

River Lambourn Walton Way, Newbury Habitat Improvement Report



Action for the River Kennet

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1.0 Project Information

Introduction

This report is the output of a visit on the 14th March 2023 undertaken by Anna Forbes of Action for the River Kennet (ARK) over approximately 320 m of the River Lambourn at Walton Way Newbury, Berkshire.

Upstream grid reference SU480680, downstream grid reference SU482678.

A walkover of the site and a report advising on the issues, suggested improvements and costings was requested by David Ingram, Community Services Manager at Newbury Town Council the owners of the site. Comments in this report are based on observations on the day of the site visit.

Throughout the report, normal convention is followed with respect to bank identification i.e. banks are designated Left Bank (LB) or Right Bank (RB) whilst looking downstream. The walkover assessment started at the downstream end of the reach and worked upstream.

Habitat Assessment & Improvement Options

The River Lambourn at Walton Way forms part of the River Lambourn Site of Special Scientific Interest (SSSI). The River Lambourn rises above the village of Lambourn and flows south east, under the M4 by Welford and through Newbury before joining the River Kennet. The River Lambourn is also a designated Special Area of Conservation SAC. The River Lambourn is an internationally rare chalk stream and is one of the least modified rivers of this type, representing species such as bullhead (*Cottus gobio*) and brook lamprey (*Lampetra planeri*).

ARK's walkover visit on the 14th March confirms this urban reach, although blighted with significant amounts of ongoing littering does have many of the essential habitat components to support healthy populations of wild trout, grayling and pike at all life cycle stages and in addition many other species of chalk stream flora and fauna.

However, there are ample opportunities for habitat improvements, with several areas within the reach that will benefit from the addition of strategically placed large woody debris, to act as deflectors and improve flow diversity; brushwood berms/mattresses and spiling to prevent riverbank erosion, trap silt, improve habitat connectivity; and native planting of a range of marginal plants.

Materials can be 'site won' through some selective tree hinging and coppicing.

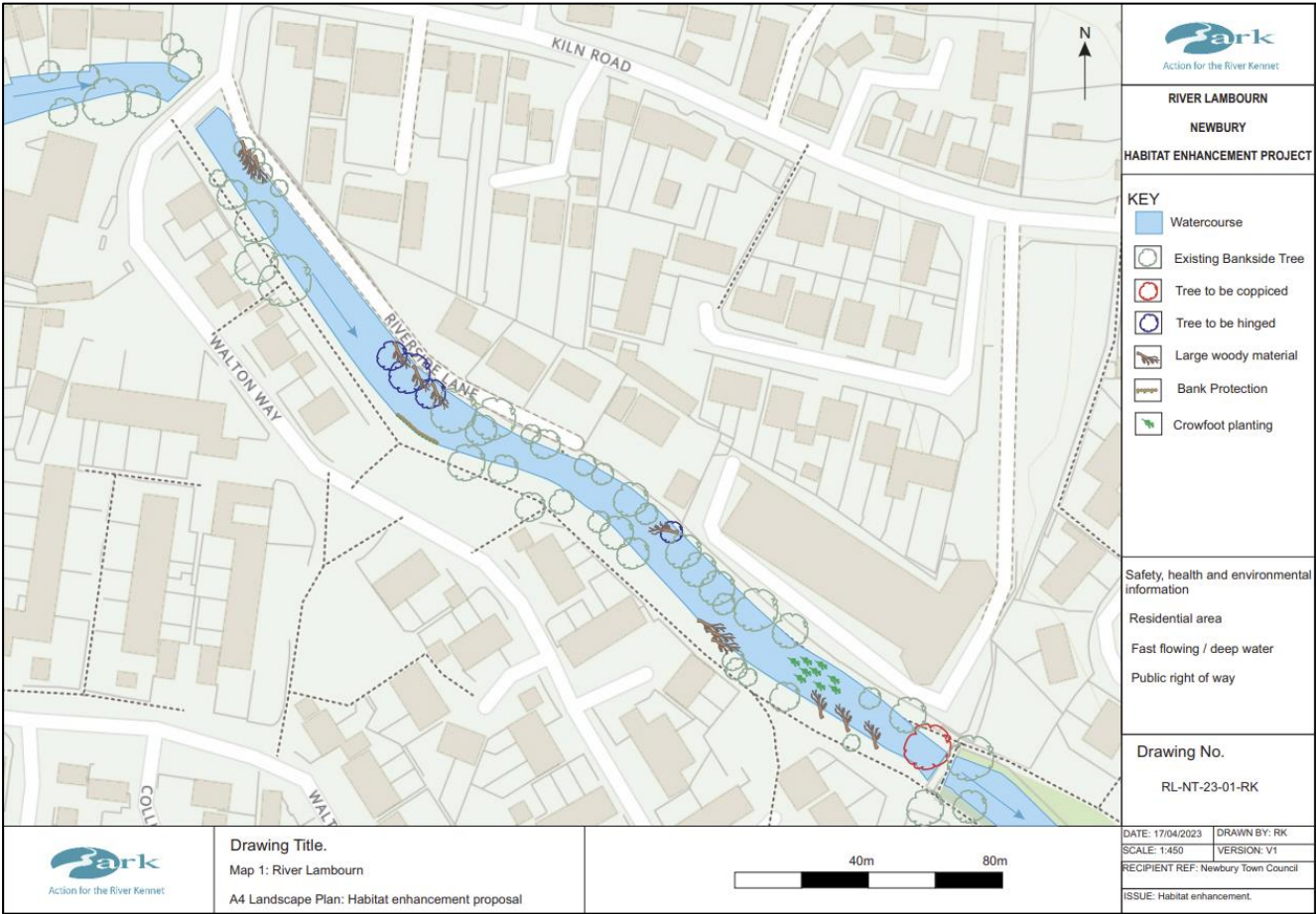
With the exception of the ribbon weed at the upstream limit, the reach lacks favourable aquatic vegetation that you would expect to see in abundance on a healthy chalk stream, e.g. stream-water crowfoot and starwort. It would be beneficial to see if it were possible to establish these desirable chalk stream species at appropriate good flow areas within the Walton Way stretch. Benefits would include improved oxygenation, habitat to sustain high quality supply of prey species for predators, food source for plant eating species, physical shelter for young brown trout and other fish species, and improved flow diversity (holding up shallow waters and provides pockets of deeper water).

An on-going light-touch approach to the management of the river would be beneficial, particularly when it comes to retaining fallen trees and limbs where they are not presenting a flood risk. Leaving fallen trees and limbs in place or adjusting their position and securing them to the riverbed will deliver benefits for the invertebrate population, the wild trout, grayling and many other species that have been observed at this reach. A similar ‘hands off’ approach to the on-going management of the marginal fringes, including well established sedge beds is also recommended. This approach is promoted by the Environment Agency FCRM Asset Management Standards and represents current best practice.

The inclusion and education of the local community alongside partnership working will be paramount to making the project a success and is something ARK has a proven track record in achieving.

Project Plans

Site Plan – Proposed Habitat Improvement Works



2.0 Site Walkover Photos



Photo 1: Downstream limit of the Walton Way reach at the wooden footbridge, image taken from the bridge facing upstream (SU SU482678).

The water level here is high, the LB is barren due to significant shade from the large trees. Increasing light, by coppicing trees closest to the bridge and planting a variety of native marginal plants will prevent erosion near the bridge.

Marginal plants will additionally increase biodiversity, not only for aquatic wildlife but will help support terrestrial insects including pollinators such as butterflies, moths and bees. A more diverse group of native plant species that flower can also make the stretch more attractive for the community. For example, marsh marigold, purple loosestrife and flag iris.



Photo 2: *The flow here is uniform, with some significantly silty areas as well as some clean gravel. ARK recommends installing a series of site won Large Woody Material (LWM) secured to the riverbed, these will act as deflectors that will provide flow diversity, promote colonisation of native emergent flora and provide cover and habitats for fish and invertebrates, without significant loss of conveyance or capacity in the channel.*



Photo 3: *There are sedge beds on both banks, more dense on the LB. These are favourable to the health of the river; their soil binding properties and growth habit means they are excellent at slowing and filtering runoff from the land, trapping sediment that would otherwise reduce water quality and smother the clean riverbed gravels, which are required by brown trout, grayling and brook lamprey for spawning grounds.*

The growth of the sedge beds is naturally narrowing the channel and improving the flow. Sedge beds are ideal places for ground nesting birds, eg. ducks, coots and moorhens.

It is in the muddy root systems of these well established sedge beds that the immature brook lamprey can spend approximately 5 years living before emerging to the clean gravels to spawn.

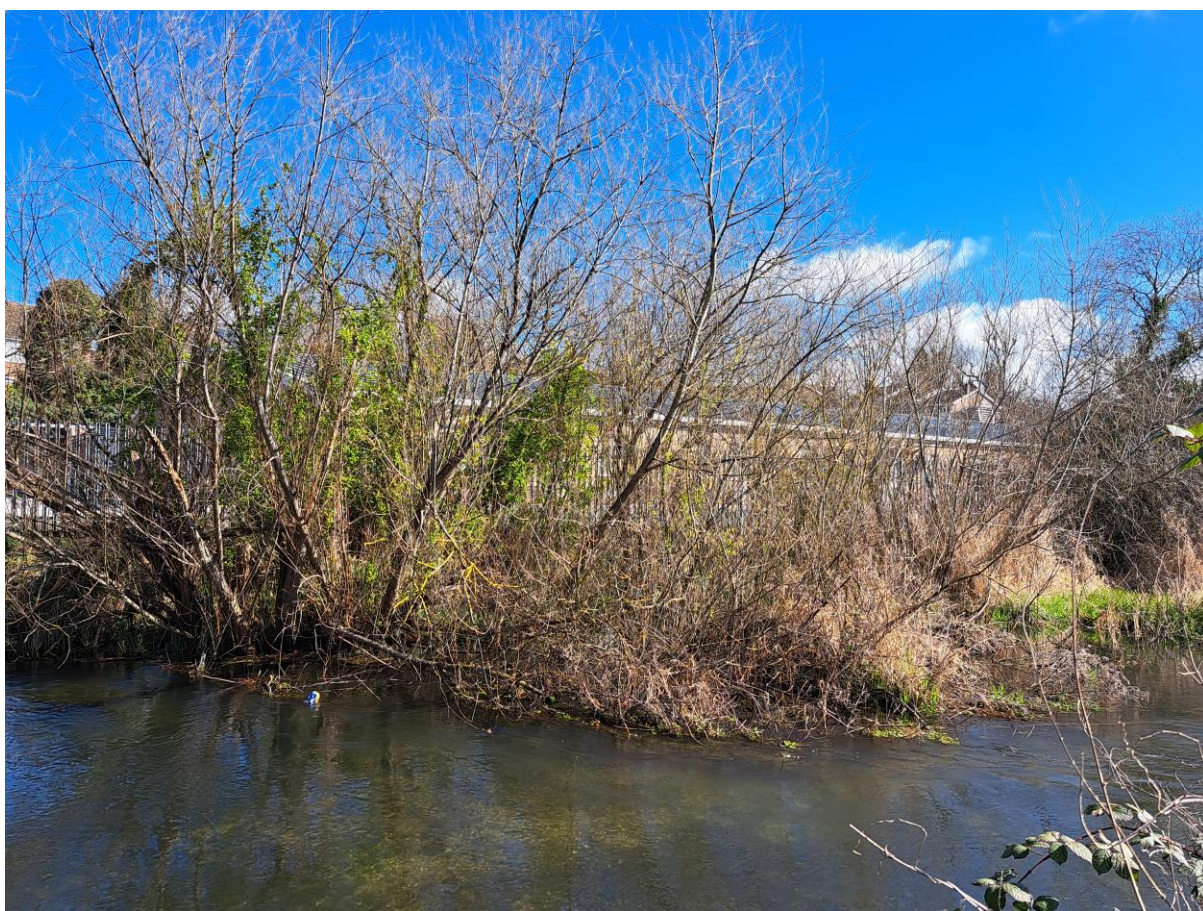


Photo 4 & 5: These images show a good mix of habitat features. The willows and sedge bed on the LB, the bramble scrub habitat on the RB, the clean gravel riverbed, a variety of water level depths and the river meandering to the south.

The bramble cover along the RB margin is providing cover for fish and nesting habitat for bird life, with an abundant food source of fruit for small mammals and birds in the summer.

The well-established hanging cover on the LB in image 5 provides nesting habitat for waterfowl, including moorhen and mallard, it also creates dappled shade for fish. The network of submerged roots is a refuge for fish fry and smaller fish species, for example minnows.

ARK recommends pinning in some large woody material in the channel from the LB to further enhance the diversity of the riverine ecosystem.



Photo 6: Shows a silty area adjacent to the RB. This indicates the channel would benefit from narrowing. In this image facing upstream it is the bank on the left. ARK recommends creation of a brushwood berm/mattress. Materials can be gained from coppicing the trees visible on the LB in the image. Planting up the mattress with a mix of native marginal plants will speed up naturalisation.



Photo 7: There are a lot of willows growing along the riverbank and in summer they will put the river into much shade. A balance of light and shade is desirable, willow also benefits from coppicing. ARK recommends coppicing some of the willows to make a brushwood mattress/berm or hinging some willows to create a more diverse mosaic of in stream habitats and shift the flow around. The woody material will also provide complex cover for fish to avoid predation as well as great habitat for invertebrates.



Photo 8: Along this section of the RB there is a significant amount of erosion and this is having a negative impact on the river. ARK recommends stabilising the bank, this can be achieved through a two pronged approach:

1. Modify the mowing regime to leave 1.5m from the river uncut. The increased root depth will provide better bank stabilisation.
2. Create a rich marginal buffer strip to prevent further erosion, this will also help filter road surface runoff that is currently directly entering the river, impacting water quality and smothering potential fish spawning grounds.

A method to use is a traditional spiling technique of weaving willows or hazel through chestnut stakes then backfilling, securing and planting up with native marginal species such as flag iris which will over time consolidate the bank and increase healthy river corridor connectivity for wildlife.

ARK recommends considering installation of a metal framed or frameless interpretive panel here and increasing litter bins. The panel should focus on how special a chalk stream is, the wildlife to be seen and what that wildlife requires to thrive.



Photo 9: *This area would benefit from either the hinging of tree trunks and securing to create a structure or installing a brushwood berm/mattress for planting up. Either green engineering option will act as a silt trap and reduce the amount of silt present in the main channel.*

Along the whole reach a balance must be struck to retain a combination of light and shade for the river and to maintain a number of perches for kingfisher. Kingfisher were observed during the site walkover.



Photo 10: Upstream limit of the Walton Way reach, image taken from the road bridge facing downstream (SU480680). The water level here is high, with a well established sedge bed on the RB and trees on both banks. ARK recommends sensitive work on the LB willows, which will open up views of the river along the well used public footpath and provide natural 'site won' materials for small planted up brushwood mattresses and the other suggested instream works in this report.

3.0 Project Proposal

Small scale habitat enhancement works, as illustrated in the map on page 3. Estimated costs include:

➤ **Water vole survey in advance of practical works:**

1 X day @ £300 = £300

➤ **Tree / chainsaw works:**

1 X days for 1 X chainsaw operators @ £300 per person /day = £300

➤ **In-stream works installing habitat structures:**

15 X ARK professionally led volunteer days @ £350 per day = £5,250

Posts, wire, fuel = £970

Plants = £2,000

Volunteer PPE = £700

Volunteer refreshments = £300

➤ **Signage & Interpretation board:**

ARK can arrange or can refer you to details for design company and signage infrastructure.

➤ **Project management, including 2 joint community engagement events:**

4 X days of ARK Project Manager time @ £300 a day = £1,200

4 X days work for applications for consents and permissions @ £300 a day = £1,200

2 X joint community engagements events, prep, publicity and comms £600

Total Cost: £12,820.00 (excluding signage design, manufacture and installation)

Making it Happen

If the proposed works and the costs detailed in **Section 3** are approved by Newbury Town Council, the next steps before any works can commence would be to gain the relevant statutory consents which include:

- Flood Risk Activities Environmental Permit (FRAP): ARK would need to apply to the Environment Agency for a 'bespoke permit' to undertake the works. From submission this will typically take between 2-3 months for the Environment Agency to process.
- SSSI Consent: ARK would also need to apply to Natural England to undertake works to the SSSI.

A water vole survey will need to be completed as part of the statutory consenting process and will help inform areas where works should be restricted to avoid impacting water voles.

Because of sensitivities from residents and the wider community regarding this stretch of the River Lambourn we would suggest a valuable exercise would be a simple community engagement plan, consisting of several local and well publicised in person events to present and explain proposed works. Gauging where there is support and conversely where there is concern at the start of the enhancement works will be beneficial.

For example, residents may support hinging of trees into the channel because it will give them more light or they might prefer the shielding that the trees provide.

ARK would need sufficient time to submit FRAP applications for the proposed works, all in-river works would be carried out between end of May – end of September due to the water levels at this reach and to avoid brown trout and grayling spawning season.