Advisory Visit - 27 September 2002

A report on behalf of Wild Trout Trust

Etchilhampton Water
at
Old Rectory, All Cannings, Devizes SN10 3PF

By Jason Lovering & Peter Carpenter

Background and Objectives

Approximately 100m of the Etchilhampton Water flow through the property of the Old Rectory at Old Cannings.

In the past the water has been subject to the occasional outflow from the sewage treatment works upstream. In addition, during the works to rehabilitate the Kennet & Avon canal, chalk washings had entered the stream. The owners advise that these discharges have now stopped.

The previous owner of the property had, some years ago, installed a stone dam at the downstream end of the stream, with a weir overflow approximately 0.8m from the bed of the stream.

The present owners are concerned about the low water flow and the quantities of silt & weed in the stream. The objective for the visit was to find methods of ameliorating these problems and to improve the stream for wild trout.

State of the stream at present

The photograph on the cover of this report shows the main stretch of the stream within the property. The water flow is slow and where the light levels are high, there is extensive weed cover. Beyond the upstream limit of the property, where the stream is overgrown by a thick tree & shrub canopy, the weed is scarce.

The photograph to the right shows the weir at the downstream end of the property. Below the weir, the bed is gravel, with a water depth of approximately 300mm.

Above the weir, the stream has suffered severe siltation. In broad terms, the whole stretch holds approximately 800-900mm of silt above a gravel bed. Approximately 300mm of water flows above the silt.

Just beyond the view of this photograph there is a brick bridge, the span of which indicates that the original stream would have been approximately 1.8m wide. Testing the silt along the stretch shows similar original widths.

The photograph to the left shows the stream below the Old Rectory. The stream is approximately 2m wide with a gravel bed, and a water depth of approximately 300mm. The flow is slow and high light levels have led to significant quantities of weed.

The present owners report that in winter, the water levels below the weir increase by approximately 500mm.

Recommendations

In order for the recovery of the stream to be successful at the Old Rectory, the infestation of weed must be overcome and the siltation dealt with. It is important to note that it is unlikely that the works on this stretch of river and the conditions therein will result in the increased use of the stream by wild trout. Success here will be measured by the re-creation of a flowing stream without significant deposits of silt and infestation with weed.

The owners have already commenced planting trees along the stream to shade the weed but this will not treat the real issue of slow flow. The conditions downstream of the weir show that the flow rate is the critical factor. Downstream, the flow rate is sufficient to prevent much siltation but is insufficient to prevent dense weed growth. This indicates that it is essential to increase the water flow rate: this seems to be possible only by narrowing the channel significantly. However, wholesale narrowing along the length would not provide an acceptable answer. Creation of a series of shady wider (*i.e.* 1.5 – 2m) stretches alternating with narrowed (*i.e.* <1m) stretches along the stream will tend to keep the weed at bay by either shade or water flow rate.

Initially, however, the siltation must be removed. A skilled excavator operator will be able to remove the large quantity of silt with minimal damage to the original profile of the stream banks. This care is extremely important. The depth testing indicated that in places the bank is stepped: retaining the stepped profile may give a narrow channel for low water levels, widening out for higher winter levels. Disposal of the silt will be costly, unless an alternative solution is found, for example the neighbouring farm. After removal of the silt, the entire weir should be dismantled. Use of some filtration medium below the weir should be considered to prevent washing of silt downstream. The two previously separated sections of the stream will then be re-united.

Use of devices, such as chestnut stakes interwoven with hazel, to support soft lengths of bank and to narrow the stream should then be employed.

It is also recommended to discuss the works with the Environment Agency, from whom consent may also be required. We do not believe the stretch to be within the River Avon SSSI but, nevertheless, the Environment Agency may also consult English Nature.