



Somerset
Rivers Authority

**DRAFT SRA Strategy
and Flood Action Plan
2024 - 2034**

*We reduce the risks and impacts of
flooding across Somerset*

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. That is what we do.

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 150km² 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 drafted 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.
4. Protect Somerset's economy from the impacts of flooding, promote business confidence and encourage new opportunities.
5. While doing the above, 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.

Contents

1. Why this SRA Strategy and Flood Action Plan is needed
2. SRA partners
3. SRA funding
4. SRA history 2014-23
5. The context now: Somerset flooding and climate change
6. Lessons learned from SRA works so far
7. SRA core purpose and core principles
8. SRA themes
9. SRA objectives
10. How is this SRA Strategy and Flood Action Plan going to be delivered?
11. Flood Action Plan

1

Why this SRA Strategy and Flood Action Plan is needed



Somerset has suffered many significant floods over the centuries. The wettest winter for 250 years was the winter of 2013-14. Around 150km² 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 this Plan's 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 April 2023, we allocated an extra £26million 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 across Somerset.

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 an updated Plan, crafted specifically for the SRA, that draws upon the experiences of the last decade, and continues to serve the people of Somerset well.



2

SRA partners

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 bodies sit on the SRA Board. The Board directs the SRA and approves budgets and programmes of work.

Our partners work together through the SRA to achieve more than it would be possible for them to achieve individually. Partners' own flood risk and water management responsibilities continue. **SRA membership enables 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.

Pictured at the top of this page, works on the River Frome in Frome town centre.

3

SRA funding

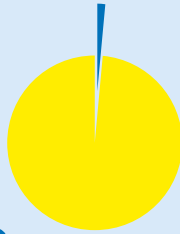
SRA income from council tax

2016-17

£2,757,000

2023-24

£3,010,000 +9.2%



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 percentage is still the same 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 2023-24 the SRA's income from council tax had risen to £3.010 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 hypothecated funding to pay for extra works across Somerset, works to reduce the risks and impacts of flooding that otherwise would not be done.

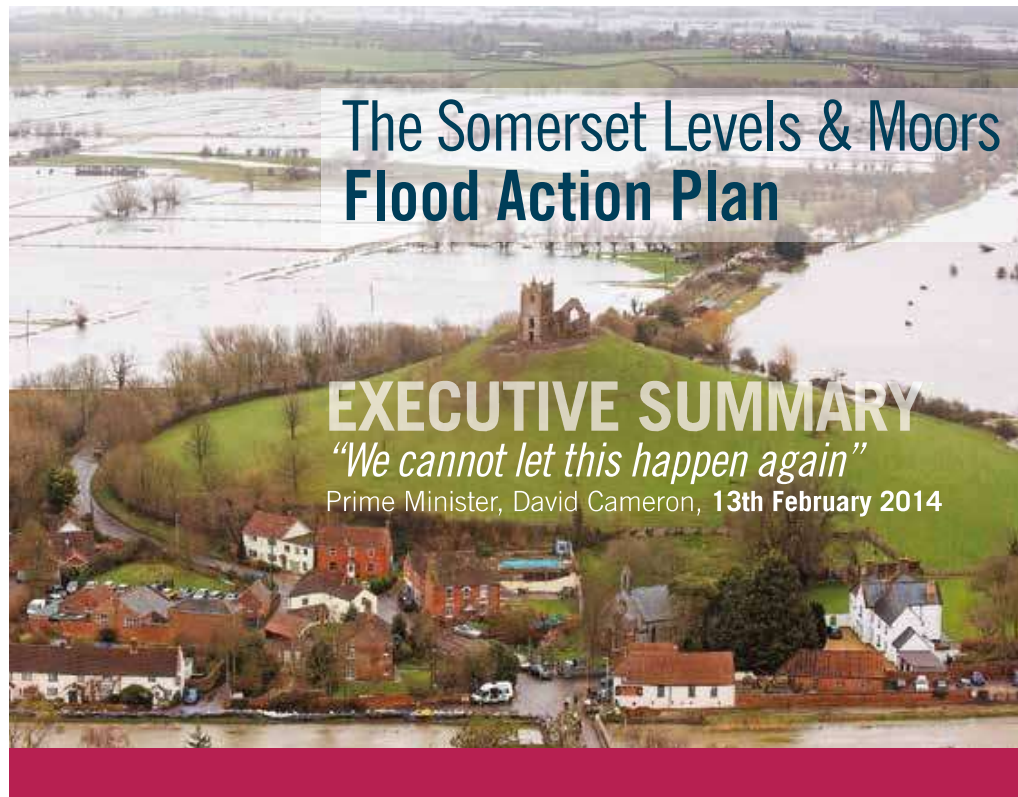
4

SRA History 2014-23

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.



Dredging in 2014

61

recommendations
for actions in
original Plan

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).

237

schemes and
activities
approved for
SRA funding

In furtherance of the Plan's overall objectives, between 2015 and September 2023 the SRA approved funding for 237 schemes and activities, quite often with many individual elements. Detailed descriptions of projects can be found in the Flood Risk Work part of our website.

£39m

additional
SRA funding
allocated

In total, between 2015 and April 2023, we allocated an extra £39million for works to reduce the risks and impacts of flooding across Somerset: £1.9million given us by the Department for Environment, Food and Rural Affairs (Defra) for 2015-16, £24.1million 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 Flood Action Plan will incorporate recommendations from the original Plan which are still in progress, but otherwise it is 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. In January 2023, for example, 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 two centimetres 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.

These cases of flash flooding followed earlier incidents in the 2020s in places such as Croscombe, Chard, Ilminster and Milverton.

*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 it 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 full 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*



6

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 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 We are good at helping people try out new ideas and integrate different approaches

Our special funding arrangements, layered partnership structure, non-bureaucratic 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 0’-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 Natural flood management works best 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 0' 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 We need to keep encouraging better knowledge and understanding, more ambition and imagination, in ways that lead to action

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 SRA moves to spread funding between workstreams and different parts of Somerset have worked well, but we now need a 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

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 bound to focus on works that fell within their council boundaries. However,

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 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.

Our **principles** as a partnership are:



Doing extra

Somerset Rivers Authority (SRA) membership enables partners to go above and beyond what they usually do. 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

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.

Acting on local priorities

The SRA concentrates on what it identifies as being important for Somerset. Calling upon technical expertise and detailed knowledge, the SRA makes choices about local priorities.

We can do this because we have been given freedom and money to do things differently. The Flood Risk Management Authorities (FRMAs) who are partners in the SRA 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, more proactive and more 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 the county.

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 set about doing extra works which meet local priorities.

8

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 Plan, 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 15,000 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 also 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-relations 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.

We respect the emotional connections that people across Somerset feel for their natural, built, social and historic environments. As part of SRA-funded 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.

*King's
Sedgemoor
Drain*



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:

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.
4. Protect Somerset's economy from the impacts of flooding, promote business confidence and encourage new opportunities.
5. While doing the above, conserve and enhance Somerset's special environments (natural, built, social, cultural) for all who live and work in Somerset and visit.

10

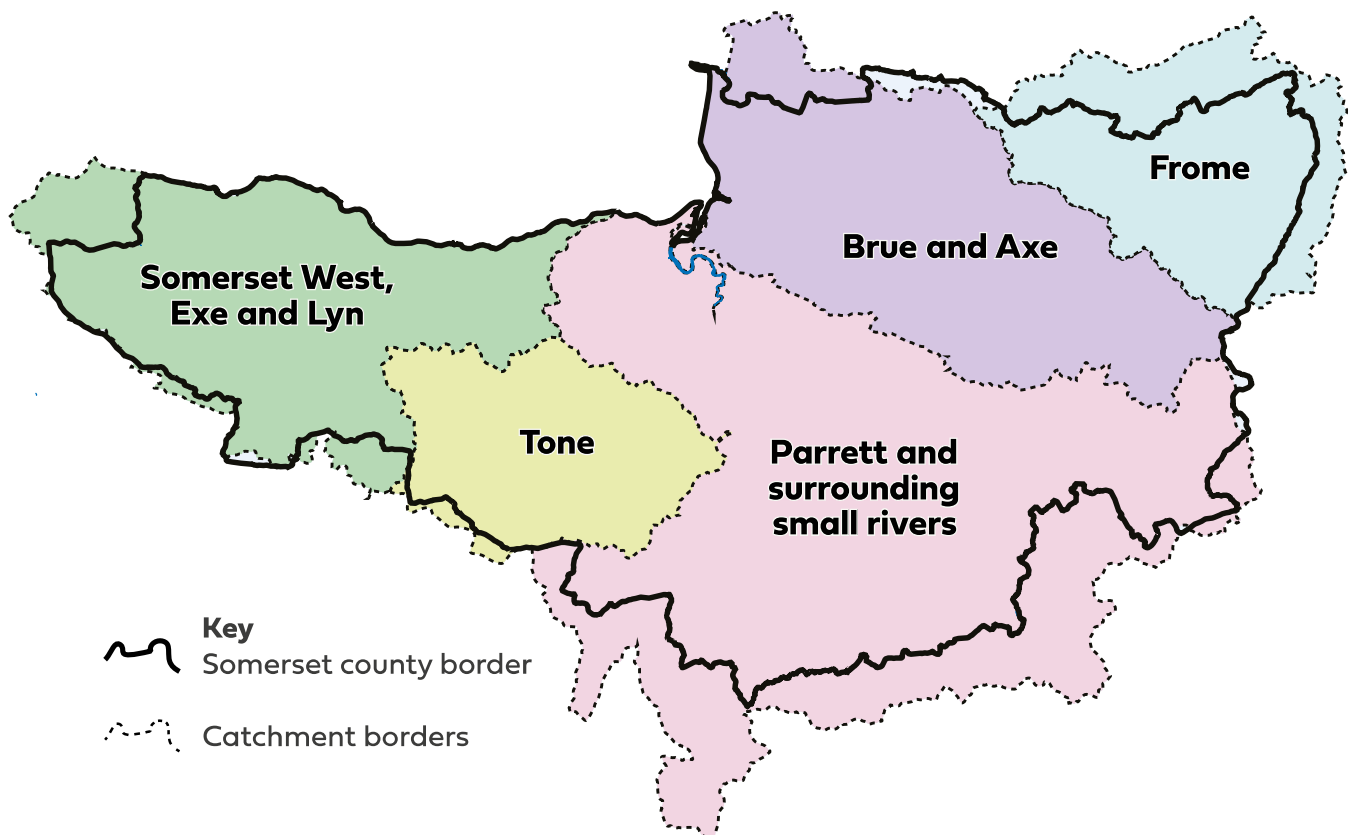
How is this SRA Strategy and Flood Action Plan going to be delivered?

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



Approaches will be 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 will draw together 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 are preparing summaries of 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
- Notes on works planned by SRA partners
- Areas of opportunity for the SRA

These sub-catchment overviews will be key documents shaping SRA-funded activities. Proposals to the SRA for funding will 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.

Catchment issues and types of work

Listed below are examples of different types of works generally thought suitable for different parts of catchments, as responses to some common problems.

Uplands and Hills

Common issues

Sheets of water flowing overland; localised surface water flooding; flooding from small watercourses.

Possibilities

Increase the volumes of flood water that can be stored and held back in features such as ponds and swales.

Work with farmers and landowners to reduce runoff, for example through better soil management so that more water can percolate into the ground.

Slow the flow of water down to vulnerable areas by using techniques of Natural Flood Management (NFM), such as forming woody dams and planting trees and hedgerows.

Mid-slopes

Common issues

Fast runoff causing flash flooding, particularly during intense periods of heavy rain.

Undersized channels and undersized structures such as bridges can make problems worse, especially if there are also blockages.

Possibilities

Work with farmers and landowners to store water and slow its flow.

Maintain and improve watercourse systems and structures, for example by removing blockages, increasing capacity or diverting water in suitable ways.

Support flood resistance and resilience measures for properties.

Improve flood warning systems.

Lowlands

Common issues

Flooding from rivers overflowing their banks, often for a long time, because of extended periods of rain or combinations of events.

Problems are worsened - particularly in areas below high-tide / river / flood bank level - if outfalls to the sea become tide-locked and drainage systems get overwhelmed.

Possibilities

Maintain and improve watercourses, flood banks and associated infrastructure such as pumping stations, and increase capacity where feasible.

Consider land use changes, such as growing climate-resilient crops, or paying farmers and landowners to store floodwater.

In the longer term, consider restoring natural watercourses and floodplains and providing more space for water, as part of agreed moves towards adaptation.

Urban areas

Common issues

Flash flooding because of surface water running off from impermeable areas (such as concrete, tarmac, and hard paving) and a lack of capacity in drainage systems and small watercourses.

In built-up areas nearer the sea, water can back up in rivers and drainage systems because of high sea levels.

Possibilities

Identify capacity issues.

Maintain and improve drainage systems and small watercourses, for example by removing blockages, increasing capacity, and retrofitting Sustainable Drainage Systems (SuDS) for more natural ways of storing and conveying runoff.

Discourage paving over domestic gardens with impermeable surfaces and encourage SuDS techniques, like de-paving and using water butts.

Improve flood awareness, resilience and adaptation.

Catchment-wide

Common issues

All types of flooding; community resilience and adaptation; strategic road network and infrastructure resilience.

Possibilities

Work with communities to help them better help themselves, for example by setting up flood action groups to identify and tackle local flooding problems (for example, through doing suitable maintenance tasks) and to support each other after a flood.

Work with riparian owners (who own land next to rivers) to help them understand and fulfil their responsibilities effectively.

Along roads, assess any drainage blockages, maintain and improve.

11

Flood Action Plan

The SRA's catchment approach makes sure that what is in the SRA Flood Action Plan all contributes to achieving SRA objectives. The SRA strategy and our catchment approach sets the strategic framework within which the SRA funds projects. The SRA Flood Action Plan sets out the specifics of what will be done. The SRA Flood Action Plan is a dynamic document constantly under review.

It evolves and changes month by month, year by year, as new data, knowledge and opportunities emerge, and partners learn more through working together and developing joint schemes and activities.

The Flood Action Plan will be a separate document prepared following public engagement in 2023-24.