

Water Framework Directive Delivery

River Frome Rehabilitation Plan:

Lower Woodsford 2014

Background

The upper reach of the Lower Woodsford Channel has been historically straightened but there are now signs of recovery. The option for this reach is for '*Assisted Natural Recovery*'. Riffles and berms are developing which are improving the channel condition.

Dredging in the lower reaches has removed in channel features such as riffles and glides resulting in a low variety of flow patterns. This also limits the range of habitats and species that the river can support.

A deep drainage ditch had been created in the 1970's running parallel and south to the river for nearly 1800m's. The material this generated was used to embank the river to reduce flood flows.

There's a lack of riparian trees and shrubs in this management unit. Trees provide habitat at the river banks for insects and birds. Trees also provide shade which helps reduce the river temperature creating better conditions for fish.

The majority of floodplain land to the south of the river has been in arable production since the drainage activities. This limits the river corridor habitat value and allows sediment runoff to enter the river affecting in channel ecology. Soils and silts enter the channel covering gravels that Salmon and Trout spawn on, which reduce their reproductive success.

Proposed works will consist of:

- riparian tree planting
- introduction of large woody debris
- embankment removal
- removal of hard bank protection
- ditch reprofiling
- channel and scrape creation

Outline Design

In discussion with the landowner the original outline design highlighted areas of bank regrading, bed reprofiling and bed raising, creation of a new set back embankment and ditch to allow continued arable production.

Up to 11 Ha have been allocated by the landowner as part of the habitat creation. This had been allocated for woodland planting through the English Woodland Grant Scheme.

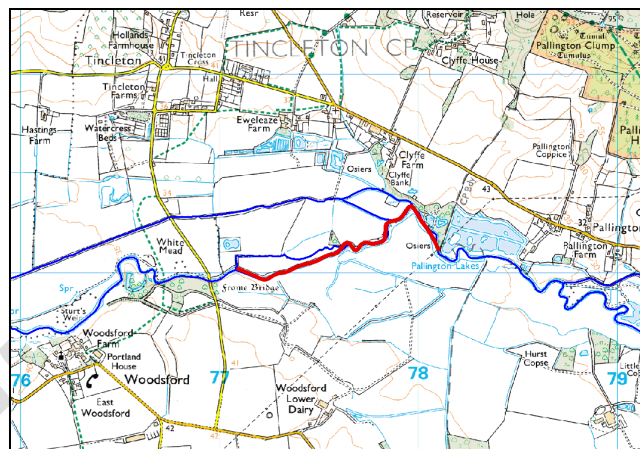
No Planning permissions were required as both West Dorset District Council and Dorset County Council agreed they works came within the EA's Permitted Development.

Detailed Design

Continued discussions with the landowner allowed for an expanded scope increasing the project area to 15 Ha, encompassing all the arable floodplain land south of the river. The requirement for the new embankment and ditch were dropped. The existing main ditch is to be retained but reprofiled creating a more ecologically suitable habitat.

The existing embankment is to be removed where there are no or minimal mature trees allowing greater river and floodplain connection. Most of the embankment material will be used to raise the ditch bed and remaining will be spread on adjacent arable fields.

No bed raising will be carried out again and therefore no gravel extraction is required. As part of reconnecting the river and floodplain a network of floodplain channels and scrapes will be created which will accommodate water during high out of bank flows.



Risks and Management

A pylon within the project area have required discussions and approvals from National Grid.

A geomorphological Assessment and Flood Modelling of the proposals have been undertaken to support these discussions and for FDC.

Monitoring

A range of monitoring will be undertaken including electrofish sampling, biotype mapping, fixed point and aerial photography.

Ecological Mitigation

Pre works strimming has been undertaken to reduce the spread of Himalyan Balsam during the project. The strimming is also helping to mitigate the risk of water vole impacts during the embankment and ditch repfoling activities. As part of this a specific method statement for managing water voles has been developed.

Delivery

Lessons Learned

EA Cost: £90,000 Reach Length: 1800m LWD: 10 Structures Bank reprofiling: 300m

All enquiries about this project and the River Frome Rehabilitation Plan contact Aly Maxwell on 01258 483390 or follow the link to the Environment Agency's website for further information:
<http://www.environment-agency.gov.uk>