go back to their previous state.

'Adaptation' accepts that keeping things as they are is no longer possible. Measures can still be taken to resist, and people and places can still become more resilient, but fundamentally different measures - perhaps even different ways of life and doing things - have to be seriously considered, and gradually and thoughtfully acted upon.

'Adaptation' is about people and places changing in ways that are going to mean their future is more successful than it would be if they did not change.

Why are these ideas relevant to Somerset and the SRA? Because across our county levels of flood risk vary from place to place, and some places are more vulnerable than others, because of factors such as their geography and geology. Therefore mixes of different measures will be needed for different places at different times.

People and places cannot be ordered or forced to adapt. We will help communities better understand their flood risks, because better understanding will be essential for people wanting to make their own decisions about the future. As people make their own decisions, we will offer support, advice, information and practical help.



## 8.4 Protecting the economy from flooding

An Economic Impact Assessment produced following the floods of 2013-14 found the economic cost to Somerset was up to £147.5 million, with the South West region also suffering. Among the main findings were that half of all Somerset businesses were badly affected by the floods, and that the closure of 80 roads cost the local economy up to £15 million. The impact on residential property was up to £20 million, and the impact on public mental health was "devastating". Response costs for the Environment Agency, emergency services and local government were up to £19.3 million.

The flash floods that hit towns and villages across Somerset in 2020-23 and the Major Incident declared in January 2023 on the Somerset Levels and Moors reminded us of the impacts, disruptions and economic costs of flooding.

Through our actions and our ways of working together in the SRA, we will help to reassure businesses that Somerset is somewhere they can invest and expand. Our track record includes contributions towards the Bridgwater Tidal Barrier, which will help to protect more than 1,500 businesses; support for the development of the Taunton Strategic Flood Alleviation Improvements Scheme; and funding for drainage upgrades and extra maintenance activities which have helped to reduce costly delays and disruption on hundreds of roads including the A38 between Taunton and Wellington, the A358 near Combe Florey and the A39 at Carhampton.

We will help to generate confidence in the exploration of new opportunities. We are particularly interested in possibilities for growth that may arise from climate change and moves towards Net Zero, from national policy ambitions for farming and the natural environment, and from the inter-relationships of house-building and Sustainable Drainage Systems (SuDS).

Furthermore, flooding should not necessarily always be treated only as a threat. Every flood presents new facts which could spur innovation and growth, in many areas including architecture, water-related technology and storage. Somerset could augment its burgeoning reputation as Britain's green powerhouse by leading the way with transformative possibilities.



### 8.5 Conserving and enhancing Somerset's special environments

'Special environments' refers to habitats such as Sites of Special Scientific Interest (SSSIs) and Ramsar sites, which are wetlands of international importance designated under the Ramsar Convention and protected by law. Especially when working in sensitive areas of the Somerset Levels and Moors, SRA partners aim to get the right balance between land being too wet and land being too dry. The ideal sought is right amounts of water in right places at right times. That could mean large volumes of water being conveyed out to sea; it could mean the 'splashy conditions' favoured by over-wintering birds; it could mean peaty ground not drying out and releasing carbon into the atmosphere; it could mean farmers and landowners being paid to store water to help avoid flooding; and a myriad of other localised possibilities, relating to SRA themes and principles and to helping nature to recover and flourish.

'Special environments' also includes Protected Landscapes, such as Exmoor National Park and the Quantock Hills, Mendip Hills and Blackdown Hills Areas of Outstanding Natural Beauty (AONBs). It includes archaeology, ancient monuments, listed buildings, cultural history, and other distinctive elements of places (like the drangs of Porlock, the goyles of Crowcombe, the Somerset Levels' rhynes and the Mendip Hills' swallets) which infuse their character and give people pride and pleasure.

King's Sedgemoor Drain

We respect the emotional connections that people across Somerset feel for their natural, built, social and historic environments. As part of SRAfunded works, local environments will be conserved and where possible enhanced, and different approaches will be taken at different times in different places to reflect different circumstances, including working with natural processes where possible.



# **9 SRA objectives**

Our core purpose, principles and themes are encapsulated in the following aspirations. We will develop and fund selected schemes and activities that advance these objectives:

- Reduce the risks and impacts of flooding across Somerset.
- 2. Maintain access and connections during times of flood for communities and businesses across Somerset.
- 3. Increase the resilience of people, places and the environment to flooding, while adapting to climate change.
- 4. Protect Somerset's economy from the impacts of flooding, promote business confidence and encourage new opportunities.
- Conserve and enhance Somerset's special environments (natural, built, social, cultural) for all who live and work in Somerset and visit.

## 10

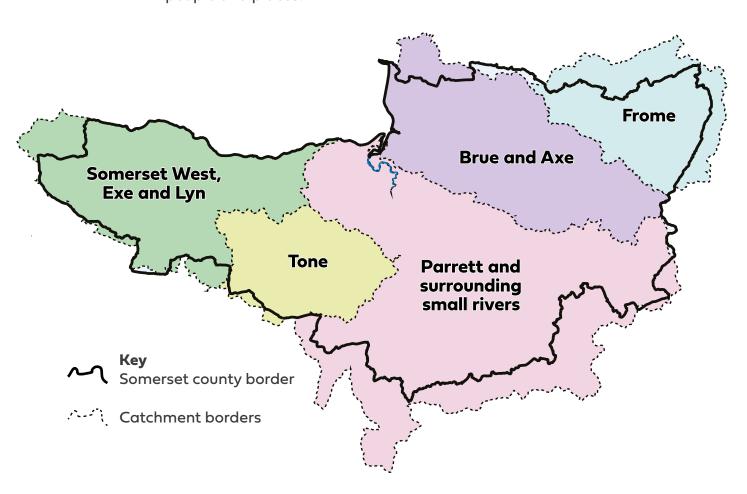
# How will this SRA Strategy and Flood Action Plan be delivered?

The SRA takes a catchment-based approach. A catchment is an area of land from which water - especially rainwater - drains and flows down into streams, rivers, lakes and often the sea.

Somerset's five main river catchments are the Tone, Parrett, Axe and Brue, the Somerset Frome (also known as the upper part of the Bristol Frome), and West Somerset Streams.

Parts of the River Exe headwaters, the Dorset Stour and East Devon catchments also flow out of Somerset.

We analyse catchments to understand problems with excessive amounts of flood water, we select issues about which the SRA can do most in line with our objectives, and we fund proposals which duly benefit Somerset people and places.



Approaches are taken which balance investment between upper, mid and lower catchment areas, and combine different measures. For instance, in general terms, SRA partners may seek to slow the flow of water down through upper catchments, store it in mid-catchments, and through lower catchments convey it safely out to sea or - when and where conditions are right - let it spread over floodplains.

We draw on a wide range of insights won through years of carrying out and assessing many different techniques of land, watercourse and infrastructure management, and of working with communities, businesses and special environments.

The ideal sought is to have right amounts of water in right places at right times, while recognising that definitions of 'right' will always be subject to negotiation, compromise and what in practice it is possible to achieve.

To support our catchment approach and inform future funding proposals to the SRA, we analyse the five main catchments in Somerset.

Our catchment analyses include:

- Catchment descriptions
- Summaries of specific local flood issues
- Maps showing areas at risk of flooding
- · Indications of key infrastructure
- Details of SRA-funded schemes and activities in the catchment
- Notes on SRA-funded studies that could lead to SRA-funded works
- Areas of opportunity for the SRA

These catchment overviews are key documents shaping SRA-funded activities. Proposals to the SRA for funding have to show how they tackle issues of interest to the SRA and support SRA objectives.

The SRA wants to fund projects that are integrated with other relevant actions across catchments and tackle flood risk from many angles. We want more working together across organisations, leading to the cost-effective delivery of schemes and activities that have multiple benefits.

Each year as we develop a programme of works, we will bring together our partners and key stakeholders. We will understand what is already being done and identify where – with SRA help – more can be done. The expertise and knowledge of SRA partners and stakeholders will be crucial to the success of this approach.

#### How is it assessed?

This approach should be judged by whether it does or does not "result in real action and changes on the ground". That was the original criterion proposed in Somerset's 20 Year Flood Action Plan in 2014: it still applies. SRA Board members, SRA stakeholders and the people of Somerset should primarily judge the SRA as a partnership by what is achieved through SRA-funded programmes of works.

The SRA is a unique partnership geared towards action. Our structure, policies, systems for scoring and proposals and assembling programmes of works are intended to be bespoke, flexible and unbureaucratic so that as much money as possible can be spent by SRA partners working together to make more locally useful things happen.

Specific results are measured scheme by scheme, activity by activity. Grant proposals are assessed using locally-set criteria directly linked to our objectives. Monitoring and reporting are proportionate to the scale and value of works undertaken.

Proposers set out in their grant proposals how they will monitor outputs and outcomes. Once a scheme is completed, a completion report is required with an assessment of whether the anticipated results have been achieved.

It is not possible to quantify exactly how each individual SRA-funded scheme or activity reduces flood risks overall across Somerset. To attempt to do so would be disproportionate and expensive. We want SRA funding to be focused on action on the ground.

The SRA Board oversees our progress towards meeting our objectives and ensuring effective use of SRA funding.

Annually, the SRA Board receives:

- Total number of SRA schemes and activities funded year on year
- Total number of funded schemes and activities that are new
- Number of partnership projects projects involving two or more organisations
- A summary of schemes and activities completed in the last financial year with a statement on outputs and outcomes
- Analysis of the programme assessing how schemes and activities are contributing to achieving our objectives

#### Quarterly, the SRA Board receives:

- Amount of spend per quarter on scheme delivery as a percentage of total funds available
- Summary of total programme spend assessed against funds available and forecast future spend
- Summary of progress on delivery of the programme assessed against originally agreed timescales.
- A report on completed schemes and activities with a statement about outputs and outcomes

Nobody has all the answers to Somerset's flooding problems.

The SRA does not aim to replicate the roles and expertise of its partners. We need to draw on experience, expertise and innovations from around Somerset, the UK and the world.

The end point of this Strategy is to create a framework for extra projects and activities that blended together will help to reduce the risks and impacts of flooding across Somerset.

Our efforts are focused on action.

The SRA Flood Action Plan sets out what will be done and ideas for the future. As will be seen, it takes all the main elements of this Strategy and incorporates them into a dynamic plan that evolves year by year, catchment by catchment, action by action.

