

# Wet meadow re-creation project at Upper Heyford, Northamptonshire

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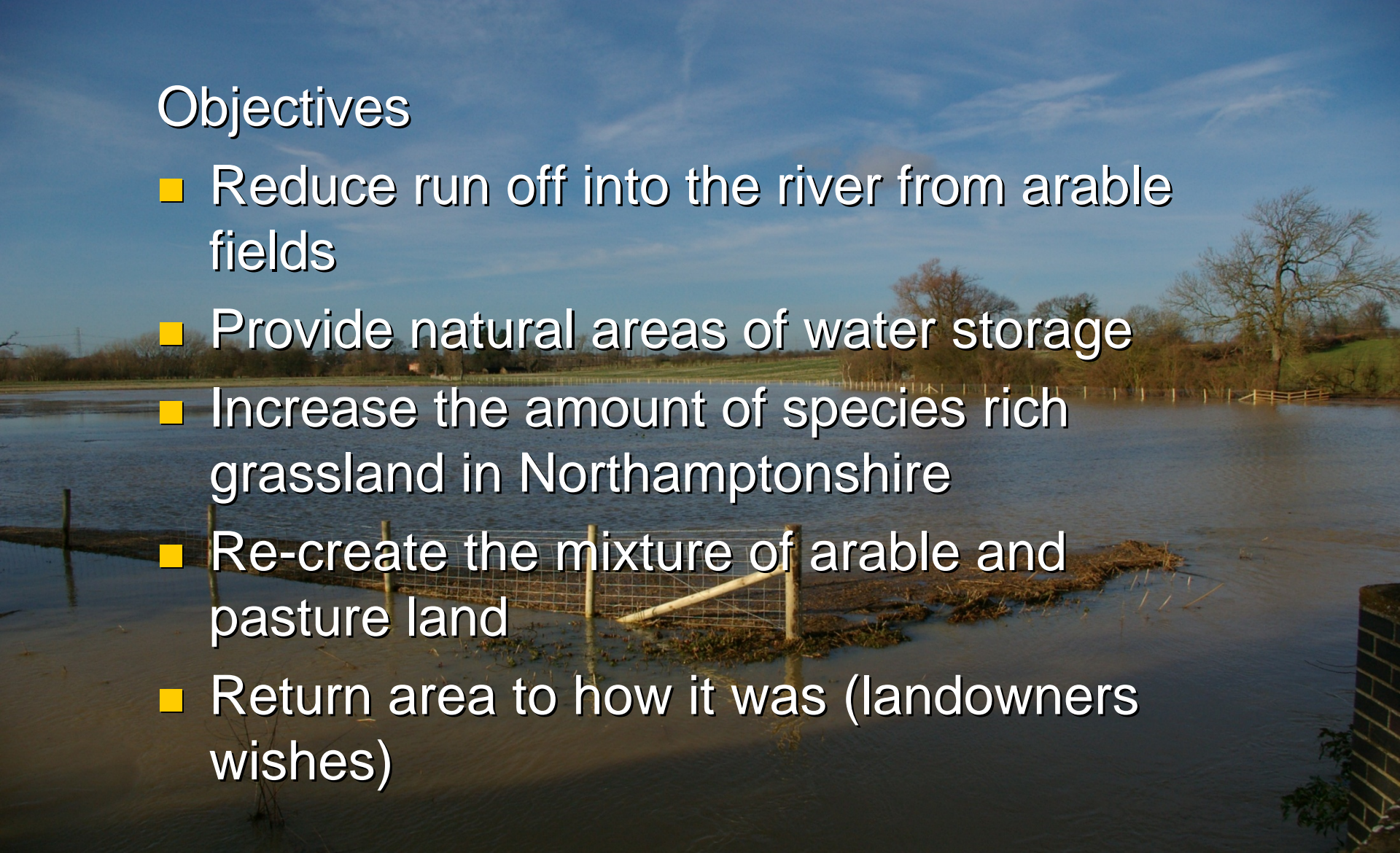
River Nene Regional Park



# Case study – Upper Heyford

## Objectives

- Reduce run off into the river from arable fields
- Provide natural areas of water storage
- Increase the amount of species rich grassland in Northamptonshire
- Re-create the mixture of arable and pasture land
- Return area to how it was (landowners wishes)



# Meadow re-creation

- 13.5 ha of arable land next to the River Nene
- 11 km upstream of Northampton
- Problems on the River Nene with Metaldehyde, nutrients and sediment
- Final crop – OSR flooded three times and part unharvested
- Was meadow up to the 1970's
- Possible funding from NE

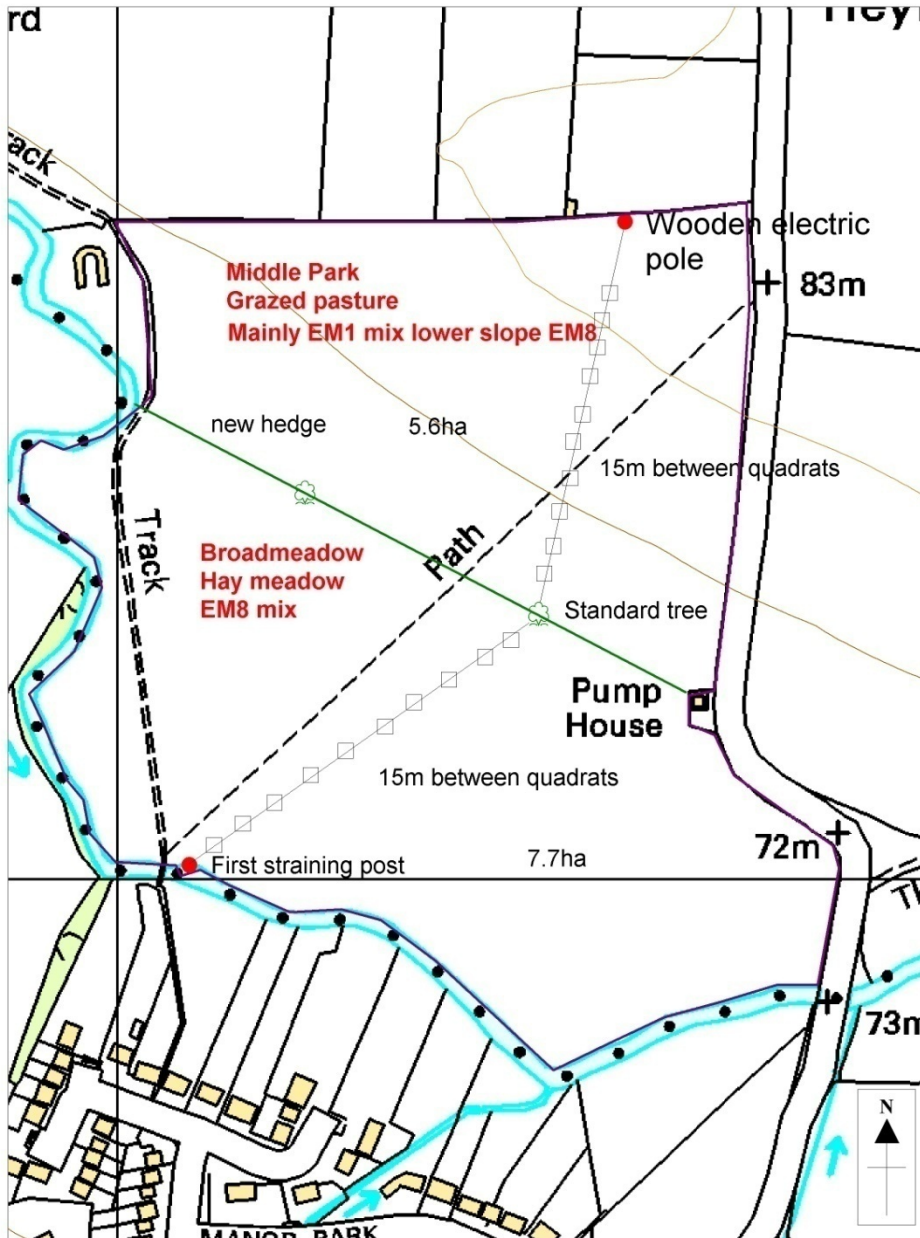
# Method

- Soil tests in August 2007
- Phosphorus 16 mg/kg (2)
- Potassium 96 mg/kg (1)
- Magnesium 129 mg/kg (3)
- pH 6.3
- Seed bed prepared October 2007



# Preparation

- Field fenced
- Hedgerow replanted to divide the field along old boundary
- Water to field
- New access and access furniture
- Otter holt next to the river
- Surrounding hedges laid or replanted



# Broadmeadow 7ha

- Plan to re-create MG4 grassland
- Sown with EM8 mixture from Emorsgate Seeds
- EM8 – wet mix with 17 wildflowers and 7 grasses
- Sown at 3g/m<sup>2</sup> in April 2008
- Cut four times during the summer

# Middle park 6.5ha

- Drier, valley side
- Possible MG5 grassland
- Sown April 2008 at 3g/m<sup>2</sup>
- Emorsgate seeds EM1 general purpose mixture
- 11 wildflowers and 4 grasses
- Cut three times and then grazed by sheep overwinter





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# 2009

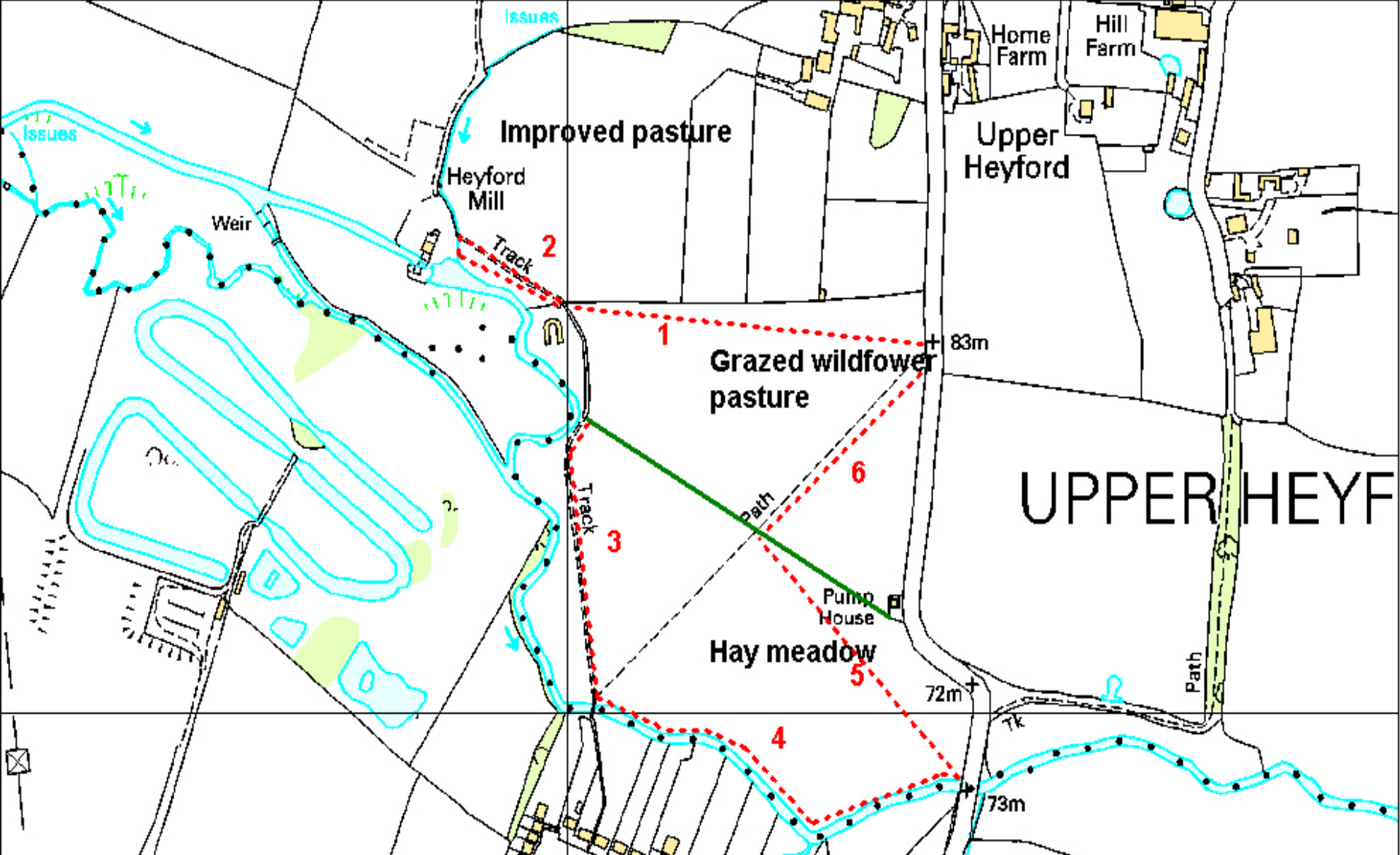
- Quadrat survey with Northamptonshire Wildlife Trust
- Both meadows going towards MG5
- Local Wildlife Site status
- Three MG4 species missing from Broadmeadow
- Hay crop taken from Broadmeadow 242 large bales from the 7 ha

# Similarity scores for the two meadows

scores 0 (no species in common) to 100 (complete match) >50 moderate fit

	Broadmeadow	Middle Park
MG5b	50.9	50.2
MG5a	50.8	47.7
MG6b	50.6	46.5
MG6a	45.9	44.3
MG4	45.6	37.3





# Butterfly transect

# Butterfly data

- 16 species including good numbers of Small copper
- Species richness was double on Broadmeadow when compared to an adjoining area of improved grassland
- Abundance was significantly greater on Broadmeadow than on the improved grassland
- (150 b/m v 30 b/m)

# Future

Broadmeadow – grazing and cutting

- Graze until mid May, cut for hay mid July and then aftermath grazing
- Plant missing species such as Meadowsweet, Great burnet and Pepper saxifrage
- Graze only in 2011

Middle park – grazing as in 2009, cut for hay 2011

# Thanks

