

Haverah Beck, River Lune catchment



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Introduction

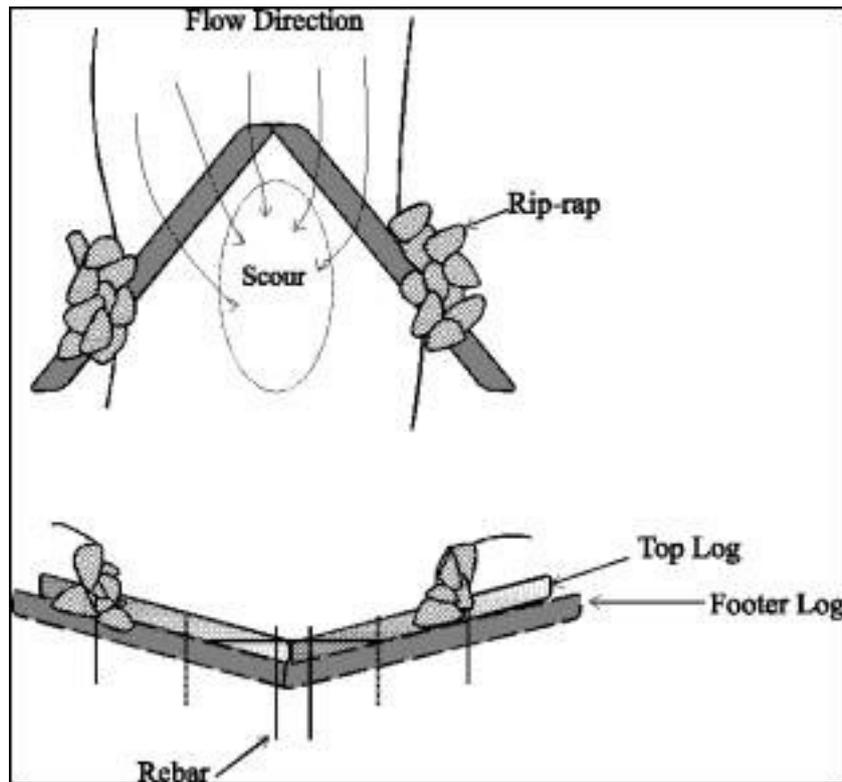
The Haverah Beck is a tributary of the River Rawthey which in turn is a tributary of the River Lune. A section of the beck has recently changed ownership and the new owners at 'The Hill' would like to explore the potential for creating favourable wildlife habitat. They would also like to examine the possibility of creating a small still-water for attracting wild brown trout. The beck has been highlighted for restoration previously by the Environment Agency following a report in 2000, but agreement could not be reached with the previous owner. Historically, the beck was reported to support breeding brown trout and sea trout.

A site visit was carried out at the beginning of July with the owners.

Current condition

The Haverah runs alongside the boundary of the gardens at 'The Hill'. There is a very high presence of Himalayan Balsam throughout the stream corridor. The owners have been controlling this invasive exotic plant by strimming where access is possible and are aware of the potential long term problems caused by this plant. A considerable length of the stream would normally be considered over-shaded due to continuous trees and a very silty stream bed. In this case, I think that the shading is one factor keeping something of a check on the balsam and I would not recommend coppicing until such time as balsam has been removed upstream. If coppiced now, I think that the only plant that would take advantage of exposed stream bed and silt would be the balsam, which is of no advantage to the biodiversity.

The stream bed appears to be carrying quite a high quantity of organic fine sediment. This is reflected in the presence of invertebrates at the site which from turning just a few stones consisted of leeches, snails, midge larvae and caddis. The channel is straight, deep and slow running alongside the gardens and does not offer good habitat at all for salmonid species. In a beck this size, habitat can be recreated quite easily, however, I recommend prudence until such time as the reason for silt build up is established. One or two upstream facing log v-weirs may recreate a basic pool-riffle structure throughout this section without the risk of bank erosion. It would also hopefully mobilise some of the silt and expose natural gravel. Gravel from an external source could be added at a later date if required.



V shaped log weirs are excellent ways of recreating flow variation without exacerbating lateral erosion of the channel. The Haverah is small enough that the logs could just be dug into the bank.

Downstream of the gardens is the newly acquired section of the beck. This meanders through a distinctive floodplain which is currently open to grazing animals and is mixed with a few individual willow and alder trees. There is currently no major impact from grazing although there is evidence of historic damage to the beck. The owners would like to create a wetland habitat through this section. Excluding grazing animals will be easily achieved by fencing along the edge of the floodplain. It is advisable to incorporate a slip-gate as limited grazing at some point may be beneficial for the wetland. Vegetation within the floodplain is likely to flourish quickly but Himalayan Balsam may become a problem. Excavating some scrapes of varying depths within the floodplain will create variation in habitat, including standing water, and is likely to attract all manner of wading birds and amphibians. The Lune Habitat Group have recent experience of creating wetland areas and have access to limited funding for biodiversity projects.



The wetland should be fenced at the top of the floodplain embankment and scrapes constructed to create variation in wetness.

Upstream of the potential wetland area is a small section of the field that may well lend itself to the creation of a large pond. It is separated from the rest of the floodplain by a low causeway and is adjacent to the beck itself. The pond would be off-line, that is fed by a pipe or channel from the beck, and have an outflow back into the beck further down. The creation of a pond would be beneficial for birds and other wildlife. The pond area is not large enough to create a dedicated trout still-water and certainly not large or secure enough to ever consider stocking, but much smaller ponds have attracted wild trout to use them as a 'pool'. In fact, this could be a very important habitat for wild trout migrating up and down the Haverah beck. The pond should be excavated to at least a metre in depth. Soil may be used to secure sides of the pond so that any flooding occurs over the causeway and into the wetland area where it will continue down the beck. This work will require consent from the Environment Agency. A pond in this location is quite likely to fill rapidly with silt, steps can be taken to minimise this but it may be advisable to develop the pond as a second phase of the project after the level of silt has been established and other possible problems addressed. It must be recognised that a pond here is likely to flood and must be regarded as a wildlife pond and stocking of any fish or non-native plants is not to be considered. This must be made clear in initial discussions to avoid requirements for fish screens often imposed on such developments.



There is space to create a wildlife pond but this should be constructed and maintained forearmed with the knowledge that it will flood and is likely to be a silt trap.

Upstream of 'The Hill', the Haverah beck follows the course of the road. The beck is again over-shaded and maintained over-wide in order to reduce the likelihood of the road flooding. Habitat is not great and again the invertebrate population is poor. This section is again particularly silty but improves at Beckside where a handful of trout were observed in a small pool below the road culvert. Above this point the stream habitat is reported to improve significantly. The presence of trout is indication that there is a potential for improvement in the Haverah if suitable habitat is established and water quality can be maintained. There is not much opportunity to improve this section due to the proximity to the road.

At the downstream end of the new field there is a culvert which in previous reports has been identified as both a barrier to migrating fish and the cause of sediment deposition upstream. The culvert was flowing freely on the day of visit and appeared passable to fish. However, it is likely that over such a length of pipe, especially with a bend in it, that water speed is going to become increasingly difficult for fish to pass as flows approach migrating levels. It does appear from anecdotal evidence that sea trout have spawned above the road in previous times but it is unknown at what point the culvert becomes a complete barrier. This culvert has been identified by the EA and Lune Habitat Group as something they would like to improve but the cost will be quite high and requires involvement of several parties. At this stage, it would be useful to inform the interested parties that the landowner is interested in facilitating remedial work in the culvert. Any improvement to the culvert for fish and flows may change the characteristics of the beck upstream and this must be recognised in the planning stage in order for the owners to maintain the habitats that they wish to develop.



The culvert is free flowing and passable at these flows but may be a barrier when fish need to migrate.

Downstream of the culvert, and outside of the in-hand land, the Haverah meanders down to its confluence with the Rawthey. This whole stretch is quite rich in in-stream habitat but is compromised by poor land management. Agricultural stock has access throughout and there are obvious signs of damage. A fence line crosses the beck without a water gate leaving a build up of debris that will be impassable to migrating fish in current flows. The type of remedial work needed to repair this is consistent with that carried out regularly by groups such as the Lune Habitat Group and should be carried out to secure improvements upstream. Work needed would be simply fencing and installation of a water gate. Any way in which the upstream owners could facilitate habitat improvement work will be a benefit to the whole system.



Build up of debris at the fence line has created an impassable obstruction. This should be cleared before fish migration and replaced with a water gate. This whole section would benefit from fencing.

Recommendations

- Himalayan Balsam control is really only possible on a catchment basis. That is, the plant must be cleared from the top of the stream, working down. This will take a minimum of 2 seasons, due to the 2 year seed bank of this plant. This is a daunting task but if not possible on a beck as small as the Haverah, it is not possible at all. This kind of project is best co-ordinated by a catchment restoration group such as the Lune Habitat Group and the owners should get in touch directly.
- Try one or two upstream facing log v-weirs for recreating trout habitat through the garden section.
- Fence off floodplain area and excavate some shallow scrapes for wading birds.
- Open communications with the EA over possible wildlife pond upstream of the wetland area.
- Inform EA and Lune Habitat Group that landowner is interested in facilitating remedial works on the culvert and habitat improvements downstream.

Funding

The Environment Agency and the Lune Habitat Group have previously raised funds for a scheme along the lines described in this report. The original project failed without agreement from the previous owners. Both organisations are likely to be interested in resurrecting the project, but with all projects such as this, it is often an

injection of private funding to part of the work that is likely to make the difference. The owners should make contact with the Lune Habitat Group contact, Chris Littlefield (01524 222174) before progressing work on their own land, as this may be used to lever considerable funds for the rest of the beck which will benefit all parties.

Consents

Some of the proposed work will require consent from the EA. It is recommended to make contact in the first instance with John Cizdyn the local fisheries technical officer who has been taking a special interest in improving this stream.

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