

**RECONNAISSANCE SURVEY OF THE LENNOCH BURN**

**(Tributary of the River Earn)**

**Undertaken on behalf of the WILD TROUT TRUST**

**For the River Earn Improvement Association**

**By Ron Holloway MIFM on the 10<sup>th</sup> August 2001**

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## RECONNAISSANCE SURVEY OF THE LENNOCH BURN

This survey was undertaken by Ron Holloway in the company of the Chairman of the River Earn Improvement Association, Dr Bill MacIndoe, the Treasurer, Mr John Patterson, the Fishery Manager of Laggan Fishings, Mr John Young, and Mr Simpson the landowner.

### OBJECTIVE:

To enhance and restore where necessary the natural instream and bankside habitat that has been lost or damaged through neglect and the effects of excessive alder and willow growths and debris dams. Historically the Lennoch Burn was a well used salmonid spawning burn which was also home for many other natural flora and fauna. Once the restoration work has been completed, the site will be used as a demonstration area to raise awareness and encourage support for further similar work to be undertaken on the many other neglected and habitat poor tributary burns within the River Earn catchment.

### THE LENNOCH BURN.

This tributary burn of the River Earn was historically a very productive spawning and nursery stream for salmon, sea trout and brown trout, local anecdotal information substantiates these facts. Due to neglect over the past 50 to 75 years, the burn has become severely overshadowed with alder and some willow, particularly from the road bridge to the confluence with the main river. Open access for grazing animals under the bankside trees has, in places, severely reduced the natural bankside ground vegetation. The water quality appears to be satisfactory as there are good densities of invertebrates and some salmonid young of the year and a few yearling trout were found to be present.

The burn, as it enters the wooded area has, due to a major woody debris dam forming, altered its course and has now relinquished the channel which runs parallel to the road down to the main river. The new channel is, in my opinion, the natural historic channel route and the stream has now returned itself to its original and required natural channel. It is apparent that the now vacated channel was originally manmade sometime in the past and this is illustrated

by the visible embankment on the north bank which indicates that this was derived from the spoil which was removed to create the channel.

Now the burn has returned to its natural channel it would, in my opinion, be time, effort and money wasted to try to return and maintain the flow back to this channel. The manmade channel will, however, still act as a flood relief at high water levels and should be kept clear of any major debris accumulations.

Where the burn at high flows has broken through due to the big debris dam, it is recommended that a substantial log deflector wall is constructed to seal this gap and divert the water and its energy in high flows along in the required direction. Materials for this work will be readily available from the coppicing work described below. The main stream should be identified and followed down from this construction and all instream debris removed, especially the willow growth that covers the entire stream in one area. There is nothing wrong with willow, but as it is growing here it overshadows and prevents marginal vegetation from growing. Once the light is allowed in the vegetation will naturally recover and start to stabilise the banks of silt (see open area in wood, where bullrush and natural sedge growth has stabilised the banks and provided superb cover and food for young fish, as well as naturally deepening and narrowing the stream channel).

As a guideline for tree canopy removal, at the minimum remove 40% of the cover and up to 60% in some areas would do no harm. The alder trees that make up most of the stream cover appear to be all about the same age, 50 to 60 years approximately, and almost all are multi-stemmed which indicates they were, at one time, regularly coppiced.

It must be emphasised that once the present channel has been fully identified and cleared of debris and the tree cover significantly reduced, then regular checks should be made to ensure this channel is kept clear of debris, particularly after any major or annual flood events. Ongoing maintenance is, therefore, essential if the channel is to be kept open and accessible to spawning fish. In flood times don't worry about the channel overtopping or any of the other lesser channels, which may become blocked, as long as the designated main channel remains open then nature will, over time, maintain it as long as no major debris dams are left to accumulate.

Along the stretch from the road bridge to the end of the field all that is required here is for the tree canopy to be significantly reduced. Concentrate the main thinning out along the south bank, where about 75% removal is recommended. Although overgrazing has occurred, there is little serious overwidening of the stream. Once the trees have been thinned and the banks have been protected by fencing, the natural vegetation will soon stabilise these banks and improve the general riverbank habitat along this stretch which will, in turn, eventually narrow and deepen the channel.

#### SUMMARY OF OPERATIONS:

1. Identify the designated channel from upstream edge of wooded area to confluence with River Earn.
2. Clear channel of debris
3. Coppice alder and willow
4. Select suitable lengths of alder trunks, choose the largest and straightest that can be readily manhandled! Construct alder trunk wall to a height of approximately 6ins higher than natural bank, fix very securely to withstand highest floods and use adjacent trees as “anchor” points. Use any available stone rubble and lay in front of this construction. There is no need to make the wall 100% watertight, just sufficient to divert main flood flows along and towards the right channel and any small leaks will soon be filled with natural debris. Even if the construction does overtop the main energy of the flow will still be directed along the required channel course.
5. Fence both sides of the burn from the road bridge down (see diagram). The width of the buffer strip must be agreed by the landowner (six to nine metres on each bank is the ideal)
6. In the fields beside the burn just downstream of the road bridge, at least one cattle watering access come crossing point should be constructed to allow livestock to pass through the burn to and fro the fields. Again, siting and width of crossing should be agreed with the farmer.

#### COMMENTS:

The Lennoch burn has been neglected for many years but as the water quality appears to be good, illustrated by the invertebrate count and young of the year salmonids being present. The burn offers excellent opportunities for the restoration and enhancement of aquatic and

stream bank habitat for a broad spectrum of flora and fauna, including its use by wild brown trout, sea trout and salmon. The location of the burn affords easy access for the work to be carried out and when completed should become an excellent demonstration area which could be used to promote further similar restoration and enhancement projects on the many other degraded tributary burns within the River Earn catchment.

Consideration could be given to exploring the possibility of recruiting other partners in the project to assist with, not only funding, but supplying volunteer labour etc., for example, Tay Fisheries Board., SEPA., SNH., S&TA., Parish Councils, Town or County Councils, Scottish Hydro, or any wealthy local businesses and/or landowners who fish. Contact could be made with the above telling them all about this project and it may be surprising as to how much help you may get.

It is essential to invite Dave Summers to become involved as advisor and to get the water quality checked and an invertebrate assessment made as well as a stock check before anything is started. Furthermore it would be advisable to obtain written agreement from the landowner for permission to undertake all that is planned, right down to the marking out of fence lines and positioning of cattle crossings etc., and it is suggested that you formulate a simple statement of intent which could be agreed and signed by both parties and be legally approved.

Finally, when the work is completed, it is suggested that a discreet Interpretation Board be erected which is visible from the road bridge to advise the public of the objectives of doing this work.

When this project has been completed I feel confident that the objectives to restore the natural aquatic habitat will increase the use of the burn by more species of flora and fauna, including fish.