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October 29, 2004

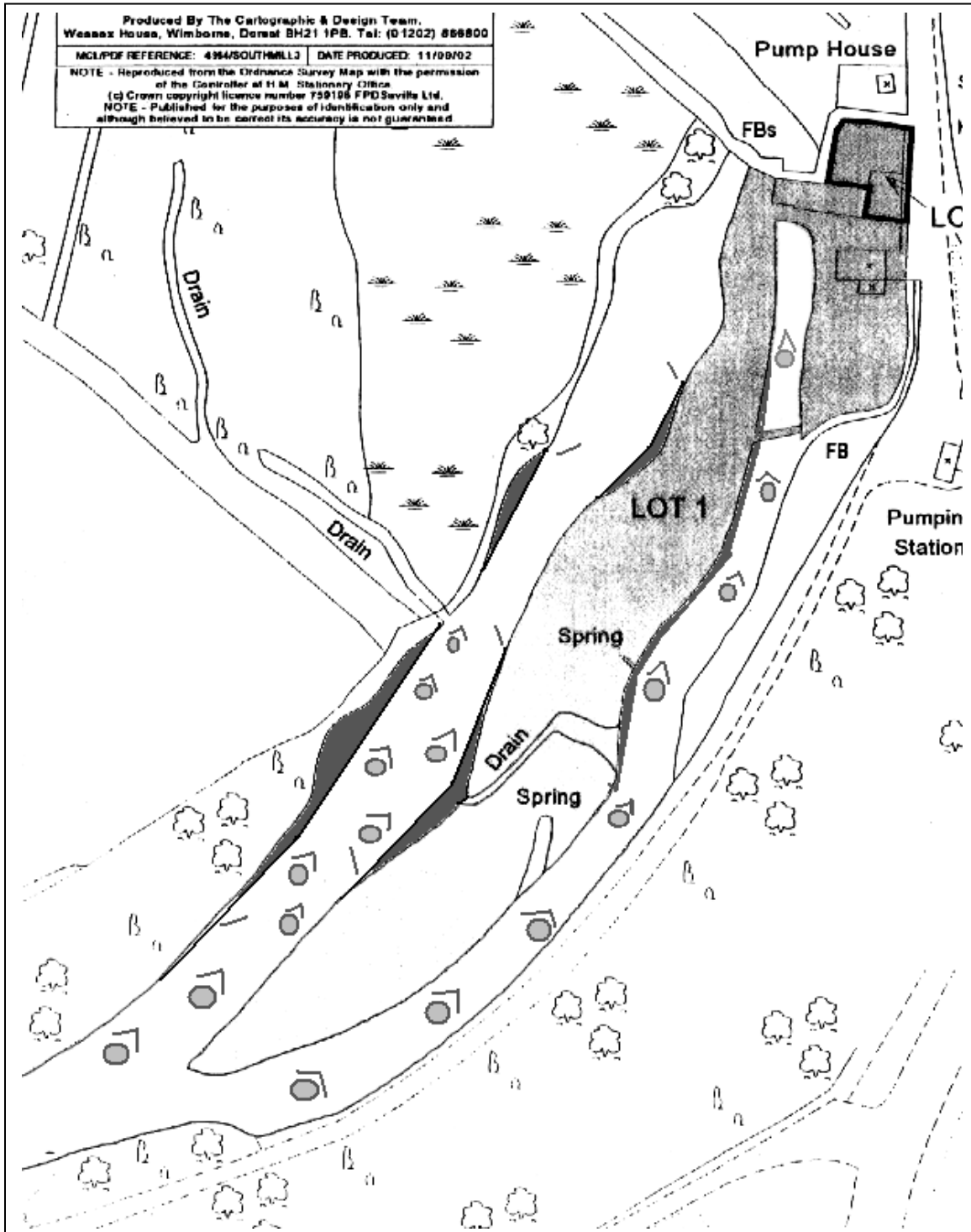
Wild Trout Trust Advisory Visit Report

Summary:

The following actions are recommended:

1. Develop a tree-pruning management plan so as to sky-light areas of river bank and river bed where you wish to encourage the re-growth of grasses / reeds / rushes, etc and in-stream growth of water crowfoot (*Ranunculus*), starwort, etc. Tree pruning should be carried out in winter and useful wood stored out of the flood plain.
2. Use much of the timber pruned from the trees to build low-level, securely-staked bank revetment and deadwood cover features. Alternatively or additionally, further channel narrowing can be carried out by chestnut-staking hazel faggots or pre-planted choir rolls along new lines. Small logs can also be used to build upstream 'V' and other current deflector structures in mid-river (these should be constructed from timber which will not re-grow e.g. ash, oak, beech). In-stream work should, ideally, be carried out in mid-late summer, when banks are driest and water levels at their lowest.
3. De-silt critical areas of spawning gravel with a high-pressure washer so as to produce excellent areas for wild trout and grayling spawning. Gravel-washing should be done very thoroughly, in the right places, in early autumn, after the main fishing season and before the trout start to spawn. Grayling will use this spawning habitat in spring.
4. Remember that detailed plans, drawn to scale, will be needed for Environment Agency/English Nature consents prior to any in-stream work commencing. The consenting process can take up to two months after submission of plans.

Sketch map of fishery with suggested types of improvement

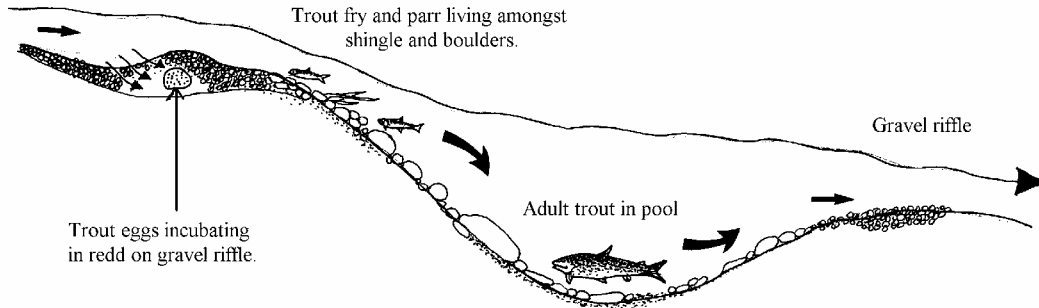


The sketch plan above indicates approximate positions for choir roll installation on the mill stream, channel narrowing on the main river and current deflector construction on both of these channels. A proper scale plan would need to be developed for EA/EN consent.

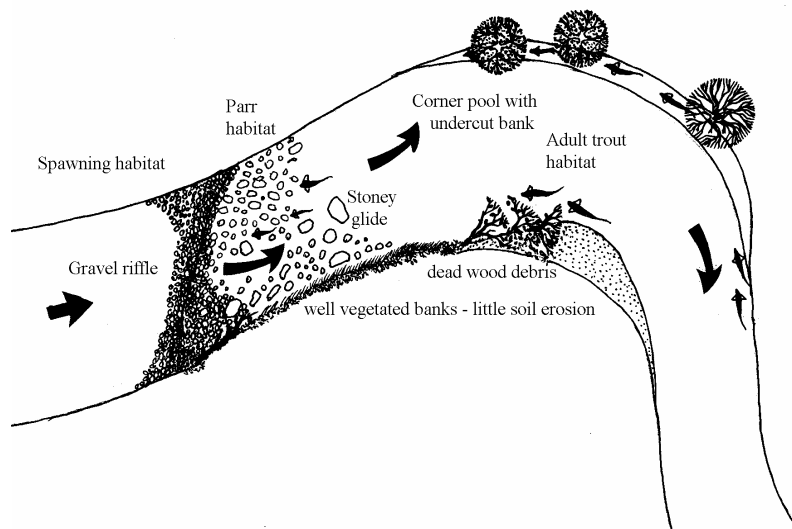
Background notes © Dr Nick Giles.

Wild trout habitat

Brown trout and grayling need good, clean water flows, relatively silt-free gravel for spawning, abundant cover from predators and a nice varied sequence of shallow riffles, weedy glides and deeper pools. The diagrams below show how a short section of good habitat can provide everything a wild trout needs throughout its life cycle:

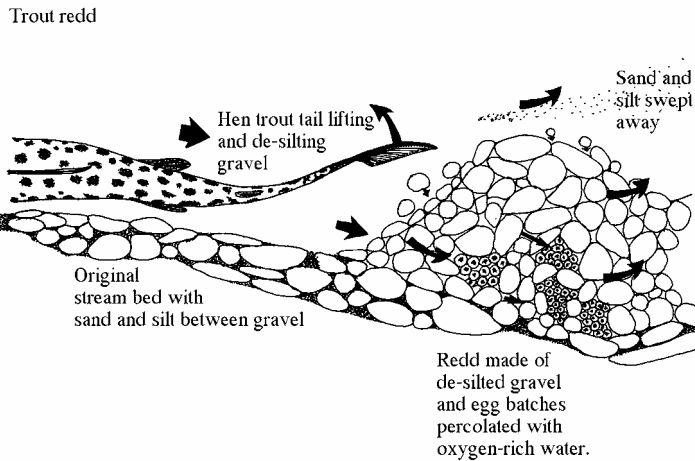


Trout stream riffle-glide-pool habitat sequence



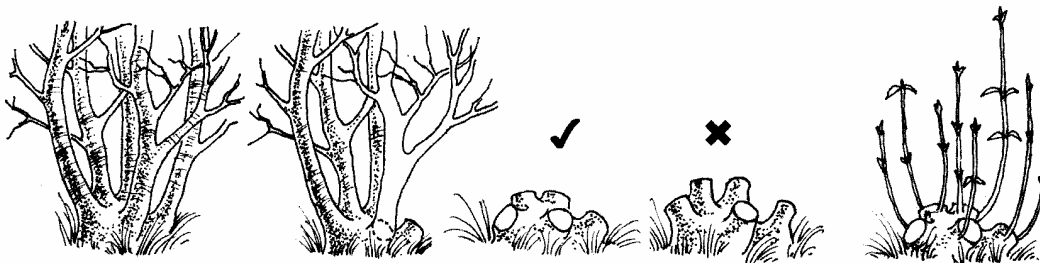
Siltation of spawning gravels

The wild trout stock is certainly being adversely affected by a river bed which is silty and compacted, providing a poor environment for incubating fish eggs. This can be helped by a thorough water-jetting of suitable areas of gravel early each autumn, before the trout spawn in early winter. These cleaned areas will also be of value to grayling, bullheads and lampreys which spawn in the spring. Fly life will also be boosted by the opening-up of the formerly clogged river bed which will be re-colonised by a wide range of aquatic invertebrates. Larger flints uncovered during the water-jetting will be used by bullheads for breeding and for cover and by trout fry and parr for cover. Sediments disturbed during the jetting process will re-deposit downstream in areas such as inner bends where they will produce habitats for various burrowing invertebrates (eg *Ephemera* mayfly nymphs) and for lamprey larvae. Note that it is politic to warn the Environment Agency that this work is being undertaken and to inform downstream neighbours that some discoloured water will, inevitably, come their way. EA/EN consent may be required for this work.



Over-shading

Good coppicing practice:



Old growth

Correct coppice

Spurs too long

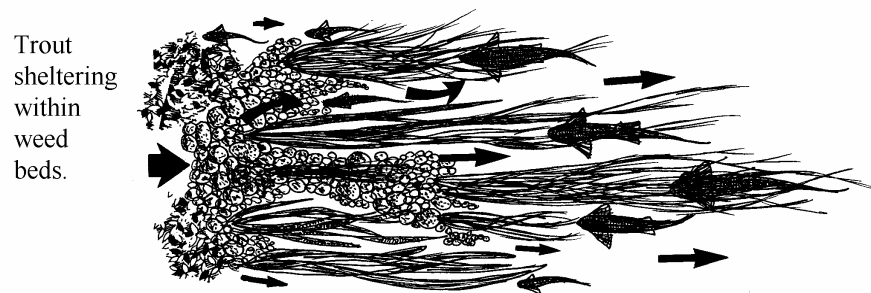
Useful re-growth

When sky-lighting streams which have previously been over-shaded the following points are useful:

- Work on trees when the sap is down in winter. Be very careful not to destroy old trees which are active bat roosts, these are commoner than you may think and are protected by law. Be very careful not to root-out otter holts in old tree root systems. Trunks with owl and woodpecker nest holes should also be left.
- Stack scrap deadwood in quiet corners (out of the flood plain) and leave it as habitat for wildlife. Collect and store useful timber for use in summer habitat improvement projects. If you wish willow to re-grow, for instance as a living bank revetment, it must be re-planted within a relatively short time, before the bark dries out and blisters.
- Work mostly on the shadiest bank of the stream and aim to create a mosaic of light and shade along the fishery. It is far better to develop a sky-lighting programme over a number of years, rather than to try and do the whole thing at once. This both spreads costs and gives wildlife a chance to adjust to changing habitat availability.
- Often, it is best to leave pools well-shaded and to let most light into medium-depth glides and gravel shallows.

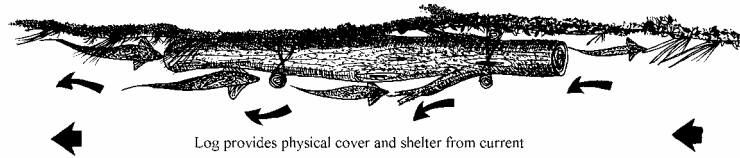
Physical cover

Trout parr (fish of up to a year's age) and juvenile grayling need relatively shallow water with cover from weed beds, boulders or deadwood (logs) staked securely along the margins. Adult trout continue to seek out habitat where year-round secure cover is available.

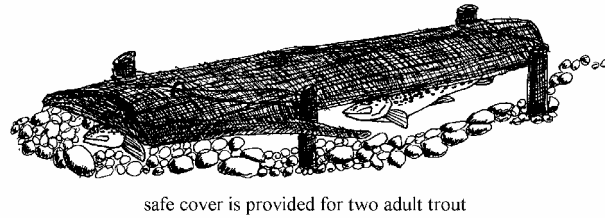


Whilst weed beds offer good summer cover, they die back in winter, leaving fish stocks vulnerable in open water to a range of potential predators. These predators include herons, cormorants, pike, mink and otters. Trout streams with abundant cover hold much higher fish stocks than those where most or all of the dead wood cover has been cleared away. To create improved cover, logs or half logs can readily be pinned close to the bank, leaving a gap underneath them for sheltering brown trout.

Trout using dead wood cover feature - staked close to well vegetated bank.



Half log cover board staked to river bed



The boards / logs will not rot as long as they remain submerged year-round. Prior Environment Agency consent is required for this type of in-stream work.

Nick Giles DRAFT October 29, 2004