

Yorkshire Water – Lower Ure Conservation Trust

Expanding priority wetland habitats in the Lower Ure Valley project

Update: December 2021 to April 2022

Flasks Fen

As outlined in the November update, Flasks Fen is the primary focus of the Yorkshire Water funded project. Although it's still early in the season, over-winter survival of 2021's extensive plantings seems to have been most satisfactory. Planting groups of plugs in sand bags was clearly successful, with vigorous new growth of Tufted Loosestrife *Lysimachia thyrsiflora* particularly noticeable: the only remaining native population of this species in England occurs at Gormire Lake near Thirsk though it once occurred at a number of sites in the Swale & Ure Washlands. Established patches of Great Fen Sedge *Cladium mariscus* and Blunt-flowered Rush *Juncus subnodulosus* are showing strong lateral rhizome spread and early plants like Tufted Sedge *Carex elata* are already in flower.



Great Fen Sedge patch showing vigorous rhizome spread: reduced to a single site in the Swale and Ure Washlands, this is the most successful species in our fen planting trials

It's too early to gauge the success of the fen meadow plots which form the inland edge of the sequence of wetland plant communities. Key monocots (grasses, sedges, rushes etc) such as Purple Small-reed *Calamagrostis canescens* and Blunt-flowered Rush are coming back well along with smaller sedges. Over-winter survival of forbs (broad-leaved herbs) has been less predictable so far with species such as Hemp Agrimony *Eupatoria cannabinum* appearing to be susceptible to Rabbit damage. Nonetheless, at the time of writing (early May), re-emerging species include Yellow Loosestrife *Lysimachia vulgaris*, Purple Loosestrife *Lythrum salicaria* and Marsh Valerian *Valeriana dioica*; Marsh Thistle *Cirsium palustre* has flourished.

A series of winter storms tested the durability of the aquatic dead hedge built to protect the northern part of Flasks Fen. While much debris has been deposited along the lake edge, the hedge seems to have been successful in dampening wave-wash, with visibly calmer conditions inshore of the barrier.



Dead hedging serves as a wave break and debris trap in the northern part of Flasks Fen

In April we began planting up the shoreline between the western edge of Flasks Fen and the Newt Pond. The bank is steep here so only a narrow belt of vegetation can be established but this links up the Fen, pond, Nursery Marsh and wet woodland areas into a more coherent whole. Bladder Sedge *Carex vesicaria* is the principal emergent planted here, with species such as Meadowsweet *Filipendula ulmaria* higher up the bank.

Wet woodland

The osier copse at the west end of Nursery Marsh, planted in winter 2021-22, suffered some initial bark stripping by Roe Deer but additional protection meant that relatively few whips had to be replaced and most plants show reasonable growth. This will, in time, be managed by coppicing, imitating the small willow beds which were a well-documented historic feature of the Washlands.

Along the eastern shoreline of Kiln Lake, we've expanded existing natural regeneration of willows by planting patches of Downy Birch *Betula pubescens*, Guelder Rose *Viburnum opulus* and Purging Buckthorn *Rhamnus catharticus* to create open-structured wet woodland. This has been complemented by planting stands of Tufted Sedge and Greater Tussock Sedge to create a tussocky field layer. This brings the area of wet woodland created to around 0.5 hectares.



Planting of tussock-forming sedges in the wet woodland area at Kiln Lake

Plant production

Sedge seed collected in 2021 and cold-stored over winter has begun to germinate with seedlings of the following species appearing: Fibrous Tussock Sedge *Carex appropinquata*, Brown Sedge *C. disticha*, Star Sedge *C. echinata*, Tufted Sedge, Glaucous Sedge *C. flacca*, Tawny Sedge *C. hostiana*, Long-stalked Yellow Sedge *C. lepidocarpa*, Common Sedge *C. nigra*, Carnation Sedge *C. panicea*, Greater Tussock Sedge *C. paniculata*, Cyperus Sedge *C. pseudocyperus*, Bottle Sedge *C. rostrata* and Bladder Sedge. This long list reflects the skill of

key volunteers and includes several species which we have never managed to grow before. Moreover, we have previously relied on vegetative propagation for species like Bladder Sedge and Bottle Sedge which we plant in large quantities, so raising additional plants from seed widens the genetic base of our stock and reduces the risks inherent in using one or a few clones.

Among the forbs, we've germinated large amounts of Meadowsweet, Hemp Agrimony, Purple Loosestrife and Ragged Robin *Silene flos-cuculi* with more modest quantities of Meadow-rue *Thalictrum flavum*, Lesser Spearwort *Ranunculus flammula*, Fen Bedstraw *Galium uliginosum*, Marsh Speedwell *Veronica scutellata*, Marsh Lousewort *Pedicularis palustris* and Marsh Hawk's-beard *Crepis paludosa*. Several of these are new additions to the range of plants we have in cultivation.

Additional vegetative propagation material has been collected for a number of species, either to increase genetic diversity or to meet demand. This includes Tubular Water-dropwort *Oenanthe fistulosa*, a Priority Species. Various permit applications have been made to allow collecting of seeds and cuttings from statutory sites and nature reserves during 2022.

Demonstration garden

A small demonstration plot has been created near the nursery so that visitors can see key wetland plants at close hand along with some of the lost flora of the Washlands. This was created by volunteers using railway sleepers and pond liner. Plants include Great Fen Sedge, Bottle Sedge, Slender Sedge *Carex lasiocarpa*, Tufted Loosestrife, Marsh Cinquefoil *Comarum palustre* and Marsh Fern *Thelypteris palustris*.

Partnership working

We continue to host visits from groups interested in propagating plants for habitat creation. In recent months these have included North Pennines AONB, Freshwater Habitats Trust and Oxford University Botanic Garden, members of the Yorkshire Wildlife Trust's South Yorkshire team and staff from the National Trust's River Skell project.

We hosted Richmond MP Rishi Sunak on 14th January 2022 and received a welcome visit from one of the land owners who has generously allowed us to collect material from his land.

We have supplied plants to the Freshwater Habitats Trust for use in school ponds as part of the Nidderdale Priority Ponds Project.

In response to demand for local provenance material, we have begun growing plants for Great Crested Newt mitigation ponds. Plants for 20 ponds at two sites will be supplied at cost this year.

For these projects, 'functional' plants are needed to provide habitat structure (e.g. as egg-laying substrates and shelter, and to attract aquatic invertebrates) rather than to establish specific plant communities. The emphasis is thus on widespread species which fulfil this role

such as Flote-grass *Glyceria fluitans*, Water Forget-me-not *Myosotis scorpioides* and Curled Pondweed *Potamogeton crispus*. To this end we have obtained propagation material from local sources and established new wet beds for aquatic plants.

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May 2022