

THE SOUTH MEDWIN WATER

LEE & CARNWATH ESTATES

NEWHOLME

DUNSYRE

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Wild Trout Trust Sponsored Advisory Visit Report

Undertaken by Ron Holloway MIFM

April 7<sup>th</sup> 2004



South Medwin Water, Below Newholm House.

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## **THE SOUTH MEDWIN WATER**

This sponsored advisory visit was undertaken by Ron Holloway MIFM (RH Associates) on behalf of the Wild Trout Trust (WTT) in the company of Angus Lockhart (Land Owner) and Dr Alistair Young (Angler and friend of owner) and Dr Willie Yeomans (Biologist for the Clyde Foundation) on April 7<sup>h</sup> 2004.

## **THE OBJECTIVE OF VISIT**

The objective of the visit was to look at the South Medwin Water upstream from the road bridge at Newholm ( marked "B" on map, see appendix 1) to the end of the double bank ownership at Neuk Wood marked "A" on map and to assess present conditions and to pin point and identify the limiting factors that may be controlling survival of resident wild brown trout and grayling. To suggest any habitat work required to protect, enhance and restore quality wild brown trout and grayling habitat which, in turn, may improve the stocks of the wild brown trout and grayling and render benefit to all wild life in general.

## **BACKGROUND**

The South Medwin water at this site has been in the ownership of the Lee & Carnwath Estates for many years and during that time the owners family and friends and members of the local community have fished the bum. There are no records of any stocking. There are no catch records available but anecdotal evidence suggests that wild brown trout and grayling have been taken both up to one pound in weight.

The Medwin Water consists of two tributaries, the North Medwin and the South Medwin both of which rise from springs in the Pentland hills. The topography of the valley at Newholm (altitude 400 ft) is of a flat low gradient floodplain between higher hills that has created a very meandering stream that has migrated to and fro across the valley floor for thousands of years. The flood plain is of fine glacial alluvial deposits and the low hills and drumlins of glacial moraine. There is bed rock visible along the river channel with good sorted gravel's and cobble and

unfixed fines and sediment deposits occurring at intervals in slow flowing reaches. The present and historic land use in the catchment is predominantly grazing for

sheep and cattle with arable fields alongside one bank at the bottom end of the reach inspected.

Water quality appears to be good with several species of invertebrates observed and small shoals of stickle backs and minnow and one or two wild trout were seen.. The burn exhibits typical spate characteristics with heavy erosion in places and signs of heavy flooding at high flows. High water temperatures have not been a problem due to the springs feeding the burn in low water times and low volumes have also not been a problem. Adult holding cover appears to be a limiting factor. There is evidence of permanent areas of healthy *Ranunculus* growths which indicates good water quality and reasonable Ph levels.



**Erosion and over grazing. Neuk Wood.**

## **DISCUSSION**

The reach inspected has excellent opportunities for salmonid habitat protection and enhancement. However some essential prior protection is required in the form

of fencing. The major problem has been caused by years of unrestricted grazing access by sheep and cattle. Much of the indigenous vegetation along the river

banks and in the river margins has and is regularly eaten away by these animals. This in turn reduces dramatically the stabilising benefits of strong rooted plants along the soft river banks and depositing sediment bars. However before any protection work is considered it is essential to ascertain what the present stock of fish is quantity wise and what food is available for wild trout and grayling within in the bounds of the "project site" before any protection/ rehab work .is agreed and commenced.

### **SUGGESTED ACTIONS**

Once it has been agreed that the protection part of the project will go ahead and before any work has been done the following courses of action are recommended. An electro fishing survey to be undertaken by The Clyde Foundation this summer on the reach indicated (between B & A on map) to ascertain the present status of the fish populations within the reach. This survey will also include an invertebrate survey to measure the food availability. Willie Yeomans of the Clyde Foundation is very keen to undertake these surveys and would write up and provide a full report on the results. A control site will also be identified and surveyed, so over time, measurements of the effectiveness of any protection work can then be accurately monitored. Discussions with Willie Yeomans indicate that the cost of these essential surveys would be £750 per day to undertake the two initial surveys. This entails a four man team for a whole day. One day would be required according to Willie. Further monitoring surveys to measure progress will be required either on an annual or biannual basis. These timings should be discussed with Willie Yeomans. The Wild Trout Trust would however consider some funding assistance for this if approached.



### **Erosion and sites for replanting**

The essential fencing would be installed after the initial survey reports have been received. It is suggested that the entire stretch between B&A be fenced off in straight line fencing where convenient. It is not practical to follow the river banks as the meanders make it difficult! Drinking points have to be planned if water access for animals is required. FWAG do have a fencing scheme that will assist farmers to fence off rivers for protection of wild life habitats. Once the area has been fenced then a program of replanting can commence. This would entail planting up all the erosion points and sediment bars along the river banks with native plants. There are excellent sources of natural plants along the site with, for example, reed mace clumps under the Neuk Wood which can be split up and planted along the banks. Also there is a good stock of Burr Reed along the river margins that can be split up and rooted shoots replanted. Any natural vegetation to the valley that can be moved and replanted should be considered. Willow cuttings are excellent. It is suggested that the trees that have already been planted should be pollarded

to reduce spindle growth and encourage trees to bush out. Furthermore as summer goes into Autumn then seed heads from any wild field plants can be collected and randomly seeded along the river banks .

After the first complete year of protection, the second years growth should be such that most of the river banks that are now very unstable will have been suitably vegetated and which will provide improved protection from high flows. Furthermore the insect life that this protected vegetation will contribute to the feeding of the native fish will be quite considerable. The vegetation when established will also overhang the water and provide added shade cover for fish as well as provide insect life for food. These benefits will be monitored by the subsequent annual or biannual surveys that the Clyde Foundation will need to undertake . The control site surveys will also indicate whether the improved stock levels of fish within the project area are a result of the improved reproduction at the site or that the improved conditions at the site has drawn in fish from up and down stream!

There should be consideration given to improving the in stream adult holding habitat by the random placement of clusters of "Two man" rocks in the areas that exhibit little cover and sediment deposits. These rocks to be placed randomly only within the middle third of the channel. No clusters should be placed near the river margins as they could cause severe erosion of the already soft river banks. Finally consideration should be given to fencing off the left hand bank upstream from Newholm road bridge up to the foot bridge below the house, to a distance of at least 10 meters back from the waters edge. The large erosion area here needs planting up but before doing this thought may have to be given to mechanically with a JCB or HYMAC) sloping the bank back to 45 degrees before planting. This will allow for planting to take more firmly and it would reduce further erosion in high flows if the foot of the bank is also protected by a layer of tree trunks set firmly end to end into the river bed and tight into and along the bank foot and the plantings to be placed behind the tree trunks.

Overall, when this project is agreed this site will become a most excellent and valuable demonstration area. It will provide from the surveys, essential proven information and knowledge, and by illustration from the fencing. This work will greatly benefit and encourage future protection and enhancement on the remainder of the Medwin water, and most importantly for similar bums throughout the Clyde catchment and beyond. In my opinion once the aquatic habitat has been protected from the ravages of over grazing, nature will rapidly do the healing. The trout and grayling will positively respond as well as will many terrestrial species of wild life including butterflies and bird life. This site will admirably demonstrate the benefits of protection of vulnerable river banks simply by fencing aided by replanting, allied to the wonderful healing powers of nature.

Ron Holloway

