



**Advisory Visit**

**River Erewash, Toton**

**4<sup>th</sup> March, 2009**



## **1.0 Introduction**

This report is the output of a site visit undertaken by Tim Jacklin of the Wild Trout Trust on the River Erewash at Toton (Derbyshire / Nottinghamshire), on 4<sup>th</sup> March 2009. Comments in this report are based on observations on the day of the site visit and discussions with Mick Martin of the River Erewash Foundation (<http://rivererewashrestorationproject.blogspot.com>), Wendy Adcock of Broxtowe Borough Council, and Joel Rawlinson, Environment Agency Fisheries Technical Officer.

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.

## **2.0 Fishery Overview**

As indicated in a previous Wild Trout Trust visit to the Erewash at Stanton Gate (August 2008), the Erewash is a small river draining a densely populated catchment. It receives well-treated discharges from eight sewage treatment works, but is vulnerable to pollution from combined surface water/sewage overflows (CSOs). The run-off regime of the river is flashy because of the urban nature of the catchment.

There are good stocks of coarse fish present in the river including roach, gudgeon, perch, pike, chub and barbel. Grayling were recently stocked into the river (December 2008) by the Environment Agency, and occasionally trout are caught (see above link to website – 8<sup>th</sup> January 2009 entry).

The section of river inspected was between the footbridge at National Grid Reference (NGR) SK 4923 3444 and the A6005 road bridge (NGR SK 5029 3416). Just downstream of the footbridge there is an overspill weir into a flood relief channel which takes some of the flow away from the main river channel (Photo 1). The flood relief channel rejoins the river a short distance downstream of the A6005 bridge, and for its length forms the boundary between Nottinghamshire and Derbyshire, and also between Broxtowe Borough Council (Notts.) and Erewash Borough Council (Derbys.). The section of the main Erewash here is within Broxtowe and Notts. and there are plans to create a Local Nature Reserve which will encompass this part of the river.



Photo 1 Overflow weir showing main river channel (left) and bypass channel (right)



Photo 2 Overflow weir – view from bypass channel RHB

### **3.0 Habitat Assessment**

The river levels were about 30cm above normal flows during the visit following overnight rain.

#### Main River Channel

The upstream section of the main river channel, in the vicinity of Greenwoods Community Centre, has a meandering plan-form and some good in-river habitat. There is a pool-and-riffle sequence, variation in channel width and depth, midstream islands, gravel shoals and point bars, well-vegetated banks, earth cliffs, and some large woody debris (LWD) in the channel (Photos 3 - 5). It is from this area that the recent captures of trout have been reported.

The overspill into the flood channel is situated in this section, and the weir structure was lowered about 4 years ago to maintain a permanent flow of water over the weir. Previously the weir only over-topped at high flows resulting in fish becoming stranded in the flood channel when flows dropped. Mick Martin has expressed a concern that the reduced flow in the main channel resulting from lowering the weir maybe affecting the quality of the habitat.

In contrast, the downstream section (below the Community Centre and the footbridge at Carrfield Avenue), has relatively poor habitat (Photo 6). The river channel is straight, uniformly wide, and has little depth variation. The banks are steep and there are few trees present apart from one section of hawthorn.

#### Bypass (Flood Relief) Channel

The upstream section of this channel, from the overspill weir downstream, is straight with a uniform width and depth as would be expected from an artificial channel (Photo 7). Below the footbridge (path linking Carrfield Avenue and Cleveland Avenue), the channel shows some more natural features: bends, gravel riffles and side bars, and pools (Photo 8). It may be that, prior to the creation of the flood relief channel, the upstream section of the main river channel and the downstream section of the existing flood relief channel formed the previous course of the river.

The left bank downstream of the footbridge is adjacent to the playing fields and has been maintained (regularly mown and fertilised) as if it were a football pitch (Photo 8). This could easily be changed to an annual cut on a wide buffer strip (10m +), to vastly improve the wildlife value of this river bank. The same comments apply to the right bank of the Erewash main channel on this playing field section (Photo 6).



Photo 3 Good habitat: well-vegetated banks, midstream island, pool and riffle sequence



Photo 4 Gravel side bar and earth cliffs



Photo 5 Large woody debris in the river channel – excellent habitat



Photo 6 Downstream section of the main river channel – uniformly straight, wide and shallow – poor habitat



Photo 7 Bypass channel looking upstream from footbridge – a uniform channel



Photo 8 Bypass channel downstream of the footbridge – more natural river features are present. The mown bank would benefit from a more relaxed maintenance regime.

#### **4.0 Conclusions**

This section of the Erewash has habitat capable of supporting adult trout, as evidenced by their recent capture. There is good instream habitat in the main river channel downstream of the overspill weir, but the lower section of the main channel and much of the bypass channel is artificial in character and poor habitat. Efforts to improve instream habitat should be focussed on the lower section of the main channel (downstream of the Community Centre, especially downstream of Carrfield Avenue). The upstream section of the bypass channel could also be improved. The aim of habitat improvements should be to create more diversity of widths, depths and flow patterns.

#### **5.0 Recommendations**

- Take up the Environment Agency's offer to carry out electric fishing surveys within the Erewash catchment to establish the presence or absence of trout, and their distribution. A plan can then be drawn up



identifying the factors limiting the distribution of trout within the catchment, (e.g. weirs, water quality, habitat availability) and how these can be overcome. A catchment-wide approach to restoring the trout population is required, and improving habitats in areas distant from this stretch (for example spawning areas in tributaries and headwaters) may be necessary to re-establish trout in the Toton reach.

- The straight sections of river could be improved in a number of ways depending upon the resources available. These include the installation of flow deflectors (relatively cheap – could be done by volunteers; Figure 1), the creation of vegetated ledges (berms) to narrow the channel (more costly – would probably require contractors; Figure 2), and re-meandering the channel (expensive – probably only likely as part of a larger scheme, e.g. a flood defence capital project). The River Restoration Centre provides a manual of techniques ([www.therrc.co.uk/rrc\\_manual\\_pdf.php](http://www.therrc.co.uk/rrc_manual_pdf.php)) which have been tried in similar situations and could be adapted to suit this site.

Careful consultation with the Environment Agency will be required during the planning of any in-stream habitat improvements. Flood risk management will be a key concern in this urban environment, and it is likely that a formal assessment of the flood risk associated with proposed works will have to be carried out to the satisfaction of the EA.

The next step would be to get a detailed design of habitat improvement proposals drawn up. This could then be used as a basis for consultation with the EA and other stakeholders including Broxtowe Borough Council, the Friends of Toton Fields group ([www.freewebs.com/friendsoftotonfields/](http://www.freewebs.com/friendsoftotonfields/)), and Nottinghamshire Wildlife Trust. A partnership approach to river habitat improvement is most likely to succeed: aligning plans for the river with existing management plans and creating additional benefits is the way forward.

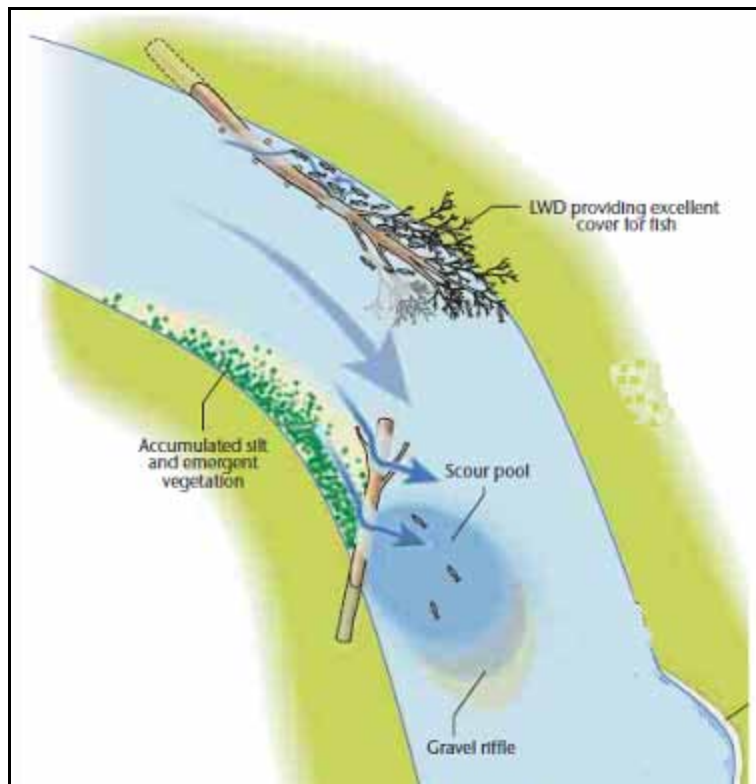


Figure 1 Effects of flow deflectors – creating variation in channel width and depth

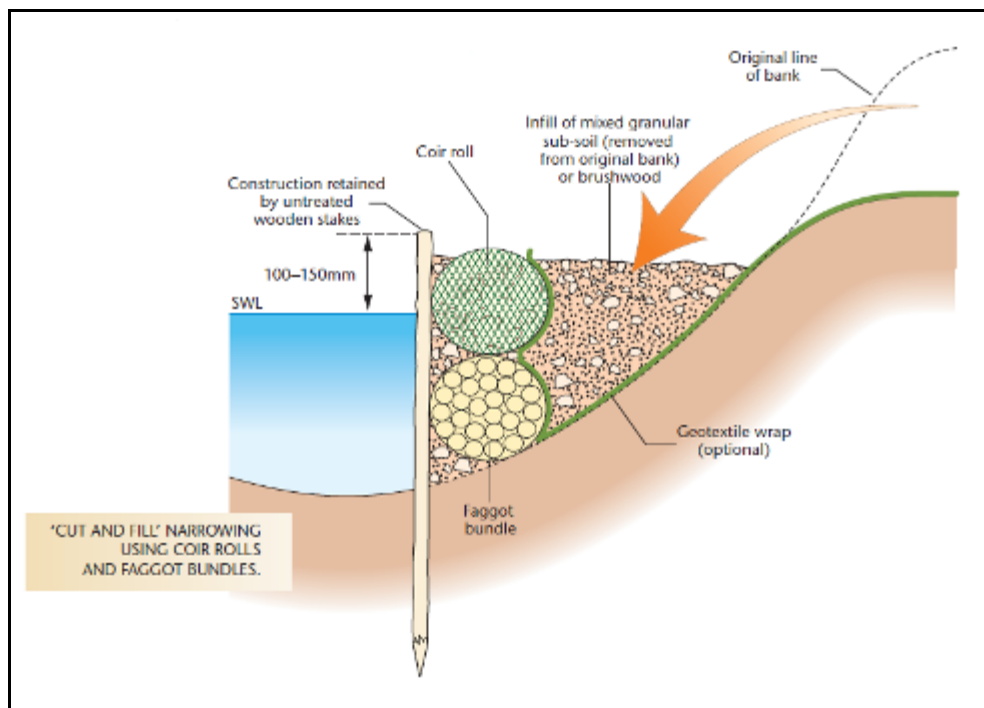


Figure 2 Example of method of creating an marginal shelf or berm



Photo 9 Paired flow deflectors scouring a deeper area in the centre of the channel – these could be used on the bypass channel.

- A draft management plan for the proposed Local Nature Reserve at Toton Fields site has been drawn up by Nottinghamshire Wildlife Trust ([http://www.freewebs.com/friendsoftotonfields/2008-03%20Toton%20Fields%20Management%20Plan%20\(draft\).pdf](http://www.freewebs.com/friendsoftotonfields/2008-03%20Toton%20Fields%20Management%20Plan%20(draft).pdf)). This includes many recommendations which would benefit the river corridor, and it is recommended that instream habitat improvement proposals are developed and included in the final plan.
- Create a wide buffer strip (10m or more) alongside the bypass channel and the river adjacent to the playing fields by changing the mowing regime to an annual cut.
- Take part in the anglers' invertebrate monitoring initiative instigated by the Riverfly Partnership. This will enable volunteers to monitor water quality in the river and provide an early warning of pollution and a deterrent to potential polluters. Details of sampling strategies and training days can be obtained from the Riverfly website at

[www.riverflies.org](http://www.riverflies.org) . Contact Bridget Peacock [riverflies@salmon-trout.org](mailto:riverflies@salmon-trout.org) for further details. Suitable nets for sampling macroinvertebrates can be obtained from Alana Ecology [www.alanaecology.com](http://www.alanaecology.com) Tel: 01588 630173

- Encourage community participation in looking after the river. Liaise with the Wild Trout Trust's *Trout in the Town* project officer, Paul Gaskell, over schemes such as Trout in the Classroom and Mayfly in the Classroom which could be suitable for use in local schools.

**Please Note: 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.**

## **6.0 Making it Happen**

The WTT can provide further assistance by way of advice, support and funding to formulate a worked-up project proposal for habitat improvements and prepare the necessary consent applications.

Applications for the above should be made via [projects@wildtrout.org](mailto:projects@wildtrout.org)

## **7.0 Acknowledgement**

The WTT would like to thank the Environment Agency for its support which made this visit possible.

## **8.0 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.