



**ADVISORY VISIT TO KEMNAY ANGLING CLUB  
STRETCH ON THE RIVER DON, ABERDEENSHIRE  
26 SEPTEMBER, 2008**



**Frontispiece: River Don above Kemnay**

**Undertaken on Behalf of the Wild Trout Trust  
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## **1.0 INTRODUCTION**

Kemnay Angling Club requested an advisory visit by the Wild Trout Trust to their stretch of the River Don, Aberdeenshire, to consider ways to improve the brown trout population for angling. The Wild Trout Trust ([www.wildtrout.org](http://www.wildtrout.org)) was established in 1997 by a small group of people dedicated to the idea that ailing populations of wild trout can be given a helping hand through restoration and conservation of their habitat. It provides practical guidelines and encourages riparian owners, angling clubs and community volunteer groups to instigate habitat projects, not only to protect and improve stocks of wild trout, but also to deliver many gains to local bio-diversity. The Trust (WTT) continues to grow in strength and now operates throughout the United Kingdom and Ireland. An advisory visit was conducted in late September 2008 in company with Ann Baillie and James Mackay representing Kemnay A.C.

## **2.0 BACKGROUND**

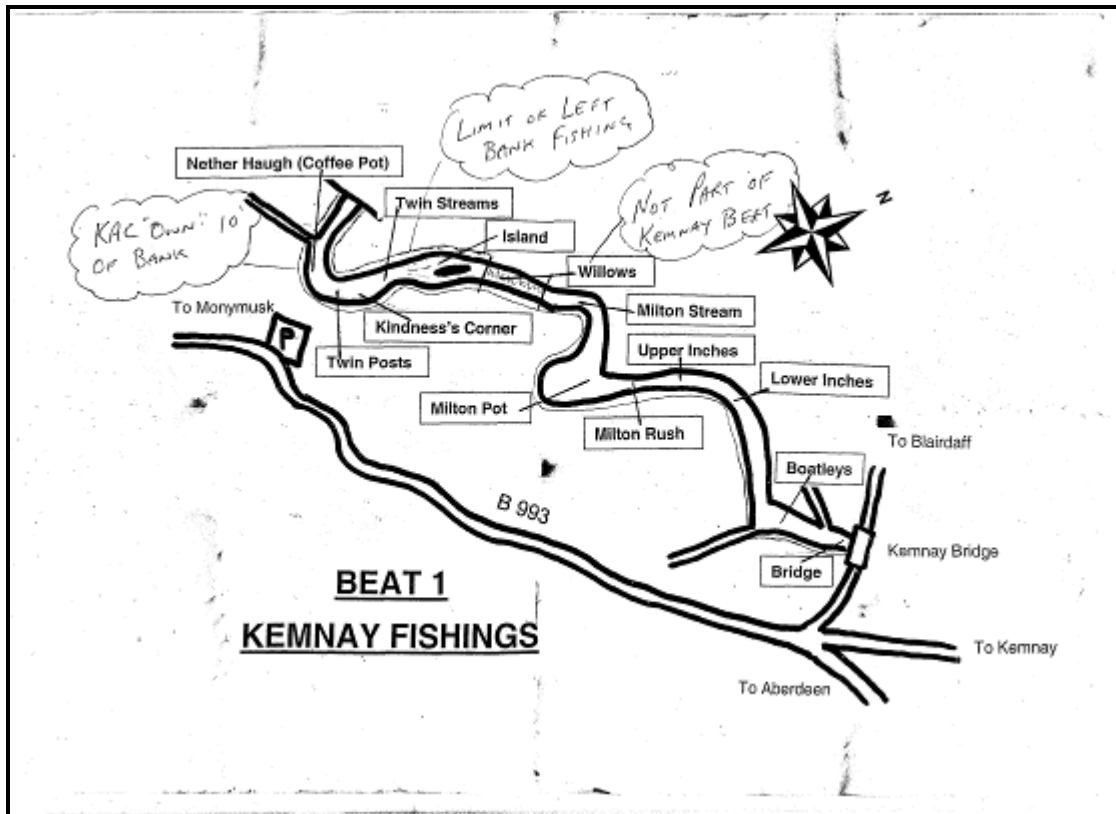
### **2.1 Description of the area**

The River Don is the sixth largest river system in Scotland. It rises at an altitude of 680 metres in the Eastern Cairngorm Mountains in North East Scotland and flows in a generally easterly direction for 120 kilometres, entering the North Sea at Aberdeen. Most of the catchment of the Don is rural, set in rolling, productive, Aberdeenshire farmland. The area has become very popular as a dormitory for commuters to the city of Aberdeen, so there has been a progressive expansion of many of its small communities. Throughout most of the 20<sup>th</sup> Century, the Don has been regarded as one of the best brown trout rivers in Scotland, particularly for dry fly fishing. With the easing of a pollution barrier in the lower reaches from about 1980, it has become a noted salmon river, with an improved run of sea trout. The small town of Kemnay lies in the lower/middle reaches (NGR: NJ732165), a few kilometres above the larger town of Inverurie. The catchment lies mainly on Dalradian metamorphic rocks with large amounts of basic intrusives and a small pocket of Old Red Sandstone. There is high moorland habitat, with 20% forest cover, ranging down through pastoral and cropland in the lower valleys (SEPA website). The river is approximately 25-30 metres wide at Kemnay, where the local angling club has salmon and trout fishing on a stretch of about 1.5 km (mostly right bank) from just above the mouth of the Ton Burn down to Kemnay Bridge. Kemnay is situated at the bottom of a wide floodplain. The river follows a meandering course through open farmland, often grass fields grazed by cattle and sheep.

### **2.2 Management of Don brown trout**

The Don District Salmon Fishery Board is the statutory authority controlling the local salmon and sea trout fishing, but it has no remit for the brown trout at the moment. [*District Fishery Boards working in conjunction with Fishery Trusts and Foundations may become responsible for the management of all freshwater fish species under recent fisheries legislation*]. The main stem of the River Don and its main tributary, the Urie, is covered by a Protection Order, making it illegal for anglers to fish for brown trout and other freshwater fish without written permission. Prior to the granting of the Order, riparian and salmon fishery owners had little incentive to improve their trout fishings, having little legal recourse against visiting parties of anglers who removed large numbers of trout, fishing without a permit and by any methods. Uncontrolled fishing pressure gradually worsened as anglers from more

populated areas of the country where there was less fishing available to them began to travel further afield. The granting of Protection Orders, although controversial, helped to regulate the perceived threat from excessive anglers. Unlike the case with salmon and sea trout, there remains no statutory requirement to report brown trout catches in Scotland. The general lack of catch records for brown trout is a major problem in examining trends in their population status. Trout fishing is widely available on the River Don from private estates and angling clubs/associations, although some is kept by angling syndicates. Kemnay AC permits trout fishing combined with salmon/sea trout fishing on Kemnay Beat 1 by accompanied guests of their members. Visitors can fish on their own for £25 per day or £15 per evening.



### 3.0 ADVISORY VISIT

The river was fairly clear and flowing at a moderate height at the time of the visit on 26 Sept. We began at the mouth of the Ton Burn and walked down to Kemnay Bridge, then inspected accessible parts of the lower and middle Ton Burn, discussing aspects of interest that we encountered.

#### 3.1 Too few rising trout?

The general feeling of club members is that the trout fishing in their part of the River Don has declined over the years and there is a general lack of rising fish. Consequently, few members appear to fish the river for trout nowadays. However, there are no records to illustrate catch and effort trends. Some trout were seen rising in the stream at the head of the Coffee Pot (Nether Haugh) and a small one was quickly caught on a dry fly. Unfortunately, a cool breeze began to blow downstream and the rise stopped and no further fishing was attempted.

### 3.2 Bare banks and shortage of fencing



**Plates I-IV: Views of the upper part of Kemnay Beat 1**

Most of the angling club water on Kemnay Beat 1 has relatively bare banks with few bushes or trees and is showing signs of overgrazing and breakdown of the margins through trampling and general erosion. In consequence, the river is tending to become wider and shallower, although some erosion and silt deposition must be expected as the river channel winds naturally through the flood plain. Lack of protection of the banks from overgrazing by farm stock simply accelerates this process. Only a small section of the upper and middle right bank (looking downstream) is fenced to exclude cows and sheep. Revetment with loose large stones and boulders (Plate V) only provides a temporary protection against erosion and loss of banking, unless a strong mat of riparian vegetation is established at the same time. For this to happen, the banks need to be protected in the first instance by extending the present level of fencing. Fencing would allow the growth of riparian grasses, rushes, bushes and trees. The club has access to fish along the banks but has no authority to erect fencing. Local farmers who own the fields would be responsible for fencing and may be encouraged to undertake more fencing to protect their land from erosion. In recent years, a number of landowners along the River Don have participated in a range of conservation and woodland management practices under Scottish Executive Rural Agri-environment Schemes to conserve and enhance wildlife habitats, including field and water margin management. Improvements in brown trout habitats fit well with



these wider conservation and rural development aspirations. Grants for fencing to protect river banks and create habitat diversity and corridors for wildlife are dependent on availability and priorities of Scottish Government agri-environmental schemes and may not be as attractive to farmers currently as they used to be. On the other hand, in their drive to deliver further improvements in river water quality, as a consequence of the EU Water Framework Directive, SEPA are likely to be sympathetic to the club in their aim to promote bankside buffer strips and may be able to help the farmers find ways to secure funding.



**Plate V: Loose rock and concrete revetment materials which may have been dumped illegally on both sides of the river are only a temporary solution to bank erosion**



**Plate VI: The positive effect of fencing to create a buffer zone of vegetation and provide protection against bank erosion is amply shown in the lower beat and on parts of the left bank (e.g. above Boatleys)**



**Plate VII: Retention of large woody debris is recommended**

### **3.2 Retention of large woody debris**

In view of the relatively scant amount of bankside cover for the most of the middle and upper right bank (there are some stands of willows on the left bank), every effort should be made to retain large woody debris, as shown in Plate VII above. This

material provides additional shelter for trout and helps to break up and deflect the current, promoting bottom scouring and general aquatic habitat diversity.

### 3.3 Croys and boulders

The club has restored a couple of older submerged stone croys or groynes in the lower part of the beat and would like to put in more of these structures further upstream, where the surface flow in the river is relatively smooth and featureless.



**Plate VIII: Submerged boulder current deflector**

The croys act as current deflectors and appear to be working, although some of the boulders or large stones have washed downstream. In order to limit bank erosion that may occur because of redirection of the flow, croys should point upstream rather than downstream so that the water is pushed outwards rather than into the bank. The ones sited near Kemnay are well-sited in an area where the bank is consolidated and less prone to erosion. For further practical information on the siting and construction of current deflectors and sheltering habitat for trout, consult the Wild Trout Trust publication “*A Wild Trout Trust Guide to Improving Trout Streams*” (supplied). For other practical details and examples, consult the Wild Trout Trust website (<http://www.wildtrout.org/>). Another key source of information is “*Managing River Habitats for Fisheries - a guide to best practice*” (undated), prepared by Prof Chris Soulsby of the Department of Geography and Environment, University of Aberdeen and published by SEPA in partnership with Fisheries Research Services Freshwater Laboratory, the Fisheries Branch of the Scottish Executive Environment and Rural Affairs Department and Scottish Natural Heritage. This guide is available from SEPA and from the Fisheries Laboratory at Pitlochry. Club members will be aware that some of the legal requirements and most of the agencies that need to be consulted for river management schemes are different in Scotland from England and Wales. At Kemnay, any importation of new boulders would need to be licensed by SEPA under the terms of the Water Environment (Controlled Activities) (Scotland) Regulations 2005. For obtain further information, the club should contact SEPA and also obtain their “*Levels of Authorisation for Controlled Activities*” available by direct application, or through their website: ([www.sepa.org.uk/consultation/index.htm](http://www.sepa.org.uk/consultation/index.htm)).

### **3.4 Aquatic weed control**

Water Crowfoot (*Ranunculus*) is common on the river bed and a lot of detached fronds and smaller parts were seen drifting downriver. Small patches of plants more commonly found in stillwaters (*Elodea* and *Potamogeton*) were seen in slacker water, but were not considered to be at a problem level. While the *Ranunculus* provides abundant cover for salmon parr and trout and abundant substrate for invertebrates, members believe that its growth has become excessive and it seems to be consolidating and extending in extent rather than being removed by spates. Fish frequently become snagged during playing and the drifting weed festoons fishing lines. Control is likely to be very difficult in view of the relatively large size of the river. The high nutrient status of the Don, exacerbated by fertiliser run-off from agriculture and the eroding substrate of the flood plain, combined with the relatively low flow in the Kemnay area, provide excellent conditions for weed growth. Options to reduce the problem into patches are likely to be restricted to manual cutting, or digging out. These may not be feasible within the resources of the club. Again, SEPA should be consulted before any attempt is made to reduce the amount of weed colonisation of the river bed.

### **3.5 The trout population**

As stated earlier, there are no catch records of brown trout made on the beat, although the perception is that the fishing quality has deteriorated. Rising fish are seen only sporadically. This may be because the trout are genuinely scarce, or perhaps they are just scarce compared with a rich amount of invertebrate feeding available to them on the bed of the river. If there is a scarcity of emerging flies to attract trout to feed at the surface, which seems unlikely in view of the high nutrient status of the river and the large amount of *Ranunculus*, it could be due to changes in fly species composition, or even changing weather conditions. This is not just a comment about the River Don. A lack of rising trout compared with past years is a common complaint of river anglers throughout the country and is often attributed to agricultural practices. It is not clear whether this is a real change, or whether modern anglers are less aware of the natural variation in the seasonal feeding behaviour of wild trout and how best to fish for them.

Changing attitudes to recreational time, competition from stillwater rainbow trout put-and-take fisheries and increased availability of salmon fishing may also be contributory factors in the overall decline of river trout angling. In spite of these possibilities, many anglers who have considerable experience of river fishing are adamant that the fishing is poorer than it used to be.

All of these problems are encountered also on the River Tweed. This prompted the River Tweed Trout and Grayling Initiative (see [www.tweedfoundation.org.uk](http://www.tweedfoundation.org.uk)). Through this initiative, interested individual anglers from Border angling clubs are given simple training in benthic sampling and processing and encouraged to carry out regular flylife surveys. This has proven to be very popular because it gives the anglers hands-on experience of the bugs and creatures under the water and a greater appreciation of the seasonal patterns of flylife abundance and differences in species composition from site to site. Also, it has the potential to highlight unusual absences which may lead back through reporting these to SEPA to eliminating sources of pollution.



Further details of 'DIY' sampling strategies can be obtained from the Riverfly website at <http://www.riverflies.org/> Suitable nets for sampling macroinvertebrates can be obtained from Alana Ecology [www.alanaecology.com](http://www.alanaecology.com) Tel: 01588 630173. The clubs are also encouraged to maintain catch records and put forward members who will regularly report their catches through a log book scheme. Throughout the year there are interclub competitions to provide good information on fishery performance. All the fish are measured and returned alive; some are scale sampled first for age and growth determination. There is some trapping of a few selected spawning burns to help the Tweed Foundation get secure data on spawning strength and growth rates. All of these methods help the Foundation in their assessment of the status of brown trout (and grayling) stocks throughout the Tweed. Some of these ideas may be appropriate and feasible on the Don. It is difficult otherwise to evaluate the quantity and trends in abundance of adult brown trout in large rivers like the Tweed and the Don without good catch records and stock sampling.

A study of River Don brown trout was carried out in the 1990s by Brian Shields for a PhD degree from the University of Aberdeen (Shields, 1996). He found from an analysis of catch records kept by some private beats that the trout fishing quality varied depending on where in the river the fishing took place. Larger/ older trout were more frequently caught in the upper parts where the fishing pressure was relatively low, whereas there were more young trout proportionately in the lower river, where there was more fishing pressure. It is reasonable to infer that fishing pressure is a major factor in older trout survival and that catch and release would favour their chances of reaching a large size, but there could be other explanations as well. The degree of migratory activity of the young trout may be important. Many of the young trout from the upper areas could be moving down to populate the lower ones. The Kemnay AC beat lies in the middle and the source of the trout which populate this section of the river is not known, although most are likely to come from spawning burns further upstream. At least in eastern Scotland, brown trout tend to spawn in smaller burns and less frequently in the main rivers, although they may find some suitably sheltered areas such as in braided channels out of the main flows. Generally, rather few trout fry but often plenty of salmon fry are found during electro-fishing surveys of riffles in larger rivers. Unfortunately, in common with other rivers in north-east Scotland, such as the Ugie, Ythan and Deveron, some of the Don tributaries have been heavily modified by farming and other land-management practices.



**Plates IX&X: Ton Burn lower section**



**Plates XI: Ton Burn below Cluny Castle, still showing straightened shallow channel, lacking in bottom diversity, but at least the banks are well-vegetated and provide marginal cover**

The Ton Burn is the only one of any size that flows into Kemnay Beat 1 and it has been severely affected by drainage. Burns straightened to improve field drainage are shallower and retain far less instream and bankside cover than should be the case. They may still support reasonable numbers of fish, but these are often mainly fry, since there is little depth and cover for older individuals. Some recovery of stream sinuosity and diversity of depth and current speed may occur over time if no further draining is carried out and with this improvement in habitat larger trout may come back. However, the drastic physical changes brought about by channel excavation and straightening are often accompanied by diffuse chemical pollution from intensive agriculture through fertilisers and sprays and occasional point sources such as septic tanks, or accidental spillages of varying nature. Almost certainly, the greatest challenge for brown trout habitat restoration and protection in the River Don lies in the feeder burns, rather than in the main river.

The Ton Burn should be a major potential source of juvenile recruitment for the Kemnay stretch, but is badly degraded at present. Based on a cursory inspection from bridges and other points of access, the banks appear largely to be fenced and are well-vegetated, so that there is good overhanging cover. However, the stream bed is silted and there are few exposed stones and boulders, or spawning gravel. Probably the channel size is wider than it ought to be. We did see a few trout (parr-sized) at each site, including at Cluny Castle Estate, where the burn splits and flows through woodland containing ponds. Judging by the OS map, there could be diversion barriers

to further upstream migration in one channel which may serve the ponds, but another main spur should be clear. Most of the exposed spawning gravel is likely to be in upper areas where the gradient is progressively steeper. The Don District Fishery Board has recently been undertaking a habitat survey of the Don catchment to assist in targeting obstructions to fish movements, sources of pollution etc, but may not have reached the Ton Burn yet. It would be sensible to contact the Board and SEPA to ascertain their views on the status of this burn, whether there are any barriers in it that could be eased or bypassed and any plans to carry out remedial habitat work there.

### **3.6 Brown trout and sea trout relationship**

The biological composition of the Don trout population is likely to be more complex than most anglers realise. In recent times, with the easing of the pollution barrier in the lower river and the decline of commercial netting for migratory fish, the River Don has been improving as a salmon river. The extra migratory fish will have benefited angling catches, but the overall effect of their increased abundance on the brown trout population is unknown. Shields (1996) believed that some degree of negative biological impact would be expected as a result of competition for food and living space. However, salmon and trout have differing habitat and flow preferences and therefore can partition their living space to a fair extent. Also, there could be some genetic influence on the overall migratory behaviour of the Don trout due to increasing prevalence of sea trout (*Although there appears to be a downturn in sea trout survival in many rivers at the moment*). Although brown trout and sea trout commonly spawn together and their progeny are genetically indistinguishable by present biochemical methods, there is research evidence that the tendency in trout to migrate to sea is at least partly inherited. The other main influence is environment. The latest thinking is that the migratory instinct in *Salmo trutta* is controlled by threshold effects acting on combinations of genes. However, even pure crossing of male and female sea trout have been shown to produce a mixture of burn, river and sea trout. This means that the practical outcome in terms of proportions of migratory and non-migratory behaviour of the juvenile stock is impossible to estimate at our present state of knowledge. Perhaps a greater proportion of young Don trout migrate downriver now than before the increase in sea trout access, but we simply do not know.

The trout population is very likely to be largely self-sustaining, although some stocking is carried out by the River Don District Salmon Fishery Board (<http://adaa.org.uk/pdfs/mapspdf/donBoardReport2006.pdf>). The Board distributes trout fry into the headwaters from sea trout and brown trout ova obtained when collecting salmon brood stock at Mill of Newe Weir in Strathdon. Takeable brown trout of farmed origin also are stocked in the lower reaches by Aberdeen Angling Association and some of these large fish (c.1.5 lb) may survive to spawn somewhere, although most fishery authorities would recommend that these fish should be triploids and therefore sterile.

### **3.7 Fishery rules**

Kemnay AC has sensible rules to protect brown trout, with a shortened fishing season for brown trout from 1 April until 30 September and a ten inch size limit, but no bag limit. Catch returns are requested via the fishing permit. There are several very well-constructed stiles across wire fences and little litter was seen. A good working basis would be to try to ensure that most of the trout survive long enough to spawn at least

once before they can be retained. With the good growth rates of trout possible in the Don, that might mean extending to a minimum size limit of twelve inches (300mm) and general concern about trout being scarce might indicate a small bag limit, however it is open to the club to decide on the practicalities involved. The fact that worm fishing is allowed for salmon fishing during June to August when river heights are above a designated level may mean some additional mortality of trout, but the members need to decide whether or not this is acceptable.