



**Bedfordshire
Cambridgeshire
Northamptonshire**

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Water for Wildlife in Bedfordshire

Progress Report for 2017



This report covers the Water for Wildlife work that has been carried out in Bedfordshire this year. It explains how projects have progressed and been developed during the last year, as well as how it is hoped that the work will be taken forward. Current funding for Water for Wildlife in Bedfordshire covers a post for two days per week.

The Water for Wildlife work has been carried out by Lewis Dickinson (Water for Wildlife Officer), Katharine Banham (Conservation Officer) and Gwen Hitchcock (Research and Monitoring Officer) as well as Laura Downton (Living Landscapes Manager) and John Comont (Director of Conservation).

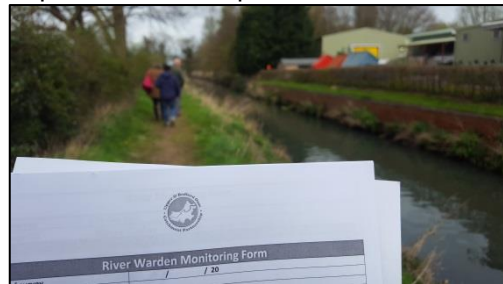
Lewis Dickinson

**The Wildlife Trust for Bedfordshire
Cambridgeshire and Northamptonshire**

River Wardens Scheme

The River Warden Scheme started in the summer of 2017 with an induction and training workshop saw 35 people sign up to the scheme across Bedfordshire. The number of volunteers along the Bedford Ouse and tributaries Renhold, Bromham, and Elstow Brooks, has grown to 32 with three of those volunteers on the River Flit. This amounts to around 33km of river and 18.4% of the area covered by the Water for Wildlife Officer (Bedford Ouse and part of the Ivel Operational Catchments). There are a number of other river wardens looked after by The Greensand Trust and Bedfordshire Rural Communities Charity (BRCC) that currently stands at approximately 20 volunteers.

The river wardens have been providing a steady flow of information about the rivers they monitor. They have so far predominantly provided useful information on invasive non-native species and some early water



quality testing for nitrate and phosphate levels, the invasive non-native Floating Pennywort sightings are passed on to the Environment Agency who currently have a programme of Floating Pennywort removal on the Bedford Ouse. Once the wardens settle into their roles they will then have options of taking on some more aspects that can enhance the river warden role such as fixed point photography and more regular water quality testing.

As the scheme develops and more information is provided projects can be developed to protect, restore, or enhance features of the river to improve its ecology. Within those projects there will be opportunities for the river wardens to be involved in any practical conservation and restoration work.

The sustainable development of the scheme will require careful oversight as to how many volunteer river wardens are taken on. Lessons learned from a more developed scheme in Essex Wildlife Trust was that it is important not to allow the scheme to grow too quickly, beyond what is manageable for staff running the scheme. It is important to manage time effectively between the river wardens project and other projects that operate within the Water for Wildlife remit.

Planned Actions for 2018

Taking the scheme forward the catchment partners who are currently involved will be looking to hold a 1 year celebration event for the volunteers to look back at the achievements of the scheme and see where we are going to take it forward. Ahead of this an annual newsletter will be produced and go out via the UBOCP website to the volunteers. Suitable projects using river warden's data will also be identified as the scheme gains traction.



River Wardens



Bedfordshire
Cambridgeshire
Northamptonshire



Environment
Agency



The
Greensand
Trust



England's quality
water

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Contributions to the UBOCP

Catchment Partnership Meetings

A strategic partners meeting was held on the 9th of October hosted by The Parks Trust Milton Keynes at Campbell Park Pavillion Milton Keynes.

Prior to the meeting an EM River demonstration was held by Mike Nunn from the Environment Agency.

In the meeting updates from each partner were discussed along with any interesting upcoming projects. Use of the new UBOCP project proforma was encouraged, with advice support on how to fill out the form with a project being given by Jon Balaam (Greensand Trust) and Richard Lawrence (Beds Rural Communities Charity).

Pro forma



The Upper and Bedford Ouse Catchment Partnership have put together a project list pro forma that members of the partnership outline some projects to enter into it.

This list enables the catchment partnership to identify some priority projects and also be able to submit projects when funding streams arise. We have written a few entries for the pro forma that we feel would contribute to the objectives of the Water for Wildlife role. These projects aim to achieve one or a mix of: creating some areas of in decline wetland habitat, undertaking river restoration, addressing Water Framework Directive objectives, or helping improve flood water management by

natural flood management.

Planned Actions for 2018

The catchment partnership as a whole wants to develop in participation, engaging with some others who work within the catchment but don't sit on the partnership to have a representative. The WfW Officer is drawing up map of river warden coverage in the catchment to put onto the UBOCP website. The WfW Officer will also work with other catchment partners who are running the river warden scheme to create an annual newsletter for the river wardens.

We are creating a strategic vision document for the river wardens scheme with the aim to give some direction for current and future partners engaging with the scheme.

Himalayan Balsam and Other Non-Native Invasive Species on the River Flit

Himalayan Balsam (*Impatiens glandulifera*)

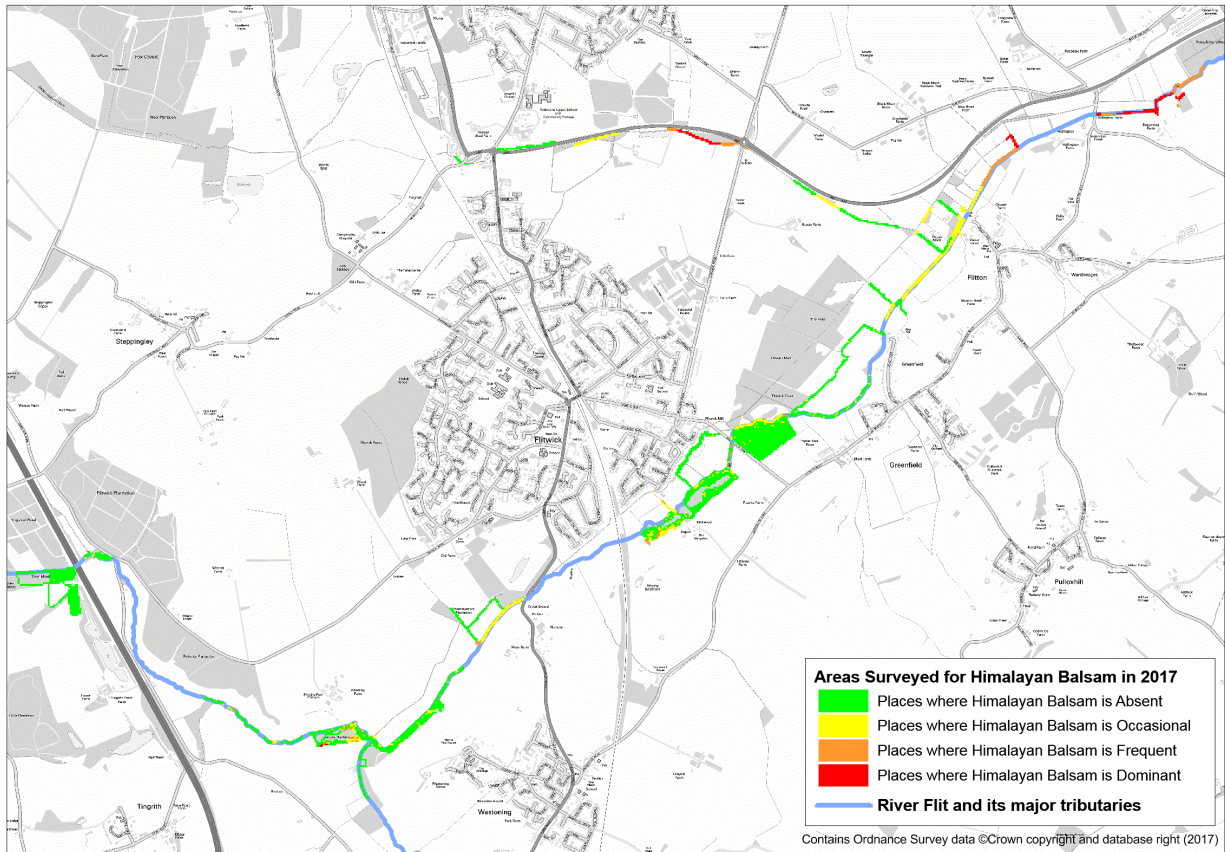
This is an ongoing project which started in 2009 and is proving very successful. This success is in large part due to the project tackling this invasive species from the most upstream point it occurs which greatly reduces re-seeding of previously cleared areas. By working together with other local organisations and landowners the project has been able to cover 12.7km of the river Flit and tributaries plus 40.6ha of adjacent habitat comprising Flitwick Moor Sites of Special Scientific Interest (SSSI), three County Wildlife Sites (CWS), three non-designated areas of woodland, field edges and ditches.

The distribution of Himalayan balsam was along the river Flit was mapped through the project area in June (map below) which shows a similar amount of Himalayan balsam to 2016, and less than in all preceding years. No Himalayan balsam was found along the Eversholt Brook (tributary of the Flit) upstream of the M1 for the second year running, although a few small patches were found in Kingshoe Wood away from the brook. Some areas where recent work had mostly cleared the balsam showed signs of new balsam growth, presumably from isolated plants missed the previous year. Another reason could be that many areas were drier than usual exposing more bare soil for the plant to grow. This highlights the importance of resurveying areas even when they've been mostly cleared as it only takes a single plant to recolonise an area rapidly. Using the results of the survey we can direct clearance work to tackle these areas.

Balsam Warden holding Large Balsam Plant



Funding was secured from the Environment Agency in June 2017 to assist with the removal of Himalayan balsam along the River Flit. This allowed for us to buy in the services of contractors and extra volunteer groups. The contractors were principally used to cover the sparser areas of balsam along approximately 5.5km of the river Flit and tributary through private farmland upstream of Flitwick Moor as well as a couple of small patches of adjacent woodland including Moors Plantation CWS. Wildlife Trust volunteers, including specific Balsam wardens, focused their efforts around Flitwick Moor, Flitwick Manor Park CWS and Kingshoe Wood CWS. Other bought in volunteer groups worked on the River Flit, Running Waters tributary and ditches around Flitton Moor, covering approximately 5.7km and expanding the project area slightly downstream along the river through more farmland as far as Pennyfather's Moors.



Himalayan Balsam found during 2017 surveys

Other invasive non-natives species

A significant amount of effort was again spent by Wildlife Trust staff to remove the three patches of small balsam (*Impatiens parviflora*), at Flitwick Moor. A major concern with this species is the extended growing and flowering season making repeated visits necessary.

Other non-natives including *Crassula* and Japanese knotweed are tackled by other members of the Flit Vale Local Action Group (LAG) and will be reported and discussed during the next LAG meeting.

Planned Actions for 2018

A meeting of the Flit Vale Local Action Group (LAG) is to be held on 12th December 2017 to discuss the combined efforts of members in tackling Himalayan balsam and other invasive non-native species along the valley of the River Flit. An annual report on the Himalayan balsam project has been drafted to be discussed at the meeting. Plans are being made for 2018 which will again be discussed at the LAG meeting.

Water Vole Surveys, Habitat Management and Mink Control

Actions in the Last Year

The partnership (The Wildlife Trust, Bedfordshire Rural Communities Charity (BRCC), Environment Agency, landowners and volunteers) formed in Bedfordshire to operate a series of mink rafts which aim to protect the remaining populations of water voles has been successful. So far several mink have been caught and evidence of another was seen. The volunteers checking the rafts have been contacted regularly to check they are happy and the rafts are being looked at.

In the last year funding from the Environment Agency enabled the partnership to purchase:

- Five additional mink rafts (from Filcris a local company who we have used before)
- Five remote trap sensors (from GSMOutdoorAlert)
- Four trail cameras (Bushnell Tropy Cam HD Aggressor No-glow)

Filcris also donated an additional raft and a trap to the project, which was appreciated. Project members regularly monitor the use of each of the rafts and cameras and assess if their position is still suitable. At present we have four rafts out on the River Flit with another location being investigated and ten along the River Ivel. We currently have a couple of rafts which will be placed as soon as suitable positions become available.

The remote trap sensors have been very useful. They send a message to a trap checker and one of the project co-ordinators when the trap is triggered. This means that rafts with traps in no longer need to be checked daily and can be quickly checked once they are triggered. This is much more efficient and reduces the time any animal could be in the trap for. The first remote sensor was used almost as soon as it was received on a raft close to the Potton Brook. The trap was triggered at 2:59am, checked by the landowners at 6.15am and the mink it had caught was dispatched at 8.30am. A second mink was caught at the same location a few weeks later following a report of a sighting from a member of the public. Two more have been deployed in other locations but have not yet captured mink (despite in one case a mink investigating the trap as shown by a trail camera).



Camera under a bridge at Flitton Moor

The cameras have proved very useful for finding mink in locations where installing rafts was more challenging and where mink seem not to be using the rafts. They have also found other species, for example a Water Rail at The Riddy. Three cameras have been set up along the River Ivel and one has been out on the River Flit at Flitwick Moor and Flitton Moor. At Flitton Moor it regularly picked up otters but no mink were seen at either location.

Planned Actions for the Future

Over the winter the key members of the partnership will meet once again to discuss the rafts which are out, check they are in the best positions and move them if necessary. We would also like to extend the project to cover the Colworth Brook, where water voles were found earlier in the year. If funding becomes available we are keen to continue to cover staff time for some of the project members to maintain support for the volunteers and landowners.

Felmersham Water Soldier

Similar to previous years the Natural England Conservation and Enhancement Scheme (CES) project on the Water Soldier (*Stratiotes alodites*) at Felmersham Gravel Pits has been very active again this year. During the summer we undertook further macrophyte surveys along with targeted macro invertebrate surveys.

In areas where this species is absent or in low numbers, the plant diversity continues to be much higher, strengthening the theory that water soldier smothers out other vegetation. Early indications from the macro-invertebrate surveys indicate that the abundance of many groups is lower in areas dominated by Water Soldier. The impact on Mayflies is the most dramatic, and it is thought that the increase in aquatic macrophyte in areas cleared of Water Soldier has a corresponding increase in mayfly numbers and this may be linked to an increase in other plant diversity.



Water Soldier deposition pile.

Contractors with two specialised boats have spent 2 days removing Water Soldier from the gravel pits. Approximately 30% of the area covered by dense Water Soldier was cleared in this year and over the last 4 years about 80% has been removed. This has continued to make a big difference to the Site of Special Scientific Interest and the response from volunteers and visitors to the reserve has been positive. The locally rare Bladderwort (*Utricularia australis*) and Whorled Water-Milfoil (*Myriophyllum verticillatum*), which had large blooms last year have been considerably smaller this year, a mix of factors including shading and weather conditions may have played a part here.

Hand removal of Water Soldier



be reviewed to ascertain if there has been an impact on the distribution of the water soldier in that area.

A site meeting was held in the early autumn to revise the actions to tackle the water soldier and where it may be best to direct efforts to achieve the most beneficial outcome. It was decided that a new method of removal was needed to contain the water soldier to the main lake where it is present and to attempt to eradicate it from where it had spread, in small amounts, elsewhere. A method of tackling an area and revisiting it a couple of weeks later to remove any remaining roots was decided, this alongside the contractor removal. For this new method an area with a few water soldier plants (10-15) was tackled in mid-autumn initially and revisited two weeks later and will be carried out again next year. The method will then

Planned Actions for the Future

Over the winter the macro-invertebrates will be identified and the reports will be finalised to document the findings of the various surveys which have been conducted this year. Plans will also be made for next year's surveys and removal works. More in depth surveys on specifically Odonata will be undertaken to gain a better understanding of the effect of water soldier removal on population numbers. Continual review of the new method of water soldier review will also be important to identify any impacts.

Training & Events

Invasive Species Local Action Group Meeting

A meeting was held for the Local Action Group (LAG) in December for updates of the last year of the actions taken against invasive species within the catchment. Himalayan Balsam, Mink, Pennywort, and Crassula were discussed at the meeting. With particular reference to the Himalayan Balsam removal on the River Flit, discussions were held as to how the project can be taken forward identifying areas where H. Balsam could be eradicated at its furthest upstream point and actions to tackle areas where Balsam is amongst scrub. The mink project also identified a few key areas to target in the New Year and established a catch up date for January.

Essex Wildlife Trust River Wardens Celebration Event

With the idea that the UBOC partners who are running the river wardens scheme wanting to put on a celebration event for the river wardens one year after the scheme starting, we attended an event the Essex Wildlife Trust put on for their river wardens.

The Essex WT river warden's scheme is well established with a good few years behind it. We attended the event as it was a chance to network and see what kind of event they put on for their wardens.

It was a half day event 10am – 2pm with talks from their WfW officer, River Wardens Officer, an EA Fisheries Officer, and an Invasive Species Project Manager from the Dedham Vale and Stour Valley project. The EA fisheries officer had also brought juvenile live eels to showcase to the wardens.

The event was very informative and well received by the river wardens.

The experience of this event will be used when creating the river wardens event for the UBOC scheme.

Freshwater Habitats Trust Water, Wildlife & Communities Event

We attended an event held by the FHT that was a celebration event for their volunteers who conduct citizen science on watercourses throughout the Rivers Thames and Thame catchments. The evening event was a series of talks from FHT staff as well as two talks from the River Thame Conservation Trust. These talks looked at some of the history of the Thames region as well as the Clean Water for Wildlife project being run by the FHT assessing Nitrate and Phosphate concentrations in ponds and streams in the catchments. The event was well attended and informative whilst fitting into a concise timeframe (6-9pm).

East of England Water Vole Conference

Was due to be held 11/12/2017 but postponed until the new year due to travelling conditions.

River restoration with WTT, Affinity Water, HMWT

A course was put on by the Wild Trout Trust, funded by Affinity Water, at Stanborough Park, Hertfordshire, looking at easy river restoration techniques using nearby woody debris and vegetation. A heavily practical course, the whole day spent in chest waders in the River Lee, the course taught techniques that could be used with or without hand power tools using stakes and wire as supporting materials.

A number of features were created, including: vegetation bundles, woody habitat shelves, fish refuge areas, and flow deflectors. All the features had the additional impact of pinching the river to increase the flow, creating a variety of pools, riffles, and eddies. The increased flow also began to scour away the sediment helping to reveal the gravel bed, providing an additional fish spawning habitat.



A well-attended and informative course, the techniques learned will hope to be applied to some projects designed for Bedfordshire.

Fixed Point Photography

Run by the Greensand Trust, the Fixed Point Photography (FPP) workshop aimed to provide attendees with the current practice of continually taking and processing photographs at a fixed location.

The workshop provided the necessary information of how to manage the photographs and subsequent data effectively to ensure that they could be a reliable source of monitoring of a subject over time.

The event was attended by a few river wardens who expressed an interest in the idea of FPP. Other wardens expressed interest but couldn't make the date so another workshop will be planned.

Providing Advice and Other Work

- Land East of Gypsy Lane at Broom Quarry, Biggleswade, Beds. 7th Dec. (To expand on)
- Advice on SuDs for Bedford Borough Council SPD
- Provided advice from some enquiries on the UBOCP website on areas looking to set up their own river wardens scheme
- Advised an individual on crayfish trapping on the River Ouzel within Milton Keynes
- Native crayfish survey carried out in closed pond situated adjacent to the river Ivel near Stotfold in one of the last known hotspots for the native crayfish. No crayfish were found.

Other Projects

Harrold Odell Country Park

A river enhancement and bank protection project carried out in partnership between Wildlife Trust BCN (Project Lead), Environment Agency, and Bedford Borough Council (Landowner).

The aim of the project is to excavate an old back channel that has silted up and re-profile a bank as well as installing a cattle ramp.

The excavation of the back channel is to recover a feature that was present on maps of Harrold Odell Country Park area in 1900s. The back channel will primarily provide a refuge area for fish and fry in flood events. As a feature connected permanently to the river it will also provide extra variation in available spawning habitat in the river. The excavating of the material from the back channel will be used to create a number of banks on land which will be managed for the benefit of invertebrates.

The re-profiling of a bank further downstream that has been heavily poached by cattle and had some considerable erosion is necessary to help prevent excessive amounts of sediment being washed into the river in flood events. Creation of a formalised cattle ramp will enable cattle to still access the river for drinking whilst protecting the bank from further poaching and erosion.

The project has been designed and is now in the tender stage with consent also being sought from the EA to comply with deposition of sediment within the floodplain. Work on the project will aim to begin by March 2018.

Planned Actions for the Future

Opportunities to provide advice and engage with others come on an ad hoc basis. Screening planning applications and supporting policy statements will continue. Opportunities for more practical river restoration improvements will be engaged with as they arise. Low risk, low cost, but cumulative big impact projects such as installing woody debris or opening up and letting light onto banks will be the types of project that fit into this category.



Lewis Dickinson

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Cambridgeshire and Northamptonshire