

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:

1. Note the progress on the Project Completion Plan for the King's Sedgemoor Drain (KSD) Bank Raising works.
2. Note that the full allocation of funds to the Parrett Internal Drainage Board (IDB) to the sum of **£250,000** should be retained to deliver the outfall works in March/April 2025 as some prices and contracts are yet to be agreed.

Purpose of the item

To update the SRA Board on progress and the likely budget requirements for the two projects in the 2025-26 enhanced programme.

To update the SRA Board on the investigation of options, and preparation of a project completion plan for outstanding River Sowy – King's Sedgemoor Drain (KSD) Enhancements Scheme Phase 1 work. The works include 1.8 kilometres of bank raising on the KSD and completion of upgrades to two outfall structures which were not completed during the original project work.

Background

The River Sowy-King's Sedgemoor Drain Enhancements Scheme was a key project identified in the original Flood Action Plan and has been in delivery for several years. The project was initially led by the Environment Agency. There remain some outstanding works to complete Phase 1 that the Environment Agency were unable to undertake before having to redirect resources to other projects. Detailed information on the project has been discussed and papers have previously been provided to the Board, so their substance is not repeated here. It is important to note firstly, however, that in March 2023 SRA Board members agreed that all SRA partner organisations should work together on steps necessary to complete Phase 1 works. Secondly, in November 2023, SRA Board members agreed to allocate up to £100,000 to review the works required to complete Phase One. £100,000 was allocated for investigating options to complete works and then advising the SRA Board and potential delivery partners if the work could be completed at a reasonable cost using an approach supported by all partners and regulators. It was intended that completion of this review should enable a willing delivery partner to come forward to undertake works.

Allocated budgets

£100,000 of funding was allocated to the Parrett Internal Drainage Board (IDB) in November 2023 to investigate the most cost-effective way to complete Phase 1 of the River Sowy – KSD Enhancements Scheme. This includes 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**. The IDB is reviewing relevant aspects of the Sowy-KSD scheme. This review includes 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. Once all information gathered has been assessed the Parrett IDB will then either:

- prepare a plan for completing bank raising works on up to 1.8km of the KSD near Chedzoy and Westonzoyland, or
- report to the Board that such a plan was not in fact judged to be achievable at reasonable cost and with the support of all SRA partners and regulators.

A proportion of the £100,000 funding has been used to undertake actions that will enable delivery of the two outfalls to proceed in March 2025. This included a design and tender review with recommendations to the Board on budgets and programme.

To date, **£20,446** of the £100,000 has been committed on progressing the outfalls and **£22,599** has been committed on progressing the KSD bank raising. We are still expecting costs for additional design work for the KSD Outfalls (as outlined below) and progressing the KSD Banks Project Completion Plan (including building a 3D model as part of the detailed design to generate volumes for contractor pricing).

Allowing for a small contingency, we estimate that a total budget of **£60,000** will be sufficient to complete these two elements of work. Therefore, **£40,000** can be made available for the 2025-26 enhanced programme.

KSD Banks proposed specification

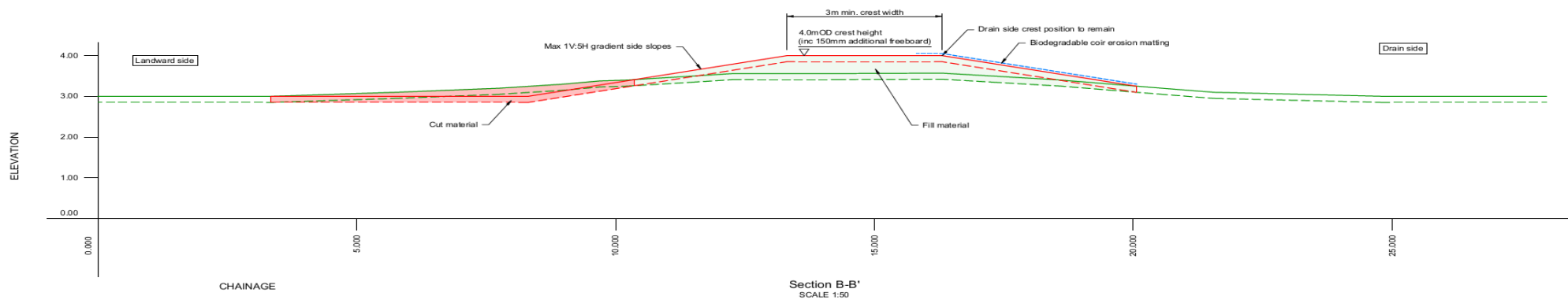
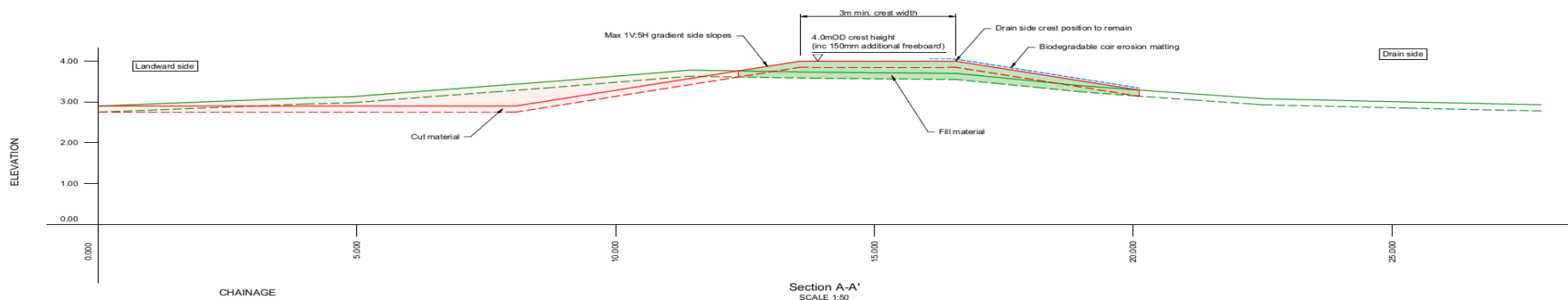
The existing bund is typically around 0.5 metres high and 7m wide with side slopes around 1 in 6. A Flood Risk Activity Permit (FRAP) is required from the Environment Agency when working within 8m of a main river or when carrying out activities that may affect flood plains or flood defences. The standoff between the toe of the bund and the bank of the KSD is typically a minimum of 8m, however, it is considered a flood defence. The Environment Agency when leading the Sowy-KSD project, determined that maintenance of an existing raised river defence is classed as an exempt activity under FRAP guidelines so it is deemed a FRAP will not be required for the KSD bank raising work as this is maintaining the existing flood defence.

The top of the bund needs to be increased to a minimum level of 3.85m above ordnance datum (AOD) to reach the required defence height determined by the

Environment Agency under previous work. This is a height increase of up to 500 millimetres. The existing bund has a significant width relative to the head of water to be retained and so it is proposed that the landward side should be excavated and material placed on top of the bank to create a higher but narrower bund. This will still achieve the minimum required width of 3 metres at the top of the bund to enable Environment Agency access for maintenance, and it will remove the need to bring in large volumes of exported material at a far greater cost.

King's Sedgmoor Drain Bund – Cross Section

- Key:
- Existing ground line
 - - - Approximate base of topsoil below existing groundline
 - Proposed ground line
 - - - Approximate base of topsoil below proposed groundline
 - - - Biodegradable coir erosion matting
 - Existing ground line
 - Existing ground line



Based on the ground investigation, the existing bund materials are typically suitable for reuse on account of low permeability. It is likely that some material may require drying out to achieve adequate compaction, and settlement is expected. A minimum additional freeboard of 150mm is recommended to allow for this settlement, considering the results of the ground investigation and testing. The design fill level is therefore 4.0m AOD.

Bank slopes of no steeper than 1 in 5 were specified in previous works due to potential for livestock damage and will be adopted for these works. This will form the basis of the cut and fill 3D model being designed to inform the volumes of material to be moved and thus the costs.

Progress since September 2024 Board Paper– KSD Bank

1. Finalising the 3D modelling of the cut and fill volumes for reprofiling to the desired height (with an allowance for consolidation).

Progress: We have appointed consultant geotechnical specialists to complete these works by the end of January 2025.

2. Discussion with Contractor on likely costs for implementation to inform budget setting for the SRA.

Progress: Initial informal discussions with a local Contractor indicate that a budget of £500,000 would cover the delivery of the works, including a contingency. Once volumes and design are confirmed then a further action would be to tender the works to finalise costs.

3. Finalise key list of constraints to be considered for these specific works.
4. Consult with the Environment Agency and Natural England on key constraints, including the need for any additional consents for the works proposed.
5. Discussion with the area Archaeologist on the need for any pre-commencement archaeology assessment.
6. Development of a programme relating to the remaining tasks identified to bring the project to delivery stage.

Progress: Project Manager now appointed to work towards delivery in July 2025. Principal Designer identified with confirmation of costs awaited.

7. Identification of outstanding problems from existing works and any potential solutions that might be considered as part of the works.

Progress since September 2024 Board Paper – KSD Outfalls

1. Confirm final costs and award Contract to chosen contractor.

Progress: Construction drawings issued to chosen Contractor. Confirmation of prices expected January 2025 for formal Contract signing.

2. Complete Public Right of Way (PROW) stopping up order for planned programme dates.

Progress: Complete. Stopping Up Order now issued by Somerset Council.

3. Finalise with the Environment Agency the extension of the FRAP for Back Ditch to planned programme dates.

Progress: Complete. FRAP has now been issued by the Environment Agency.

4. Transfer of materials from the Environment Agency Depot to the Contractor.

5. De-watered inspection of Chedzoy Tilting Weir Structure to inform design.

Progress: This is scheduled for January 2025 with an assessment / review design details to follow to then be priced by the Contractor as a Compensation Event on the contract.

6. Commence Delivery Programme March 2025

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Date: 14 January 2025

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