

ITEM 9

Somerset Rivers Authority (SRA) Board Paper

River Sowy and King's Sedgemoor Drain (KSD) Enhancements Scheme: Development of Phase 1 Project Completion Plan including Chedzoy Tilting Weir Outfall and Back Ditch Outfall Works

Recommendations

The Somerset Rivers Authority (SRA) Board is asked to note the following

1. Confirm the Parrett IDB as the delivery partner for KSD bank raising.
2. Allocate up to £915,000 of previously set aside funds to the Parrett IDB to complete the KSD bank raising work.
3. Note the progress on the KSD Outfalls – Back Ditch and Chedzoy Tilting Weir

Purpose of the Paper

To update the Somerset Rivers Authority (SRA) Board on development of a project completion plan (PCP) for the River Sowy – King's Sedgemoor Drain (KSD) Enhancements Scheme Phase 1 work.

To update the SRA Board on progress and confirm the likely budget requirements for the bank raising works following an initial tender review.

Background

The River Sowy-King's Sedgemoor Drain Enhancement Scheme was a key project identified in the original 2014 Flood Action Plan and has been in delivery since June 2018. The project was led by the **Environment Agency** and was to increase conveyance capacity by approximately 30% to reduce flood risk. The works included creation of two stage channels where possible, strengthening and raising flood banks, desilting under bridges and improving key water control structures.

In June 2018, the SRA Board reaffirmed its commitment to improving the hydraulic efficiency of the Sowy and KSD whilst recognising that to deliver the desired outcomes required planning across a number of years and a greater level of funding than was available.

Desilting of Parchey and Dunball Bridges was completed in Autumn 2018 followed by dredging of the Parrett, environmental mitigation work and improving key water control structures. In July 2022 the contractor re-mobilised after COVID restrictions were lifted, to start the bank raising works on both the Sowy and KSD. All bank raising could not be completed during the 2022 working season. There remained a 1.8km length of bank raising on the KSD that was planned to be delivered in 2023. However, in March 2023,

the estimated cost to complete this element of the works had inflated to £1.35m and this cost was not guaranteed.

The SRA Board was asked if they wished for the Environment Agency to deliver the work at the cost of £1.35m. The SRA Board agreed to pause the work and seek alternative cheaper options. Below is the spend to date on the Phase 1 scheme as supplied by the SRA finance reporting.

Project: River Sowey/KSD Enhancing Scheme inc and Parthey and Dunball Rail bridges and Outfall Refurbishments				
Project Budget (Works to Dec 22)	Funding Source			
	HotSWLEP	EA	SRA	
9,642,732	4,353,251	979,919	4,309,562	
Claimed/Spent	4,353,251	979,919	4,012,564	
Remaining	0	0	296,998	

SRA Board members agreed that all SRA partner organisations should work together on steps necessary to still complete the Phase 1 works. Therefore, in November 2023 SRA Board members agreed to allocate up to £100,000 of additional funding to review the works required to complete Phase 1.

£100,000 of funding was therefore allocated to the Parrett Internal Drainage Board (IDB) to investigate the most cost-effective way to complete Phase 1 of the River Sowey – KSD Enhancement Scheme. This included 1.8km of bank raising on the King’s Sedgemoor Drain AND improvements to 2 outfall structures; **Chedzoy Tilting Weir** and **Back Ditch Outfall Structure**.

As part of taking on the project from the Environment Agency (EA), the IDB has undertaken a review of the outstanding elements of the Sowey-KSD scheme. This review included ascertaining details of work still needing to be done, identifying current project constraints and investigating ways of removing those or dealing with them in a way that reduces risks, time and cost. This culminated in the delivery of a Project Completion Plan (PCP) for the 1.8km of bank raising and a detailed design and tender review for the 2 outfalls.

The Project Completion Plan was circulated to all SRA partners in March 2025 to confirm and shape the remaining actions required to enable delivery of the scheme. These are summarised in the Consents and Approvals table later in this report. These actions have now been worked into the project programme with an intention to deliver the scheme in July 2025.

The SRA board approved an allocation of £250k to deliver the 2 outfall structures in January 2025 and construction work commenced on 28th April 2025.

KSD Bank Raising Design and Tender progress

The existing banks have a significant width relative to the head of water to be retained and so we used the funding provided to undertake a detailed investigation to assess the merits of using existing site won materials to raise the bank; a method deployed by the Environment Agency historically on other reaches of this embankment.

This approach would minimise the amount of imported material required to complete the works to reduce haulage costs, material movement, carbon footprint and risk. We therefore needed to understand whether there was suitable material within and around the site and whether there would be suitable volumes of this material to raise the bank to the desired height of 3.85m above ordnance datum (AOD).

The embankment design geometry, as per the EA specification:

- * *Crest width: 3 metres*
- * *Wet slope: 1 in 3 (Front)*
- * *Dry slope: 1 in 5 (Back)*
- * *Consistent crest height of 3.85 mAOD*

To inform the design and specification updates for raising the banks in this way the following investigative work was undertaken:

- Full Topographic Survey of the existing banks to confirm the height and profile of the banks (thus the volume of excess material available);
- Ground Investigation works to assess the suitability of the existing material to be used for bank raising works. This included testing of the bank material itself and the material immediately along the land-side toe of the bank;
- Environmental Appraisal of the site during the summer months (the proposed construction period) to identify any additional environmental constraints;
- Review of the Environment Agency handover information to identify key consents and approval requirements as per the previous works.

Based on these investigations, the existing bund / bank materials are considered suitable for reuse to complete this phase of the enhancement scheme. It is likely that some material may require some drying out to achieve adequate compaction and settlement and so, considering the results of the ground investigation and testing, a minimum additional 150mm of material is recommended to allow for this.

The design fill level is therefore 4.0mAOD

Bank slopes of 1 in 5 (Back) and 1 in 3 (Front) were specified in previous works with a 3m crest width and these were used as a basis for the cut and fill 3D model designed to inform the volumes of material to be moved and thus the costs. The Topographic survey and subsequent volumetric calculations based on the specified design geometry indicated that there was a shortfall of material. However, by slackening off the back slope to **1 in 4.5**, the existing bank material would provide sufficient volumes of material to reprofile the existing banks to the desired design fill level (4mAOD).

The EA have confirmed that they are comfortable with this approach and so we progressed with going out to tender with this design and specification. Tender packs were issued to 4 contractors on 25th April with tender returns expected on the 20th May 2025. The IDB received 3 compliant tenders which we are in the process of reviewing and providing recommendations to the IDB Board who are due to meet in early June. The IDB are therefore now in a position to award a contract to complete the works this summer, should the allocation of funding be approved.

The SRA set aside **£915,000** for completion of the bank works. We are still in consultation with the contractors through the tender process to confirm pricing and contracts and so are not in a position to confirm prices at this stage. However, we can provide the board with the assurance that the project is deliverable within the budget set aside and that the Parrett IDB are in a position to be delivery partner for the works. Prices and contracts will be confirmed in June, provided all the necessary consents are in place by then (refer table below).

Consents and Approvals Progress

Following consultation with partners on the Project Completion Plan (PCP) back in March, we received comments from Natural England, Environment Agency, Historic England, Public Rights of Way and Somerset Council (North) Planning to enable confirmation of remaining actions. Several actions were assessed as no longer applicable and the remaining actions are summarised below with an indication of their status:

Item	Status	ACTION/ Comment
Environmental Action Plan (EAP)	COMPLETE	EAP has been prepared as part of the tender pack and sent out to Contractors. This was based on the original EAP prepared as part of the wider scheme.
Habitat Regulations Assessments	IN PROGRESS	The location of the KSD banks project is considered 'functionally-linked land' ('FLL') to the Special Protection Area (SPA). Therefore, Natural England (NE) have indicated that a Habitats Regulation Assessment (HRA) screening should be completed for this project. Outputs from Johns Associates Walkover Survey will inform the Screening and a draft will be sent to NE for review.
Flood Risk Activity Permit	IN PROGRESS	The EA confirmed that the work does require a Flood Risk Activity Permit (FRAP). A variation to the EA's original FRAP has therefore been submitted. To help expedite it as much as possible, local area officers have contacted the National Permitting Service (NPS) to ask that the variation is allocated to them. This is currently in progress with the EA and awaiting sign off
Scheduled Monument Consents and Compliance with Ancient Monuments and Archaeological Areas Act (1979)	COMPLETE	Historic England have confirmed that the area designated as the Battle of Sedgemore is a Registered Battlefield not a Scheduled Monument . In terms of consents for works within a Registered Battlefield, there is no requirement for any kind of license. Archaeological Watching Brief has been endorsed by Historic England as adequate mitigation.
Public Right of Way (PROW)	COMPLETE	PROW officers have confirmed that a temporary closure for the public footpath BW 36/5 will be required for the duration of the works. Technical detail is required regarding the gradient of the tie-ins either side of the Chedzoy Sluice bridge and at either end of the scheme. This has been provided and an application submitted with the associated fees incurred. Closure notices issued
Waste Regulations	IN PROGRESS	Material Management Plan completed under Claire Regulations Completed and awaiting sign off
Planning	IN PROGRESS	The Somerset Council planning teams have confirmed that works would still constitute 'permitted development' and would not require an application for planning permission to be submitted. The formal way for this to be confirmed would be through the submission of a new Certificate of Lawfulness application which has been submitted with the associated fees incurred. Awaiting certificate of Lawfulness to be issued.

Item	Status	ACTION/ Comment
Temporary Fencing	COMPLETE	The majority of the temporary fencing was removed by the EA contractor following completion of previous phases of works. A minority (near the upstream end of the 1.8km) opted for it to remain in situ or to retain only the wooden posts stacked for their future use. Temporary fencing will therefore need to form part of the temporary works and included in the tender.

Progress since January 2025 Board Paper – KSD Outfalls

The contract was awarded in February 2025 for the two outfalls. Dewatered inspection of the Chedzoy Tilting weir was completed shortly after that to inform the design of the new tilting weir. This design has been completed, and the proposed fixing arrangements have been priced by the Contractor and fabrication works commenced.

Contractors commenced on site at Back Ditch on the 28th April 2025, once ground conditions allowed. As of the 12th May 2025, Back Ditch Outfall Structure was completed (as shown below)



Upstream head wall



Downstream Flap Valve

The Contractors are now continuing work on Chedzoy Tilting Weir having commenced works on the 14th May 2025.



Chedzoy Tilting Weir: Flap Valve Sheet Pile Headwall

Future Works

Further considerations – water across the low-lying land can become trapped behind the raised banks for months at a time. It has been identified that the existing system of drainage ditches has capacity to conduct water back out through Chedzoy Clyce, subject to the following actions:

- o Remediation/replacement of critical culverts and structures;
- o Removal of unused access culverts (with permission from landowners);

- o Desilting and reconnection of the Rhyne System to the outfall at Chedzoy Clyce.

Through the PCP we were seeking guidance on whether this scope of works would have support from partners and the SRA in the future.

The EA were positive in their response to these actions in principle, subject to details closer to the time, including where it might interact with main river and any assets the EA manages, and any permits that might need to be considered. It was also noted that consultation with RSPB would be beneficial during development of any future proposals to tie into their Greater Sedgemoor Landscape Recovery project, assuming that work gets support from landowners/ Department of Environment Food and Rural Affairs (DEFRA).

RECOMMENDATIONS

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Date: 27th May 2025

Authors: Caroline Murray, Somerset Drainage Boards Consortium