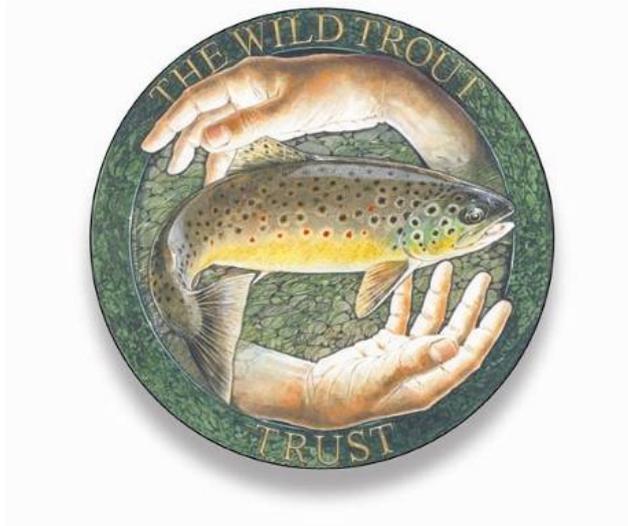
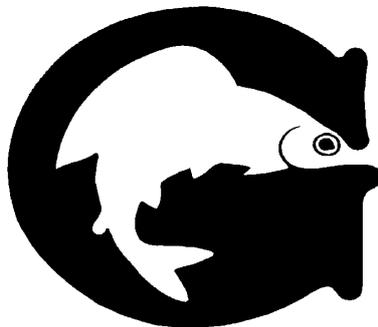


Advisory Visit Report
River Nidd, North Yorkshire
On Behalf of Harrogate Fly Fishers Club
6th September 2007



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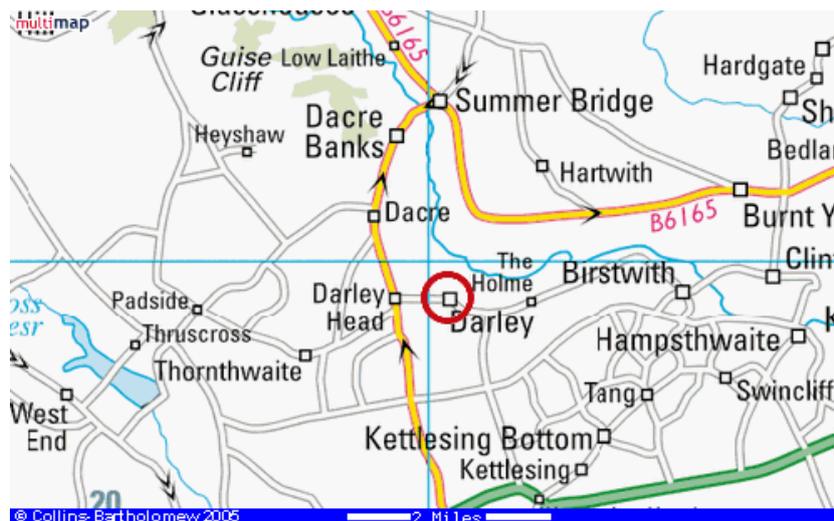
1.0 Introduction

This report is the output of a site visit undertaken by the Wild Trout Trust on the River Nidd, Darley, North Yorkshire on 6th September 2007.

Comments in this report are based on observations on the day of the site visit and discussions with Mr Keith Simmonds and fellow committee members of Harrogate Fly Fishers (HFF).

Normal convention is applied throughout the report with respect to bank identification, i.e., the banks are designated left hand bank (LHB) or right hand bank (RHB) whilst looking downstream.

HFF control 4 miles of mainly double bank fishing of the middle Nidd from Low Dacre Banks stream on both banks to midway between Birstwith (Ordnance Survey Grid Reference 198615) and Darley (Ordnance Survey Grid Reference 223600).



Formed in 1887 HFF have some 50 members paying £220 per annum in subscriptions.

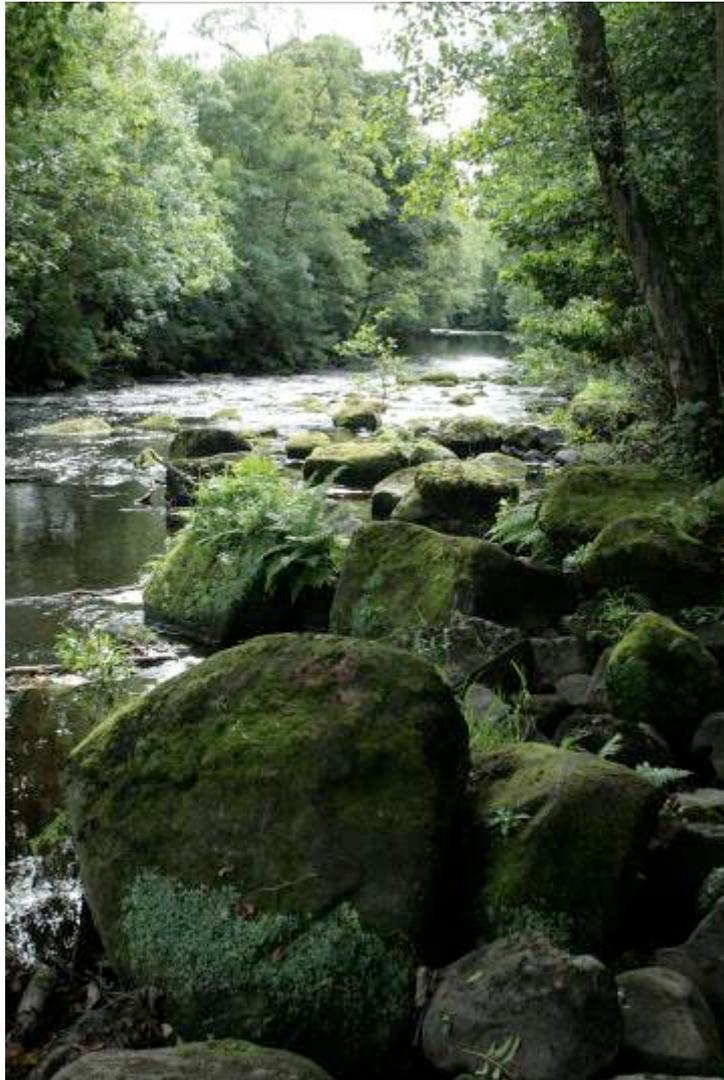
The river contains good populations of both trout and grayling. The Environment Agency (EA) classifies the river as a Native Trout Water under the Trout & Grayling Fisheries Strategy, and consent the annual stocking of some 1000 domesticated diploid brown trout each year.

Catch and release of wild trout is encouraged and a bag limit of two fish per day, with a maximum of six brace per week is a club rule.

The club would like to focus its attentions on improving the wild fishery through sustainable management and habitat improvement projects.

2.0 – Site Description and Issues

The Nidd can be described as a freestone river with a catchment geology of Millstone Grit. The geomorphology of the river is active with an excellent pool-riffle sequence and other in-channel features which include runs, glides, point bars and mid-channel islands.



Good main river habitat

Native broadleaved trees are present. If left un-managed there is potential for some over-shading of the channel. Tree cover is mainly high canopy with very little in the way of understory in the form of boughs and bushes. This type of habitat provides useful cover for adult trout and grayling and is a source of terrestrial invertebrates.

However, there is an almost complete absence of Large Woody Debris (LWD), e.g. fallen trees and branches in the channel. The presence of LWD has been shown to be extremely important in several respects.

- An increase in mean flow, depths and velocities.
- Development of high in-channel physical habitat diversity
- LWD can have significant benefits to the control of run-off at the catchment scale. Woody Debris helps regulate the energy of running water by decreasing the velocity. Thus the 'travel time' of water across the catchment is increased.

LWD is a general term referring to all wood naturally occurring in streams including branches, stumps and logs. Almost all LWD in streams is derived from trees located within the riparian corridor. Streams with adequate LWD tend to have greater habitat diversity, a natural meandering shape and greater resistance to high water events. Therefore LWD is an essential component of a healthy stream's ecology and is beneficial by maintaining the diversity of biological communities and physical habitat. Traditionally many land managers and riparian owners have treated LWD in streams as a nuisance and have removed it, often with uncertain consequences. This is often unnecessary and perhaps harmful to high quality streams such as the Nidd. Stream clearance can reduce the amount of organic material necessary to support the aquatic food web, remove vital in-stream habitats that fish will utilise for shelter and spawning and reduce the level of erosion resistance provided against high flows. In addition LWD improves the stream structure by enhancing the substrate and diverting the stream current in such a way that pools and riffles are likely to develop. A stream with a heterogeneous substrate and pools and riffles is ideal for benthic (bottom dwelling) organisms as well as for fish species like wild trout and grayling

There is widespread growth of Himalayan Balsam (*Impatiens glandulifera*) on both LHB and the RHB.

Himalayan balsam (*Impatiens glandulifera*) is a relative of the busy Lizzie and is known by a wide variety of common names, including Indian balsam, jumping jack and policeman's helmet. It is a tall, robust, annual producing clusters of purplish pink (or rarely white) helmet-shaped flowers. These are followed by seed pods that open explosively when ripe, shooting their seeds up to 7m (22ft) away. Each plant can produce up to 800 seeds.

Introduced to the UK in 1839, it is now naturalised, especially on riverbanks and increasingly in waste places and has become a problematical weed. Himalayan balsam tolerates low light levels and, in turn, tends to shade out other vegetation, impoverishing habitats. In the autumn, the plants die back, leaving the banks bare of vegetation and vulnerable to erosion.



Extensive colonisation of Himalayan Balsam

The area downstream of Darby's Pool has had some recent ground works undertaken to combat bank erosion. The erosion 'nick points' have been back-filled with a variety of material including soil and rubble. This material is unstable as vegetation has yet to colonise. It is anticipated a large proportion of this material will be washed away during spate conditions, this coming winter. Stock is still accessing the river causing this material to slump into the channel and remain unstable.

There are a number of burns entering the main river Nidd. The largest burn is the Darley Beck. HFF officials thought that Hirsch's Beck was also important spawning tributary. However, little is known regarding their suitability as spawning and nursery areas. Observations on the day indicated the presence of suitable gravel habitat, although there may be barriers to migratory trout in the form of fallen trees, etc. Himalayan Balsam has colonised the banks on all the becks inspected during the visit.



Recent bank work d/s Darby's Pool (note: cattle and sheep)



Confluence of the Darley Beck and River Nidd

3.0 – Recommendations

The following are recommendations to improve both the status of the wild trout and grayling populations and biodiversity in general.

It is a legal requirement that all the works to the river require written Environment Agency (EA) consent prior to undertaking any works, either in-channel or within 8 metres of the bank. It may also be a requirement under the Wildlife and Countryside Act 1981 that all proposals are scrutinised by Natural England conservation officers.

Local EA Fisheries and Development Control staff should be contacted at the earliest opportunity to discuss any recommendations arising from this report that the club may wish to pursue.

3.1 – Catchment Issues

The club would like to improve recruitment of wild trout and possibly grayling, and would like to take steps to address this issue. This could be the result of either of poor spawning success, or the subsequent survival of the progeny. Even where there is poor spawning success, good survival of young fish can compensate for this to an extent. All three major lifestages of trout benefit from abundant bankside and / or in-stream cover to ensure a strong population. Observations made on the day of this visit indicate that this vital habitat type is limited throughout the fishery. This is especially true for in-stream cover in the form of LWD.

In all probability there are catchment issues which may be also limiting the production of wild fish. Unsustainable drainage practices in the headwaters of the Nidd may cause the river to become more flashy in nature. This may result in wash out of trout and grayling eggs and alevins out of the system when they are at their most vulnerable during winter floods. LWD increases bed stability and provides a valuable refuge for juvenile life-stages and may help to mitigate the effects of flash flooding.

It would be a worthwhile exercise for the club to understand the status of spawning areas which trout and grayling may use upstream and downstream tributaries. These areas are the engine rooms of rivers and there maybe habitat quality issues limiting them as both spawning and nursery areas.

To this end it is recommended that the club ask the Environment Agency to undertake a fishery survey of the main river and spawning streams. There may also be partnership opportunities with the Yorkshire Dales

Rivers Trust (YDRT) who are embarking upon a similar study on the Ure, part-funded by the Wild Trout Trust.

As a plan of action it is recommended the club takes a holistic approach to managing its fishery. To this end there are immediate actions the club can undertake to improve habitat. It is essential that these are combined with getting involved in catchment issues that will ultimately drive the long term sustainability of trout and grayling stocks in the Nidd.

3.2- Habitat Management / Restoration

The importance of LWD to wild trout and grayling cannot be overstated

The club should adopt a policy of leaving LWD in river unless it is causing significant problems. As a guide the following simple check list has been developed by the West Country Rivers Trust:

1. Is the debris fixed, if yes then continue to 2, if not continue to 5.
2. Is the debris causing excess erosion by redirecting the current into a vulnerable bank? If yes then go to 5 if not then go to 3.
3. Would fish be able to migrate past it (take into account high river flows). If yes got to 4, if no go to 5.
4. **Retain the woody debris in the river.**
5. **Extract the debris.**

Note: If the debris dam needs to be removed but there is still a significant amount of the root system attached to the bank then it is recommended that the stump be retained for its wildlife habitat value and its stabilising effect on

In the short-term the club should 'introduce' LWD

A little and often programme needs to be adopted with regard to tree management on the fishery to achieve a good balance of LWD, light and shade. Willows can be 'trained' to hang over the channel by nicking the trunks and pushing them over.

Arisings from this tree work could be used to install LWD. It is recommended to introduce upstream facing submerged log deflectors

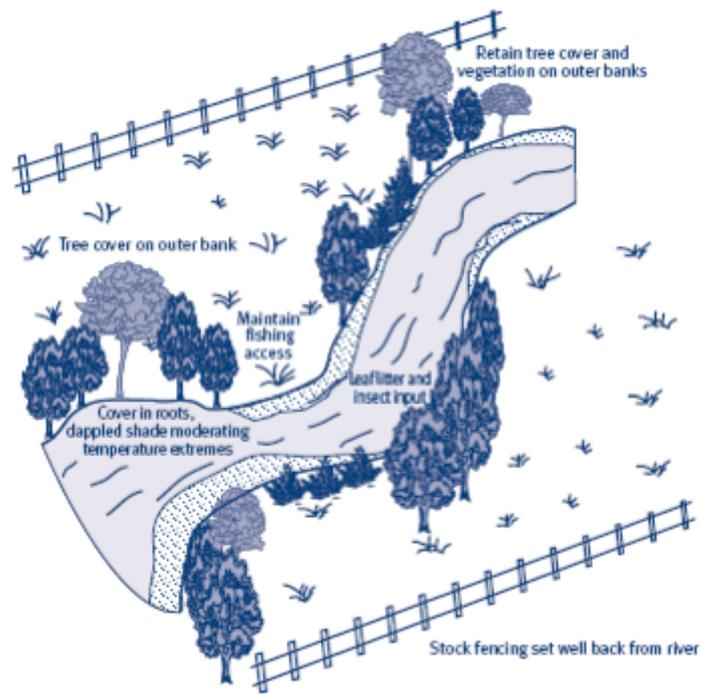
(single or paired) to create localised scour pools in the margins and mid-channel. LWD will need to be securely 'keyed' into the bank and possibly the river bed using posts or rebar and wire to avoid problems of washout. Another option would be to 'hinge' trees, leaving them still connected to stumps, again for added security these can be secured to the bed of the river using posts and wire.



Example of hinged LWD on River Derwent (Co Durham)

A fence should be installed downstream of Darby's Pool as a matter of some urgency. Unhindered access by stock to the river is causing bank-side poaching which is leading to the loss of valuable vegetated margins. It is suggested that a buffer strip of at least 5 metres be created. Formalised 'post and rail' drinking areas can be created to facilitate safe, clean access for stock. The fence should run along the lines of the public footpath which will also keep walkers and dogs away from valuable stock.

The fence line should be placed well back from the bank in a straight line to avoid trash getting caught on wires (causing 'blow-out') during peak flows.



Example of a hypothetical fencing scheme



Example of a post and rail cattle drink

Himalayan Balsam is rapidly colonising both banks of the Nidd. Urgent control measures are required to prevent flowering and if this is achieved before seeds are set, eradication is possible in two to three years.

Chemical control: can use glyphosate or 2,4-D amine. Need to be used whilst plant is actively growing in early spring for best effect.

Cutting/mowing/strimming: cut at ground level using a scythe, before the flowering stage in June. Do not cut earlier as this promotes greater seed production in any plants that regrow. Cutting should be repeated annually until no more growth occurs.

Pulling: shallow-rooted plants can be pulled up very easily and disposed of by burning or composting, unless seeds are present.

Grazing: Grazing by cattle and sheep is effective from April throughout the growing season. It should be continued until no new growth occurs.

The Food and Environment Protection Act 1985 (Control of Pesticides Regulations 1986, as amended), sets out the rules on the use of pesticides to control weeds growing in water or on land. *'Pesticides' includes herbicides as well as insecticides and fungicides.*

Under the Regulations, anyone who wants to use herbicides to control aquatic or bankside weeds must have written agreement to their proposals from the Environment Agency. They must notify the Agency of their proposed programme, including details of the site to be treated, who will be applying the herbicide, and which herbicides they will use.

See:

http://www.environment-agency.gov.uk/commondata/acrobat/wqm1_notes201_1797478.pdf

Lastly, it is vital that angling clubs understand what is happening to populations of riverflies in their streams and rivers. To this end WTT recommends that fisheries register their interest in taking part in the Riverfly Partnership monitoring and training initiative. The initiative aims to support fishing clubs to monitor and help conserve the environment. More details can be found on www.riverflies.org



The River Nidd has considerable potential to be developed and managed as a sustainable wild trout fishery. By undertaking the recommendations outlined in this report it is hoped that HFF will be able to shift towards a wild fishery. To protect wild fish it is recommended that catch and release (C&R) and the use of barbless hooks are introduced as club rules. It may also be prudent to get stocked fish marked to aid anglers with identification of wild fish (C&R). Catch return log books could be introduced to gauge stocked vs wild components of the annual catch in the river that the club controls. The Environment Agency in the Dales Area administers a catch log book scheme.

3.3 – Partnerships

To address catchment issues the club should seek to work in partnership with local EA Fisheries Dept (John Shannon) and the Yorkshire Dales Rivers Trust.

The EA may be able to assist with fisheries surveys of both the main river and spawning streams. This will provide vital information on the structure of trout and grayling populations and will guide future management efforts.

The Yorkshire Dales Rivers Trust was established as a Registered Charity in 2004 in order to provide a concerted and holistic approach to the protection and enhancement of the rivers and catchments of the Swale, Ure, Nidd and Wharfe. (contact Nick Buck: nickg@buck700.fsnet.co.uk)

The Grayling Society's charitable arm, the Grayling Trust awards grants each year for research and conservation projects in the United Kingdom. (www.graylingsociety.net)

4.0 – Making it all happen!

This report makes a series of recommendations that aim to improve biodiversity and the status of the wild trout and grayling populations in the Nidd.

Physical enhancement works could be kick-started with the assistance of a WTT 'Practical Visit' (PV).

PV's typically comprise a 1-3 day visit where an approved WTT 'Wet-Work' experts will complete a demonstration plot on the site to be restored. This will enable project leaders and teams to obtain on the ground training regarding the appropriate use of conservation techniques and materials, including Health & Safety equipment and requirements. This will then give projects the strongest possible start leading to successful completion of aims and objectives.

The WTT can fund the cost of labour (two/ three man team) and materials (max £1800). Recipients will be expected to cover travel and accommodation expenses of the contractor. The use of specialist plant will be by separate negotiation.

Wet-work experts will demonstrate one or more of the following techniques that are appropriate to the site.

- Tree management (coppice, pollard, sky-lighting)
- Tree Planting
- Fencing (Installation & Repair)
- Stream Narrowing (Faggots, Coir Rolls, Spilling)
- Flow Deflectors
- Introduction of spawning substrate
- Gravel Jetting
- Introduction / Management of Woody Debris

Further assistance with project funding can be provided through the WTT's 'Rods for Conservation Scheme'. Clubs typically raise £750-1500 from these initiatives. See www.wildtrout.org for more details.

Note: Recipients should have received a WTT AV and have obtained the appropriate consents from the relevant authorities, prior to arrangements being made to undertake the PV. WTT can advise on this.

Applications for all the above and the Rods for Conservation initiative should be made via [**projects@wildtrout.org**](mailto:projects@wildtrout.org)

Harrogate Fly Fishers should discuss this report with local EA Fisheries Officer John Shannon (john.shannon@environment-agency.gov.uk). The EA will be able to provide further technical advice and possibly assistance with project funding. The club are reminded that all works within rivers and within 8m of the bank will require written permission from the Environment Agency.

5.0 - Disclaimer

This report is produced for guidance only and should not be used as a substitute for full professional advice. Accordingly, no liability or responsibility for any loss or damage can be accepted by the Wild Trout Trust as a result of any other person, company or organisation acting, or refraining from acting, upon comments made in this report.