Chapter 14

Rutland Waters

Robert Ovens and Sheila Sleath

Rutland is in the driest region of the United Kingdom, receiving on average 600mm or 23.6 inches of rain a year, which is two thirds of the average for England and Wales. This equates to nearly 234 million cubic metres (51,520 million gallons) of water – sufficient to fill Rutland Water nearly twice over. Although a great deal of this is utilised directly by plant and crop growth, and some evaporates, this still leaves a staggering 58 million cubic metres (12,760 million gallons) or so to be drained away by the county's surface watercourses and underground aquifers.

Rutland Watercourses

A cursory inspection of the county map will soon establish that many of the natural surface watercourses, especially in the southern half of Rutland, flow generally eastwards, and these are often through steep-sided valleys. This will certainly be confirmed by the traveller crossing Rutland in a northerly direction, say along the A6003 from Caldecott towards Oakham. The roller-coaster nature of the road will definitely be noticed, and it is why the area was so carefully scrutinised when the search was on for new reservoir sites.

The county's only river of any significant size is the Welland, which is never wholly in Rutland as it forms the majority of its south-eastern boundary. At least 85 per cent of the county is in the drainage basin of this river, which has its source near Husbands Bosworth in Leicestershire. Its journey past Rutland begins at its confluence with the Eye Brook, near the former Rockingham Station, just south of Caldecott. It then flows past Thorpe by

The Welland in flood near Seaton Viaduct in November 2006 (RO)

Water and Seaton Mill, under the Seaton Viaduct and on to Barrowden and Tixover Church before skirting the Northamptonshire village of Duddington. Near Ketton it passes under Collyweston Bridge and on to Tinwell, which is the river's abstraction point for the Rutland Water aqueduct. It finally leaves the Rutland boundary at Broadeng Bridge. Its onward journey takes it through Stamford and Spalding in Lincolnshire and across the Fens to discharge finally into the Wash. It is navigable from Hudds Mill, just below Stamford, down to Fosdyke Bridge near its outfall into the Wash, a distance of 56km (35 miles).

The Eye Brook, sometimes shown on old maps as the Little Eye, rises near Skeffington in Leicestershire and, for some miles, forms the south-west boundary of Rutland with Leicestershire, beginning at Finchley Bridge near Belton in Rutland. It passes south of Belton, and north of Allexton and Stockerston in Leicestershire before flowing into the Eyebrook reservoir south of Beaumont Chase and Stoke Dry. From the reservoir it follows the valley for a short distance to join the Welland near Caldecott. It has a number of streams as tributaries, including West Brook which joins it from the north near Belton in Rutland.

The River Chater rises near Whatborough Hill in Leicestershire, and then flows east, past the site of Sauvey Castle, and Launde Abbey, before crossing the county boundary with Rutland at Leighfield. It continues its sinuous course north of Ridlington and Preston, and then to the south of Manton. Between North and South Luffenham, it meets a stream that rises south of Ridlington. It continues in a north-easterly direction, going through Ketton, before meeting the River Welland near Tinwell, the end of its 24-km (15-mile) journey.

The Welland in a quiet mood at Tixover, looking west (John Nowell, Zodiac Publishing)

The Chater at Ketton in the early 1940s (RCM)

The River Gwash, which appears on early printed maps as the Wash River, also rises in Leicestershire, near Owston. It takes an easterly course, passing through Braunston and south of the former Oakham Waterworks to Brooke, then between Gunthorpe and Martinsthorpe before running under the railway line and Sounding Bridge north of Manton. Here, it flows into Rutland Water to emerge from under the dam some five miles later, just before Church Bridge, Empingham. (Prior to the construction of the reservoir, the river followed a meandering course past Hambleton Wood, through Brake Spinney and on to Normanton Fishpond.) Just before entering Mow Mires Spinney, it was joined by its northern arm which passed through Burley Fishponds. Just beyond Empingham, near the former Empingham Mill, its volume of water is again increased by the North Brook, and at Wild's Lodge by water from the springs in Shacklewell Spinney. Continuing its course through Tickencote, the river crosses the Great North Road (A1) under Roman Bridge at Great Casterton. After passing close to Little Casterton and Tolethorpe it nearly encircles Ryhall, where it runs down the side of the street, and passing through Belmesthorpe, finally discharges into the Welland near Newstead Mill to the east of Stamford. Its total course is about 40km (25 miles).

The North Brook sources near Cottesmore and after flowing in an easterly direction through Greetham turns south past the site of the former Greetham Mill to flow through a deep gully into Exton Park and Fort Henry lakes. Just after the lower of the two lakes it passes on its eastern side the site of the deserted medieval village of Horn, before flowing under the remains of the Exton Park wall. A little later it is joined by a small tributary which flows through Ry Gate Lake in the grounds of Exton Hall, and later through the bed of a drained lake near Cuckoo Spinney. The North Brook continues in a southerly direction by Horn Mill, now a Trout hatchery, to Empingham where it joins the Gwash near the site of the former Empingham Mill.

The Gwash following its serpentine path through meadows between Braunston and Brooke (RO)

The North Brook flows under the remains of Exton Park wall near the deserted medieval village of Horn (RO)

The River Glen flows for a short distance through the north-eastern corner of Rutland, during which it skirts Essendine church and the adjacent castle mound. It eventually joins the Welland in the Fens.

The River Eye, not to be confused with the Eye Brook, sourcing to the east of Cold Overton in Leicestershire and running through Langham, leaves the county, after almost encircling Ashwell, in a north-westerly direction and eventually drains this part of Rutland towards the River Trent. Its tributary, Whissendine Brook, also runs from near Cold Overton, through Cold Overton Lake and Whissendine to join the Eye just before it enters Stapleford Park in Leicestershire.

There are many other streams in Rutland which, although shown, are rarely named on maps. However, they often have local names. Two examples

are the River Eg, originally a tributary of the River Gwash, which flows through Egleton and into the nature reserve lagoons at the western end of Rutland Water, and the River Hlyde which flows past Lyddington fishponds, eventually joining the River Welland upstream of Thorpe by Water. In each case, the name of the river is associated with the name of the settlement through which it flows.

The watercourses of Rutland (RO)

Watermills in Rutland

The main function of most watercourses is to drain excess water from the landscape. Secondary uses include water supply for human and animal consumption, for irrigation, and for commercial and industrial applications. For centuries, larger rivers and canals have also been used for transport. Until the beginning of the twentieth century, another important use was a means of storing energy.

For over 1,000 years, until the introduction of the windmill in the twelfth century, the watermill was the only form of mechanical power available. The watermill and windmill were then the unrivalled providers of power until the steam engine was introduced in the eighteenth century.

The Domesday survey shows that there were some 5,624 mills in England in 1086, mainly in the south and east of the country. Thirty-nine of these were in Rutland, of which seventeen were on the River Gwash or on one of its tributaries. Six were located at Empingham.

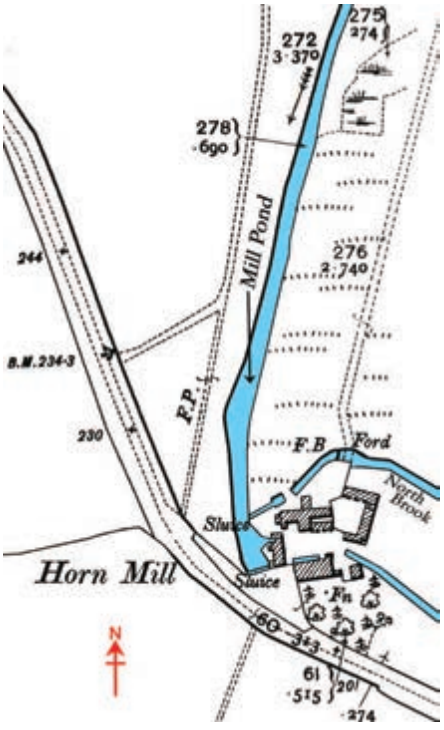
For several hundred years after Domesday, the lord of the manor dominated mill life. These owners of ancient manorial mills possessed 'soke rights', which meant that all corn was ground in the lord of the manor's mill.

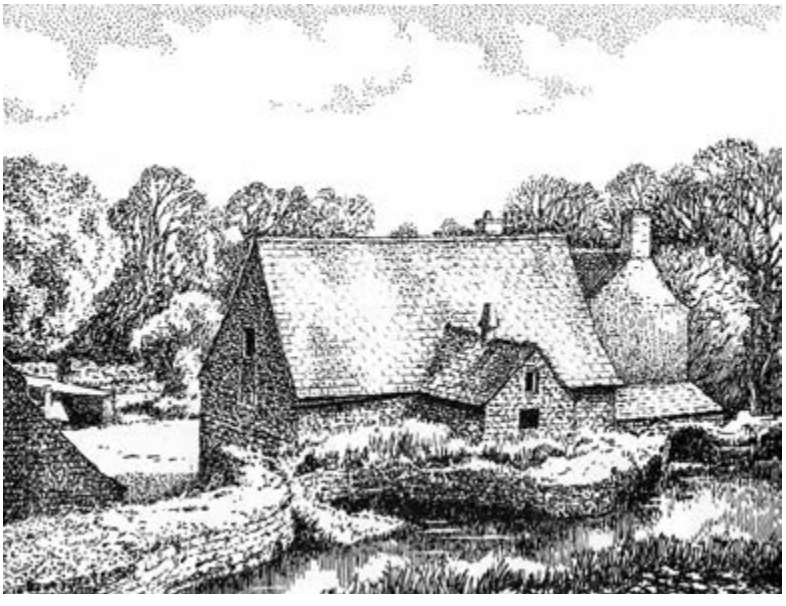
A good supply of water was essential in this highly profitable trade, and many lawsuits resulted from disputes between mill owners concerning the flow of water between watermills.

After Domesday, watermills were put to an increasingly diverse range of uses including grinding iron ore, driving tilt hammers, pumping bellows, and crushing bark for tanning. There were also sawmills, paper mills, gunpowder mills, boring mills, water-pumping mills, silk mills, and cotton-spinning mills. However, Rutland watermills were almost exclusively corn mills, grinding corn to produce flour.

At the beginning of the nineteenth century steam-driven mills, followed closely by steel roller mills, resulted in the eventual demise of watermills. Along the River Gwash and its tributaries in Rutland, there were eighteenth-century watermills at Brooke, Whitwell, Empingham, Tickencote, Tolethorpe and Ryhall, together with Greetham and Horn on the North Brook, most of which were able to continue as working mills until the end of the nineteenth century. There were other watermills at this time at Ketton and South Luffenham on the Chater, Caldecott on the Eye Brook, and Thorpe by Water, Seaton, Barrowden and Tinwell on the Welland. Today there are no working watermills in the county. However, some of the buildings survive, most having been converted into private dwellings. The OS Second Edition 25" map of 1904 shows the mills then surviving in Rutland. Particularly interesting are their water systems, including the leets, mill ponds, mill dams, weirs, sluices, mill races and tail races. The only watermill site known to have been lost to Rutland Water was at Whitwell. The stone-faced embankment of its mill dam can be seen to the south of the village on pre-Rutland Water aerial photographs. Its water supply was the stream which flows in a southerly direction through Whitwell, a tributary of the northern arm of the Gwash (*see* Chapter 20 – Medieval Settlements at Nether Hambleton and Whitwell).

Horn mill from the OS 2nd ed 25" map 1904. Although the mill house survives, many of the other buildings were demolished when the Trout hatchery for Rutland Water was built here in the 1970s





Horn Mill and mill pond about 1905 (Canon J R H Prophet)

Barrowden Mill and mill pond on the River Welland, about 1908 (Hart)

Ryhall Mill in 1925, now demolished (Hart)

Empingham and Manton Reservoirs

Following the Water Resources Act of 1963, the local water authorities, the Welland & Nene River Authority and the Mid-Northamptonshire Water Board, the forerunners of Anglian Water, had reviewed the probable future requirements for water, and investigated various ways and means of supplying the estimated demands. In the area being considered the growth rate was predicted to be well above the national average, mainly due to new housing in developing Northamptonshire towns. It was considered that the only practical solution was to establish a large reservoir to store water pumped from two or more rivers as no single river in the area had sufficient flow.

Some 64 valleys with possible potential for water storage were investigated in what is now the Anglian Water area. In many cases the storage capacity was too small to be worth consideration, and many others were too remote from watercourses from which water could be transferred in adequate quantities for a pumped-storage scheme. In the majority of cases the

geology of the valley was unsuitable. Only two sites were considered to be worth further investigation, the Chater valley to the west of the main road between Preston and Manton (the Manton reservoir), and the Gwash valley upstream of Empingham (the Empingham reservoir). These are adjacent valleys in the heart of Rutland and the reservoirs together would have covered some 4.5 per cent of the county.

Looking at water sources, the River Authority had also reached the conclusion by 1966 that the River Nene, with a catchment area of 1,554 square kilometres (600 square miles) and the River Welland, with a catchment area of 518 square kilometres (200 square miles), should be fully developed as constituting the only practicable way of meeting the required demand. Fortunately, they were close enough to the identified storage valleys for the planners to consider a full pumped-storage project. Records of water flow from the previous 27 years, which included two periods of severe drought, indicated that up to 900,000 cubic metres (200 million gallons) of water per day could be extracted from the Nene at Wansford, Cambridgeshire, leaving 140,000 cubic metres (30 million gallons) per day to flow down the river. Similarly, up to 450,000 cubic metres (100 million gallons) per day could be taken from the Welland at Tinwell, leaving 70,000 cubic metres (15 million gallons) per day to carry on down the river. The River Gwash, upstream of the dam, with a catchment area of 78 square kilometres (30 square miles), would supply only 5 per cent of the reservoir water.

Much of the investigative work to reach this stage had been carried out by T & C Hawksley, Consultant Civil Engineers of Whitehall, London, in conjunction with the two water authorities. In 1967 it was decided to seek Parliamentary approval for constructing the whole of the works described here and T & C Hawksley were engaged to prepare a report on the project, dealing in particular with the sequence in which the reservoirs, pumping stations and treatment works were to be built.

Looking north across the Chater valley from Preston towards Manton. The crest of the proposed dam for the Manton reservoir was along the line of the main road seen here crossing the valley (RO)

The geology of both valleys was investigated by drilling a series of boreholes. Both were found to have problems, but nothing was found that was considered to be insurmountable. The earth dam across the Gwash valley near Empingham was to be 37m high, 1,200m long and 810m wide on the Upper Lias Clay in which the valley has been formed. This would mean very gentle slopes and a very high volume of banking material. The resulting reservoir would have a top water level of 83.82m OD, would impound 124 million cubic metres (27,300 million gallons) of water, and would have a surface area of 1,260 hectares (3,114 acres). The village of Lower Hambleton and part of Middle Hambleton would be lost, together with three other isolated properties. Three new roads would be required: from near Burley Fishponds to Hambleton, from the east of Oakham to the top of Barnsdale Hill, and from Normanton to the top of Bunker's Hill near Empingham.

Drilling one of the many boreholes in order to establish the exact geology of the valleys (Brian and Elizabeth Nicholls Photography)

Looking across the Gwash valley from Hambleton towards Burley and Barnsdale in 1972 (Brian and Elizabeth Nicholls Photography)

For the Chater valley reservoir, the earth embankment near Manton was to be 42.67m high, and this was considered to be the maximum for this type of dam. It would cover the main road which crosses the valley south of Manton, and would therefore have to be wider at the top to accommodate the 37m necessary for a new road. Again the slopes would have to be very gentle and a very high volume of banking material would be required. The top water level of 114.2m OD, 30.5m higher than the Empingham reservoir, would impound 98 million cubic metres (21,560 million gallons) with a surface area of 595 hectares (1,470 acres). Only two properties were threatened: Jubilee Lodge on the road between Ridlington and Brooke, and Leigh Lodge in Leighfield, both being farm houses with adjacent farm buildings. Both could be saved by slightly lowering the top water level. Part of the Ridlington to Brooke road would be lost, but it seemed obvious that this could be replaced by a new road along the line of the old coaching road through Martinsthorpe, on the ridge between Brooke and Manton. A 132,000 volt electricity transmission line would also have to be realigned.

Key:
HWL - High Water Level
1 - Leigh Lodge, farm and medieval fishponds
2 - Jubilee Lodge, formerly Ancaster Estate farm
3 - Martinsthorpe Deserted Medieval Village (Scheduled Ancient Monument)
4 - Martinsthorpe Park
5 - Old coaching road
6 - Grade II listed packhorse bridge over the Chater

The two reservoirs together would provide a maximum storage capacity of 222 million cubic metres (48,860 million gallons). This would ensure 82 days supply without top-up water being added.

As well as the reservoirs, the other works necessary included the installation of pumping stations at the abstraction points on the Nene at Wansford, and the Welland at Tinwell, a water treatment works at Wing, and aqueducts linking the pumping stations to the reservoirs and the reservoirs to the treatment works.

Above: The proposed Manton and Empingham reservoirs were in adjacent valleys and together would have covered 4.5 per cent of the land area of Rutland (RO)

Left: Jubilee Lodge, built by the Ancaster Estate, was a potential victim of the Manton reservoir (RO)

Leigh Lodge, on the upper reaches of the proposed Manton Reservoir, was another possible victim. This aerial photograph, taken in 2006, shows that the Chater has now been dammed locally to create an ornamental lake (John Nowell, Zodiac Publishing)

The consultants considered a range of options. The main discussion was whether they should build Empingham reservoir or Manton reservoir first. Other considerations included different methods of constructing the aqueducts, various regimes for pumping and the effects on pumping costs. A further option was to consider a truncated reservoir at Empingham with two dams, mainly as a gesture to reduce the area of farming land lost. However, this was dismissed on the grounds of cost and feasibility.

Hawksley's recommendations were to construct the whole of the works, including both reservoirs for the long term scheme. This would ensure the maximum utilisation of the water available from the Welland and Nene rivers. However, in the shorter term, they recommended that Empingham Reservoir should be built first. This would save £3 million and provide 20 per cent more storage capacity compared to building Manton Reservoir.

These recommendations were adopted and Parliamentary approval was received in May 1970. Work commenced in June 1970 and the scheme was essentially complete, although not yet ready to supply water, by the summer of 1975 when water from the diverted River Gwash was allowed to flow into the new reservoir basin. At the end of a protracted campaign, Empingham Reservoir was renamed Rutland Water in 1976. It was 1979 before the new reservoir was full to capacity for the first time. There has been little mention of the need for Manton reservoir since (*see* Chapter 15 – Don't Dam Rutland, and Chapter 17 – Planning and Constructing the Reservoir).

At the time of writing plans have been agreed to increase the output of Wing water treatment works. These involve extracting larger volumes of water from Rutland Water and reducing water levels considerably below those experienced in the past. A new pipeline will be installed between Empingham and Wing, and between Wing and Hannington in Northamptonshire. In order to protect the nature reserve at the western end of the reservoir from low water levels, it is proposed to construct dams across Manton Bay in the south arm and across the western end of the north arm near the former Burley Fishponds. These will retain the water in the nature reserve area. Additional lagoons will also be created (*see* Aspects of Topography: A New Wetland Habitat). This work is due to commence in 2008.

From the *Stamford Mercury*, 22nd April 1977:

Huge reservoir plan – go-ahead unlikely

A reservoir three-quarters the size of Rutland Water could be built at Manton if there is an 'enormous population growth' by the year 2000. The lake, three miles south of Oakham and four miles south-west of Empingham, would hold 18,000 million gallons, pump out 29,000 gallons a day and cover 6.1 square kilometres.

But there is doubt whether it would ever go ahead.

Mr Peter Doble, Anglian Water Authority spokesman, said: 'Whether the reservoir is ever built or not depends on future demand. It would need an enormous population growth or a higher industrial growth in the area.'

Mr Doble said Manton was first thought about ten years ago as one of the original alternatives to Rutland Water. 'It was a bit of a toss-up between Manton and Empingham,' he said.

Mr Doble said the reservoir could serve areas as far away as Grimsby and Essex if it were built.

The 1975 cost of a reservoir at Manton was £23.8 million, 'but it would cost twice or even ten times that amount by the year 2000,' said Mr Doble. 'At the present growth rate of population we won't need another scheme anyway,' he added.

Mr Richard Adams, Rutland council planning officer, said: 'As we understand it at the moment, we have been informed by the water authority that the proposed second reservoir is highly unlikely to proceed, particularly in the period covered by the Rutland Structure Plan, which runs out in 1991. But one gets the feeling that this is more in the future than that,' he added.

Mr Doble said a reservoir at Manton would be against the plan. 'We would lose the character of the area; we would lose a lot of agricultural land, and almost certainly the presence of a second reservoir would lose a lot of development area,' he said.

Normanton Fishpond

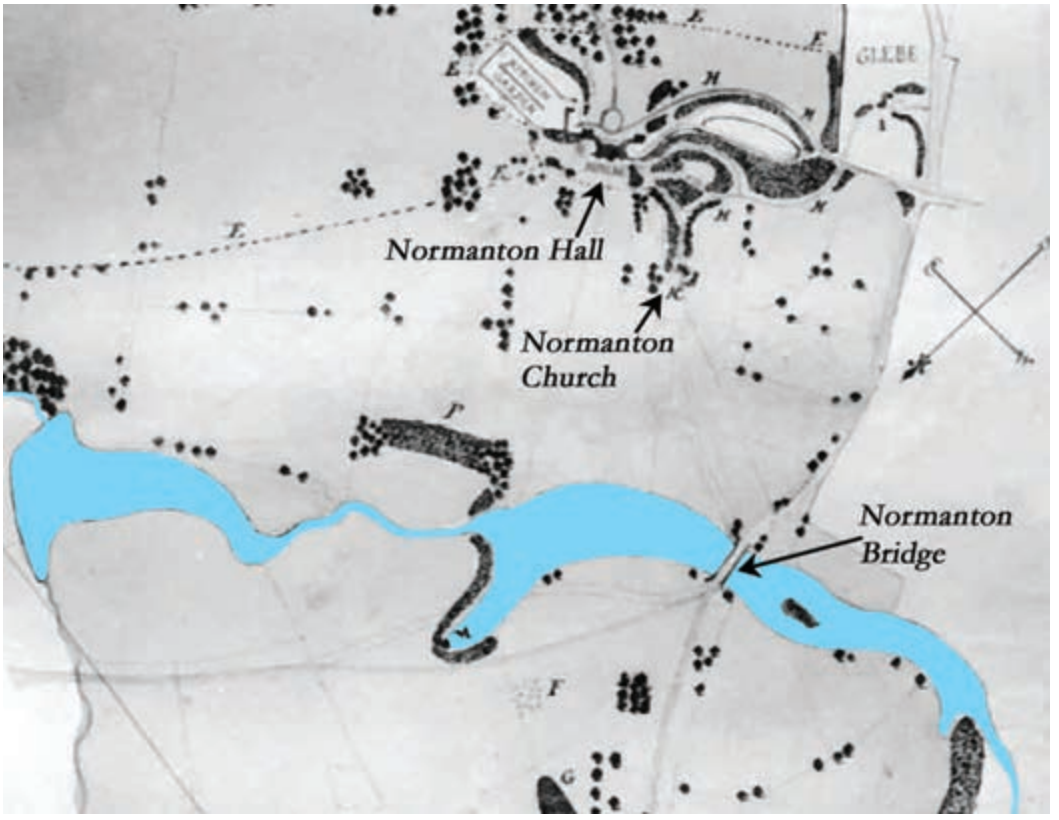
Normanton Fishpond was originally an ornamental lake, almost certainly influenced, if not created, by the landscape architect Humphry Repton (1752-1818) who visited and surveyed Normanton in 1796. The following year he produced one of his Red Books detailing his proposals, illustrated with before and after watercolour views and a map. The views had fold-down flaps so that his client, Sir Gilbert Heathcote, 4th Baronet (1773-1851), could immediately see the proposed transformation. Repton's ideal was natural beauty enhanced by art, and the secret of his success was his vision of a house and how it should be placed in relation to the landscape surrounding it. In his Normanton Red Book he made many suggestions, and some of these were implemented. In particular he recommended the construction of a reservoir, or lake, as a feature to enhance the landscape on the north side of Normanton Hall. The following extract from the Normanton Red Book is particularly interesting in view of the changes which were taking place in this part of the Gwash valley some 175 years later:

'There is certainly no circumstance of landscape more interesting or beautiful than water and there can be no person so void of taste as not to feel the necessity of improving the valley at Normanton by enlarging the river, yet this is a subject attended with some difficulty and requires more management than may at first be conceived; for though it might be possible to make such a dam or head as would convert the whole valley into one vast

lake, yet the expense of such a bank, and the waste of so much valuable land, is more than I would dare to advise especially as an effect equally pleasing may be produced by the more simple process which I shall now describe:

'I propose making a dam a little below the present head, and out of sight from the house, of sufficient height to flow the water to the bridge [Normanton Bridge] of an ample breadth, but to render the surface more considerable in the view from the house. I propose digging a channel or reach to supply materials for the head and also disguise the termination of the water. At the end of this bay I have supposed a boathouse with a fishing room over it, because from hence there will be the best view of the water. It is from this spot (now a gravel pit) that I have taken the sketch No XI showing the effect of the water, the bridge and the alteration suggested to the church of Normanton, but the house will not be seen from hence and of course this boathouse, tho' seen from the church, will be hid from the house, a circumstance to be studiously attended to, lest the landscape should become crowded by a multiplicity of artificial objects.'

He went on to describe how he would create a second channel, or lake, to the north-east of the first. This would be a widening of the river as before with a second dam, the second lake being lower than the first. The river would be 'the union between the two waters' and this 'union' would be disguised, when viewed from the house, by a small plantation. The deception would, in Repton's view, fool the eye into thinking that there was one vast lake.



From Repton's plan of his proposals for Normanton with the lakes highlighted in blue (The Grimsthorpe and Drummond Castle Trust)

Repton's sketch No IX looking northwards along the proposed upper pool towards the boathouse (The Grimsthorpe and Drummond Castle Trust)

Repton's sketch No XI showing his proposals for the upper pool which extended under Normanton Bridge. His suggestion for the re-modelling of Normanton Church is to the left. Edith Weston Church can be seen in the background (The Grimsthorpe and Drummond Castle Trust)

Part of Repton's lake is shown in the foreground of this 1822 engraving of Normanton House and Park from the north-west (RLHRS)

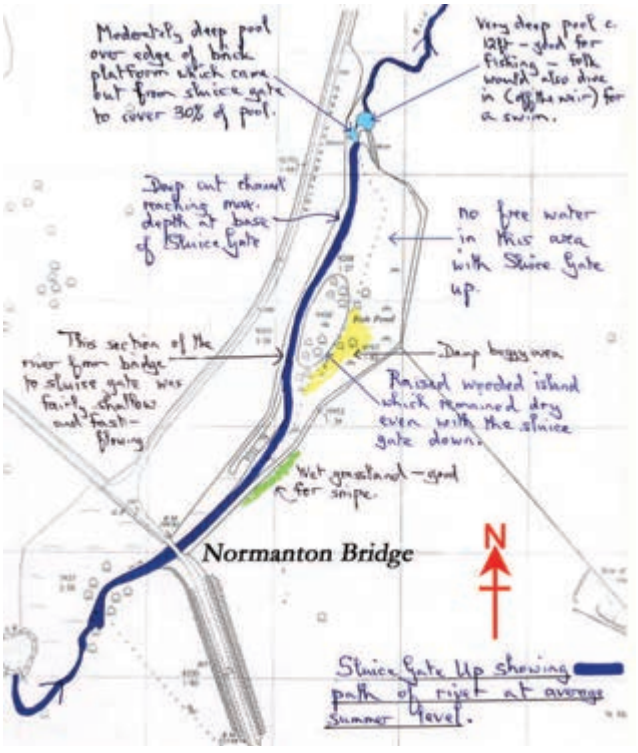
Humphry Repton's proposals for the two pools described here were not adopted, but it seems that a lake, with an island, was created as a result of his report. An engraving of 1822 showing Normanton House and Park from the north-west shows part of the lake in the foreground.

On 15th January 1881 *The Illustrated London News* featured an account by the Rev Edward Bradley (who wrote under the name of 'Cuthbert Bede'), the then incumbent at Stretton, of the visit to Normanton by the Prince and Princess of Wales. In this he included: 'At the foot of the hill, on the slope of which the mansion is built, the road is carried by a bridge over a stream, which has been artificially widened into a small lake, with an island in the midst for the water-fowl.'

Thatched Village by James Buchan is an account of his life as a young boy in 'Overton' [Exton] in the 1920s when his widowed mother, Helen Buchan, was schoolmistress at the Catholic village school. The following extract describes a visit to the lake at 'Saxford' [Normanton]:

'When we were out for a picnic one day we found a lake up a narrow, overgrown road near Blackwell [Whitwell]. Bushes grew round most of it, but in the gaps between them you could see that the water was covered with lily pads with their yellow flowers scattered among them. Where the lake ended there were two iron plates set in concrete. They had cog wheels above them and a metal handle. My mother said that they were sluice gates which could be raised or lowered to control the level of the water. "Look," she said, pointing to where the top of a wall showed above the grass round the bank, "this lake has been made by people. It's an artificial one. I wonder why they put it here miles from anywhere." '

Mike Griffin's family farmed the land that was Normanton Park. In notes on the OS 2nd ed 25" map 1904, he records his memories of Normanton Fishpond as it was in the late 1940s and 1950s (RCM)



Water running down the weir at the north end of Normanton Fishpond in the 1960s. Normanton Church can be seen in the field beyond (Mike Griffin)

The ornamental lake at Normanton became known as Normanton Fishpond, and it is shown in detail on the OS Second Edition 25" map of 1904. During the second World War, the fishpond had to be drained and so the sluice gates were raised. Normanton Fishpond then remained 'dry' for about 20 years, except during occasional short periods of natural flooding. During this period, the course of the River Gwash was down a cutting which ran along the west side of the island and on to the sluice gates. Several trees and bushes became established in the fishpond area. In *circa* 1960, the sluice gates were closed to re-fill the fishpond which was subsequently stocked with Trout. The outlet for water was then over the weir. Normanton Fishpond remained as such until *circa* 1970 when it was drained as part of the construction process for the new reservoir.

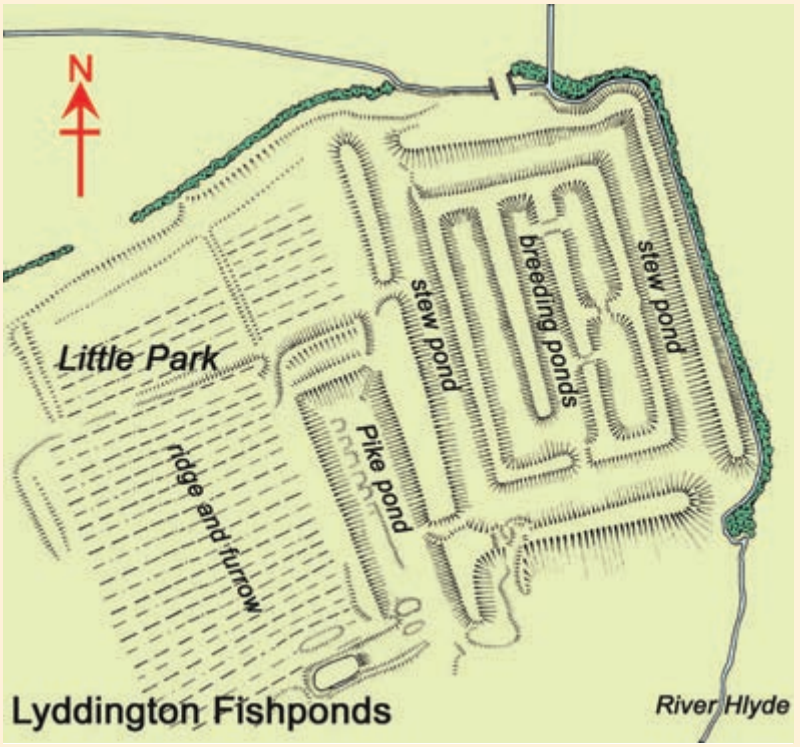
An aerial photograph of the River Gwash and Normanton Fishpond at high water level circa *1969. Note some flooding over the margins of adjacent fields* (Fred Adams)

Looking down from Normanton Bridge to Normanton Fishpond in 1970. Note the dense growth of vegetation (Jim Eaton)

Looking down-stream from Normanton Bridge towards Normanton Fishpond in 1972 after clearance of trees for the new reservoir (Jim Levisohn ARPS)

Early Fishponds in Rutland

The surviving earthworks of medieval and post-medieval fishponds can be found in or near at least eighteen of Rutland's settlements (*see* Chapter 5 – Edith Weston: A Queen's Dowry), and others may have been lost as a result of land drainage, and agricultural and building development. Most of those that remain are protected as Scheduled Ancient Monuments. Fish rearing in purpose-built stews was a valuable



The surviving earthworks of the medieval fishponds in the Little Park, Lyddington (after Hartley)

source of food. Consequently, fishponds, some of a considerable size, were desirable additions to monastic sites, manor houses, castles and settlements. The aim was to maintain and breed a readily accessible and plentiful supply of freshwater fish, usually Bream, Pike and Tench. Carp were also introduced in the sixteenth century.

An aerial view of Lyddington showing the earthworks of the medieval fishponds in the Little Park to the east of the church. The Bede House is immediately adjacent to the church tower (John Nowell, Zodiac Publishing)

Probably the best preserved of all the fishpond sites in Rutland is at Lyddington. Lyddington Palace was, until 1547, a seat of ecclesiastical administration for the Bishops of Lincoln, and the nearby Little Park was part of the estate. Here, the large complex of fish breeding and rearing ponds was built about 1330, probably by Bishop Henry Burghersh. These ponds survive today as major earthworks and are sufficiently well preserved to enable an understanding of the main principles of their use. They consisted of a number of individual inner breeding ponds, surrounded by an outer rearing, or stew pond. This outer pond helped to protect the interior ponds from predators and the inner ponds were long and narrow to provide the maximum area of shallow edge for the spawn and fry. The ponds were interconnected by channels with wooden sluices which enabled individual ponds to be isolated. There would also have been a dam with a sluice across the south-east corner which controlled the water level in the outer pond. A further, much deeper pond, sometimes called the jack pond, was reserved for rearing the carnivorous Pike, a tasty and favoured game fish.

Looking west from just inside the south-east corner of Lyddington medieval fishponds (RO)

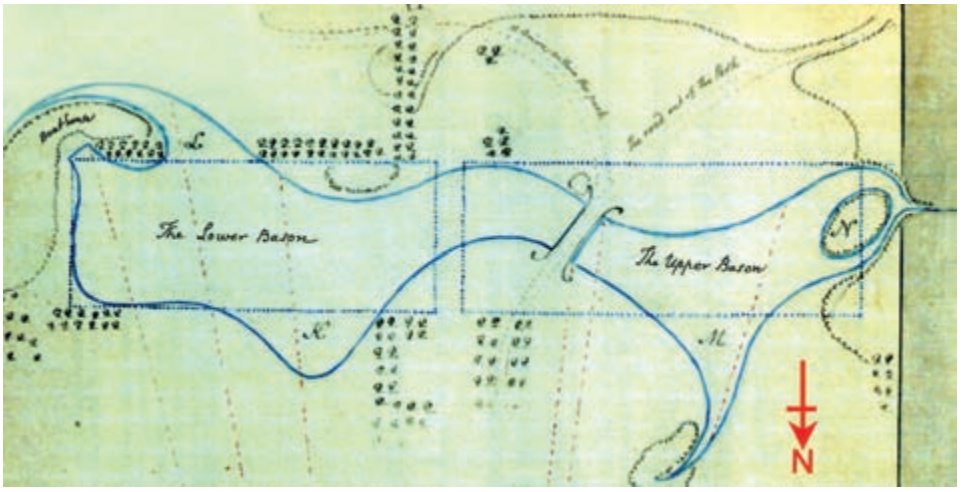
The fishpond earthworks and the nearby Bede House, the surviving part of Lyddington Palace, now administered by English Heritage, are open to the public and well worth a visit.

Burley Fishponds

Until 1940, when the Eyebrook Reservoir was first flooded, Burley Fishponds and Fort Henry Lakes were the largest stretches of open water in Rutland. Until Rutland Water, the fishponds at Burley were a familiar landmark to those who regularly travelled the road between Oakham and Barnsdale Hill and particularly popular with anglers. They are located at the bottom of the south avenue to Burley on the Hill, near the Buckingham Gate, and are fed by the north arm of the River Gwash. Little is known of their early history but it is thought that they were created in the 1620s when George Villiers, Duke of Buckingham, purchased, improved and beautified the Burley Estate. It is possible, though not confirmed by documentary evidence, that they are on the site of former medieval fishponds.

Burley Fishponds are mentioned in a survey, *A Particular of the Manor of Burleigh on the Hill in the County of Rutland and of the Park therein being the Estate of His Grace the late Duke of Buckingham* (ROLLR DG 7/1/56/1). The great house at Burley had been destroyed in 1646 by Parliamentary troops who had been garrisoned there during the Civil War, and this survey was commissioned by Daniel Finch, the new owner, about 1690. As a result, work started on building the present house in 1694. The survey mentioned the 'little brook' running through the park to the fishponds, saying that there were 'two fair fishponds' containing about 15 acres, with a 'cottage house' by the second pond; this was Keeper's Cottage adjacent to Buckingham Gate.

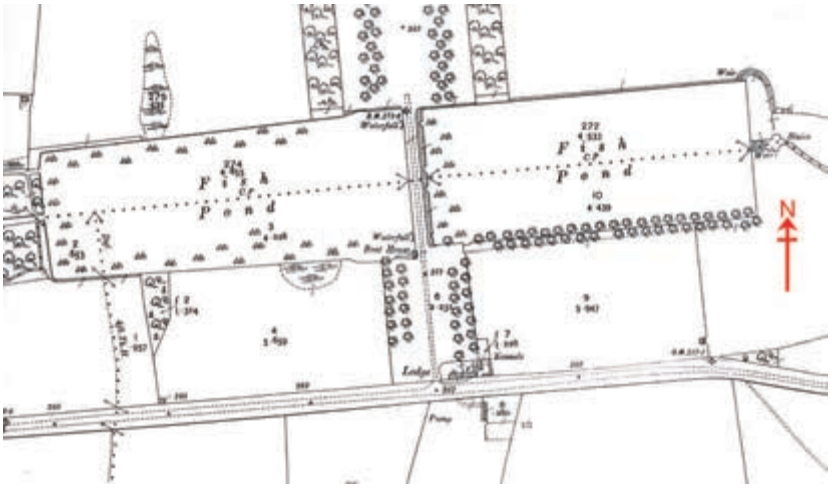
In 1795, the 9th Earl of Winchilsea commissioned Humphry Repton to remodel the Burley landscape. Repton was impressed with what he found: '. . . few places can vie with Burley in magnificence, both natural and artificial.' He presented his proposals in one of his Red Books, and the 9th Earl decided to adopt them, but in abbreviated form, excluding the ponds and proposals for the southern side of the Park. Repton wanted to make the fishponds more attractive and give them more prominence. He proposed a longer curved area of water which was to include a narrow section where there was to be a bridge, or a dam in the shape of a bridge, which would be visible from the house.



This plan is from Repton's Red Book for Burley on the Hill and shows his proposals for the fishponds (private collection)

Repton's perspective of his proposals for Burley Fishponds (private collection)

Burley Fishponds from the OS 2nd ed 25" map 1904



The causeway at Burley Fishponds in 1905 (Hart)

Fishing at Burley Fishponds. From an eighteenth-century oil painting (private collection)

It seems that the ponds have always been a venue for recreational fishing, being a particularly good spot to catch Pike, and a haven for bird watchers. C Reginald Haines refers frequently to 'Burley Ponds' in his *Notes on the Birds of Rutland* of 1907, for example:

'26. BEARDED TIT, *Panurus biarmicus*.

For the first recorded time, on January 18, 1905, two of these most beautiful little birds were seen in Rutland, selecting for their visit Burley Ponds, the most suitable spot in the county . . . . '

Immediately to the west of the ponds are Burley Water Meadows, once used to grow reeds for thatching.

Today, Burley Fishponds stand at the west end of the north arm of Rutland Water, and are part of the nature reserve, although not open for public access. At low water level the remains of the causeway between the two ponds can still be seen.

The causeway at Burley Fishponds and the ride to Burley on the Hill in 2006 (RO)

Charles Masters

Charles William Masters, gamekeeper to the Burley Estate from about 1877 until 1908, lived at the Keeper's Cottage which is adjacent to the Buckingham Gate on the old Oakham to Stamford road. From here he could see the great mansion of Burley on the Hill at the top of the ride which crossed the causeway between Burley Fishponds, as well as observe the great variety of birds that were attracted to this part of Rutland. Many of his observations were reported in Haines's *Notes on the Birds of Rutland* (1907), including, for example: 'C. Masters tells me he has seen the Ringed Plover again "this spring" [1906] at Burley Ponds.'

Exton Lakes

The ornamental lakes in Exton Park, usually referred to as Fort Henry Lakes, and owned by the Earl of Gainsborough of Exton Hall, stand adjacent to the deserted medieval village of Horn. They are fed by the North Brook, flowing down from Greetham, and a smaller unnamed stream which enters the lake from the west. It is this junction of two small valleys which gives the upper lake its unusual shape. Little is known of the early history of the lakes, particularly when they were created. They are shown in their present form on Thomas Badeslade's *Prospect of Exton Park* of *circa* 1730. Exton Park is a post-medieval park, originally enclosed by a stone wall and extending to the Great North Road.

A photograph of 1905 shows that there were once cascades at the southern end of the lower lake. These were designed by Stephen Switzer and built about 1760. He had been working for Sir John Vanbrugh and alongside Lancelot 'Capability' Brown at Blenheim Palace, and The Cascades at Exton was one of his first commissions after he started working on his own. The Cascades have long since gone, but otherwise the lakes remain much as they were and still attract bird watchers and fishermen.

Badeslade's *Prospect of Exton Park* also shows a third lake, which on J & C Walker's map of *circa* 1840 is located outside the Park, on the south side. This lake, which was near Cuckoo Spinney, has been drained for many years. It was fed by the stream which passes through Ry Gate Lake in the grounds of Exton Hall, and which eventually joins the North Brook just upstream of Horn Mill. It is possible to walk down the valley of this tributary from Exton where the remains of the old dam are easily seen.

Fort Henry Lakes in Exton Park from the OS 2nd ed 25" map 1904

The three lakes at Exton shown on J & C Walker's map of Rutland of circa *1840*

The Cascades at the southern end of the lower lake at Exton Park in 1905 (Hart)

Fort Henry and the Bark Temple

Fort Henry is on the western shore of the upper lake in Exton Park. It was built for Henry Noel, 6th Earl of Gainsborough, after whom the building is named, by William Legg of Stamford between 1786 and 1789. The Earl had instructed him to design and build 'a gothic building by the pond' to replace an existing structure. Legg commissioned and supervised all the craftsmen who worked on the project, many of whom were local men. The principal mason was George Beaver who worked with Legg on other major projects. Most materials were also locally sourced, including stone from Clipsham quarry and bricks from Lord Winchilsea at Burley. Accounts show that William Legg made 116 journeys to Exton Park from Stamford whilst Fort Henry was being built. The overall building cost, calculated by totalling the various craftsmen's vouchers, was £1,426 4s 5d on which Legg took a commission of £71 6s 0d. He was also commissioned to carry out other work for the Noel family, including the dovecote by Ry Gate Lake near Exton Hall in 1792-93.

Records show that, even before the construction of Fort Henry, the lake was well used for boating activities, including the re-enactment of great sea battles. In 1761 Lord Gainsborough paid for a boat to be brought from London to Stamford via Spalding, and in 1778, a 'gunning' boat was purchased as well as another new boat which was transported from Peterborough to Wansford.

Fifty years or so after William Legg built Fort Henry, a rustic building was constructed a little way up the bank behind. In a report describing the preparations for Lady Louisa Noel's marriage to Andrew Agnew in 1846 there is a reference to '. . . the fairy temple now in the course of erection'. This was the 'Bark Temple', so called because it was constructed of wood and covered with bark and moss.

Right: Fort Henry and the Bark Temple based on the OS 2nd ed 25" map 1904

Fort Henry and the rustic Bark Temple provided an ideal venue for celebrating the births, birthdays and marriages of the Earl of Gainsborough's family. Lady Louisa's wedding celebrations included dinner by the lake for the Earl's 250 tenants the day before, and another meal for estate labourers and their families on the afternoon of the wedding.

Although Fort Henry has been fully restored it is rarely used. The Grade II listed Bark Temple was in a perilous condition by the mid 1990s. English Heritage did pay for a detailed drawing to be made but they were unwilling to fund its restoration. Sadly, it finally collapsed in the winter of 1997/98.

A side view of the surviving structure of the Bark Temple in April 1993. It finally collapsed during the winter of 1997/98 (SS)

Fort Henry on the western shore of Fort Henry Lake in 1908. At this time the Bark Temple, seen on the higher ground behind, was still in good condition (Hart)

Fort Henry upper lake in 2007 (RO)

Eyebrook Reservoir

The only other substantial area of water in Rutland is the Eyebrook Reservoir. It was formed by the construction of an earth dam across the valley of the Eye Brook, a tributary of the River Welland, to the north-west of Caldecott. It straddles the south-western county boundary with Leicestershire which follows the course of the old river down its centre.

The reservoir was built for Stewarts and Lloyds, now part of the Corus Group, to supply water for the former iron, steel and tube works at Corby, Northamptonshire. It was designed to provide 27,300 cubic metres (6 million gallons) of water a day, but since the closure of the iron and steel works in 1980 the remaining tube works only require 1,600 cubic metres (350,000 gallons) a day.

Construction started in 1937 and it was completed by early 1940. Like Rutland Water, the clay for the earth dam, which stretches about one third of a mile across the valley, was excavated from borrow pits in the floor of the valley. The reservoir was full by the autumn of 1940 and the first water was being pumped to Corby by the end of the year.

The design high water level was 68.5m OD, but this was increased in 1955 by raising the level of the overflow by approximately 750mm. This increased the reservoir capacity by seventeen and a half per cent to 8 million cubic metres (1,781 million gallons). It now covers an area of approximately 162 hectares (400 acres), being 2.8km long and 1.2km wide at its broadest. Compared to other reservoirs, it is relatively shallow, the average depth being only 5.2m. The maximum depth is 16.5m.

The reservoir is managed by Corby Water Company, a subsidiary of Corus. Until 1957, when the new Pitsford Reservoir was commissioned, this company was also responsible for distributing water from the Eyebrook Reservoir for domestic use in the Corby and Wellingborough areas. As well as the industrial requirement, 3,200 cubic metres (700,000 gallons) of water per day are released back into the Eye Brook to maintain its flow below the dam to where it joins the River Welland near Caldecott. Interestingly, some of this water is later transferred into Rutland Water via the abstraction pumps near Tinwell.

The new Eyebrook reservoir played an important role in the Second World War. Steel from the works in Corby which it served was vital to the war effort, and this included the pipe which carried fuel for the D-Day landings under the sea (PLUTO: pipe line under the ocean). The reservoir was also used to practise low-level bombing runs by the Lancasters of 617 Squadron, perhaps better known as the Dambusters, prior to the raids on the Eder and Mohne dams in Germany in 1943. This is commemorated by plaques on the dam wall and a display in the Fishing Lodge.

Today, the reservoir is a much quieter place, with recreational activities which are mainly confined to bird-watching and fishing for Rainbow and Brown Trout. In fact, as soon as it was built it very quickly became a haven for wildlife, particularly wintering wildfowl, to the extent that it was designated a Site of Special Scientific Interest (SSSI) in 1956.

An aerial view of the Eyebrook reservoir in 2005, looking north-west (John Nowell, Zodiac Publishing)

A Lost Opportunity

In 1907, C Reginald Haines published his *Notes on the Birds of Rutland*. In this he commented:

'The only artificial waters of any size, and those not considerable, are the Burley-on-[the-] Hill and Exton Ponds. A great opportunity was lost of making a big reservoir between Preston and Uppingham, when a water supply was required for Uppingham School. This would have answered every purpose, and besides being an ornament to the county, such as it sorely lacks, it would have been, ornithologically speaking, the greatest possible boon. Such sheets of water as the reservoirs at Naseby [Northamptonshire], Saddington [Leicestershire] and Kettering [Northamptonshire] have already had a marked effect upon the avifauna of their respective neighbourhoods.'

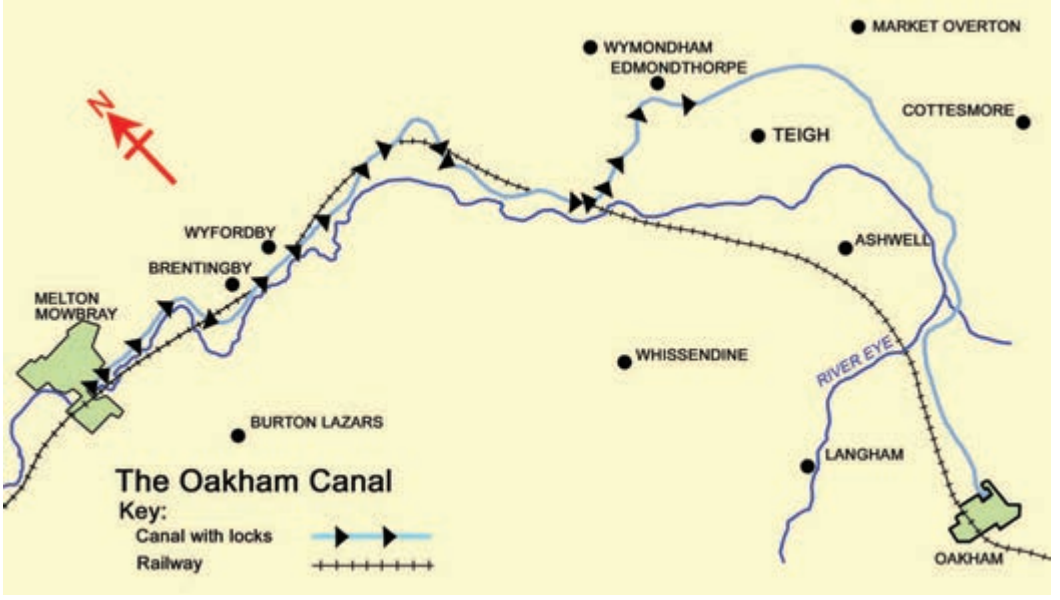
No details relating to this proposed reservoir for Uppingham School have been located, but inspection of the current OS 'Explorer 15' map (Rutland Water and Stamford) suggests that the most likely location for the proposal was in the valley located between the Preston to Uppingham and Ridlington to Ayston roads where it would have been fed by an unnamed stream, a tributary of the River Chater, which has its source to the south-west of Ridlington.

Rutland Canals

Other reservoirs have been proposed for Rutland. Two are shown on the plans for the Oakham to Stamford Navigation, an extension of the Melton Mowbray, Leicestershire, to Oakham canal.

Construction of the canal, which was to link Oakham with Melton Mowbray and the River Soar Navigation, was started in 1794 and the first canal barge with a cargo of coal reached Oakham in December 1802. Its route from Melton Mowbray to Oakham wharf took it by Brentingby, Wyfordby and Edmondthorpe in Leicestershire, and then between Teigh and Market Overton in Rutland. It had eighteen locks. From a very shaky start the canal gradually became more prosperous and better equipped, but by 1845 the Oakham Canal Committee had recognised that the proposed Syston to Peterborough railway was a significant threat to its prospects. In 1847 the committee eventually sold the canal to the Midland Railway Company who wanted to use part of the route for their new line.

In 1810, however, a proposal to build a new canal to link Oakham with Stamford and the Welland and Nene systems beyond was being considered. This was to be called the Stamford Junction Canal but the scheme was rejected by Parliament. The design for the new canal had been prepared by Thomas Telford and the accompanying plans show the route to follow a southerly path from Oakham wharf to Martinsthorpe, and then to turn eastwards to follow the Chater valley to Stamford. Top-up water was to be supplied by twin reservoirs which were to be constructed in the valley to the north-east of Braunston, and connected to the canal by a culvert which terminated below Gunthorpe. The scheme was considered again in 1815 and 1828, but it had been abandoned long before the Melton Mowbray to Oakham canal was closed.



The route of the Oakham Canal, showing the locks and the line of the railway which was the eventual reason for its closure (David Tew)

Detail from the plan for the proposed Stamford Junction Canal designed by Thomas Telford. It was to connect Oakham with Stamford, then branch in one direction to Peterborough (then in Northamptonshire) and in the other to Boston, Lincolnshire (ROLLR DE 470/106)

Domestic Water Supplies

John Judd, in *The Geology of Rutland*, published in 1875, makes some interesting observations on the use of springs and wells for the provision of water for human consumption:

'The frequent alternations, within the district under description, of pervious beds of limestone and sand with impervious clays, gives rise to numerous springs . . . . The constant outflow of these along the base of the harder beds, by causing a broken condition of the surface and imparting a freshness to the verdure, sometimes makes the division of the formations very distinct, and enables the eye to trace them even at a considerable distance.

'It is interesting to notice the manner in which the presence of springs has determined the sites of the towns, villages, and even isolated habitations of the district . . . .

'The question of the water supply of the area has, in modern times [late nineteenth century], assumed great importance, and an entirely new aspect. Although springs are so abundant in the district, yet as population has increased it has been found necessary, either for the purpose of supplementing the supply of water or for obtaining it in the most convenient situations, to open numerous wells. These have been for the most part of no great depth, passing merely through the first pervious bed into an impervious one, and thence obtaining, in almost every instance, an abundant supply. But the facility with which the refuse matter of a considerable population can be got

rid of, where there is a substratum of porous material, has led to openings in these same rocks of innumerable cesspools and drains. Hence the water supply of the population is often poisoned at its source; wells and cesspools existing in the same rock and at no great distance from one another. Now it has been shown that waters from such a tainted source, though bright and clear to the eye and not unpleasant to the taste, may, nevertheless, be the means of propagating the worst forms of epidemic disease. Fortunately, in the district under notice, there generally exists a remedy, and it is in most cases easy of application; it is in fact only necessary to carry down the wells to the next impervious stratum, and to protect them from infiltration in their upper parts . . . The district being an almost purely agricultural one, the civil engineer is not called upon to make provision for large and closely packed populations, like those which demand such great works for procuring and storage of water supplies in manufacturing districts. In very few cases are the towns of sufficient size probably to need deep artesian wells . . . .'

Between 1831 and 1866 there were four major cholera epidemics, accounting nationally for over 55,000 deaths, and the realisation that polluted drinking water could lead to such serious diseases and epidemics resulted in the Sanitary Act of 1866. The Act required local authorities to undertake sanitary regulation, and set out powers for the provision of water supplies, for sewage disposal and for the abatement of 'nuisances'. Each local community elected a 'Nuisance Committee' or 'Board of Health' which had the power to inspect 'nuisances' and serve formal notices on offenders. At Belton in Rutland, for example, a meeting of the 'Board of Health' on 25th November 1870 decided to establish a uniform course of action. It was agreed that cesspools and refuse places be made dry, that drains be taken direct into the main sewer, and that pigsties, manure heaps and holes be removed from the fronts of houses, and elsewhere if found to be a 'nuisance' (ROLLR DE 1815/15).

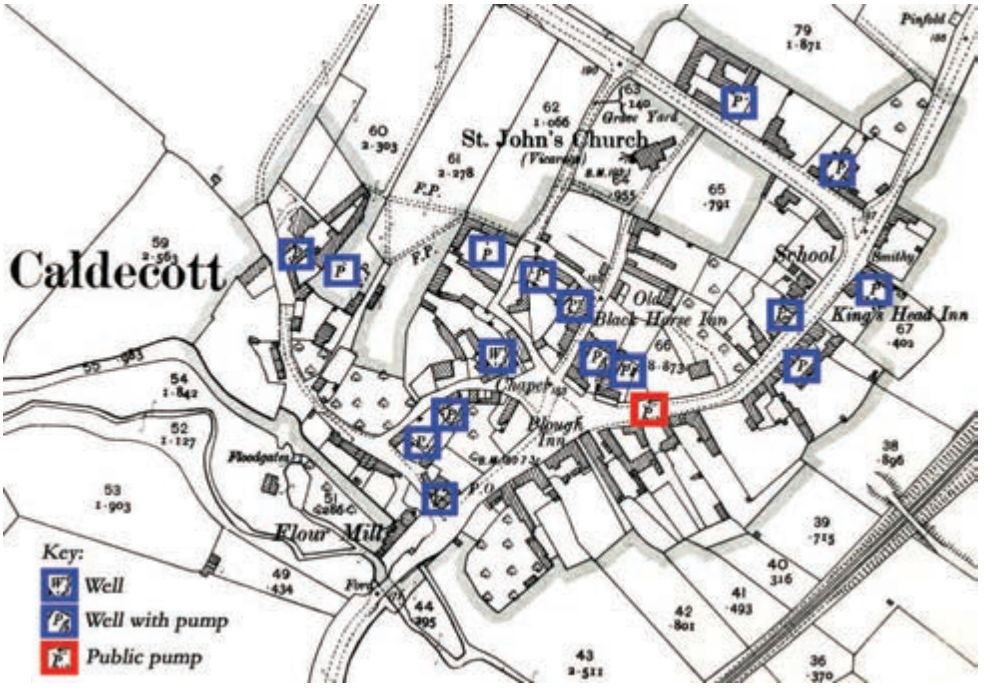
Ernest Mills, in *Empingham Remembered* published in 1984, describes how piped water was taken to Empingham properties:

'Empingham has always been noted for its water supply. There were wells, some with pumps on them and springs to supply most houses in the village. The first I remember of a piped water supply was a brick built reservoir in the field above [to the north of] the Chapel, with a windpump over a well nearby to fill this reservoir when the wind blew, which was not often. However, sometimes it was too much which would blow the sails off and the supply would give out. This proved useless and a water ram was installed near Gunnel Spring to keep the supply going. These water rams were gaining in popularity, working on the principle of a large quantity of water in one pipe forcing a small quantity in another pipe up hill and down dale and they proved their worth. The installation entailed digging a trench from Gunnel Spring to the reservoir across two fields, under Loves Lane and across the field where the Council houses are now built. This trench was dug out by one man, the [Ancaster] Estate drainer Bob Downes who lived in Church Street . . . We youngsters would often go to see how it was progressing as he was the only one working on it.

'The reservoir was perhaps six feet deep in water and the brick wall was

continued about four feet above ground level. This was very convenient for the farmer's cows in the adjoining field to rub their bottoms on, and who knows, perhaps they did two jobs at one time. I remember seeing some suspicious looking patches floating on the water that definitely did not come through the pipe. Whether this was the fact or not, a few years later a corrugated iron fence was erected round it. The water was piped down to Main Street, (I never heard of it being filtered, but we were a hardy lot in those days) and then into two branches, one down and one up street. The stop cocks for these two pipes were in the road near the village notice board and may be seen today.

'The stand pipes for the extraction of water for domestic use were huge ugly iron pipes surmounted by a man's face and hat; the water coming out of a pipe in this mouth. Well it may have been worse! The handle to turn him on was a knob-like affair on the side which one turned round to get water, holding tight until the bucket was full. On release it unwound and was ready to use again. It required a strong arm to turn it on; one never saw kids playing with it. The five places where these stands were fixed may be seen in recesses in the fence outside the Olive Branch and Hallstones and other places. Farm houses were connected up with a cold tap over the sink at a charge of £1 per year if the occupier wished it. The pipe was taken down street as far as Canada Lane and a solid oak plug was bunged in to cut it off. No one seemed to remember this and the water pressure was always low, until about 1925 when some one had the bright idea to dig the pipe out and found the wooden plug had nearly rotted away and the water was running into the limestone out of site [*sic*]. This leakage was stopped and the village water supply was later taken over by Rutland County Council.'

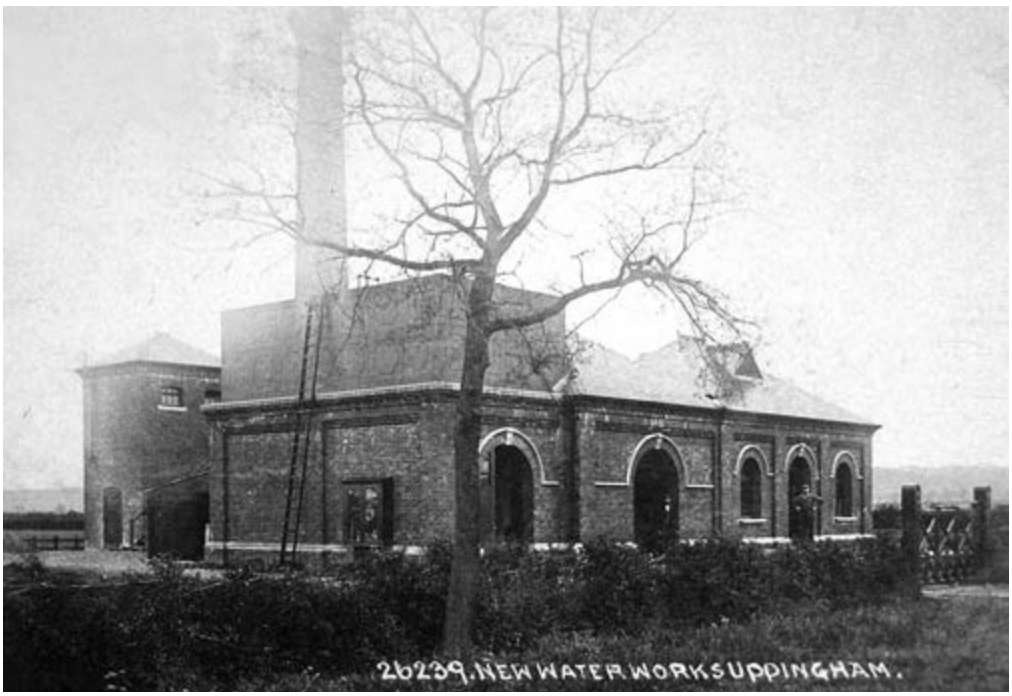


Caldecott was typical of most Rutland villages in that its inhabitants relied totally on wells for their potable water supplies until piped water came to the village. Those who did not have a private well could use the public pump, highlighted in red on this extract from the OS 2nd ed 25" map 1904

However, Empingham was somewhat unusual in having a piped water supply at this time, although there was a similar system at Exton which was installed about 1900 by the Earl of Gainsborough. Previously, in Exton, public drinking water had only been available from the village pump. The new system consisted of stand pipes installed throughout the village to which water was pumped from the Hawkswell Spring by a ram pump.

Most other Rutland villages continued to rely on wells and hand pumps for another 60 years or so, until the Dove Water Scheme was extended from Leicestershire into Rutland, thus bringing piped water to all but the most remote communities.

In the towns of Oakham and Uppingham piped water was available much earlier. At Oakham, water came from a 12m borehole near Braunston, in the Gwash valley, where a new waterworks was established just after the turn of the twentieth century. Uppingham suffered repeated outbreaks of typhoid between 1875 and 1877, centred on Uppingham School. Faced with ruin if nothing was done, the Rev Edward Thring, headmaster, removed the school to Borth, on the Welsh coast, for an entire year. The town's shopkeepers were heavily dependent on the school and they forced the local sanitary authority to improve the drainage system. Thring was a leading player in the group which set up a private company to supply water to the town (Richardson 2007, 195-213). Within a year new main water pipes had been laid in every street, and in 1880 it was agreed to install hydrants throughout the town for extinguishing fires, flushing drains and watering the streets. In 1882 a new large well was sunk by the water company to a depth of 32m, and at a cost of £500, but no water was found. A new Uppingham Waterworks was established about 1906 in the Welland valley, just south of Lyddington and about 4 miles from Uppingham.



The new Uppingham Waterworks, near Lyddington, in 1910 (Hart)

Rutland Ponds

Village ponds were considered to be valuable assets to the community. In this category we can include horse ponds, cart ponds, fire ponds, dew ponds, washdykes and sheep dips. Most of those located within villages have now been drained or filled in for safety reasons, and because they no longer serve a useful purpose.

In 1960 the old horse pond at Exton was filled in. It was situated in the dip on Oakham Road below the old school. A horse-shoe shape, it was used for washing horses' feet when they came off the fields – this would prevent their hooves from cracking, and for swelling the wood of the cart wheels in dry weather. Sheep were also washed here. Similarly, at Glaston, there is a cart pond with stone walls on three sides which has been dated as *circa* 1740. The now restored pond was used to soak cart wheels to expand them into their metal tyres. The much larger pond at Barrowden also survives, enjoyed today more by ducks and visitors to the village. Preston also still has its village pond, which was deepened during the Second World War as a reserve water supply in case of fires.

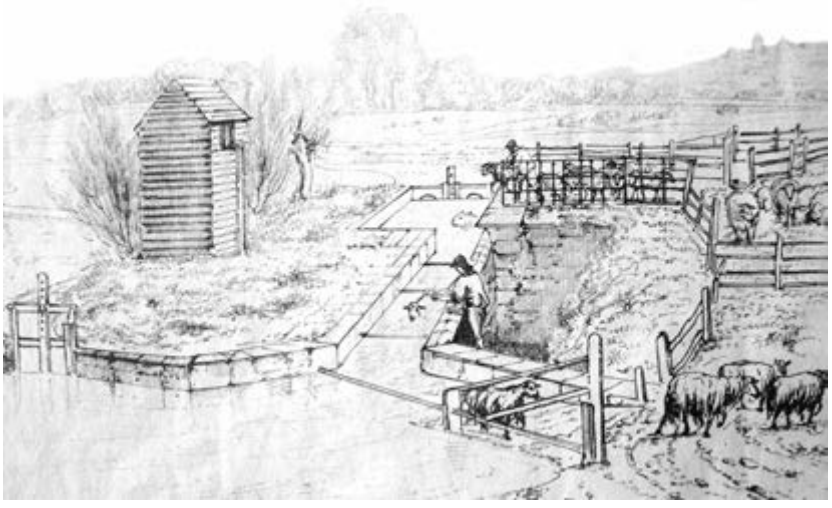
Out in the fields there are more ponds, some of which are dew ponds, although most are associated with a nearby spring. They were mainly created many years ago for cattle, sheep and horse watering, and some were no doubt used as cart ponds. Also amongst these are a number of ponds created by bombs dropped during the Second World War. At Braunston, a spring opened up by a bomb dropped in the Second World War was thereafter known as 'Hitler's Spring'.

There were many sheepdykes and washdykes for washing sheep before shearing. These were often created by temporarily damming a stream. There were more permanent washdykes at Cottesmore, Ryhall and Burley Fishponds for example, but all have now disappeared.

Today, there are new types of pond to be discovered, mainly in the countryside. Large ornamental ponds are popular as a landscape feature in private gardens, and farmers are creating fishponds for leisure fishing in order to generate alternative sources of income, often as part of a farm diversification programme.

A flock of sheep at Barrowden pond in the 1920s (Hart)

The sheepdyke at Cottesmore was filled in during the 1950s (Hart)



Left: The Earl of Winchilsea's washdyke at Burley fishponds in 1860. It was at the north-east corner of the east pond (private collection)

Below: Ryhall washdyke at the side of the Gwash in 1906. It was filled in many years ago (Hart)

And Finally . . . .

In this short survey of Rutland Waters – what was, what might have been and what is – there has only been space for a brief look at some of the more interesting and significant aspects. Personal observation and the study of, for example, aerial photographs, large scale maps, estate surveys, enclosure maps and awards, and old documents would no doubt reveal many other ideas for research.