

Case Study 10.7

Boddington Meadow and Kingsthorpe North Meadows, Northamptonshire – wildflower seed collection by brush harvesting for use in restoring floodplain meadows



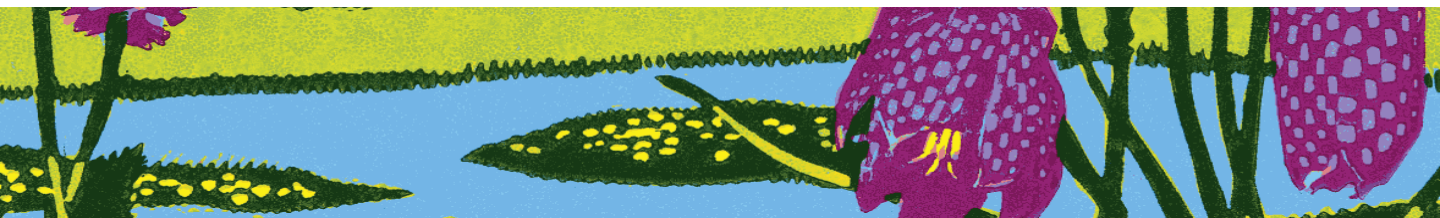
About the sites

Boddington Meadow is a 2.3 ha Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire reserve and Local Wildlife Site with areas of Burnet floodplain meadow (MG4). The site is particularly herb-rich and also has a good range of grasses. Never ploughed, a wet meadow on the edge of a reservoir provides an impressive display of colour, with great burnet, betony and devil's-bit scabious. The site became a Trust reserve in 1986 and has been managed through a late hay cut and light aftermath grazing ever since. It became the county's Coronation Meadows in 2013.



Seed harvesting at Boddington Meadow using a brush harvester. © River Nene Regional Park RNRP

Kingsthorpe North Meadows (as opposed to Kingsthorpe Meadow, Chapter 9) is a 4.5 ha site with a mix of drier ridge-and-furrow and wetter floodplain meadow, and has been owned by the local community since 2009. It is situated on the banks of a tributary of the River Nene. A small wetland section in the northern end became a Local Wildlife Site in 2005. The site is managed through an annual hay cut. Soil samples showed low nutrient levels and the upper slopes have already been restored to a semi-species-rich grassland through management. The lower sections are species-poor, with a range of grasses, and regularly flood during the winter. The project aims to restore the lower area to a species-rich floodplain meadow. P levels of 12 mg/l⁻¹ indicate that this should be feasible.



Technique used

Donor site

Boddington Meadow was chosen as a donor site as it has similar soil and hydrological conditions to Kingsthorpe North. A low-impact brush harvester was used to collect the seed. This had a rotary brush with stiff bristles, designed to sweep the seed heads it comes into contact with into the hopper, and was pulled by a compact tractor.

Seed harvesting was undertaken on two occasions (mid July and late August). Additional great burnet and devil's-bit scabious seed was collected by hand. Seed was collected from around one-sixth of the site on each visit across roughly spaced sets of strips, meaning seed was collected from around a third of the site in total.

The seed was bagged and most was taken straight to an agricultural contractor to be dried using a seed drier, while the remainder was spread out and dried on a barn floor.

Receptor site

Kingsthorpe North Meadows were cut short in early August. Several 6 m wide strips were created by shallow rotavation with the aim of creating open ground on one-third of the site. The collected seed was hand-sown into these strips, and the strips were then rolled. The plan was to top the strips the following year to help control weed growth. A shallow drain running through the field was re-dug to help drain the topsoil.

Monitoring

Boddington: quadrats were undertaken along fixed transects to assess impact of seed collection in the year following collection, then every three years.

Kingsthorpe: quadrats were undertaken along fixed transects to monitor the restoration on an annual basis. Monitoring results for the two sites are not yet available.

Cost

- Seed collection: £200.
- Rotavation and rolling: £380.
- Ditch works: £760.
- Most of the labour was through staff time and volunteers.

Partners

Wildlife Trust BCN, with Nene Valley NIA, Kingsthorpe North Meadows Trust, Coronation Meadows and Biffaward.

Benefits

- Increased offtake of nutrients from catchment through removal of hay crop.
- Creation of 4.5 ha of flower-rich pollinator habitat.
- Buffering of wetland Local Wildlife Site.
- Increased public access to flower-rich meadow.

