

# Staffordshire Water Meadows



## An Archaeological Survey and Assessment

### Water Meadows- History and Description

From the 17<sup>th</sup> century onwards, a revolution in pastoral agriculture spread across England, dramatically improving the productivity and value of farmland wherever it spread. This revolution came from the use of irrigated field systems known as water meadows, often maintained by skilled craftsmen known as “Drovers”. This type of managed pastureland is well known within the southern counties of Britain, however, until recently relatively little was known as to the extent of this practice in Staffordshire. In September 2007 Staffordshire County Council commissioned a team from the VISTA centre of Birmingham Archaeology to perform a county-wide survey to identify the location, extent and preservation of historic water meadows across Staffordshire.

Water meadows are found next to rivers or streams, and were designed to be deliberately flooded at certain times of the year by the farmer. A ‘main carrier’ took the water from the river, which had often been partially dammed by a weir, via sluice gates into a series of ‘carriers’. These were channels on top of wide grassy banks that were designed to overflow, watering the sides (or ‘panes’) of the banks. Excess water was then taken by drains at the bottom of the banks to a large ‘tail drain’ which led back to the river. This system meant that fresh water moved in a constant flow over the meadow, and resulted in intricate interlocking patterns of channels and banks, known as *bedworks*.

By floating the meadows early in the year the farmer was able to encourage an early growth of grass, allowing him to overwinter his sheep for a shorter period of time. Hay crops could then be grown on the fields later in the year through once again floating the meadow.

In upland areas *catchwork* meadows were used, with simple overflowing drains used to send water down swathes of hillside, watering the fields. Alternatively in some areas streams were dammed to flood the fields upstream, known as the ‘floating upwards’ system.

### Locating Historic Water Meadows

Archaeologists used a mixture of sources, including historic mapping, aerial photographs, and the latest archaeological computer modelling, in order to look for indications of where lost water meadows once were, and whether anything may survive of them today.

Historic maps were analysed for tell-tale signs of water meadows, such as channel and sluice systems. Targets were then examined through a series of vertical aerial photographs. This allowed researchers to confirm whether the targets may be water meadow, and to assess whether the preservation of these meadows had changed over time.

Finally, select targets were tested through field survey, with archaeologists visiting the sites and recording the features they found. Most of the investigated sites dated from the 19<sup>th</sup> century; however, a few examples appeared to be earlier, possibly dating to the early 18<sup>th</sup> century or before.



a) 1st Edition Ordnance Survey Map of water meadow near Weston-Upon-Trent (Copyright and database right Crown Copyright and Landmark Information Group Ltd (All rights reserved 2008)).



b) Aerial photograph of water meadow near Trentham (Copyright UKPerspectives.com, Licence Number UKP/048/SCC).



c) Ground photograph of Trentham water meadow taken during fieldwork.



# Survey Results

The survey analysed historic mapping for over 1543km of rivers and streams within the county, along with approximately 1200 aerial photographs, and identified over 180 possible water meadows. Individual sites ranged in size from a single hectare to over 450 hectares in size. 76 of these possible meadows appeared to be well-preserved in the year 2000, the rest were in varying poorer states of preservation, with at least 15 having been completely destroyed since the 19<sup>th</sup> century. The largest numbers of meadows were found to lie on the Trent, Sow, and Blithe rivers although further targets were identified on almost every major river in the county.



Staffordshire's surviving water meadows provide a vital flood storage service. This helps to take pressure off our floodplain settlements and is a subject which is being investigated by the Staffordshire Washlands partnership.

Images of Wychnor water meadows in flood (cover and background) provided by Nick Mott, Staffordshire Wildlife Trust.

For more details please contact the Staffordshire County Council Historic Environment Team on her@staffordshire.gov.uk.



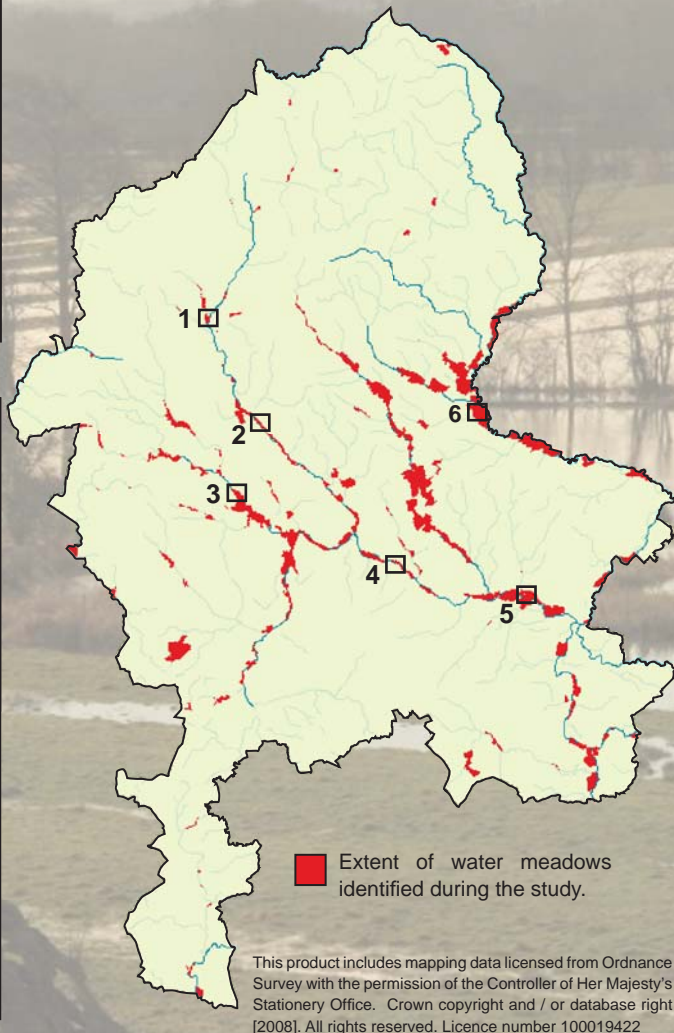
**1: Trentham**  
This meadow was one of the most complete systems found by the survey, with preserved earthworks and structures typical of water meadows. Historical records show that farmers around Trentham were enthusiastic about water meadows in the early 19<sup>th</sup> century, and were encouraged to build them by the Marquess of Stafford, who had an example made at Trentham - possibly the meadow revealed during this survey.



**2: Stone**  
A wealth of water meadow remains was found in this area, with a clearly defined complex of carriers and drains. These remains appeared to reflect a mainly intact system of earthworks, apart from within the north-eastern area of the system, which has been transformed into wetland environment for conservation and fishing.



**6: Willows Farm, Uttoxeter**  
This is one of the biggest meadows in the county (226 hectares). Carriers and minor drains were found, still retaining their original grid pattern. In addition, sandstone sluice hatch settings and a well-preserved buried sandstone bridge were also found. These suggest this is an early water meadow, possibly pre-eighteenth century in date.



**5: Orgreave/Yoxall Meadows**  
Two distinct water meadow systems were identified, with the survival of earthworks representative of main drains, and of minor drains and carriers across the area. A single area contained very well-preserved remains of both major and minor features, and is potentially a fully-preserved portion of water meadow.



**4: Rugeley**  
This water meadow is an island between the two bodies of water of the Trent and Mersey canal and the River Trent. Historic mapping had shown a series of channels crossing the area, and aerial photography indicated the presence of earthworks. Field survey revealed striking remains of both main and minor drains and of carriers, many of which were still directing water.

**3: Seighford Meadows, Stafford**  
Archaeologists found a fully-preserved portion of water meadow, which was still carrying water. Less complete systems of former channels were also located, with modern fields defined by former main drains which were still holding water. Several water meadow structures were found, including culverts or bridges, and a possible preserved sluice mechanism.

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