

Building Calstock's resilience to climate change

The new habitat will improve the area's resilience to the changing climate and provide a richer environment for people and nature.

The 11-hectare intertidal habitat is part of a new flood defence scheme to manage the risk of flooding to properties and critical infrastructure in Calstock. The overall cost of the project is £3.1 million.

The intertidal area was made following the breach last year of the old flood bank along the Tamar. Environment Agency surveys showed the flood bank to be in poor structural condition. As a result the Environment Agency has built several new embankments totalling over 600 metres, protecting local properties, the village preschool and village hall, and the wastewater treatment works from flooding.

Working at night during low tides last November, the old flood bank was breached, and water from the estuary allowed to flow into pools and creeks previously constructed as part of the habitat creation.

The new habitat area will help off-set some of the impacts of sea level rise and climate change and clean river water by trapping sediment. An increase in biodiversity has already been seen, with birds and other wildlife attracted to the new intertidal habitat.

Jess Thomasson, Biodiversity Officer for the Environment Agency said:

As in many of our estuaries, climate change and rising sea levels in the Tamar are leading to coastal squeeze where essential habitat is prevented from adapting and moving towards land by a structure such as a wall or bank.

So, last year, after many years of careful planning, we started to create a series of interconnected creeks and the material won used to build the new flood banks. The breach in the redundant flood bank, allowing tidal water from the estuary to flow in and out of the creeks has enabled this new vital intertidal habitat to establish in front of the new flood banks.

The old flood bank is a popular footpath, and the Environment Agency has supported the Tamar Community Trust in getting a new footbridge to maintain access along the river. The footpath is due to open shortly, following completion of work to ensure the safety of users.

Andy Rogers, Local Project Lead for the Environment Agency, said:

We really appreciate the efforts that the local community, Tamar Community Trust and Calstock Parish Council have made in helping make the Calstock intertidal habitat and flood defence improvement scheme possible.

The Tamar Valley Area of Outstanding Natural Beauty (AONB) team has played a key role making sure the best outcome is delivered for the community, and we are thankful for the support of Cornwall Wildlife Trust, Cornwall Bird Watching Preservation Society and Calstock Footpath Society.

The scheme has also made the field next to the football pitch available to the Tamar Community Trust so it can be managed to the benefit of the local community.

Last year the Environment Agency was a key partner in a similar project with the National Trust to create a new 1.7-hectare intertidal habitat at Cotehele on the Tamar.

Rob Price, Tamar Catchment Coordinator at the Environment Agency, said:

The creation of new intertidal habitat on the Tamar at Cotehele and now this work at Calstock reinforces our aims to improve resilience to the changing climate and to provide a richer environment for people and nature.

It will provide an invaluable tool in the fight against climate change by locking in carbon and also help improve overall water quality. This valuable work is an important part of an integrated programme of works to build the Tamar catchment's resilience to a wide range of environmental pressures including those related to biodiversity and a changing climate.

The project is being funded by Flood Defence Grant in aid, Water Environment Investment Fund, and contributions from the Tamar Community Trust.

- It is clear that we are already seeing the impacts of climate change in the UK and around the world, which is why urgent action is needed to adapt the impacts of climate emergency at the same time as reducing emissions.
- We're already seeing the impacts of the climate emergency in the UK.
- According to the Met Office 2020 was the third warmest, fifth wettest and eight sunniest on record for the UK. No other year has yielded observations that fall in the top-ten for all three of these variables for the UK.
- That included the wettest ever February, where most of the UK received more than twice the February long-term average rainfall, with 300% quite widely in the north and west, and over 400% in parts of the Pennines.
- Climate change is happening now. We're seeing more extreme weather, with an increase in flooding, coastal erosion and landslips. The most recent

climate change predictions confirm we will experience wetter winters and drier summers, with an increased likelihood of more intense rainfall leading to flooding.

- We're working to better protect communities from this risk, with climate change projection built into the design of flood defences to ensure they are fit for the future.
- However the climate emergency means that we cannot always prevent or build our way out of an incident. That's why we're working to help households, businesses and communities be better prepared and more resilient to flooding and coastal change through our long term FCERM strategy, and making sure that people have access to the information they need to prepare, act, survive.