Yorkshire Water Biodiversity Fund

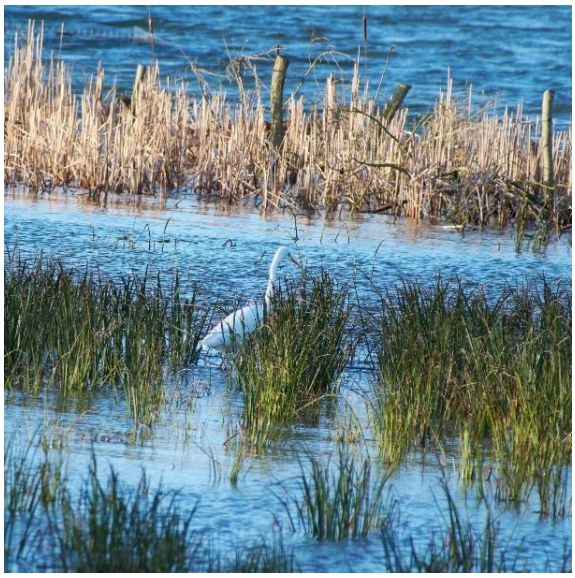
Expanding priority habitats in the Lower Ure Valley (Tranche 2)

Update: November 2023 to February 2024

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 in November 2023 to February 2024.

Flasks Fen



The winter lull allowed some replanting of dislodged plants and removal of over-prolific Hard Rush from the wet grassland zone.

Winter visitors to the Fen included occasional Snipe, Jack Snipe and Little Egret with a Great White Egret visiting repeatedly during late January and throughout February (photo ©Laurie Reed).

Results of invertebrate surveys of Flasks Fen have been collated. Moth records were summarised in the last Update report and an overview of moth recording on the reserve in 2023 can be read at:

https://www.luct.org.uk/blog/2024/2/26/nosterfield-nature-reserve-moth-report-2023

Flasks Fen and adjoining areas such as the Newt Pond and Nursery Marsh produced 18 species of Odonata (damselflies and dragonflies) during 2023. These included the scarce Hairy Dragonfly, Willow Emerald Damselfly and Small Red-eyed Damselfly in addition to the vagrant Lesser Emperor. The most abundant species were, perhaps predictably, Common Darter, Blue-tailed Damselfly and Common Blue Damselfly followed by Brown Hawker and Emperor. An overview can be found on the LUCT website at: https://www.luct.org.uk/blog/2024/2/19/nosterfield-nature-reserve-dragonfly-report-2023

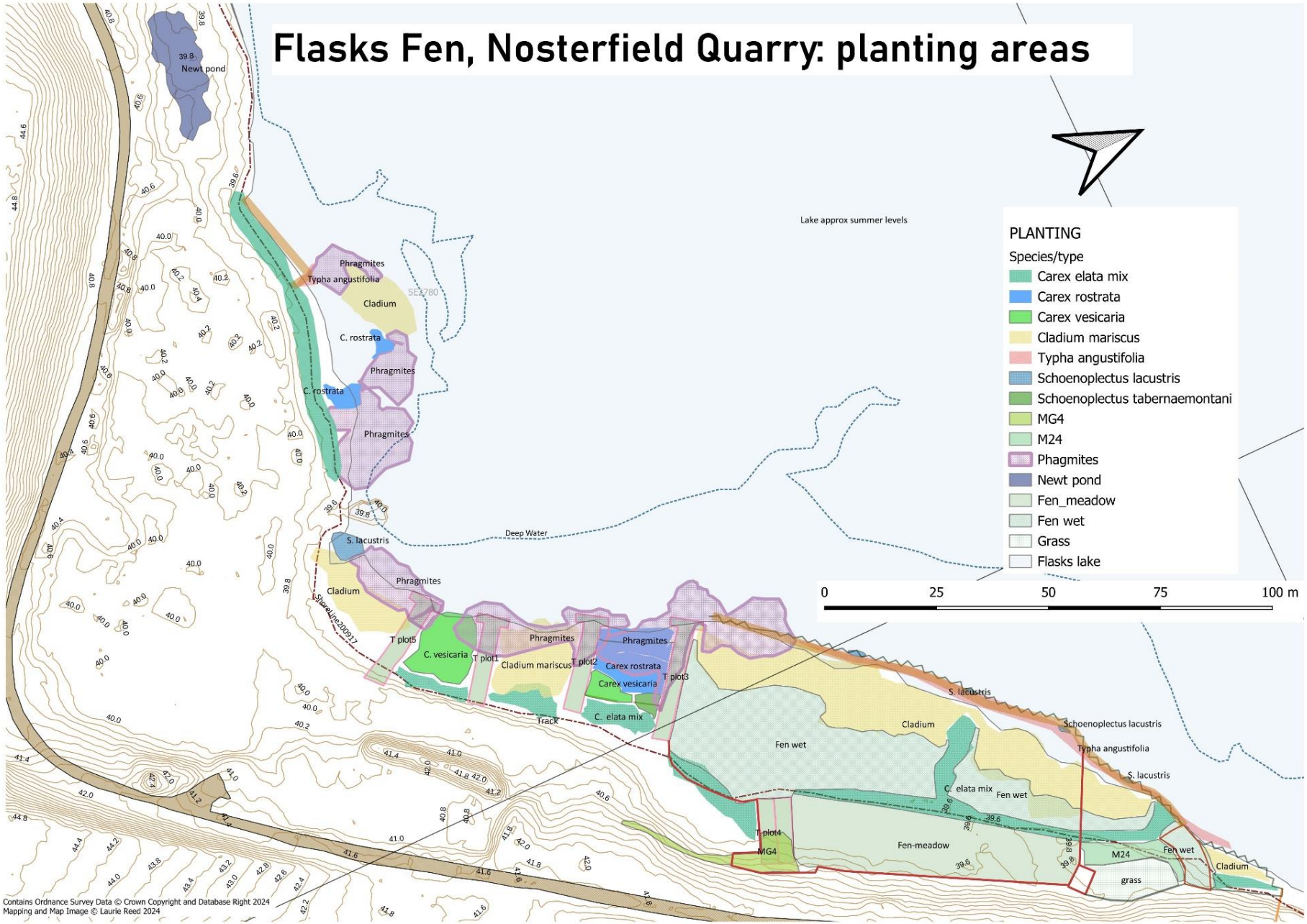
Aquatic invertebrates were sampled from the Fen in April, August and October. Both biomass and diversity were surprisingly low, with only 36 taxa recorded (Table 1), generally in small numbers. Several localised water beetles were found (e.g. *Chaetarthria seminulum*, *C. simillima*, *Enochrus coarctatus*, *Dryops ernesti*) but these were confined to the moss-fringe at the extreme edge of the lake.

The low numbers and poor diversity of aquatic invertebrates have obvious implications for other wildlife. For example, there was a marked absence of lesser water-boatmen (Corixidae), which provide food for birds such as rails, grebes and small herons. This is difficult to explain but it's likely that large and unpredictable fluctuations in water levels are a factor while the dominance of invasive *Crassula helmsii* may also play a part.

Species	English name	Order	Family
Succineidae sp.	amber snails	Gastropoda	Succineidae
Potamopyrgus antipodarum	New Zealand Mud Snail	Gastropoda	Tateidae
Galba truncatula	Dwarf Pond Snail	Gastropoda	Lymnaeidae
Radix baltica	Wandering Snail	Gastropoda	Lymnaeidae
Stagnicola palustris agg.	Marsh Pond Snail	Gastropoda	Lymnaeidae
Gyraulus albus	a ramshorn snail	Gastropoda	Planorbidae
Gyraulus crista	Nautilus Ramshorn	Gastropoda	Planorbidae
Crangonyx pseudogracilis	an amphipod	Amphipoda	Crangonyctidae
Asellus aquaticus	Water Hoglouse	Isopoda	Asellidae
Cloeon dipterum	Pond Olive mayfly	Ephemeroptera	Baetidae
Sialis lutaria	Common Alderfly	Megaloptera	Sialidae
Coenagrionidae sp.	blue damselfly larvae	Odonata	Coenagrionidae
Sympetrum striolatum	Common Darter larvae	Odonata	Libellulidae
Nepa cinerea	Water Scorpion	Hemiptera	Nepidae
Noterus clavicornis	a burrowing water beetle	Coleoptera	Noteridae
Agabus/Ilybius sp.	diving beetle larvae	Coleoptera	Dytiscidae
Hydroporus angustatus	a diving beetle	Coleoptera	Dytiscidae
Hydroporus palustris	a diving beetle	Coleoptera	Dytiscidae
Hygrotus inaequalis	a diving beetle	Coleoptera	Dytiscidae
Helophorus minutus	a scavenger water beetle	Coleoptera	Helophoridae
Anacaena bipustulata	a scavenger water beetle	Coleoptera	Hydrophilidae
Anacaena limbata	a scavenger water beetle	Coleoptera	Hydrophilidae
Chaetarthria seminulum	a scavenger water beetle	Coleoptera	Hydrophilidae
Chaetarthria simillima	a scavenger water beetle	Coleoptera	Hydrophilidae
Coelostoma orbiculare	a scavenger water beetle	Coleoptera	Hydrophilidae
Cymbiodyta marginellus	a scavenger water beetle	Coleoptera	Hydrophilidae
Enochrus coarctatus	a scavenger water beetle	Coleoptera	Hydrophilidae
Helochares lividus	a scavenger water beetle	Coleoptera	Hydrophilidae
Laccobius bipunctatus	a scavenger water beetle	Coleoptera	Hydrophilidae
Laccobius minutus	a scavenger water beetle	Coleoptera	Hydrophilidae
Laccobius sinuatus	a scavenger water beetle	Coleoptera	Hydrophilidae
Ochthebius minimus	a moss beetle	Coleoptera	Hydraenidae
Dryops ernesti	a long-toed water beetle	Coleoptera	Dryopidae
Limnephilus stigma	a caddis-fly	Trichoptera	Limnephilidae
Chironomidae sp	non-biting midge larvae	Diptera	Chironomidae
Limoniidae	cranefly larva	Diptera	Limoniidae

Table 1: Aquatic macro-invertebrates recorded from Flasks Fen in 2023

Laurie Reed kindly updated our planting map for Flasks Fen (page 4), essential for monitoring future developments.


Flasks Fen, Nosterfield Quarry: planting areas
Newt pond
Lake approx summer levels
Deep Water
Track
Phragmites
Typha angustifolia
Cladium
C. rostrata
S. lacustris
C. vesicaria
Cladium mariscus
Carex rostrata
Carex vesicaria
C. elata mix
T plot1
T plot2
T plot3
T plot4
T plot5
Fen wet
Fen-meadow
MG4
M24
grass
Schoenoplectus lacustris
PLANTING
Species/type
Carex elata mix
Carex rostrata
Carex vesicaria
Cladium mariscus
Typha angustifolia
Schoenoplectus lacustris
Schoenoplectus tabernaemontani
MG4
M24
Phagmites
Newt pond
Fen_meadow
Fen wet
Grass
Flasks lake
0
25
50
75
100 m
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Mapping and Map Image © Laurie Reed 2024

Improving Reedbed Priority Habitat

An electro-fishing survey by RSPB scientists in the autumn revealed that although fish stocks in the reedbed were reasonably healthy, Perch, Rudd and Three-spined Stickleback were the only species present. Young Tench and Roach were therefore introduced in November, into the Reedbed, Kiln Lake and Flasks Lake (photo, left). It is hoped this will benefit Bittern (a regular visitor but infrequent breeding bird at Nosterfield Quarry) by establishing more abundant and varied fish populations.

Magnesian limestone grassland creation

Strewing of cuttings from Moor Lane Verges County Wildlife Site last summer has produced a green sheen of myriads of seedlings on the magnesian limestone at Kiln Lake, doubtless encouraged by the wet winter. This is a positive use of cuttings from management of species-rich grassland instead of them being disposed of as green waste, and ensures local provenance.

Also on the limestone, both first and second year rosettes of biennial plants such as Viper's Bugloss, Carline Thistle and Ploughman's Spikenard are plentiful. This is an encouraging sign that these species are fully naturalised with self-sustaining populations.

Wet woodland creation

The willow copse at Nursery Marsh is now so well established that we've been able to remove tree stakes and guards. The wet woodland at Kiln Lake has had more mixed fortunes, with some loss of saplings planted in winter 2021/22 but vigorous growth of Tufted Sedge and Greater Tussock-sedge, planted to form a tussocky field layer. The site was flooded for most of the winter, preventing re-planting, but we have grown-on cuttings from our library of local willows for this purpose.

Expanding fen habitats in the wider Lower Ure Valley

Our friends at High Batts Nature Reserve have continued work on Pennycroft Fen, a brand new 1.5 ha wetland which will eventually form part of Hanson Aggregate's restored Ripon City Quarry. Following an initial planting of 200 Great Fen Sedge plants in October 2023, a further 400 plants of five species were introduced in November.

Nursery news

The winter period is mostly taken up with tidying and maintenance at the nursery, together with propagation necessary to maintain healthy stock plants. Some wind damage repairs were necessary this year. A great deal of work has been done to clean-up, re-pot and re-organise old stock – an essential task to make efficient use of limited space. We have also re-arranged the polytunnel beds to make more room for limestone grassland plants.

We've begun to assemble orders of wetland plants for Yorkshire Wildlife Trust projects on the River Foss and Mid-Swale. Propagation of nationally-endangered Water Germander continues, to provide a second tranche of plants for the re-introduction project at YWT's Bolton-on-Swale Lakes reserve. We were delighted to hear that at least some of the plants introduced in summer 2023 have survived over-winter.

Visits to the nursery were few but included a group of RSPB reserve managers on 2nd December and officers of Ripon Civic Trust on 27th February. We have several bookings for the spring and summer months including visits from the Chartered Institute of Horticulturalists, the Wildflower Society and the Richmondshire Books and Walking Festival. A second Fen Creation Workshop has been scheduled for June 2024.

A webinar on 'Managing small grasslands for nature' was given by our ecologist on 23rd November, with a full house of 90 people attending on-line.

We were honoured to give a presentation on wetland creation using local plants as part of the Botanical Society of Britain and Ireland's winter talks series. Martin, Pandora and Laurie explained the lessons of the past 5 years work on Flasks Fen and the story of the nursery to an online audience with over 140 people booked. The video is available on YouTube:

https://www.youtube.com/watch?v=AUQluWgorgM

In addition, LUCT's Director gave talks to Skipton U3A and Richmond RSPB Members' Group during February.

An important aim of the project has been to disseminate knowledge about habitat creation based on our work over the past five years. To this end we have added 'how to' guides to the LUCT website (https://www.luct.org.uk/plant-propagation) covering: creation of species-rich reedfen; creation of Great Fen Sedge and Tufted Sedge swamp; and germinating wild plants. Protocols for propagating two of the endangered plant species we work on, Water Germander and Scarce Tufted Sedge, are planned.

Managing County Wildlife Sites

Farnham Lane CWS was cut in late November: the magnesian limestone grassland at this site is in good condition, so the main objective of management is to control scrub encroachment, so a late cut is acceptable here. Scrub management was completed in February.

Ure CONNECTED seminar

Our URE Connected seminar is to be held on 22nd March 2024, at the Aislabie auditorium at Fountains Abbey. This event will bring together speakers on diverse aspects of the Lower Ure Valley landscape, past and present.

There will also be visits to Thornborough Henges, the nursery and the Yorkshire Wildlife Trust's reserve at The Loop during the preceding week. Details are on LUCT's Eventbrite page:

https://www.eventbrite.co.uk/o/lower-ure-conservation-trust-33315452055

Volunteering

LUCT is committed to delivering at least 7,000 hours volunteering as part of this project. The volunteer hours from 01/11/23 to 29/02/24 total 2,891.75 hrs, broken down approximately as follows:

Nursery: 678 hours
Other practical work (inc. planting): 1,281.75 hrs
Surveys/monitoring: 54 hrs
Trustees: 711 hrs
Admin: 141.5 hrs
Engagement: 25.5 hrs

This brings the total number of volunteer hours delivered so far to 11,218.5 hours, greatly exceeding the target.