

Manage water levels appropriately

Retain and improve existing water's edge and bankside habitats in modified watercourses

Project Summary

Title: Amble Marshes Water Level Management Plan

Location: Wadebridge, Cornwall, England

Technique: Water level management

Cost of technique: ££££

Overall cost of scheme: £££££

Benefits: £££££

Dates: 2010-2012

Mitigation Measure(s)

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Improve channel geomorphology to create habitat

Remove or modify structures to increase access for fish and eel

How it was delivered

Delivered by: Environment Agency FCRM (Public Service Agreement relating to SSSIs)

Partners: Natural England, local landowners, Cornwall Bird Watching and Preservation Society

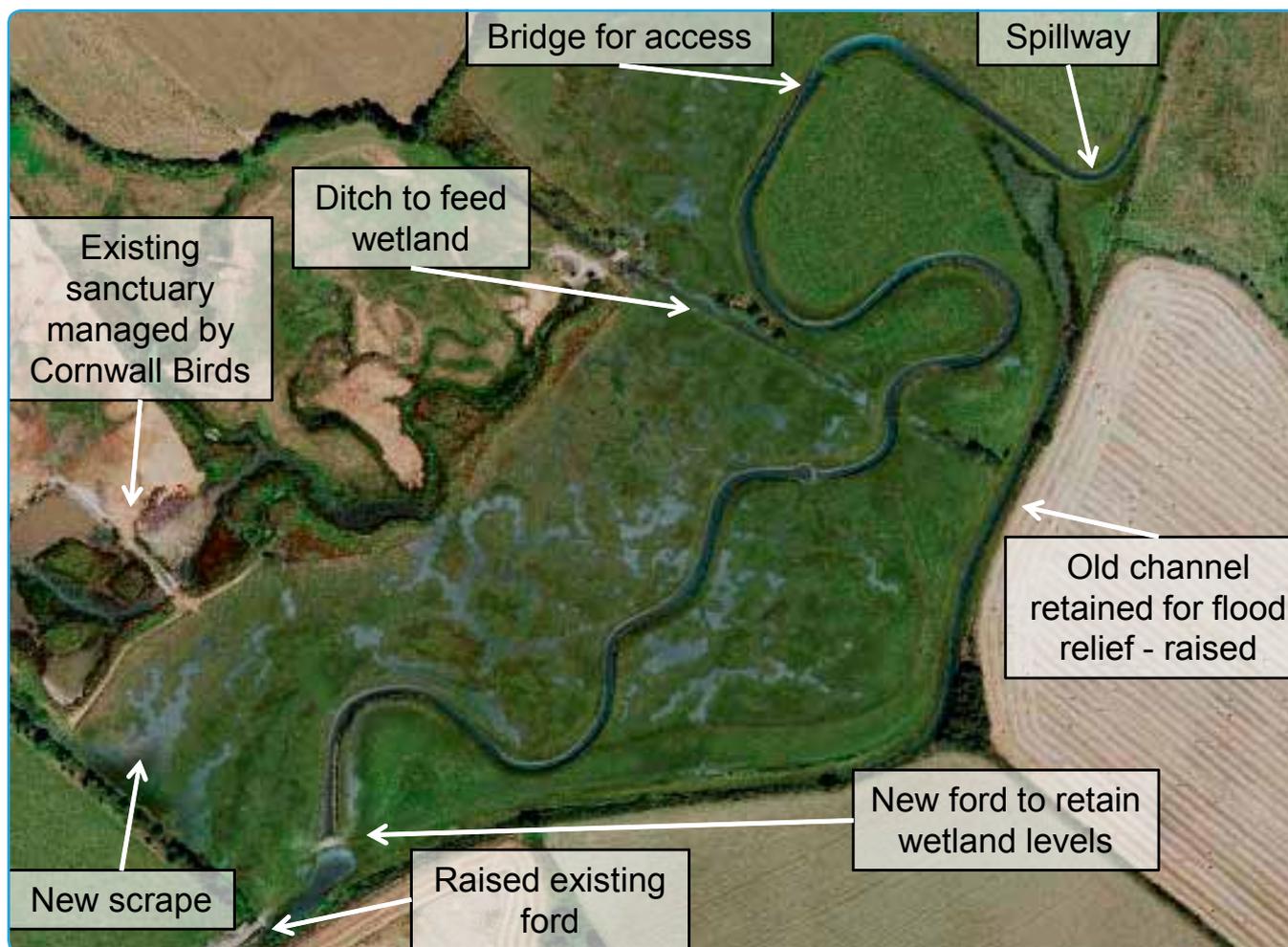


Background / Issues

Amble Marshes is located 2.3 km north of Wadebridge, and covers the floodplain around the River Amble, between Chapel Amble and its outlet into the Camel Estuary. Amble Marshes SSSI was notified in 1951 for over wintering waders and wildfowl and its value as a bird breeding site.

The River Amble has a history of modifications to improve flood defence, including installation of a tidal barrage and river straightening / deepening in the 1960s. This has led to lowered water levels in the Marshes, and a severely reduced frequency of flooding. The quality of wetland wildfowl habitat was consequently degraded.

The aims of the project were to increase floodplain grazing marsh were possible; restore approximately 50 ha marshy grassland and 5 ha of open standing water. These target areas are maintained to support non breeding birds, specifically curlew and lapwing. A secondary target is for improved fish passage at the tidal barrier. The key elements of this scheme can be seen in the annotated plan.



Plan indicating the location of the works. New wetland habitat in relic channels shown using LiDAR imagery
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Step-by-step

Phase 1 (2011)

- The water table was raised through the valley by a series of fish passable structures in the river channel and a flood relief spillway which diverted the River Amble through a new channel in the floodplain.
- To increase standing open water a new scrape within the Walmsley Sanctuary was created using a tilting weir that manages water supply to the existing pools.

Phase 2 (2012)

- Modifications made to the tidal barrier to improve fish and eel passage, including installation of a tidal flap valve.



(1) Low water table prior to scheme, resulting in drained marshes and degraded habitat;
 (2) Raised water levels post-scheme have led to restoration of grazing marsh
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Benefits

- The Amble Marshes SSSI has been returned to favourable condition.
- Valuable freshwater coastal and floodplain grazing marsh has been created in the SSSI.
- The new works will enhance fish passage through the SSSI.
- There has been no increase in flood risk at the nearby village of Chapel Amble.
- The wetland has been enhanced as a recreational resource, with an improved public footpath network and two new bird hides planned.



Aerial view of new habitats created

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Lessons Learnt

- Landowner inclusion and consultation has been key to the success of this scheme, with two landowners now entering into Educational Access agreement with Natural England for guided walks in and around this SSSI.

Project contact: Fisheries and Biodiversity team, South West Region, Environment Agency