South Yorkshire’s Wetlands
– their obscure past and uncertain future

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"Wetlands are not always, and for some not ever, the most pleasant of places. In fact they have often been seen as horrific places. In the patriarchal western cultural tradition wetlands have been associated with death and disease, the monstrous and the melancholic, if not, the downright mad. Wetlands are ‘black waters’. They have even been seen as a threat to health and sanity, to the clean and proper body, and mind. The typical response to the horrors and threats posed by wetlands has been simple and decisive: dredge, drain or fill and so 'reclaim' them. Yet the idea of reclaiming wetlands begs the questions of reclaimed from what? For what? For whom? A critical history of wetlands' drainage could quite easily be entitled 'Discipline and Drain'."

Rod Giblett (1996) Post-modern wetlands -culture, history, ecology

Introduction

Many local people realise that the lowlands around Doncaster were formerly very wet. However, they tend to have little understanding of quite how wet and extensive South Yorkshire’s fens and carrs were. Cornish writing in 1895 describes the carrs to the south-west of Doncaster as an outlier of the great fen that originally extended on the north to the river Humber, on the east to the lowlands of the Trent, and on the south into Nottinghamshire and included the Isle of Axholme, Thorne Waste, Marshland and the fen of Hatfield Chase. Eagle Clarke in 1887 wrote of Pottrick Carr having vast numbers of duck, bittern, ruff and reeve, black-tailed godwit, marsh harrier, great crested grebe and water rail – breeding commonly – before Smeaton’s drainage scheme in the late 1700s. Smout (2000) expresses surprise at how the once extensive wetlands of both Lancashire and Yorkshire have evaporated from general memory. Noting how in Yorkshire south of the confluence of the Ouse and the Trent, 70,000 acres of Hatfield Chase were constantly inundated before Vermuyden and his fellow Dutch undertakers commenced to drain it in 1626. At its heart was Thorne Mere, almost a mile over. Close by, Potterick Carr 4,000 acres near Doncaster fell to Smeaton and his engineers after a private Act of Parliament in 1764. This was one of many outliers known as the Yorkshire Carrs.

A feel for this long vanished landscape can be gathered from the status of some of the wildlife species – the Bittern was sufficiently common to have its own vernacular name and to feature in local folk rhymes –

When on Potteric Carr the Butter Bumps cry
The women of Bulby say summer is nigh
Even in the early 1900s older people around Beverley could still recall hearing the local Bitterns.

Cobbett in 1830 described the land reclaimed from the Humber area as (with the exception of the Cambridgeshire fenland) the richest and most fertile he had seen in the whole of England. The value of land at Hatfield Chase was raised from 6d per acre to 10s by the Dutch improvers. This was the value to the farmer and landowner and doesn’t reflect the value to the community that lived and worked in and around the wetlands. These were extensive and productive landscapes.

In the accounts of Leland there is a description of the feast for the enthronement of the Archbishop of York in 1466. This may have a degree of exaggeration, and much of the food would have been supplied from the Derwent Washlands. Nevertheless it does give insight into the likely wildlife at the time in the South Yorkshire and Humber marshes and fens.

400 swans, 2000 geese, 3000 mallard and teal, 204 cranes, 204 bitterns, 400 herons, 400 plover, 200 ruff, 400 woodcock, 100 curlew, 4000 pigeons, 104 peacocks, 200 pheasants, 500 partridges, 100 dozen quail, and 1000 egrittes. Many of these are wetland birds.

It is now believed that little bittern, night heron and purple heron survived in English wetlands until the 1600s.

Other household accounts from the region confirm in 1526 cranes, herons, snipe, bittern, quail, larks, dotterel and bustards for the table. In 1530 the menu included peacocks, cranes, and bitterns, and in 1528 twelve spoonbills fetched 1s apiece, and ten bitterns cost 13s and 4d.

Cranes and spoonbills were extinct as breeding birds in England for around 300 years, but ruff continued to breed at Hatfield Chase until the 1820s. Thomas Pennant in 1766 described the regular business of taking ruff in nets, fattening them in captivity and selling them for the table for 2s each. Furthermore, with the introduction of the Dutch model of duck decoy in the 1600s many thousands of wildfowl were captured every year from the South Yorkshire fens. Even Doncaster Corporation had a duck decoy – paid for either as an investment or from money entrusted to the upkeep of the poor. It cost £160 for the decoy and for making a special embankment – ‘Decoy Bank’ running over three-quarters of a mile to reach it. The decoy pond was circular, with six and a half acres of water and six ‘pipes’ [to collect the ducks!]. In 1662 it was let for twenty-one years at an annual rent of £15. This rent fell in 1707 to only £3 per year; perhaps reflecting the impact of nearby drainage schemes. The lessee of 1707 made a speciality of catching pochards – apparently one of the best ducks for the table. This was by means of nets which were raised by pulleys on poles after the pochard settled on the water.

All the duck pipes were still in existence in 1778 but the last decoy man died in 1794, and by the late 1800s the Great Northern Railway ran straight through the middle of what had been the decoy.

These wetlands also provided fish, reed and rushes (for thatching, flooring and candles), peat for fuel, brushwood from the carrs for fuel and light constructional work. They also provided valuable pasture for cattle.

As Smout notes, it was not only in the great marshes and meres of Yorkshire and Lancashire that wetlands had economic value for local people. It was the same the length and breadth of northern Britain.
The story of water and wetlands in Britain over the last 500 years or so is that of almost total reordering. Once it has fallen from the sky it behaves very differently from how it did all those years ago. It hardly rests on the surface of fields unless the storm has been severe. There are now many fewer ponds and marshes; no longer rushy furrows between curving rigs of poorly drained field, rivers have been straightened, canalised and redirected.

A recipe for heron: ‘A heron if plain boiled for about eight hours becomes tender enough to afford a meal to a hungry person, and its flavour is only slightly fishy. It should be served with a thick white sauce flavoured with chopped parsley or fennel.’
[From Cameron (1917) The Wild Foods of Great Britain].

Attitudes to water

As Giblett (1996) notes, wetlands are not always, and for some not ever, the most pleasant of places. They have are as horrific places in western culture associated with death and disease, the monstrous, the melancholic, and the mad. Wetlands are ‘black waters’, a threat to health and sanity, and to the clean and proper body, and mind. The typical response to the horrors and threats posed by wetlands has been simple and decisive - dredge, drain or fill, and so ‘reclaim’ them.

The idea of reclaiming wetlands begs the questions from what, for what, and for whom? A critical history of wetlands drainage could be entitled ‘Discipline, Drain and Dominate’.

Abercrombie in his report of 1931 [Sheffield and District Regional Planning Scheme] notes on p106 in terms of Rural Zones (Low-lying) some key aspects of Planning Policy Guidance that set in place some of the steps that save the little bit of wetland we have today in the South Yorkshire Region:

The Minister of Health has recently issued a special White Paper drawing the attention of Local Authorities to the danger of permitting building upon low-lying land, and especially that which is liable to floods. The Minister questions whether public money should be spent in protecting the property of anyone who is so foolish as to build upon such perilous sites. At the same time it is better to prevent mistakes of the public than to punish the faults of ignorance. In a mining area, such as most of this Region is, it is difficult to say, for the purposes of delimiting a Zone, exactly what area is subject to flooding; even though the ultimate amount of flooding is known, the period of its occurrence is not certain. In order, therefore to avoid disputes, it has been suggested that an ample and wide area should be zoned as low-lying land, but that the total prohibition of building of houses should be exercised on flood lands to be determined from time to time under the Zoning Control. The Zone is described as a low-lying one on which houses and other buildings will be allowed by consent; but no such buildings will be allowed upon land liable to flood.

This highlights some key thoughts on the issue and presents us with one of the first relatively enlightened views of the time.

Human impact on water and wetlands in the UK has been almost total. However, whilst the classic impacts of the drainage of the great fens and washlands (Cambridgeshire, the Somerset Levels, the Idle Washes near Bawtry etc.) are well known, many other more localised impacts
have been forgotten or unrecognised. In most cases the destruction of wetlands has been so complete that even their existence is generally dismissed. The massive impacts of medieval peat cutting in creating the Norfolk Broads has been known since the 1950s, and yet the even more catastrophic effects of medieval peat cutting in destroying the extensive upland wetlands of the South Pennines has been overlooked until the late 1900s. The insidious impacts of excessive ground water abstraction in disrupting water tables is widely recognised, but the day-to-day effects of urban catchment ‘theft’ and subsurface drainage by service supply networks and by concrete and tarmac are generally ignored.

Even the conversion of unimproved and often unenclosed farmland to intensive and improved, enclosed agriculture, with compounding effects of fragmentation and drainage combined with simplification of the landscape, have been only poorly documented.

The South Yorkshire Scene

A dugout canoe from sediments near Meadowhall bears testimony to the wet nature of this landscape in prehistoric times. Similarly place name evidence such as Holmes farm at Blackburn Meadows suggests island in a marsh. In 1546 the ancient chapel at Attercliffe was still in use so that the curate of Rotherham could come to his flock when it was too wet for them to come to him, or to provide service even when he couldn’t get there!

‘-----to mynistre to the seke people, as when the waters of the Rothere and Downe (DON) are so urgent that the curate of Rotherham cannot to them repayre, nor the inhabitans unto hym nether on horseback or bote ----- ’.

As noted by Jones (2000) land drainage and wetland management began in earnest in the eastern lowlands of the region. Some may have begun in Romano-British times, and then more seriously from the Conquest onwards. The impacts would have been limited by the need for appropriate technology – either methods of drainage and / or as the landscape drops close to sea level, pumping mechanisms to take the water off – wind power, steam, and then petrol, diesel or electricity. Evidence for wet landscapes exists abundantly in map-based form – place-names and field names etc. Osier Holt, Willow Garth, Owler-, Oller-, Silk- (Salix), Carr (e.g. Deepcarr, Carrfield), Marsh– (Lane etc), Peatfield Lane (e.g.Killamarsh), Holme (e.g. Oughtibridge and Blackburn Meadows), Withies (-beds etc), Beaver- (Hill etc.), Moor-, Mor-, -Marsh, Fenny-.

Also surnames implying association with wetlands – Mossman, Moss, Peatman, Moorman, Peate, Peatfield, Moore, Carr, Holmes,

It is worth noting that generally in the upland areas, these impacts are now, superficially at least less obvious. In fact they are catastrophically obvious once they are pointed out. However, there are two complicating factors in the uplands. The first is that in general terms drainage in the uplands is easier. A simple cut will allow water to flow down and away. So with a sympathetic topography drainage can be easily effected. The other complication is that these upland areas are inherently less productive (= less valuable??) and so there is less immediate incentive to improve and less return on investment.

However, there is a further issue too. This is that the massive loss of upland wetlands from the region has had a major if not defining influence on the behaviour of water across the entire region. It is from these upland areas that we have the water to supply the vast lowland fens and marshes in an eastern England landscape of relatively low rainfall.


**Industry and urbanisation**

The relationships of industry and of urbanisation with the water and wetland resources are many and complex – too much so to deal with in detail here. However, it is clear that across the South Yorkshire region, the impacts have been colossal – from the use of water and the diversion of rivers to facilitate the early scythe and sickle works, to the cooling of power stations, the use in iron and steel manufacture and fabrication, to brewing, to mining. Some of these impacted by using clean water and discharging polluted water, and others by affecting the wetland resource. Some did both.

Coal mining for example lowered the water table – often catastrophically during the late 1800s and 1900s, caused massive subsidence of land to create (or recreate in many cases) wetland environments, and also used water and polluted water in the nature of the coaling and coal washing operation. Now in the early 21st century with mines abandoned the water table is rising again, sometimes quite quickly, unpredictably and often polluted.

The first collieries were in operation in the medieval period, mostly to the west where coal lay close to the land surface. As easy coal ran out, and as demand for it grew, the operations moved further east – to the hidden coalfields of South Yorkshire. The first mines were bell-pits, adits, or drifts – tunnelling into the hillside. The later ones were deep mines sinking shafts deep underground and often covering the land around with spoil and poorly separated coal brought out with the fuel itself. Water and wetlands were affected as land was engulfed and as the impact of pumping the mine shafts to dewater them also lowered the water table and dried out the surrounding wetlands.

At Grimethorpe in Barnsley the demise of Ferrymoor as a wetland dates from the sinking of the first deep mineshaft in the late 1800s. Described in William Bretton’s *History of Brierley and Grimethorpe* - written in the 1930s but edited, and produced in 1999 by Terry Middleton, the story of Ferrymoor gives a specific example of a general process. Before the dissolution of the monasteries Ferrymoor was held by the Prior of Monk Bretton and farmed by a bailiff. It was regarded as very valuable – a shallow swamp covered with water to a depth of about 30 cm, and abounding with rushes, and fish such as eels, and rich in wildfowl. The reeds and rushes were used for floor coverings, screens, roofing thatch, and ‘wattle and daub’ buildings. Indicating the importance of the site, Ferrymoor was approached by several double-hedged cart roads giving good access to collect rushes, reeds, and presumably fish and fowl. The marsh would also provide hay, grazing for stock, and probably peat for fuel, along with brushwood and withies.

Bretton notes early descriptions of the River Dearne being much wider than today with Wombwell, Wath, and Bolton on its banks. He sets Grimethorpe at the head of a basin extending northward from the River Dearne. The centre of the basin was filled with a great marsh – important as a source of wealth for a farming community.

Ferrymoor continued to be waterlogged until the early 1900s, when after the sinking of the Ferrymoor Colliery Shaft (1915) and Grimethorpe Colliery (1897), the site became only seasonally wet in winter. By the 1930s it was reduced in extent to around 40 acres (c. 15 ha). , and today is almost extinct. A similar story can be told for many other sites such as Killamarsh Meadows in the Rother Valley.
By the 1930s around 50,000 miners were employed producing about 30% of the British coal output. Today there are only two working collieries in South Yorkshire – at Maltby and Rossington. Ferrymoor may be reasserting itself at Edderthorpe Ings, Old Moor on the Dearne and Rother Valley Country Park at Killamarsh.

A further impact of industry – its rise and its fall – has been the creation of numerous ponds, ditches and pools. These may be functional but now abandoned or accidental products of human industrial working. Many of these have become wonderful sites for a diverse range of wildlife – until often being infilled, ‘restored’, or otherwise made safe and tidy. These have been an all-too ephemeral and under-appreciated resource.

Industry and urban demands have also created a network of canals, of reservoirs, of millponds and of other artificial wetlands. The coal mining industry has bequeathed a legacy of mining subsidence flashes - many of which now have enormous interest and conservation value as they reassert themselves into the landscape from which they were banished a hundred years ago. These are accidental by-products of exploitation. However, deliberate habitat creation is now generating new ‘designer’ wetlands and new wet landscapes.

The New Wetlands

New complexes of wetlands are being created and restored across the region:

- The Don Valley
- The Rother Valley
- The Dearne Valley

On a smaller scale but still significant are the innumerable ponds being created in community areas, in private gardens, and school wildlife gardens etc. Increasingly ponds may be integral to new developments as balancing ponds, and as water purification systems.

Even in the uplands some of the drains and dykes are being allowed to deteriorate or are being deliberately blocked, to help landscapes re-wet.

The processes are a mix of:

- Restoration
- Habitat creation
- Conservation
A Future Vision

Some of the projects either undertaken or being undertaken are very large and very exciting. The possibilities are huge, and the idea of conservation and management being effectively supported and supporting tourism and leisure – to provide a political and financial lever is tremendously powerful.

So what might increase, return or colonise??

What has come back so far – Merganser, Goosander, Cormorant, Common Terns, others??

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Mammals

Otter, Mink, Beaver!!, Polecats, Deer – Red, Roe, Muntjac.

Rare bats species??

Others??

Fish

Salmon, others?? Exotic species??

Invertebrates

Signal Crayfish, other Dragonflies and Damselflies?? Wetland butterflies?? Other wetland specialists??

Plants

Giant Hogweed, *Crassula, Azolla*, Water Hyacinth, other exotic pondweeds, Greater Spearwort, Water Soldier and other natives but as garden escapes.
So what might we lose?? [Much gone already]

Already gone – Fox Sedge, native Black Polar, many others.

Any species associated with traditional, cultural management of wetlands must be under potential threat.

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<td>Probably all that were going have gone!!</td>
<td>Water vole??</td>
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<th>Invertebrates</th>
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<td>Native Crayfish,</td>
<td>Frogbit, Large Duckweed, others??</td>
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<td>Others unknown??</td>
<td>Under threat – managed wet grasslands, wet woodlands, upland wetlands.</td>
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<td>Thorne Moors ‘specials’ not recorded in recent years??</td>
<td>Veteran riverside and wetland trees – ancient pollards, ancient coppice such as alder etc</td>
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<td>Species of relict wetlands in the region – limited mobility</td>
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Threats and Issues

There are basic issues of management of ponds and lakes, and successional changes. There has been a move from semi-natural and natural systems, and from cultural landscapes with traditional management, to artificial landscapes requiring deliberate management input. There’s a shift from wet grassland, wet woodland, bog, marsh and mire, to pond and lake.

Problems of the wider landscape and the ‘Boom/Bust’ - Flood/Drought behaviour of water in the landscape

Impacts of urban artificial drainage networks in urban areas –services etc, impacts of non-porous surfaces

Impacts of drainage and land-use in both upland and lowland rural landscapes

Importance of regional and national contexts

Failure to take current opportunities – e.g. post-industrial restoration
References


