

Yorkshire Water Biodiversity Fund
Expanding priority habitats in the Lower Ure Valley
(Tranche 2)

Update: October 2022 to February 2023



**LOWER URE
CONSERVATION
TRUST**



A second tranche of funding has been generously provided by Yorkshire Water for the Lower Ure Conservation Trust's work to expand priority habitats, extending from June 2022 to May 2024. This report summarises work undertaken during the past four months.

Rare plant projects

Greater Water-parsnip



Following consultation with Natural England, Tees Valley Wildlife Trust are hoping to reintroduce this nationally-endangered wetland plant to their Coatham Marsh reserve at Redcar, where it grew till the 1950s. We've offered to try and grow plants for this project, so we have sown seed kindly provided from Yorkshire Water's Tophill Low Nature Reserve in East Yorkshire and planted rhizome cuttings from the Lower Derwent Valley.

Water Germander

In October, we obtained a selection of stolons and two whole plants of Water Germander under licence, from Kingfisher's Bridge Nature Reserve in Cambridgeshire. The species was introduced to Kingfisher's Bridge from a nearby native population, which at the time was one of just three surviving in Britain. Water Germander has flourished there, where there are now estimated to be in excess of 5 million plants!

Our initial aim is to gain an understanding of how Water Germander can be cultivated and how it reproduces. We have sown a small amount of seed and placed stolons in trays of wet sand, in plug trays and in a submerged gravel basket.

Rather like Greater Water-parsnip and Tufted Loosestrife, Water Germander probably evolved in wild river floodplains where river migration and oxbow formation would regularly regenerate new habitats for them to colonise. With a dense crown of freely-rooting stolons, Water Germander almost seems designed to disintegrate into a multitude of water-borne propagules.



L: Water Germander stolons in the nursery; R – herbarium specimens from the historic site on the lower Swale

It's early days as yet but a large proportion of vegetative material has survived over-winter and many stolons are sprouting basal roots.

We've helped the Yorkshire Wildlife Trust prepare a bid for Natural England Species Recovery funding towards re-introducing Water Germander to its historic site at Bolton-on-Swale, now a YWT reserve.

Looking ahead to summer 2023, we've obtained permission to collect propagules of Marsh Pea and Marsh Stitchwort from the Lower Derwent Valley National Nature Reserve, which straddles the boundary between North and East Yorkshire in the Vale of York. We have a single Marsh Pea in cultivation and while there is scope for vegetative propagation, it would be useful to have more genetic variation. This beautiful but imperilled fen plant survives in only five places in Yorkshire and genetic diversity within these very small populations is probably low. It is hoped that seed from cross-pollinated plants could be used to reduce genetic 'bottlenecking'. The Lower Derwent also has relatively large and extensive populations of Marsh Stitchwort, which may offer more chance of obtaining viable seed than other sites we have searched.

We've also applied for permission to collect seed of Rare Spring Sedge, a plant of magnesian limestone grassland, from its local stronghold. Having accrued considerable experience in propagating sedges, we're hoping to establish an ark population of this very scarce species.

Nursery work

A few additional species have been successfully germinated including Parsley Water-dropwort *Oenanthe lachenalia* and Pignut *Conopodium majus*. Bulbous Rush *Juncus bulbosus* and Marsh St John's-wort *Hypericum elodes* were added to our collection of vegetative material. Lesser Marshwort *Helosciadium inundatum* was added to our low-nutrient pool and Water Germander was added to our display of locally extinct and endangered plants.

We've begun work to extend the polytunnel, to create a new area for growing-on seedlings and more delicate plants on benches. This will reduce the risk from the occasional vole and mollusc incursions we experience and allow us more control over the growing environment.

Visitors to the nursery have included more councillors from the recently-constituted unitary authority for North Yorkshire, and Harrogate & District Naturalists' Society. National Trust staff from the Yorkshire Dales visited us in early February to discuss their plans for setting-up a wild plant nursery. We were also able to offer advice on techniques for establishing Bottle Sedge for an erosion control project at Malham Tarn. In our increasing role as a hub for habitat creation know-how, we also provided training for staff from the Woodmeadow Trust at Escrick, who have already established their own nursery.

Pond plants

Four hundred pond plants were provided to the Yorkshire Wildlife Trust in early October, for planting-up recently-created amphibian ponds at Pickering Low Carr Farm. We're continuing to work with YWT by agreeing in principle to supply 'pond packs' of 100 plants, designed to create optimal habitat for amphibians and other wildlife. These would be supplied for ponds created using funds generated by Natural England's District Level Licensing scheme.

We are currently (early March) awaiting the excavation of a facility for growing submerged aquatic plants.

Flasks Fen

Planting continued apace at Flasks Fen throughout October. Based on the outstanding performance of Great Fen Sedge in our monitored transect, we've planted this species throughout the northern 'wet' fen area, with around 3,000 one-litre pots or large plugs planted. Once this establishes, Flasks Fen will represent the largest area of Great Fen Sedge swamp (coded S2 in the National Vegetation Classification) in Yorkshire.

Inland of the Great Fen Sedge zone, we reinforced existing planting and replaced plants eaten by rabbits. Species planted here included Greater Spearwort, Great Water Dock, Purple Loosestrife, Cyperus Sedge, Greater Tussock Sedge and Tufted Sedge. Reinforcement planting in the fen meadow enclosures has included Purple Loosestrife, Ragged Robin, Meadow-rue, Meadowsweet, Purple Small-reed, Long-stalked Yellow Sedge, Carnation Sedge and Glaucous Sedge.

Fencing has been re-organised throughout the northern part of Flasks Fen to exclude rabbits more effectively. So far, this seems to have worked! We've also reduced bramble cover on adjoining slopes to discourage rabbits.

Rising levels in Flasks Lake in November and December saw water standing on Flasks Fen for the first time in many months (see cover photo), a welcome return to wet conditions.

In spring/summer 2023 we will be monitoring the fauna of Flasks Fen to see if specialist invertebrates, birds and mammals are making use of the newly-established habitat. Over the winter months, Cetti's Warblers have been much in evidence in the more mature stands of reedfen planted in 2018: although increasing in North Yorkshire, this characteristic fenland songbird is still scarce this far north, so this is a rewarding result.

Wave-damaged planting enclosures on the north and west shores of Flasks Lake were repaired and re-stocked with Common Reed in the autumn. Two small embayments on the southern shore were fenced and planted with reed to create pockets of emergent vegetation.



Flasks Fen in January 2023

Reedbed Fen

A berm at the southern end of the Nosterfield Quarry reedbed was identified as a fen creation site due to favourable water levels and landform. The berm is expected to be shallow-flooded in the spring and summer months (when water levels are raised to provide optimal conditions for reedbed birds) and close to the water line in autumn and winter. It is intended to create a 'wet' version of species-rich reedfen with mixtures of tussock-forming sedges, Great Fen Sedge, Blunt-flowered Rush, Grey Club-rush, Yellow Flag, Great Water Dock, Greater Spearwort and Yellow and Purple Loosestrifes. Covering around 1,000 m², this will provide attractive habitat for wetland wildlife with greater structural and species diversity than the adjoining reedbed.

The fen habitat is easily visible from the Reedbed Viewing Screen and will hopefully provide interesting sightings in years to come.

Planting began in early February 2023 and thanks to our industrious volunteers, we've already introduced around 1,200 plants. The remainder will be added when stock becomes available in late summer and water levels are lowered again. Around 2,000 plants will be needed in total.



The Reedbed Fen site before planting, 7 February 2023

Pennycroft Fen

As part of the Tranche II project, we set an objective to “establish at least 0.5 ha of new fen habitat at another site in the lower Ure Valley”. This has come nearer to fruition with plans for Pennycroft Fen at Hanson Aggregates’ Ripon Quarry, North Stainley. Extraction of sand and gravel from this cell has been completed but we will have a better idea of topography later in the spring. We have met with Hanson staff and have been working on planting plans, which could potentially deliver up to 1.25 hectares of new fen and provide a valuable ‘stepping stone’ between wetland habitats in the Lower Ure Valley. This would also be a great opportunity for collaboration with our friends at High Batts Nature Reserve.



The Pennycroft Fen site, autumn 2022

Calcareous grassland

We've been working with Tarmac and English Heritage on the restoration of Thornborough Middle Henge, a nationally important Neolithic monument a stone's throw from Nosterfield Nature Reserve. While Tarmac's contractors repair damage caused by rabbit burrowing, we've helped draw up a programme to restore damaged areas to calcareous grassland: more intact parts of the henge support species-rich magnesian limestone grassland, one of North Yorkshire's rarest habitats.

With appropriate permissions in place, we retrieved small patches of valuable vegetation from the most damaged areas. These are being grown-on as either small turves or individual plants, which will eventually be replanted on the repaired embankments. Over the coming year, LUCT volunteers will also be hand-collecting seed and harvesting green hay from local donor sites including the henge itself.

Our nursery is preparing to grow 10,000 plugs of species such as Rockrose, Cowslip, Dropwort, Clustered Bellflower and Bird's-foot Trefoil to supplement seeding and hay spreading. This work is being funded separately but our nursery facilities have made it possible to achieve a positive outcome in terms of habitat restoration.

In October, we sowed a new trial plot on the magnesian limestone exposure at Kiln Lake, protected with horticultural fleece. We were also able to triple the area of the enclosure erected in September 2021. This was planted in November with Common Bird's-foot Trefoil, Biting Stonecrop, Dropwort and Carline Thistle from the nursery and sown with spare seed of Wild Marjoram, Bird's-foot Trefoil, Cowslip, Dyer's Greenweed, Common Knapweed, Hairy Lady's-mantle, Lady's Bedstraw, Carnation Sedge and Quaking Grass.

Wet woodland

The willow copse planted at Nursery Marsh in winter 2020-21 has been checked: survival appears close to 100% and no replacement planting has been needed. Tracks have been mown to facilitate future coppice management and to provide access for bird ringing. Cetti's Warblers were heard calling from the new habitat several times in November/December.

The wet woodland planting at Kiln Lake has been similarly successful.

Management of County Wildlife Sites

In November, LUCT volunteers undertook further clearance of invasive Red Osier Dogwood from Sharow Mires, an ancient wetland formed in a prehistoric course of the River Ure.



In late January, we cut and raked Moor Lane Verges near Snape – one of the two most important examples of magnesian limestone grassland in Hambleton district and the last remnant of the pre-Enclosure Thornton Watlass Moor. This work was carried out with support from the land owner, to prevent the encroachment of scrub and brambles. Special care has been taken to retain a small patch of Soft Downy-rose, a scarce plant of calcareous grassland.



Once restored, Moor Lane verges will be mown annually in late summer with the hay used for local grassland creation projects.

Mink monitoring

Following the sighting of an American Mink on a trail camera in the reedbed in late November, we have built and installed three mink rafts. One, with a live trap and Remoti system, is located in the reedbed near the point where the camera first picked it up. The trap has been live since late January, but nothing has been caught to date.

Two others are equipped with clay pads that pick-up prints, to allow us to monitor other areas for mink presence. One is currently located near the polytunnel and the other on a neighbour's land on the Ings Goit, the waterway that leads into Nosterfield Quarry. These are both monitored approximately every 2 weeks, but neither have shown any signs of mink activity yet. If no prints are recorded in the next month or so, the rafts will be moved to other areas.

Lower Ure partnership launch

In November, we organised an initial meeting between organisations involved in grassroots nature conservation in the Lower Ure Valley, to discuss how we might co-operate on joint projects. A follow-up meeting was held in January and further meetings are being arranged.

At the January meeting, a grazing animals project was proposed by the Yorkshire Wildlife Trust. This would potentially establish a small 'flying flock' of livestock to graze sites in the Lower Ure Valley which would be difficult to graze conventionally. There was strong support for the proposal in principle and partners are currently providing feedback to YWT. An update on GIS mapping of historic and current habitats was also provided by LUCT volunteers.

Volunteering

LUCT is committed to delivering at least 7,000 hours volunteering as part of this project. The volunteer hours from 01/10/22 to 28/02/23 total 2,190 hrs, broken down approximately as follows:

Nursery: 510 hrs

Other practical work (inc. planting): 950 hrs

Surveys/monitoring: 50 hrs

Trustees: 500 hrs

Other (e.g. corporate work parties/community days): 50 hrs

Bird recording: 130 hrs