

Lands End Works, Middleton 1734-2016



Figure 1 Lands End Works 1926, Britain from the air

The History of an Industrial Site

Middleton Archaeological Society

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Introduction

This document has been compiled to record the varied history of this old industrial site in Rhodes, Middleton, Greater Manchester (SD 84768 04965). It draws on recent research that highlights the changing use of the land in response to the industrial revolution and the development of the factory systems to replace homebased manufacturing.

The site has supported the various phases of fulling cloth, cotton spinning and bleaching of textiles before eventually converting to its last use as a Rubber works in the 20th century.

The first documented reference to the site dates to 1734 in association with the water rights for a fulling mill powered by the adjacent River Irk. Subsequent development of the site is well supported by maps and estate papers.

Of particular note in the history of Lands End Works is that by the mid 1780's, the site had a newly built cotton spinning mill using Richard Arkwright patented water frames. A census of 1788¹ records this as the only cotton spinning mill in Middleton, one of 39 in the county of Lancashire at the time. This and subsequent developments in textile technology rapidly changed Middleton from a sparsely populated rural area to a typical Lancashire cotton town. By 1891, Middleton had 22 Cotton Mills with over 500,000 spindles.²

The Land End works soon reverted to textile finishing, becoming a bleach works in the early 19th century. In the 20th century it became a Rubber works before falling into disrepair and eventually being demolished. The remains of the industrial history of the site now lie under landscaped rubble, slowly reverting back to nature.

¹ The Arkwright Mills-Colquhouns Census of 1788 and Archaeological Evidence, S.D.Chapman,IndArchRev 11/1981, p5-27

² Graces Guide of 1891, Cotton Spinners and Manufacturers in Middleton

Topography

Lands End was located in the hamlet of Great Heaton which in the 19th Century was a township in the civil parish of Prestwich. The area, together with neighbouring Rhodes, became part of Middleton in 1894. The Heaton Estate goes back to the 13th Century and the works was leased first from the Holland and later the Edgerton families who owned the land. Sir Thomas Edgerton became the Earl of Wilton in 1801. He married Sir Ralph Asheton's daughter so acquiring land adjacent to Heaton, this connection caused a subsequent split of land between Great and Little Heaton. Manchester Corporation purchased Heaton Park and the Estate in 1901. The estate records are well preserved and kept in Manchester Archives³.

Lands End works sits on the north western bank of the river Irk, 4.5 miles north of Manchester and 7 miles south of Rochdale. The river begins some 4 miles north at Royton and meanders its way to meet the river Irwell at the edge of Manchester town centre. The site is at the base of a gently sloping valley at an average height of 220ft above sea level. The river flows steadily all year with the soft Pennine water and damp climate making the location ideal for cotton spinning. The rivers path used to zig-zag across the site however the route was straightened and the banks lined with stone in the late 19th century. The weir at the south east end of the site has a drop of 2.5M, enough to provide the equivalent of 10-15 Horsepower for a water wheel.

The site was conveniently located on an early packhorse route from Manchester across the Pennines to Halifax. It also had good road connections north to the towns of Bury, Blackburn and Burnley. This provided easy access to raw wool as well as the commercial hub of Manchester for warehousing and sale of yarn and finished textiles. The adjacent road was turnpiked in 1755 however the works was several miles away from the Leeds Canal that was completed at the start of the 18th century. Subsequent industrial development in the area was largely along the corridor of the canal or railway.

Modern housing currently isolates the riverside location from Manchester New Road. One small structure of the works remains and is used as an aviary.



Figure 2 Remains of works

³ EDGERTON FAMILY, EARLS OF WILTON, OF HEATON HALL, E4

Lands End Fulling Mill (1734?- 1770)

Manchester was the seat of woollen manufacture as early as the reign of Edward II. A survey of 1322 reported a fulling mill turned by the River Irk⁴. The first known recorded occupation of this site is a map (fig 1) referred to in a property dispute for water rights on the River Irk⁵. It shows a plan of the site with a weir, reservoir, and two buildings labelled as the Old Fulling Mill.

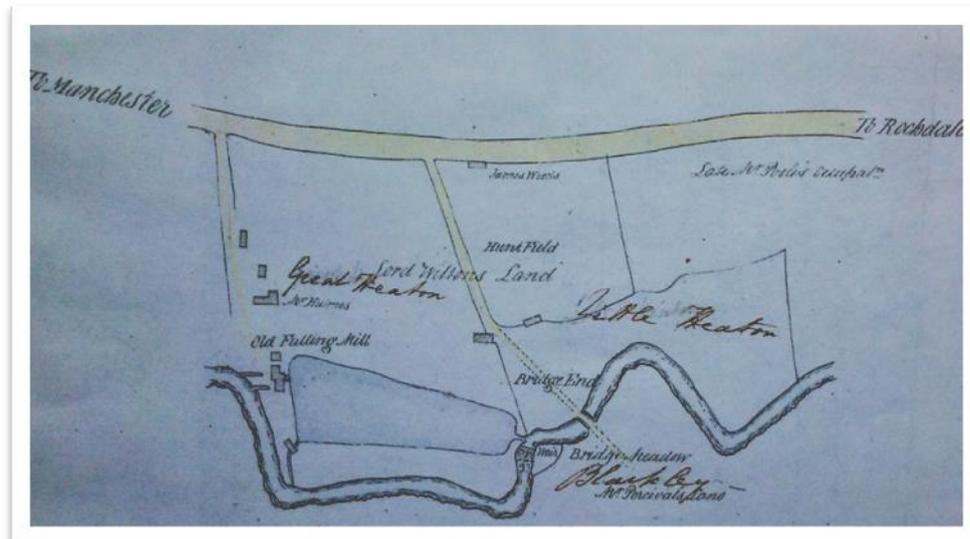


Figure 3 Map of Old Fulling Mill pre 1780

The documents accompanying this plan highlight a legal agreement in 1734 that granted water rights to the fulling mill owner, Mr William Heywood. The estate rent books of 1771 show that no rent was being received for the mill suggesting it was not being used. At some time between this date and 1784⁶, the Lands End works was leased by Mr Otho Hulme. Otho was the first son of a local innkeeper who died in 1675. It is possible that Otho used his inheritance to refurbish or rebuild the fulling mill.

Associated plans of the site show a watch house in the middle of a field. This suggests the existence of a tenter croft to the west of the site. As a part of the finishing or fulling process, cloth was hung outside a fulling mill, stretched on 'tenter hooks' for several weeks. A watchman would have been needed to ensure the valuable cloth was not stolen.

The old mill appears to be of a similar size to Mr Hulmes house. There is a reservoir or mill pond fed from a channel before the weir. Weirs were constructed to maximise the head of water upstream from a water mill. There are two mill races feeding water back onto the River Irk suggesting two sets of mills or hammers and perhaps two water wheels. A working set of 19th Century fulling mills complete with water wheel can be seen at Helmshore textile museum (Currently closed).

Wikipedia:-Fulling was a way of treating woollen cloth and comprised of two processes, scouring and milling (thickening). Originally the fulling was carried out by pounding the woollen cloth with the fullers' feet (Walkling), or hands or a club. From the medieval period however, fulling was carried out in a water mill where mechanical hammers pounded the cloth which was immersed in a liquor of human urine or in later times,

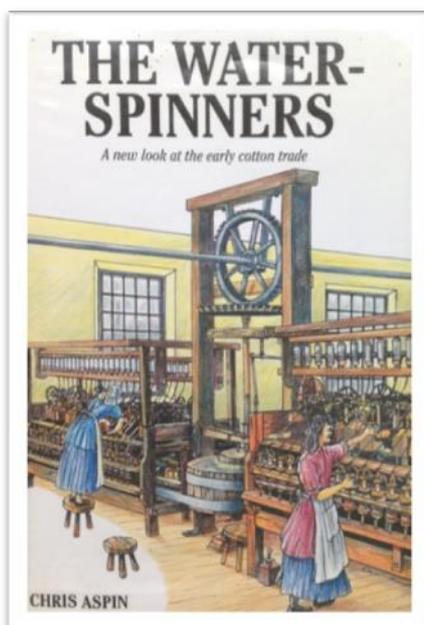
⁴ The history of the Cotton Manufacture, Edward Baines Jr. 1835

⁵ Manchester Archives; Wilton Collection E4/1/2/35b

⁶ Otho is recorded as a Fustian Manufacturer of Lands End

fuller's earth. The process both thickened the cloth and helped to make it more waterproof. The fulling process was normally followed by a bleaching process on a croft next to the mill, where the cloth was stretched on large frames known as tenters using tenterhooks to secure. The phrase "hanging on tenterhooks" was derived from this. The use of tenters of Wool mostly ceased with the development of bleaching products in the late 18th Century

Lands End Cotton Spinning Mill (1780s – 1810)



The identification of an early Cotton Spinning Mill at Lands End was made by Chris Aspin in his 2003 book, *The Water Spinners*⁷. He had been looking for the location of early cotton mills using a census taken by Patrick Colquhoun in 1788 in which 39 Lancashire Cotton Mills were listed. One of the unidentified mills was Sandsend, owned by Otto Hulme. Chris recognised Otto's name from some documents he'd been reviewing and realised the original census had been misread, it was indeed Lands End works in Middleton.

Cotton Spinning had been revolutionised by Richard Arkwright's development of the spinning frame or water table. For the first time, it was possible to make cotton thread thin and strong enough for the warp or long lengths of cloth. The foothills of the Pennines provided an abundant supply of river power and a damp enough atmosphere to make the ideal location to spin.

Arkwright had patented his spinning frame in 1769 and went on to build the world's first water powered cotton mill at Cromford in 1771. He subsequently invested greatly in developing his invention and began to license the technology to entrepreneurs such as Otho Hulme. By 1785, there were 30,000 people employed in factories using the Arkwright patent.

It is unclear when Otho actually replaced the fulling mill with a cotton mill but in 1785, he joined 21 other mill owners in contributing to a successful campaign to nullify Arkwright's patent⁸. By January 1786, Otho had Sun Fire Insurance⁹ covering his business to the value of £1,800.

Cotton Mill	£200
Utensils and machinery therein	£800
Spinning warehouse and drying rooms over	£100
Utensils and goods therein	£200
Goods in warehouse in McDonalds Lane, Manchester	£500
	£1,800

⁷ *The Water Spinners- a new look at the early cotton trade*, Christopher Aspin, *Helmshore Local History Society* 2003, (Chapter5, The search for Lands End).

⁸ *Manchester, its political, social and commercial history*, James Wheeler, Prestwich, P522

⁹ Sun fire insurance policy registers 1706-1996, *London Metropolitan Archives*: City of London

The cotton mill measured about 50ft x 30ft (17m x 9m) of 3 stories with 11 bays and would have had up to 1000 spindles. These early factories tended to resemble banks of cottages with brick or stone walls and a pitched stone tile roof.

This aerial photograph from 1926 shows the western aspect of the original mill surviving amongst later buildings. The water reservoir can be seen behind the mill and the water wheel looks as though it was located inside the mill to the right of centre. The single storey building to the left was probably built later to house a steam engine with its high roof pitch allowing connection to the waterwheel axle.



Figure 4 Lands End Works South facing aspect detail 1926; Britain from above.

Cotton spinning flourished following the abolition of Arkwright's patent and by 1795; Otho Hulme was looking to invest his profits in a larger mill. He made several designs for new buildings and reservoirs submitting them to his landlord, Lord Grey de Wilton:

Manchester Archives E4/1/10/9: letter from Lands End Mill owner Otho Hulme to his landlord, Lord Wilton

To The Right Hon. Lord Grey de Wilton.

My Lord,

Agreeable to your Lordships orders I now send you a sketch showing the situation of the mill I propose building, and the extent of the reservoir, which I hope will meet your Lordships appreciation, The size of the mill will be amply sufficient to make use of the power of the water either as a Twist Manufactory or in any other way. It is calibrated for 2000 spindles tho' I'm apprehensive that the water will not turn more than 1000. But room for more would be useful and I would much rather have a deal spare than want a little.

I will only add that your Lordship may be perfectly satisfied that the alterations and improvements I make shall be executed in a substantial and decent manner and the whole of the premises I occupy shall be put in a respectable situation. If your Lordship approves of the plan or wishes to make any observations upon it and (as I am going to London in the morning for 3 weeks or a month) will direct a line to me at the Martins Carlton Street, It will be esteemed a personal favour by your Lordships obliged servant.

Lands end 10th June 1795

Otho Hulme

Notes added in different handwriting

Size of the Mill

Mill

33 feet wide inside measurement

50 feet long inside measurement

4 stories high

Thickness of Wall

To first floor – 2 brick in length

To third floor – 1 ½ brick in length

To roof- 1 brick in length with wall plates all around the building at the top of the windows

Each storey

Windows Sashed

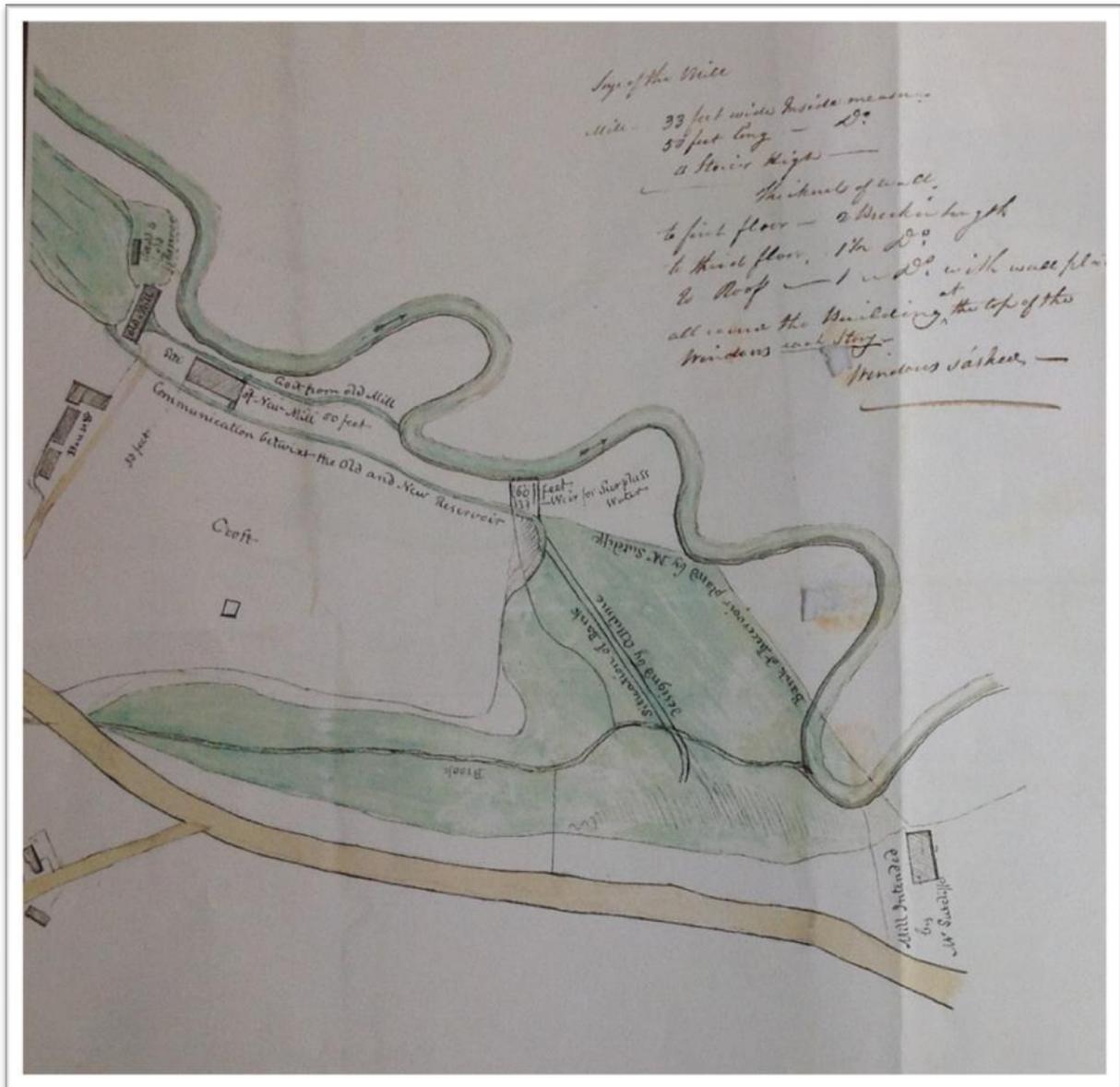


Figure 5 Manchester Archives E4/1/10/9 Plan for new cotton mill and reservoir (south at top)

It is clear from this letter that Otho had some concerns regarding the amount of water power available for his expansion. The spinning frames required a consistent power supply to spin strong cotton thread, hence the need to store a reserve of water large enough to drive the waterwheel throughout a working shift. Early steam engines were generally used to refill the reservoir as their speed was too inconsistent to drive the spinners directly.

He submitted two more plans¹⁰ for expansion to Lord Wilton one of which proposed the building of a new mill about half a mile further down the river Irk with a much larger reservoir. His plans also included reference to several proposed mills from other entrepreneurs (Mr Sutcliffe and Mr Marsden) suggesting the location was very popular at this time.

¹⁰ Manchester Archives, E4/1/10/10 and 11,

The land upstream of Othos' mill was in the manor of Middleton and his neighbour Daniel Burton had leased full water rights from Sir Harbord Harbord in 1785 to run his bleaching and dying works. He had the right to build a weir on the Irk provided it did not flood the town of Middleton¹¹ Perhaps Daniels bleaching process was restricting the flow to Lands End mill?

It appears that none of Otho Hulmes expansion plans went ahead either due the lack of water on the Irk or a refusal to extend the works by his landlord. He instead set his eye on a new location at Medlock Vale near Clayton. The River Medlock rose at the hills to the East of Oldham and had more power than the Irk.

His new mill made him and his family extremely wealthy. He died in 1820, but when his sons estate was settled in 1834¹², it included 11 warehouses on Cannon Street Manchester and over 50 houses around the Manchester area.

He sold Lands End Works to Otho Dudson in 1808

Lands End Bleach Works (1808-1930)

During the early 19th century, smaller cotton spinning mills such as the one at Lands End were replaced by larger, steam powered mills that could run many thousands of spindles. These large mills still outsourced the finishing of textiles to smaller companies who had access to water as well as the ability to discharge effluent into a river. Otho Dudson took advantage of this by converting the site to a bleach works. The discovery of Chlorine at the end of the 18th century was another technological advance that had speeded up the textile finishing business.

The conversion meant the building of new washing tanks, machinery and a steam engine to provide power and heat for the works. The meandering course of the River Irk through the site was changed to a straight channel. Otho Dudson had ownership until at least 1829 when he was listed in the Pigot directory of Lancashire as a bleacher. The 1848 Ordinance Survey map also records the site as a bleach works.

Messrs Joseph Kershaw and Sons were listed as bleachers of Lands End in the 1853 Wheeler & Co trade directory.

By the 1880's the bleaching and finishing operation had passed to David Harper who in 1890 sold the business to Kay & Smith Ltd. They continued to develop the works and in 1901, negotiated a new valuation and 13 year lease from the Earl of Wilton at a rent of £325 per annum¹³. Kay & Smith also leased the steam boiler for the works from the Earl of Wilton which suggest the Earl had either paid for its installation or foreclosed on a previous tenant of the works. The chimney for the boiler can be seen on the front cover aerial photo of the site.

¹¹ Daniel Burton of Manchester, Rhodes and Middleton, *Morris Garrat*, Middleton Local Studies

¹² London Gazette, 11th April 1834

¹³ Manchester Archives, E4/78/288

Rhodes Rubber Works (1930-1970's)

By 1930, Lands End works had ceased to support the textile finishing industry and had changed use again to Rhodes Rubber Works. By this time many of the mills in the area had closed or reverted to other manufacturing business; the textile industry was still in serious decline.

In 1825, a Glasgow Chemist named Charles Mackintosh founded a business in Manchester where he developed the process of rubberising fabric and created the famous Mackintosh coat or Rubber Mac. This was another example of technological change that led to new industries taking over redundant spinning mills. A later example being British Vita, who in 1953, took over Don Mill in Middleton to begin manufacture of carpet underlay.

Rubber manufacture would have been classed as an essential industry during the Second World War and perhaps the Rhodes Rubber Works was supporting the local aircraft factories. Little is known about this phase in the sites development so more research is needed. Post war saw the development of the plastics industry which would replace much of the requirement for rubber processing.

By 1938, Middleton Corporation had built a housing estate on the land that was once a tenter croft. All access to the site would now be through this estate and it was hemmed in on the western aspect by Middleton Sewage works.

The buildings on the site were mostly demolished by the end of the 20th century and the site was used by as a storage area for a demolition business. Some attempts have been made to level the site.

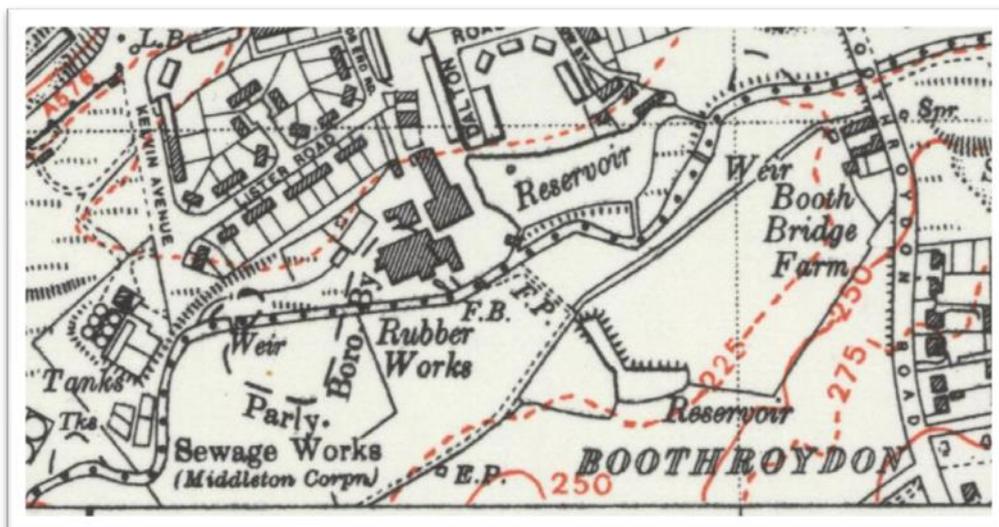


Figure 7 1938 Ordnance Survey Map

Archaeological Investigation 2014

In 2014, several members of Middleton Archaeological Society were given permission to dig test pits on the site with the intention of locating the foundations of the cotton mill. Unfortunately, landscaping of the site has led to a large bund of concrete and brick of up to 2M in depth being piled over the cotton mills foundations (fig 8)

The reservoirs on site have been filled in, again with hard-core. Some attempt at mechanical levelling has been carried out across the site and compaction of this surface and the presence of large lumps of concrete kerb stone made any attempt at hand excavation too difficult.

A test pit was dug just inside the entrance to the site(fig 9). A compact crushed brick floor surface was found at depth of approximately 1M. Pottery shards, pipe stems and brick tile fragments (fig 10) were found which suggested use of the surface in the 18th and 19th century. We considered that the surface and a slot running along one side of the trench was most likely part of the original fulling mill.

The location of the test pit and details of the excavation are held by the society.

There has been a considerable amount of archaeological investigation on the site of an early cotton mill at Miller Street, Manchester over recent years. The Lands End cotton mill is probably of a similar construction date and layout. Should funding and permission ever be granted to carry out a full investigation of the site, the results would provide an educational study of the different phases of the industrial revolution in Lancashire.



Figure 8 Location of cotton mill foundations



Figure 9 Test pit 1



Figure 10 Test pit 1 finds at context 4