

Sutton Bingham reservoir sedimentation study

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SYNOPSIS. There is evidence of significant siltation in the Sutton Bingham reservoir near Yeovil. Halcrow Group was commissioned to study the siltation problem while the reservoir water level was kept low during the remedial works at the dam in 2007. This study reviews and discusses the options available for alleviating further siltation in the reservoir. Desk studies were carried out to gather information and data to review the past and current state of sediment deposition and to propose solutions which would help to alleviate the siltation problem.

Two feasible solutions to reduce sediment inflow into Sutton Bingham reservoir were proposed. One approach is to store incoming sediment behind a submerged weir and to periodically flush sediment downstream of the dam via closed conduits. Alternatively a desander basin could be operated at the head of the reservoir to trap a proportion of incoming sediment. The trapped sediment can be removed periodically by excavation.

The paper discusses operation constraints and the practicality of flushing this reservoir. The benefits and disadvantages of the selected option are also discussed.