

Kemerton Conservation Trust

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Sapling control at Kemerton Lake through Pesticide Free Methods Project Report 16th March 2021

Project Background

Kemerton Lake Nature Reserve (KLNR) is Kemerton Conservation Trust's flagship reserve. It is a 46.5 acre (18.8 ha) wetland complex created out of a former gravel working, situated between the villages of Bredon, Westmancote, Kemerton and Kinsham. The reserve is a designated Local Wildlife Site, and has a diverse range of habitats including a 16 acre (6.5 ha) lake, pools, seasonal wet scrapes, reed beds, grassland, and land specially cultivated for arable plants. The reserve is surrounded by 111 acres (45 acres) of native woodland and arboretum which are not part of the reserve, but which make an important contribution to the habitat mosaic.

KCT manages the reserve under a long lease and the majority of habitat management on site is carried out by the Trust's volunteer Warden John Threadingham, and the Trust's volunteer work party group, with contractors brought in for specific tasks as needed and when funds allow.

Two key habitats at the reserve are the reedbeds which grow on the margins of the lake and in the pools including the Lagoon and Settlement Ponds (see Appendix A – Map of KLNR), and the limestone grassland around the Settlement Ponds and the lake. Both these habitats support a wide range of wildlife; the reedbeds provide nesting habitat for birds including Reed Bunting, Reed Warbler and Sedge Warbler, and roosts for large starling murmurations in autumn and winter, while the limestone grassland has many wildflowers which provide food and shelter for butterflies including the nationally scarce Dingy Skipper, moths and other invertebrates. County rarity Clustered Bellflower grows near the Settlement Ponds.

One of the biggest habitat management challenges on the site is staying on top of the self-seeded saplings such as Willow and Alder. Without intervention the site would transform in a few years, with trees drying out the reedbeds and covering the limestone grassland, resulting in fewer habitats and a loss of biodiversity. It is therefore vital that sapling removal is carried out regularly, and as such it forms a key element of our site management. Because Willow and Alder both coppice freely, simply cutting the saplings does not work and results in more problems as 1 stem becomes 10-20 coppice stems. To ensure saplings are killed off and do not coppice, it has been standard practice in recent years to cut and poison the saplings using a glyphosate solution. The herbicide is painted onto the cut stem to minimise damage to surrounding vegetation. Using pesticides meant

the sapling removal could only be carried out by our Warden, who has appropriate pesticides training, or contractors brought in specifically to carry out these sorts of tasks. Our work party volunteers are not permitted to use pesticides so could not assist with this habitat management. The Trust has been eager to find solutions to minimise the use of pesticides onsite, both for the safety of our warden and volunteers, and to reduce pesticide use on a nature reserve. In 2019 we heard about a sapling removal tool called a tree popper which works by levering the sapling or small tree out roots and all and purchased one to trial at KLNLR. The results were great, so we were keen to raise funds to purchase more and allow our work party volunteers to assist in sapling removal on the reserve.

The Trust therefore applied to local grant giving Trust, who prefers to remain anonymous, for a grant to purchase a tree popper and root saw for our work party volunteer group. We successfully applied for £400.00, which covered 100% of the total project cost. The project began in September 2020 and was completed in January 2021.

Project Aims

The aim of the project was to purchase 1 tree popper and 1 root saw to use at KLNLR to carry out regular sapling removal from the reedbeds and limestone grassland around Kemerton Lake and Settlement Ponds in conjunction with other tree poppers bought in 2020 with additional grant funding. The tools would be used by our Warden and the volunteers in our work party group. As part of the project, the Trust would hold one work party using the new tools to target an area onsite where saplings were taking over and needing urgent removal.

Overview of Works

Project works commenced in September 2020 as soon as our grant was awarded, and the final works were completed in January 2021 (see Appendix B – Project Photo Montage). Various Covid-19 restrictions were in force throughout the project but did not materially affect the project, as we were able to continue following minor adjustments to ensure Covid-19 safe working practices.

In September Project Manager Kate Aubury ordered the new tree popper and root saw.

In January 2021 we held a work party at KLNLR and carried out sapling removal along the reedbeds on the western edge of the lake. Although this was during the third lockdown, the work party volunteers were able to meet up due to an exception for charities allowing them to continue volunteer work where safe to do so. Covid-19 safe working practices were in place for the work party. The weather was incredibly wet, which made using the tools rather challenging, as they became slippery and the muddy ground was harder to gain purchase on, but our hardworking volunteers persisted and managed to remove a significant number of Willow saplings along the reedbed margins. The popped saplings were stacked on the woodland edge to create habitat for invertebrates and fungi as they rot down.

Project Results

Our project was completed on time. It went slightly over budget (£10.40) but the extra cost was covered from the Trust's annual budget. The new tree popper and root saw have already proved useful in carrying out sapling removal at KLNLR.

The tree popper is proving ideal for removing small to large saplings and even small trees from the grassland and reedbeds, with the root saw needed on occasion to cut through

particular deep roots, although the popper does not work on coppiced stools or saplings with a stem diameter of more than 50mm, so a small number of saplings will still have to be removed using traditional techniques.

The Future

The new tree popper and root saw will be used for annual sapling removal at KLNR for many years to come. The Trust has a management plan for the site which includes a three-year rotational plan for sapling removal, to ensure we remain on top of the growth at the lake whilst still allowing some scrub habitat for those animals that need it. The tree popper, combined with the others we purchased in 2020, will allow our warden and work party volunteers to remove most of the saplings without using pesticides, reducing our herbicide usage significantly. The Trust is delighted to have found a better, safer method of sapling removal which can be carried out by our volunteers all year round without the need for pesticides.

Acknowledgements

Kemerton Conservation Trust would like to thank our funder for generously supporting this project and making it possible.

We would also like to thank all those who assisted in the delivery of the project, particularly our Project Manager Kate Aubury and our work party volunteers.

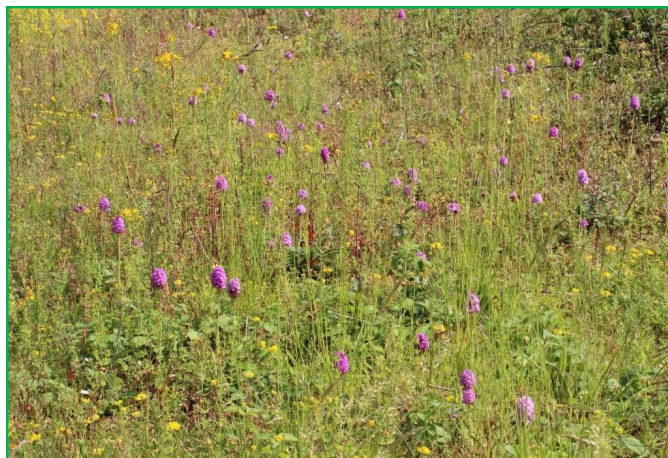
A detailed map of the Kemerton Lake area. The map shows Kemerton Lake in the center, with 'The Scrapes' to its north and 'Reed Pond' to its east. A brown rectangular area is located between 'The Scrapes' and 'Reed Pond'. To the west of the lake is 'Kemerton Wood'. The map is bounded by 'Cheltenham Road' (B4079) to the west, 'Kinsham Lane' to the south, and 'Lake Walk' to the east. Various paths and rides are marked: 'Long Ride', 'Bishop's Ride', 'South Ride', and 'Westmancote'. A 'Westmancote Nursery' is located to the north. 'Upstones Orchard' is to the west. A north arrow is in the bottom left corner. Several 'H' markers are placed along the boundaries of the lake and surrounding areas.

Appendix B - Project Photo Montage

All photos copyright Kate Aubury



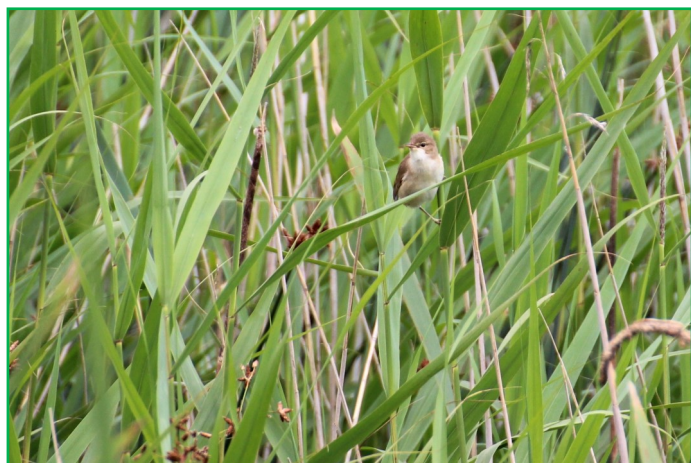
Kemerton Lake Nature Reserve; view from East Hide



Pyramidal Orchids flowering in the limestone grassland



Limestone grassland and reedbeds at reserve, with saplings visible in reedbed margins



Reed Warbler in the reedbeds - one of the species who will benefit from the sapling removal



KCT volunteer Ken using our tree popper to remove saplings roots and all from a reedbed on the reserve, January 2021