

ITEM 9

Somerset Rivers Authority (SRA) Board Paper

River Sowy - King's Sedgemoor Drain (KSD) Enhancements Scheme: KSD banks and outfalls

Recommendations

The Somerset Rivers Authority (SRA) Board is asked to:

1. Note the substantial completion of the King's Sedgemoor Drain (KSD) outfalls – Back Ditch and Chedzoy Tilting Weir.
2. Note the progress of the KSD bank raising works.

Purpose of the paper

To update the SRA Board on progress with the final stage of the River Sowy – King's Sedgemoor Drain (KSD) Enhancements Scheme Phase 1 work.

Background

The River Sowy – King's Sedgemoor Drain Enhancement Scheme was a key project identified in the original 2014 Somerset Flood Action Plan and it has been in delivery since June 2018. 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 November 2023, SRA Board members agreed to allocate up to £100,000 of additional funding to review the works required to complete Phase 1. This was allocated to the Parrett Internal Drainage Board (IDB) to investigate the most cost-effective way to complete Phase 1 of the River Sowy – KSD Enhancements Scheme. This included 1.8km of bank raising on the King's Sedgemoor Drain AND improvements to two outfall structures: Chedzoy Tilting Weir and Back Ditch Outfall Structure.

A Project Completion Plan was completed in March 2025 to confirm and shape the remaining actions required to enable delivery of the scheme. The SRA Board approved an allocation of £250k to deliver the two outfall structures (with construction work commencing on 28 April 2025) and an allocation of £915,000 to deliver the bank raising works (with construction work commencing in July 2025).

KSD Bank Raising Works

Design

The existing banks have a significant width relative to the head of water to be retained and so, following a detailed investigation to assess the site-won materials, the existing bund / bank materials were considered suitable for reuse to complete this phase of the

enhancement scheme; 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.

The embankment design geometry was determined based on the previous Environment Agency specification and in further discussion with the Environment Agency through the initial design phase:

- * *Crest width: 3 metres*
- * *Wet slope: 1 in 3 (Front)*
- * *Dry slope: 1 in 4.5 (Back)*
- * *Consistent crest height of 3.85m AOD (Above Ordnance Datum, i.e. above national mean sea level)*

In most places, raising the banks amounts to between a 150mm to 500mm increase in bank height. As part of the design process, we have assessed the likely settlement and shrinkage of the existing material for the banks and so a minimum additional 150mm of material was recommended to allow for this, considering the results of the ground investigation and testing. The design fill level was therefore set at 4.0m AOD.

Pre-Delivery Set Up

Contractors WM Longreach were appointed as the Main Contractor for the works and had access to the site from Monday 30 June with an estimated programme of 12 weeks.

Prior to the physical earth works, a metal detecting exercise was undertaken as part of the watching brief agreed with Historic England. Nearly 30 detectorists turned out for this event on Sunday 6 July (which coincided with the anniversary of the Battle of Sedgemoor in 1685). The majority came from the Weston Historical Research and Detectorists Association and there were some local amateur detectorists. We were fortunate to have Clive Hammett, Honorary Associate Research Fellow at the University of Exeter, to offer his expertise on the day.

Overall, 122 items were found including some items of note such as a gunpowder measure for a musket (below) and musket balls of varying sizes. These were individually recorded and bagged. Any items of note are to be reviewed by the Somerset County Finds Liaison Officer to further assess their historical value.



A quantity of “scrap” was also recovered including various bits of agricultural machinery, a drum brake, an Austin Maestro badge, a blue Corgi car and a dog tag which was returned to the dog owner.

Delivery Works

A site compound was set up in the first week along with removal of existing temporary fencing and erection of temporary fencing. A number of trial holes were excavated to undertake soil analysis of the existing bank material at intervals along the length of the works. The results of the soil testing were positive and bank raising works were able to commence in earnest on 7 July 2025 starting at Chedzoy Sluice and moving to the southeast to link up with the bank raised by the Environment Agency in 2022.

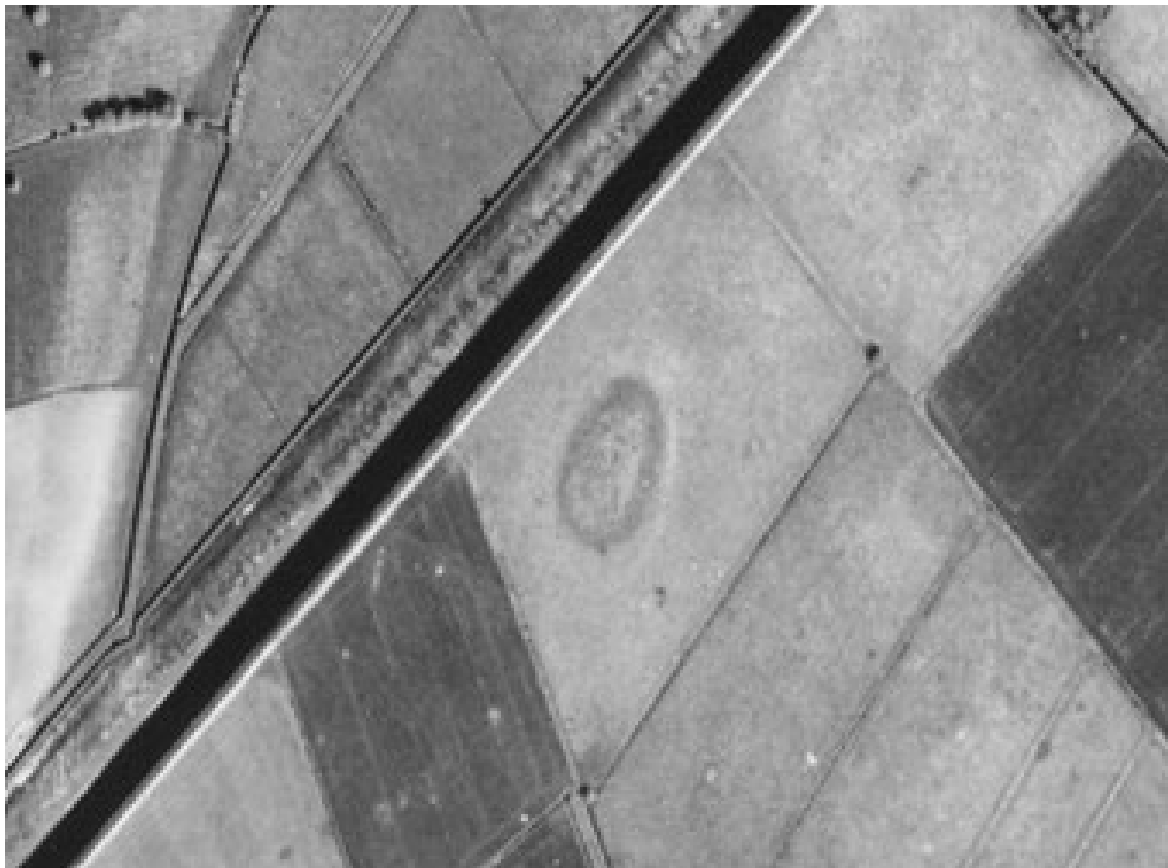


Works are now progressing to the north of Chedzoy Sluice towards Parchey with a view to completing the works before the end of September, as per the programme.

Risk Management

There are number of items that have arisen since the start of the project which have had to be managed by the team to minimise risk to programme and costs. The biggest of these was the possibility of there being a shortfall of material, which was a recognised risk based on previous experience of works of this type in this environment.

1. The pre-commencement survey and initial setting out for the works measured the length of the works to be 1960m which is longer than the 1.8km indicated within the Environment Agency specification and so the length of works has increased by 160m.
2. There is a short stretch of about 100m where the existing flood bank intersects a feature know as 'the mound' (aerial photo from 1942 below). In consultation with South West Heritage Trust, we were informed that this feature is a potential Anglo-Saxon burial ground where a dugout canoe was found in the late 1950s.



In order to avoid any impacts on the historical 'mound' we adjusted the works to avoid disturbing the ground in the vicinity of this feature.

3. We have had an extremely dry summer. This has been fantastic for delivery but it has meant that the material we have been working with is unusually dry, however we are achieving more consolidation than anticipated.

The above items in combination have meant that we have had a shortfall of material and more material has had to be sourced to achieve the design profiles set out in the specification.

The team had identified various potential sources for this eventuality and so were able to move quickly to source over 500m³ of material from the Banwell Bypass Project, approximately 150m³ from works at Crossman's Hatch (a North Somerset IDB Project) and confirm that site-sourced material from an area of high ground towards the Parchey end of the site would be suitable for use in the works.

In total, we have had 55 truckloads of material delivered to site with the remainder being tracked along the bank from the onsite source to where it is needed. We are anticipating that we will not need any further off-site material at this stage.

Since mid-August, Wessex Water have been on site within the area of our works undertaking emergency works to the rising main. The site interaction is being managed by the two contract supervisors on each of the sites, but we are also liaising directly with the project manager to ensure that neither set of works is impacted by the other's operations. The programme for Wessex Water's works is likely to extend beyond our completion date so we will be monitoring and agreeing any reinstatement works that may be required upon their completion of works.

Stakeholder Engagement

A small number of landowners/tenants met on site on Wednesday 23 July to discuss their specific requirements and to go through the scope of the work and its benefits.

Our team have been liaising regularly with the local landowners on progress of the works, sending out monthly newsletters to residents and liaising with parish councils to keep them informed and address any issues as they arise.

There have been some recent issues relating to truck movements through Chedzoy and dust on Ward Lane, which the team are managing through close liaison with Wessex Water (as our truck movements have now ceased). We facilitated a joint site meeting with Wessex Water and Chedzoy Parish Council on Monday 1 September to address the issue and avoid any further disruption or distress.

Representatives of the SRA board and staff visited the works on 28 August 2025, which enabled them to get a feel for the operation and works. There was a total of 12 people present for the visit.

Back Ditch Outfall

The contract was awarded to Bernard Perry in February 2025 for the two outfalls.

Contractors commenced on site at Back Ditch on 28 April 2025, once ground conditions allowed. Works were completed on 12 May 2025 with the contractor moving straight across to Chedzoy Tilting Weir. The landowner was pleased with the completed project and was able to start using the gated access for his cattle immediately following completion.



Upstream head wall



Downstream flap valve



Chedzoy Tilting Weir and Headwall

The Contractors commenced works on 14 May 2025 and completed by mid-July. There still remains some signage to go up on the structure and seeding of the areas around the structure but this will commence in the early autumn and be monitored through the winter and into early spring before we can confirm final completion of the project.





Works progressed well and costs to date are well within the agreed budget for the works.

We were thankfully able to utilise existing concrete foundations for the new tilting weir framing structure, significantly reducing the overall construction cost. Additionally, the contractor was extremely proactive in liaising with the team and the landowner to ensure smooth running of the project.

We liaised closely with Sustrans on the cycleway over the structure to ensure that the surfacing was up to their specifications. The stone is still a little loose due to the dry weather conditions, but this should improve over the autumn months. We have erected warning signs at either side of the structure to warn cyclists to slow down through this section and Sustrans have been made aware.

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RECOMMENDATIONS

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Date: 4 September 2025

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