

# Curry Moor Flood Storage Area Remediation Work

Autumn 2023

## What are we doing and why?

Curry Moor Flood Storage Area (FSA) is classified as a 'large raised' reservoir under the Reservoirs Act 1975. As a designated reservoir structure, it is maintained by the Environment Agency.

We play a major role in managing flood risk which includes ensuring continued safe operation and maintenance of reservoirs. The flood storage area was inspected by the appointed All Reservoirs Panel Engineer who has identified several Measures in the Interest of Safety (MIOS) which must be completed by the Environment Agency before specified deadlines as part of its legal obligations under the Reservoirs Act.

### Only Safety, No Change

We are doing this safety remediation work only to ensure safe and continued working of the flood storage area. The works will also ensure that the wider water level management system works as efficiently as it should. This will in turn guarantee continued protection of both local communities and downstream towns.

We would like to assure you that the work is not intended to change the function or working of the flood storage area.

The flood storage area will work in the exact same way as it does currently with the same water level management in place. The frequency at which the flood storage area is flooded with water will not change after construction, including the volume and depth of water within it during these periods.



# What have we done so far?



Athelney Hill (© Copyright Stephen Richards and licensed for reuse under this Creative Commons Licence.)

Athelney is certainly no exception and is the site of a Scheduled Monument, with both an Anglo-Saxon occupation site and the site of Athelney Abbey (which was founded by King Alfred).

The spillway is located within the site of this Scheduled Monument, which means there was lots of potential for archaeological remains that needed protection. We consulted with Historic England and the South West Heritage Trust and have carefully planned our project to limit and minimise the impact upon any archaeological remains that we may find during the remediation work. To understand where remains might be, we carried out a geophysical survey, within the footprint of the remediation work which identified potential archaeological features. Next, so we can have a better understanding of what these features are, we completed archaeological trial trenching in the area. Once the information is processed and published, we look forward to sharing the results and adding to everyone's understanding of the story of Athelney Hill.

## Archaeology at Athelney spillway

In 2024, we will be carrying out remediation work at Athelney spillway, on Athelney Hill, otherwise known as The Isle of Athelney. Before the marshes were drained in the 18th -19th centuries, this hill was once a very low, isolated island linked by a causeway, to East Lyng, and surrounded by marshes. In the Somerset Levels, islands like this historically attracted settlement and so are usually archaeologically rich.



Work at the River Tone embankment

## Embankment reconstruction between Hook Bridge and New Bridge complete

We completed the embankment works between Hook Bridge and New Bridge where we repaired a 200 metre section of the River Tone embankment. We have also installed new badger protection measures.



General view looking east of the work at Stan Moor cut off embankment

## Enabling works between Hook Bridge and New Bridge

We have completed further enabling works such as removal of badger setts at the embankment between Hook Bridge to New Bridge. We had to remove them to protect the embankment from any future badger activity and to strengthen its integrity.

## Work at Stan Moor cut off embankment

We put up temporary fencing at the Stan Moor cut off embankment to segregate the public from work area. A new access ramp was also constructed to enable the use of heavy construction machinery. Welding for main work at the embankment has started.

# What's ongoing?

## Stan Moor cut off embankment

We have almost completed installation of the length of pipe work adjacent to the existing embankment. We have installed trench boxes that are required to safely complete installation of the new culvert.

The culvert will be the new feed for Stan Moor main drain.



Installation of trench boxes

## Hook Bridge spillway

We are currently doing main concrete works at the Hook Bridge spillway to create the access track and crest beam. As part of this work, we are pouring concrete to create the spillway along the embankment.

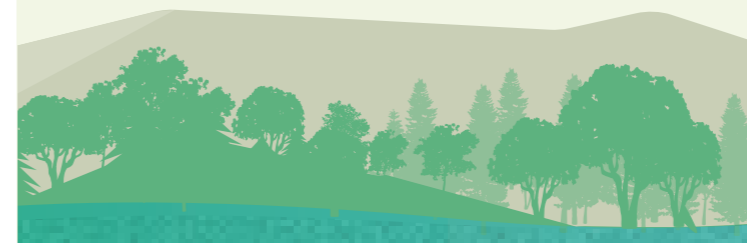
This work is close to completion.



Improved quality of the flattened concrete finish

# What are we doing next?

- We will complete installation of metal fencing and a weir plate at the Hook Bridge spillway by mid November.
- River side trench and reservoir side of the spillway near top of the weir will be backfilled.
- We will be reinstating the existing Stan Moor bank to protect it from erosion.



We will continue to work on site until 30th November 2023. No work will be done during the months of December, January, and February. All sites will be left in a condition that is safe for the winter shut down period when we are unable to work because of Natural England SSSI constraints. We will ensure that the areas are protected to the same standard as before work started. There won't be an increased risk of any of the flood protection failing.

We will be back on site in Spring 2024. We will be in touch with you early next year before starting our 2024 work.



# Protecting hairy click beetles

The banks of the River Tone include stands of reed canary-grass (*Phalaris arundinacea*). This grass species is the larval host plant of the hairy click beetle (*Synaptus filiformis*). The species is listed as Red Data Book 1 and is a Natural Environment and Rural Communities (NERC) Act Section 41 species of principal importance. They are also a UK priority species

listed under the SSSI citation for being specific to the Somerset Reservoirs.

Little is known about whether hairy click beetle can survive in or it uses small stands of reed canary-grass. But it is thought that this grass, when covered with tidal waters, creates a suitable habitat which could support a population of the hairy click beetle.

We are taking special care and are protecting any stands of reed canary-grass to ensure that our work does not disturb their presence and growth. This will in turn preserve the potential presence of hairy click beetles who are likely to sustain in stands of the reed canary-grass.

## Innovative water vole surveys



Surveyors using kayaks

The embankment on the north side of the River Tone, between Hook Bridge and New Bridge had weakened due to badgers burrowing into it. So we had to close the badger setts to restore the integrity of the embankment and relocate the badgers to a newly constructed artificial sett nearby. To enable the works a number of ecological surveys were required including, water vole surveys. We conducted water vole detection dog surveys to ensure that the closure of badger setts and the works to the embankment does not impact water voles or their burrows. The aim of the surveys was to confirm the presence or likely absence of water voles at the work location and within a suitable buffer.

The surveys were conducted with the approval of Natural England.

This innovative survey method was chosen over traditional methods -

- to ensure health and safety of our surveyors due to the steep rhynes and riverbanks and



One of our detection dogs

- to avoid unnecessary disturbance to the ditches which is a notified feature of the Curry and Hay Moor SSSI designated site within which the flood storage area is located.

Our surveyors used kayaks to access the toes of the bank – the break in the slope where the river bank meets the bottom of the river. They had the water vole detection dogs on board to detect water vole scent which was then verified by the water vole survey lead. The surveys recorded evidence of water voles within the survey area, and we put in place mitigation to displace the water voles under licence from the works area ahead of the badger sett closure and following stabilisation works (a requirement due to the protection afforded to the species under the Wildlife and Countryside Act 1981 (as amended)). We will be using the same method with help of the water vole detection dogs to conduct further water vole surveys required for the work happening in 2024.

## Machinery moved during recent flooding

Curry Moor Flood Storage Area was flooded on Monday, 18 September when water from the River Tone overtopped the Hook Bridge spillway. We have developed a flood contingency plan to use during such events to ensure safety. On Saturday, 16 September, our Flood Incident Duty Officer contacted our construction contractor on site to advise them about the storm in the River Parrett and the River Tone which was higher than the 30mm forecast - trigger level storm as defined in the flood contingency plan.



Water levels rising in the River Tone at Hook Bridge on Sunday

Throughout 16 and 17 September there was constant communication between our officer and our contractor to inform and discuss about the rain storms forecast and the water levels in the rivers. At the same time, our contractor monitored river levels on the River Tone at New Bridge, Curry Moor Pumping Station and at the Old Market Bathpool in Tauton. Work still continued on the spillway.

As water levels in the River Tone began to increase, we decided on Sunday evening that the site will be cleared on Monday morning, as it would be dangerous to do this at night. Our contractors cleared all machinery from the Hook Bridge spillway and the Stan Moor cut off embankment as decided. The spillway stopped flowing by the evening.

## Contact Us

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