

# Restoration Case Study

## Restoration of Greena Moor, Cornwall



**Location (incl grid ref):** Week St Mary, SX234 963

**Name of donor meadow:** Greena Moor

**Distance from donor meadow:** <1 mile

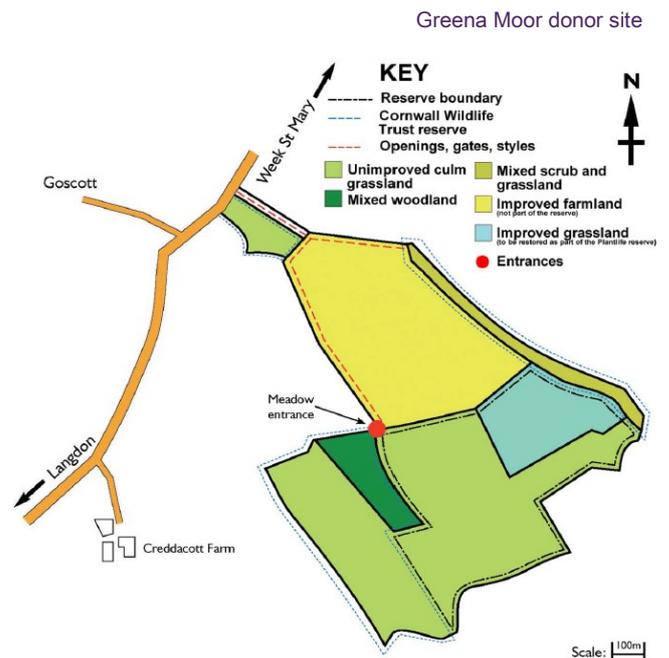
**Restoration or enhancement:** restoration

**Method:** wildflower seed, green hay, plug plants

**Size of receptor site (ha):** 5.17

**Costs/funders:** Estimated £15.500k, Biffa Award and other sources

**Partners/Contractors:** Project led by Cornwall Wildlife Trust, working closely with Devon Wildlife Trust to develop the project.



Whorled Caraway

**About the site:** Jointly owned by Cornwall Wildlife Trust and Plantlife, Greena Moor, formerly known as Creddacott Meadows, represents one of the last remaining areas of culm grassland in North Cornwall. The flora that grow here, including ragged robin and whorled caraway, are specially adapted to survive and even thrive in waterlogged conditions. Sadly this type of meadow has declined dramatically in Cornwall in recent years, making Greena Moor particularly important for plant conservation.

**Ground preparation:** The site was grazed with approximately 15 cows through June and July before being topped and the cuttings baled in August. This ensured the sward was short prior to harrowing.

Harrowing 2015



**Spreading / Planting:** In 2015 seed was harvested using a brush harvester from 3 fields at Greena Moor in order to gather as much variety of flowering species as possible. Compartments 1 and 5 were harvested in August and compartment 4 in October. In addition seed was hand collected from all 3 compartments and planted in plugs. The brush harvested seed was spread immediately, and the plugs planted in the receptor field in April 2016 in 2 sessions with the help of volunteers. In 2016 green hay was transferred from the more species-rich areas of the site and spread on the prepared receptor with the receptor areas. The receptor site was then grazed.



Brush harvester collecting seed 2015



Volunteers spreading green hay



Hand collected seed



Cattle grazing

**Aftercare** The reserve is managed by light cattle grazing, which is the traditional management of this type of habitat. Cattle remain on the reserve for most of the year, but are taken off during the wet winter months. The receptor meadow will be managed slightly differently—cattle will be taken off over the summer and a hay cut taken. Sheep grazing over the winter months will keep the grass short ready for spring.

**Weed control / other management issues** The land has been managed very extensively using traditional methods by the tenant farmer for years so there hasn't been much need for weed control. The biggest management issue has been the wetness of the site which in 2015 made the timing of the seed collection difficult. As the farmer cuts the rush pasture for bedding for his cattle it meant the seed had to be collected before the ground got too wet. This was the main reason that green hay transfer was used in 2016 although Devon Wildlife Trust also had problems baling because the ground and vegetation was very wet.



Marsh Fritillary butterfly on meadow thistle

**Monitoring** Soil surveys of all donor sites and the receptor site were undertaken to check compatibility, acidity and nutrient levels. Species surveys were conducted in May and June to catch early flowering species as well as mid summers flowers, rushes, sedges and grasses. The areas which received seed were surveyed using the Coronation Meadows Monitoring Methodology. Quadrats were also surveyed in areas which hadn't received seed and were GPS marked so that a GIS map can be created for future monitoring. In addition research was done on the drainage and hydrology of the receptor site by walking the streams and using an auger. Photographs of the site have been taken at fixed point locations in the donor and receptor fields.



Volunteer undertaking a botanical survey

**Results to date** The results have been very promising to date with whorled caraway germinating in the majority of the sown areas. Other species found include purple moor grass, devil's bit scabious, meadow thistle and marsh ragwort. In the areas prepared for the green hay in 2016 clumps of sneezewort in flower, stands of whorled caraway that had gone to seed, frequent yellow rattle and even a little eyebright could be seen.

**Lessons learned** The wetness of the site posed the biggest problem in terms of restoration of the site. It meant watching the weather closely and deciding to collect seed by harvesting green hay which allowed a collection earlier in the year. The growing of plugs was a useful addition to the project with the process being repeated for planting in spring 2017. Ensure plenty of bare ground is created. The fineness of the tilth didn't seem to make much difference as there have been good results observed in areas which weren't harrowed after being scuffed.



Sneezewort in the receptor meadow 2016

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Details correct November 2016

**Plantlife**



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Rare Breeds Survival Trust