

Longwater Lawn and Mallard Wood and Mead, New Forest

Techniques: Meander excavation & reinstatement; Drain blocking and infill

Project location: Longwater Lawn and upstream, near Ashurst

River: Beaulieu

County: Hampshire

Project start date: Late June 2010

Project end date: Mid August 2010

Length: Approx. 1.5 km

Cost: Approx. £150k

Upstream grid reference: SU326086

Site background

Part of the New Forest SSSI, Mallard Wood, Longwater Lawn and its surrounding wet heaths and bogs had been extensively drained, and the Beaulieu River straightened for much of its course, leaving the Lawn SSSI unit in 'unfavourable declining' condition. The watercourse was diverted around Mallard Mead to improve pasture, and later works in the 1960s straightened the 1 - 2 m wide channel by cutting off multiple tight meanders. All these interventions had the effect of reducing the channel length, increasing flow velocities, reducing habitat diversity and, at the diversion, creating an incised channel disconnected from its floodplain. Within the Lawn itself, spoil from the drainage works and the excavation of a flight pond for waterfowl had damaged the integrity of the floodplain.

Objectives

- Increase length, habitat diversity and natural character of channel.
- Minimize disturbance of habitats including lawns and veteran trees.
- Reinstatement original channel course through Mallards Mead.
- Restore water tables in drained bogs within immediate catchment.
- Meet requirements of Verderers and Commoners who maintain and use pasture, including maintaining access and limited drain clearance.

Design

Through Mallards Wood and Mead, the original course, where evident, was excavated to the original bed level, as indicated by a gravel layer. Cross-sections and planform in areas with no remnant channel evidence were designed to mimic natural morphology. Gravels from the existing diversion drain were transplanted to 'seed' the fauna and flora, before the bed of this was significantly raised, with imported gravels, diverting flow down the new meanders. Downstream at Longwater Lawn, meanders to be reinstated were similarly excavated, and cut-off channels blocked with compacted imported clay at the upstream and downstream ends. These were then infilled with a combination of available spoil from excavation and imported hoggin, before being carefully top-dressed with retained turfs. Nearby ditches to be infilled to raise water tables were blocked with staked heather bales on heath and bog, and clay, hoggin and occasionally wood from felling necessary for access, elsewhere. Disturbance of often wet ground by plant was minimized by the use of a tramway (see Warwickslade Lawn case study) and wide-tracked excavators.

Subsequent performance - RRC's views (2010)

The project has successfully balanced the expectations of many stakeholders, and is already naturalizing well, though it too early to assess success fully. A monitoring plan is anticipated, which will provide valuable insight.



Credit:
Dave Morris

Reconnection of a meander on Longwater Lawn - the situation in July (below) and September 2010 (above)



Credit: Dave Morris

Restored (left) and old course (right) at Mallard Mead



the River Restoration Centre Case Study Series

This site was last visited by RRC staff on 6th October 2010

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