

Local Action in the NW

Haigh Windmill, Haigh Village Nr Wigan



For many reasons windmills have an important place in our lives. Inventions emanating from the industrial revolution brought the mills to great efficiency and semi-automation, the further development of which affects everyone today. As well as their place in social and economic history, mills are a vital part of the history of mechanical engineering and the development of motive power for the processing of raw materials.

Constructed in 1840, the Haigh Windmill (listed G2) is an unmissable landmark set within agricultural fields contained within the Haigh Hall estate, near Wigan.

The Haigh Windmill has had a chequered history. It was originally designed and constructed to pump and draw water from adjacent ponds and rivers to Haigh Brewery (now demolished) some 500m uphill from the site of the

windmill. However, it has now been unused for some 80 years. Suffering from neglect, poor maintenance and frequent storm damage due to its exposed location the mill is currently in poor condition, serving only as a significant landmark. The existing sails have many lost or broken timbers and the brickwork is showing extensive areas of failed pointing and spalling. Left unarrested this decay poses a risk of serious structural failure.



Originally constructed in brick, with a timber roof, the mill underwent a programme of restoration in the late 1970s and as a result a new roof was constructed of glass fibre. However, this refurbishment was only ever viewed as a temporary measure and left the mill devoid of its original fantail and of the decking which surrounded the tower.

The Windmill was originally owned by Lord Crawford, who at the time of refurbishment transferred ownership to the Wigan Metropolitan Borough Council for preservation for the public good.

Following an application to the Heritage Lottery Fund, a small grant of £50,000 has been made available to fund a modest refurbishment,



and to provide better interpretation. Work began on site in January and has now been completed.

Historic significance: Wigan's surprising role in the development of Windmill technology.

Wigan, and indeed the Haigh Estate, has an important but little known place in the development of windmill technology, going back 100 years before the Haigh Windmill was built, with an invention that continues in use today on some modern wind turbines.

Edmund Lee, a blacksmith working at Brock Mill forge on the Haigh estate, was granted a patent in 1745 for a "self-regulating windmill", and unusually for an English inventor also secured a Dutch patent for the same invention.

This was one of the first attempts to automate the two most arduous tasks a wind miller had to face – setting cloth on the sails and turning either the whole mill, or its cap, to face the wind. This attempt at automation meant that windmills, in an age before reliable



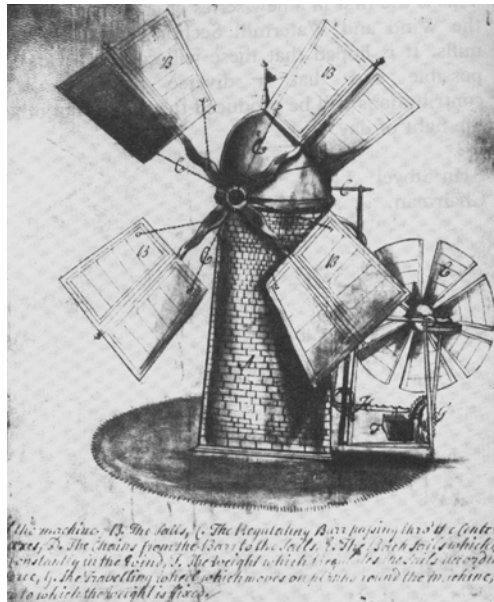
steam engines, could be used for tasks such as draining mine workings without the expense of employing someone to be in constant attendance.

In practice, Lee's design for the sails would have been unworkable, but his fantail, which turned the cap and sails into the wind, was later tweaked by the great Leeds engineer John Smeaton and others and became widespread throughout England and was used across the world. (Stephen Buckland, "Lee's Patent Windmill", SPAB 1988)

From the journal of the Swedish traveller and industrialist Reinhold Angerstein, who visited the area in 1754, it is now known that Richard Melling (who had also been employed at Brock Mill and later went on to survey part of the route of the Leeds-Liverpool canal as well as building cottages and almshouses on the Haigh estate) had built a flour windmill at Upholland (probably the tower which still exists) which used the features of Edmund Lee's patent, namely the fantail to turn the cap and sails which could be set and furled automatically.

Lee and Melling must have made models of their designs for experimental purposes and so the reference in Lord Crawford's mining agent William Peace's letter of 1838, nearly a hundred years after the patent, to the present Haigh windmill being inspired in part by

"a model at Haigh Hall" is tantalising, especially as Lee's patent drawing shows an unusual, tall, domed cap very like the one on Haigh windmill (see below).



Haigh windmill is therefore linked to two inventions: to automated windmill sails, and thus to early ideas of automation in general; and to the fantail, the ingenious invention of two Wigan men in the early days of the industrial revolution, which invention had a huge impact on the technology of wind power (and perhaps also did a little to lower the price of coal) but whose local origins have been almost completely forgotten.

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