

## **ITEM 8 Appendix 1**

### **Somerset Rivers Authority (SRA) 2025-26 Enhanced Programme: descriptions of schemes proposed for inclusion**

#### **River Parrett maintenance: Water Injection dredging, upper bank dredging and silt monitoring**

***SRA reference: IDB19-26***

##### ***Workstream 1***

A proposal to fund more maintenance dredging and silt monitoring along 3 miles (4.8 kilometres) of the River Parrett downstream of Burrowbridge. The plan - led for the SRA by the Parrett Internal Drainage Board (IDB) - is to use a Water Injection Dredging vessel in combination with an excavator mounted on a floating pontoon in the river. This pair would shift an estimated 25,000m<sup>3</sup> of solidified sediments from the central parts of the river's channel and the higher parts of its banks. The aim is to increase the river's capacity to convey flood water.

Dredging this part of the Parrett would help to reduce flood risks for around 1,300 homes and businesses, and around 7,500 hectares of land, including 5.3 miles (8.5 kilometres) of A-roads (A372 Bridgwater-Westonzoyland, A372 Langport, A361 Othery-Athelney, A378 Wrantage), 30 miles (48 kilometres) of minor roads and 5 miles (8km) of main line rail network.

The Parrett is a tidal river. Enormous volumes of sediments flow in from the sea and from the river's big catchment, which is roughly 478 square miles in size, or 770 square kilometres. When sediments build up along the river channel, there is less space left for water, and this lessened capacity can have bad consequences for the area through which the Parrett flows. Since the devastating floods of 2013-14, a lot of dredging has been done to increase and then maintain the Parrett's capacity. Because it allows more water to be conveyed, dredging helps to delay the running of spillways and the filling up of moors, and to create possibilities for earlier pumping. SRA funding for dredging also helps to bring peace of mind to people, especially given recent record-breaking periods of intense rain.

Water Injection Dredging (WID) uses the Parrett's own tidal power. As it moves along the river, a WID vessel pumps out high volumes of water targeted at build-ups of sediment which have been identified through regular silt monitoring and channel surveys (funded by the SRA and organised by the Parrett IDB). Sediments are forced off the riverbed and then dispersed through natural processes, downstream as the tide goes out.

However, while WID is effective in removing sediments from lower central parts of the Parrett's channel, deposits tend to accrete along the higher parts of banks which

WID cannot reach. Over time such build-ups make it harder to maintain an acceptable cross-sectional river area.

A short trial of Enhanced Water Injection Dredging was therefore carried out in January 2024. An excavator moved material from upper bank sections and placed it in the path of the WID vessel for washing out to sea on the outgoing tide. This trial was successful, and a similar combination is now being used in January 2025. It gets things done more cheaply and quickly, and with less environmental impact, than either method could achieve on its own.

## **Main river enhanced maintenance**

***SRA reference: EA17-26***

### ***Workstream 1***

A proposal for the SRA to fund quite a large amount of maintenance work along the rivers Axe, Brue, Parrett and Tone and across their catchments. The Environment Agency is not duty-bound to do this work, except where it owns land adjoining rivers (in accordance with the fact that responsibility for the maintenance of main rivers and ordinary watercourses ultimately sits with their owners). Historically, the Environment Agency has used permissive powers to undertake various flood risk reduction activities for the public good, on watercourses classified as main rivers by the Department for Environment, Food & Rural Affairs (Defra). But more recently it has not been able to do all of the maintenance work that it used to. This is because of significant real-term reductions in central government funding (previously discussed by the SRA Board and bodies such as the Wessex Regional Flood & Coastal Committee) and inflationary pressures of up to 40% leading to significant increases in operating costs.

The SRA is therefore being asked to fund 19 main river maintenance activities, to be carried out by the Environment Agency in July – October 2025, in line with the SRA's historic remit of doing more to protect Somerset from flooding than would otherwise be affordable. Collectively, these activities will benefit hundreds of homes and businesses, and thousands of hectares of farmland:

### **Axe**

Cheddar Yeo: Weedcut / Grasscut

Axe Head of Main River to Cheddar Yeo: Weedcut / Grasscut

Mark Yeo: Weedcut / Grasscut

Blind Pill: Weedcut / Grasscut

### **Brue**

River Brue: Brue Bridgefoot to Rice Cottages: Weedcut

River Brue: Brue Bridgefoot to Rice Cottages: Enabling Flail

Glastonbury Millstream to Coldharbour Sluice: - Weedcut

Sheppey Swanshard: Weedcut / Flail  
St Andrews / Keward Brook: Weedcut

### **Parrett**

Westmoor Main Drain: Weedcut / Grasscut  
Penzoy system: Weedcut / Grasscut  
Chedzoy New Cut: Weedcut  
River Yeo - Ilchester to Parrett Confluence: Weedcut Boat  
River Parrett - Thorney to Confluence with Yeo: Weedcut Boat  
Durleigh Brook: Hand Weedcut  
Hamp Brook: Hand Weedcut  
Middlestream: Hand Weedcut  
Parrett: Bridgwater Tidal Outfall Desilting  
Parrett: Bridgwater / Moorland Tidal Outfall Flaps  
River Isle - Slabgate Weir to Parrett Confluence: Weedcut  
Thorney Moor Main Drain: Weedcut  
Huntworth Brook: Grasscut / Weedcut / Handwork

### **Tone**

Tone: Weedcut Boat

One result of the recent reduction in maintenance has been uncontrolled weed growth in rivers. This growth affects how rivers respond to rainfall and how quickly they can convey flood water out to sea. The Environment Agency says that if maintenance work is not done in summer 2025, rivers will further choke up with weed. This will further reduce their capacity, increase the risk of fish dying, and spoil their leisure and amenity value. Furthermore, says the Agency, if maintenance is not done in 2025, getting river channels back to their previous capacity will probably require more expensive and difficult kinds of work to be carried out, as weed removal may no longer be possible due to excessive silting-up. Not carrying out maintenance is also judged to be a false economy, because to get water off moors and dispersed through rivers clogged with weed, more expensive pumps need to be deployed and run.

Grass cutting on raised banks across the Somerset Levels and Moors is important because it allows for flood defences to be inspected for problematic badger setts, trees, landslips and other forms of erosion such as scouring. If these defects are not remedied, banks could potentially fail, increasing flood risks to large areas.

### **River Sowy-King's Sedgemoor Drain (KSD) Enhancements Scheme (KSD Bank Raising)**

**SRA reference: LP GD2b**

**Workstream 1**

Funding is proposed for the raising of up to 1.12 miles (1.8 kilometres) of the left bank of King's Sedgemoor Drain (KSD) in the late summer and early autumn months of 2025, following extensive preparations carried out for the SRA by the Parrett Internal Drainage Board (IDB). This work would complete Phase 1 of the SRA's major River Sowy-KSD Enhancements Scheme, on which work began in 2016. The main aim of this scheme is to increase the amount of water that can flow, in a controlled way, through the Sowy-KSD system. In combination with other projects and activities in the SRA's Enhanced Programme, such as dredging and main river maintenance, this scheme will help to reduce flood risks for people, homes, farms, businesses, land, and infrastructure across 150 square miles of the Somerset Levels and Moors.

The River Sowy was created between 1969 and 1972 to take excess water away from the River Parrett (this is why the Sowy is also known as the Parrett Flood Relief Channel). Water flows into the Sowy through a sluice called Monk's Leaze Clyse near Combe north-west of Langport. It goes down via Beer Wall beneath the A372 near Othery to King's Sedgemoor Drain near Greylake, then it re-joins the Parrett through Dunball Sluice, 13.5 miles (22 kms) after it went through Monk's Leaze Clyse. Providing more capacity in this system, so that it can be used more flexibly and effectively, has been one of the SRA's main ambitions since the SRA was launched in January 2015.

### **Bridgwater Tidal Barrier (contribution)**

**Total project cost: £248.4m**

**SRA funding to date: £3.32million**

**SRA reference: EA17-26**

#### ***Workstream 1***

Bridgwater Tidal Barrier is a major project led by the Environment Agency and Somerset Council. Designed to help protect more than 11,300 homes and 1,500 businesses, it has three main elements: a tidal barrier on the River Parrett at Chilton Trinity, 2.67 miles (4.3km) of new flood defence banks and 1.74 miles (2.8km) of raised banks downstream at Chilton Trinity, Comwich and Pawlett, and fish and eel passage improvements at 12 sites upstream of the barrier, the furthest up being Bradford-on-Tone beyond Taunton, and Ham Weir between East Lambrook and Martock. Other planned enhancements include a new cycle and foot bridge over the Parrett, and the creation of up to four hectares of wetland habitat and up to eight hectares of open water in borrow pits (pits from which suitable material has been taken for bank-raising). Links for walkers are to be established with the Parrett Trail, the South West Coast Path, and wetlands at Steart Marshes.

The Full Business Case for the Bridgwater Tidal Barrier was approved by HM Treasury in September 2024. Most funding for this major project – it is one of the biggest in the country - will come from central government major project funding.

However, some local match funding is required to secure the national funding. As in previous years, Somerset Rivers Authority is making a local contribution in recognition of the important role that Bridgwater Tidal Barrier will fulfil in protecting Somerset residents, homes and businesses.

In total in previous years, the SRA has contributed £3.32million towards the Barrier project, including £2million of Growth Deal funding that came through the SRA from the now-defunct Heart of the South West Local Enterprise Partnership.

### **Hills to Levels: Somerset Land Management and Natural Flood Management (NFM)**

**SRA reference: FWLM01-26**

#### **Workstream 2**

Somerset Rivers Authority (SRA) is proposing to keep funding a wide range of land management and natural flood management (NFM) activities across Somerset, as part of the multiple award-winning Hills to Levels project. Such works continue to have two main aims. Firstly, to reduce local flood risks for people, properties, businesses, and roads in upper and middle catchment areas. Secondly, to help protect vulnerable lower areas from flooding, by slowing the flow of water down through the catchments of the Tone, Parrett, West Somerset Streams, Brue, Axe and Somerset Frome.

For 2025-26 four main strands of activity are planned, all to be delivered for the SRA by the Farming and Wildlife Advisory Group SouthWest (FWAG SW).

1. Designing and implementing up to 20 NFM schemes to hold back water in upper and mid catchments and reduce peak flows of water down to vulnerable areas. Several schemes stem from involvement with communities, for example from local people working together with FWAG SW's two part-time SRA-funded community sub-catchment enabling officers (whose contracts were extended by the SRA Board in September 2024).

Plans sometimes change for reasons beyond SRA partners' control, but examples of places currently expected to feature are:

Frome: bank regrade, bunds, leaky wood dams and tree planting

Frome: flood plain meadow restoration, scrapes, series of three attenuation features

North Brewham: reinstating original meandering of stream

Bruton: installation of scrape and bund plus tree works

Doultling: dredging of ponds and intercepting flow pathways

Kingston St Mary: removing miscanthus, creating a series of bunds and attenuation areas (three sites)

Crowcombe: installation of cross drains and flow spreaders

Merridge (on the Quantocks): installation of flow spreaders to help reduce road flooding

2. Increasing the uptake of land and soil management techniques which improve the infiltration of water into the ground, reduce the run-off of water and lessen compaction and erosion.

3. Responding to referrals of cases from Somerset Council's Highways Department or its Flood and Water Management team. FWAG SW advisers can be asked to help in cases where better land management or natural flood management, or both, could help to reduce flooding on roads because of run-off from fields. It makes sense to address causes as well as symptoms. Extra SRA funding enables partners working together to tackle issues beyond their usual limited remits.

4. Modelling and monitoring at sub-catchment scale to demonstrate the effectiveness of NFM measures that have already been installed. Tools would include flow gauges, data loggers and trail cams to record flows before, during and after storms.

### **Upper Barle catchment restoration**

***SRA reference: ENP01***

***Workstream 2***

This proposal is the first made by Exmoor National Park Authority (ENPA) to Somerset Rivers Authority (SRA), as a result of the SRA opening up its grant-giving process to more applicants.

It's for a study of how to reconnect part of the River Barle to its historic floodplain, so water is slowed and spread out. The site is directly south of the B3223 at Simonsbath, and a small distance downhill from part of the Two Moors Way. The Barle here was artificially straightened in the 18th century. The section being considered for restoration is 0.53 miles long (850 metres), its floodplain 3.5 hectares.

This proposal has several aims. One: to work out the best ways of holding back and storing water, to help reduce flood risks as far down as places such as Dulverton and Brushford, which between them have flooded 14 times since 1980. Also downstream, showing the power of the Barle in spate, the scheduled ancient monument and popular visitor spot Tarr Steps has been damaged several times by flood water, with rebuilding required in 2012, 2016, 2017 and 2023.

Two: to see how to bring about numerous environmental improvements in a Site of Special Scientific Interest and a National Park, in line with the SRA Strategy's fifth objective, which is to "conserve and enhance Somerset's special environments". A Natural England study in 2016 suggested that holding back more water could help to reduce the dispersion of non-native invasive species (especially Montbretia) during

periods of spate. A less kinetic river could help riverfly numbers, and so benefit salmon, grayling and dippers. An associated study funded by the National Park Authority is also to look at ways of reintroducing water voles to the Upper Barle catchment.

Three: this study would be tied in with a nearby scheme to plant trees in three steep-sided combes adjacent to the Barle, using a recently developed technique known as applied nucleation to gradually create more connected temperate rainforest. Along with some leaky dams, this planting would help to slow the flow of water down to local tributaries of the Barle.

Four: educational and economic benefits. As the study area sits within land owned by Exmoor National Park Authority, which also includes an outdoor education centre at Pinkery, it is intended to engage with local communities, around Simonsbath and across Exmoor, and also with visitors.

Five: the area also sits within a Landscape Recovery scheme (Reviving Exmoor's Heartlands) that is currently in its development phase. Carrying out a feasibility study would make it possible that Landscape Recovery money could, in due course, fund or part-fund River Barle restoration works at Simonsbath.

**Local flood risk management measures across Somerset**  
**SRA reference: WW01**  
**Workstream 3**

A second year of funding is proposed for a partnership project designed to reduce local flood risks across Somerset through the carrying-out of joint investigations and high-level assessments of possible remedial actions. This project is led by Wessex Water and Somerset Council as partners in Somerset Rivers Authority (SRA).

In 2024-25, the project's first year, 20 initial investigations were completed. Five areas in Wellington, Bridgwater, Highbridge and Taunton had flooding issues which were addressed through business-as-usual activities or separate external projects.

Three individual schemes have come forward for separate funding, in Bridgwater, Frome and Watchet (see below).

12 continuing investigations into 2025-26 include areas within:

- Creech St Michael
- Wiveliscombe
- Wellington
- Bridgwater
- Taunton



- Cheddon Fitzpaine
- Yeovil
- Wookey Hole
- Chedzoy

In 2025-26, the project team will continue to take these places through up to three different phases, as judged locally appropriate. Phase 1 is an initial assessment of various complex flooding issues, relating to the interaction of groundwater, surface water, road drainage systems, sewer networks, rivers, and other watercourses and in some cases the sea, and the effects of climate change. Phase 2 consists of more detailed investigations and the development of detailed designs. Phase 3 will involve carrying out small-scale works, or where larger-scale projects are required, future individual schemes will be put forward for funding.

Some places may also be added to Phase 1 if new complex flooding issues are brought forward by stakeholders during the year.

The SRA has been asked to part-fund 75% of this project, Wessex Water 25%, while Somerset Council will contribute staff time, because all factors involved do not come under the remit of any one single organisation. Enabling a range of partners to work together on local priorities is intended to produce better, more integrated results for local people and local environments. A further aim is to increase local people's understanding of flood-related catchment and climate change factors, so they could become more resilient and better prepared.

### **Bridgwater: Penarth Road sewer improvement and school SuDS**

***SRA reference: WW04***

#### ***Workstream 3***

A scheme to reduce surface water flooding from local highways and the sewer in Penarth Road, Bridgwater, outside the entrance to St Joseph's Catholic Primary School and in the school playground and car park. Children walking to and from school have had to wade through contaminated water. Wessex Water and Somerset Council are eager to improve matters, so have asked the SRA to fund 43% of the cost of works (Wessex Water 57%) to reduce the risk of flooding by reconfiguring the local sewerage and highway network and installing SuDS (Sustainable Drainage Systems) at the school. The SuDS would store rainwater in environmentally friendly and educationally useful and interesting ways. It is hoped the site could become a showcase for informing Somerset pupils and residents about aspects of flooding - and inspiring people to launch their own SuDS initiatives.

This proposal follows investigations part-funded by the SRA in 2024-25. Put simply, these found that problems were largely caused firstly by too much water from highway gullies in Penarth Road, Park Avenue and Quantock Avenue flowing into



the sewer network, and secondly by the foul sewer in Penarth Road and Park Avenue having too sharp a bend, so its contents cannot be sped through fast enough.

The SRA has been asked to part-fund this scheme, as the works proposed go beyond any single partner's statutory responsibilities and 'business as usual' activities.

### **Frome: Lower Keyford surveys and drainage improvements**

***SRA reference: WW02***

#### ***Workstream 3***

A proposal to reduce the high risk of surface water flooding at Lower Keyford in Frome. Following initial investigations part-funded by the SRA in 2024-25, Wessex Water and Somerset Council want to undertake surveys of various drainage infrastructure including a culverted watercourse that runs alongside Lower Keyford. Once better informed, their aim is to design and construct a series of local measures to reduce the risk of surface water flooding for residents and road users, and to reduce storm overflows from Wessex Water sewers.

Improved management of surface water would help to reduce the frequency of storm overflows from the Wessex Water combined sewer network downstream of Lower Keyford. This would result in some improvements in water quality in the Dippy stream and the River Frome.

The SRA has been asked to fund 43% of the cost of this partnership scheme (Wessex Water 57%), as the works proposed go beyond any single partner's statutory responsibilities and 'business as usual' activities.

### **Watchet: Market Street SuDS design**

***SRA reference: WW03***

#### ***Workstream 3***

A proposal for the design of improved rainwater and surface water management measures to reduce the high risks of surface water flooding in the Market Street area of Watchet town centre. Following detailed investigations part-funded by the SRA in 2024-25, Wessex Water and Somerset Council want to work out the best ways of retrofitting SuDS into the Market Street car park (owned by Somerset Council) and encourage the use of SuDS and innovative rainwater management nearby.

The SRA has been asked to fund half the cost of this design project (Wessex Water would fund the other half), with Somerset Council contributing staff time, on the basis that it would go beyond any single partner's statutory responsibilities and 'business as usual' activities.

The possible benefits of implementing SuDS in the Market Street area of Watchet would include:

- reduced flood risks for local properties and businesses
- less surface water getting in to combined sewers, so they are less likely to operate
- reduced flood risks for the Market Street car park, especially its entrance
- less run-off water from the car park flowing into the adjacent Washford River

### **Highways enhanced proactive gully cleansing across Somerset**

***SRA reference: LHA03-26***

#### ***Workstream 4***

Gullies in places most at risk of flooding across Somerset are currently cleansed once a year by Somerset Council's Highways Department. Extra SRA funding would mean that around 25,000 gullies could be emptied twice a year.

The aim would be to help keep roads open in places highly susceptible to flooding, make them safer, preserve access for communities, and safeguard properties from flooding, all in line with the objectives of Somerset's 20 Year Flood Action Plan and the SRA's Strategy for 2024-34. These works would benefit residents, businesses, and visitors.

### **Building Local Resilience**

***SRA reference: WS5-26***

#### ***Workstream 5***

This proposal is to fund the continued employment of two SRA community engagement officers until the end of October 2026.

The current team do a lot. They help large numbers of people to plan and prepare for possible flooding, and - when flooding does occur, as somewhere in Somerset it always will - to reduce its impacts, respond well and recover quickly. They help to strengthen communities (and the SRA partnership itself) through a wide range of activities and events. In fairly broad terms, these would continue to include:

- visiting numerous places, listening to local people, talking about the likely causes of flooding problems and possible improvements, providing guidance and training about issues such as riparian rights and responsibilities, pointing people towards appropriate agencies and discussing more complex situations in detail with SRA Technical Group members.

- raising awareness and increasing understanding of what local people can do themselves to be better prepared for flooding and a changing climate, with more intense and unpredictable rainfall. So in practice providing advice, information and support, for example through running workshops about how to develop community emergency plans.
- engaging with communities who have been flooded, for example through organising flood drop-in sessions, running flood cafés, writing regular newsletters that provide updates and promote resilience, and supporting the Lead Local Flood Authority's formal 'Section 19' flood investigation report process.
- supporting projects led by SRA partners, so where possible these are focused not just on technical activities (maintenance, NFM, SuDS, etc) but on sharing knowledge and encouraging more local resilience and adaptation. So in practice, for example, helping with public events such as drop-in sessions about flooding: preparing, advising, participating.
- working with other organisations to encourage preparedness in communities at risk. So in practice, for example, representing the SRA in the Somerset Prepared multi-agency partnership, and leading the organisation of the annual Somerset Prepared community resilience event and smaller roadshow events.
- supporting flood groups and other community groups, existing and emerging, helping to create links between them and useful networks across catchments and sub-catchments.
- assisting with an SRA-funded Somerset Prepared small grants scheme for community resilience training and equipment, for flood groups, community groups, parish and town councils, and supporting and promoting the SRA's new Community Flood Action Fund.
- developing materials and activities to inform a wide range of organisations, people and age groups about flooding, for example Local Community Networks and primary schools (leading popular assemblies and lessons).
- helping to shape and bring about community flood resilience initiatives such as the ongoing Community Flood Warning Systems pilot project (below, in this Enhanced Programme) and a planned new website to do with flooding matters across Somerset catchments.

### **Community flood warning systems**

**SRA reference: WS5-4-26**

**Workstream 5**

Partial funding for the fourth phase of a pilot project working with communities on very localised early flood warning systems. SRA money would be used to pay for community training sessions, a year's licensing costs for greatly increased web platform functionality and trials of a more individualised alerting system. Near the end there would be a series of 'lessons learned' events to strengthen future projects, especially those connected to local flood warning systems, in ways that would tie them in with other community self-help and preparedness activities, and local flood resilience planning.

This project began in West Somerset in 2019 (Phase 1) and was then expanded to include places in South Somerset and Mendip (Phase 2) and the River Cam valley in the east of Somerset (Phase 3). It's now managed by the SRA's community engagement team, with valuable technical support from the Environment Agency.

Its spur was people wanting much more localised information than they could get through the Environment Agency's existing system of flood alerts and flood warnings. Because - particularly in 'rapid response' catchments where water levels can rise very quickly during heavy rain - flooding can put people's lives at risk.

Local people using local knowledge have therefore been picking out hotspots for gathering vital details about what is happening in catchments during very wet times and what is therefore likely to ensue downstream. These hotspots have been kitted out with rainfall and flood gauges and other equipment linked to online dashboards so that local people can monitor what is going on, get alerts and put previously developed Community Emergency Plans into action. Communities' own spin-off projects have included setting up community rain gauges to help provide information for alerts, creating WhatsApp Channels for alerts and devising their own alert systems based purely on rainfall data, which can help to provide warnings about surface water flooding.

The service overall has grown to be deeply appreciated by communities involved while the web platform used is now flexible and robust enough to support collaboration from other agencies. A neighbouring local authority has also joined.

The fourth phase now being proposed for SRA funding would follow on from previous moves. Greater involvement and commitment would be sought from other agencies, authorities and communities, so a long-term funding base could be secured and this pilot fledged into a sustainable, ongoing project.

See the Somerset web platform:

<https://cfh.aquaticinformatics.net/AQWebPortal/Data/Map/Parameter/Stage/Statistic/LATEST/interval/Latest>

**Community Flood Action Fund**

**Grant approved at September 2024 SRA Board meeting): £200,000**

**SRA reference: CFAF-26**

***Workstreams 1 to 5 (potentially)***

In September 2024 the SRA Board agreed to pre-allocate £200,000 for a new Community Flood Action Fund (CFAF). The Fund was then launched in December 2024. It has been attracting a lot of interest across Somerset.

The Fund offers small grants for works to reduce flooding directly to Somerset communities. The idea is to help people with good local knowledge of flooding problems take the initiative and get things done.

The Fund is aimed at not-for-profit organisations, such as town and parish councils, charities, social enterprises and community benefit societies. They are being urged to concentrate on practical actions that can be achieved quite quickly, with obvious flood risk reduction benefits.

Application packs for CFAF grants of between £3,000 and £20,000 are now available through the Grants section of the Somerset Rivers Authority website.

The deadline for the first round of applications is 25 February 2025. Successful applicants will get funding from April. Three more funding rounds are due later in the year.