

Wild Trout Trust Visit to Upper Annandale RAW sites 7/2/2021

Gareth Pedley of WTT and RAW Group visited Adamsholm, Reddings, Oakriggside, Gardenholm and New Cottage sites for an Advisory visit. The day was filmed by Nick Chisholm and attended by Chair and Secretary and in part by Norm Fears and Treasurer.

The main points were

1. Buffer fencing and tree planting is good practice in facilitating riparian ecosystem improvement
 - a. Excluding livestock from the riverbank is generally beneficial as it allows a natural array of herbaceous vegetation to re-establish. It is also vital in promoting natural regeneration of trees and shrubs that are required to replace individuals lost to flood damage or old age – livestock prevents this important process as it is only generally grasses that can withstand prolonged grazing pressure. As a consequence of grazing, many sections of river now support far fewer trees than they should, so giving even a few metres of riverbank back to the river in the form of a buffer strip can deliver massive benefits for bank stability and the ecology of the river corridor.
 - b. Before planting is undertaken, it is worth first ascertaining whether larger scale habitat improvements (like channel restoration) might be possible, with planting then forming an important later stage of habitat improvements.
2. Much of the Annan has been realigned and straightened, including parts of the sites visited.
 - a. Straightening a watercourse increases the gradient and flow velocity, creating a riverbed subject to uniform scour or deposition, depending upon the flow at any given time. Contrast this to meandering channel, where bed scour on the outside of a bend and deposition on the inside, with gravel areas in between, creates a much more varied profile of pools and riffles. It is the variety in these features that are vital in maintaining the natural array of invertebrates within a river and providing suitable habitat for all fish life stages. A bottleneck at any one life stage can greatly reduce the diversity of invertebrate species a river can support and the abundance of wild fish populations.
3. Goat and Grey willow can be planted both to shore up banks and increase flow diversity, also providing valuable low and trailing cover for fish and invertebrates
 - a. Willow can be easily established by driving short whips (sticks/branches) into the riverbanks. The greatest success will be achieved in damp areas. The technique can be undertaken at most times of the year, but the specific methodology can be tailored to maximise the chances of success, depending upon when it is undertaken.

Willow planting is a fast way of increasing cover or providing bank protection, but it should be undertaken sparingly to avoid the creation of a monoculture.

Complementary planting with other native species is usually beneficial.

4. WTT requested that RAW find also find sites where the landowners are agreeable to natural flow regeneration
 - a. It would be great to find sites where the artificially modified river can be allowed to recover naturally, through scour and deposition, or could be restored by more major channel restoration.
5. Pollution still a huge problem in the Annan catchment, with many areas of diffuse pollution suspected throughout the upper river, as evident by incredibly excessive algal growth observed through spring and summer. Point source pollution is a known issue in places and is also likely to be widespread, with issues like poorly maintained septic tanks and direct farm discharges probable.
 - a. Further investigation into the locations of these issues would be highly beneficial.