

# The Agricultural Activities of John Wilkinson, Ironmaster

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IT is not generally known that besides being a large-scale industrialist, John Wilkinson (1728-1808), the celebrated ironmaster, was also one of the "spirited proprietors" who appear so frequently in agricultural history during the latter half of the eighteenth century. His youthful background was semi-rural, but his career as a large-scale landowner does not appear to have begun until the War of American Independence (1776-83), when it became difficult to satisfy public and private demands for cannon. Consequently his profits as an ironmaster accumulated rapidly, and some of them were invested in agricultural improvement. About 1777-8 he bought the bleak hill of Castlehead, near Grange-over-Sands in north Lancashire, then surrounded by a peaty marsh, and the adjacent Wilson House estate, with the double purpose of building a country residence on the former site, and "with a view of making iron from the peat with which the country so much abounded" on the latter.<sup>1</sup> The peat-smelting of iron, although technically successful, was however not an economic proposition, and his thoughts turned "to consider what other uses could be made of so extensive a tract, in particular whether it could not be made capable of cultivation."

The general nature of the tract Wilkinson undertook to improve was extremely discouraging. According to Sir John Sinclair, Bt, M.P., President of the Board of Agri-

culture, who honoured Wilkinson with a visit to Castlehead in 1805, it would have been called in Scotland a "flow moss." On the average about five feet of the first stratum consisted of a soft, spongy kind of peat, which made very poor fuel. Below this, however, the black peat was deep (15 feet and over) and of excellent quality. After these two layers the bottom was "a fine strong blue clay," capable of being used as a top dressing after being burnt in small heaps with peat, but otherwise "unfriendly to vegetation until it has been long exposed to, and ameliorated by the atmosphere."<sup>2</sup>

Wilkinson's first attempts to improve about four or five acres of this waste marsh, on which animals could only be pastured in frosty weather, began in 1778 and were unsuccessful. The surface was breast-ploughed and then burnt. But the drainage trenches were cut too far apart and the "proper management" of the sod-kilns in which lime for spreading on the moss could be produced "was not then understood."<sup>3</sup> Later Wilkinson tried a more complex system of drainage trenches which proved more successful.<sup>4</sup> Special spades and ploughs were used, and the great ironmaster's inventive brain even produced a special 10-inch circular patten for the hind-feet of the horses used in the work of reclamation, so that they could be employed even in the soft parts of the moss.<sup>5</sup> "Before this invention," remarked Sir John Sinclair, "the ploughs were wrought by the strength

<sup>1</sup> *Communications to the Board of Agriculture*, v, Part 1, 1806, p. 2; John Wilkinson to James Watt, 6 May 1776 (Boulton and Watt Coll., Birmingham Public Library).

<sup>2</sup> *Communications*, p. 2.

<sup>3</sup> *Communications*, p. 3. Sir John Barrow (1764-1848), who visited the Castlehead area about 1781-2, states that Wilkinson had met with success "mostly and simply by driving in stakes to obstruct the tide both in its flow and ebb."—*An Autobiographical Memoir*, 1847, p. 229.

<sup>4</sup> *Communications*, pp. 3-5. Wilkinson also narrowed and altered the courses of some brooks in the Castlehead area, "by which the flux of the tide, in the space of about eight years, has raised the lands near six feet."—J. Holt, *General View of the Agriculture of the County of Lancaster*, 2nd ed., 1795, p. 88.

<sup>5</sup> *Communications*, pp. 4-5 (plate: "Mr. Wilkinson's Horse Patten").

of men till the moss had consolidated." By 1805, after an elaborate rotation of crops and a considerable and costly spreading of clay, sand, or mould on the surface, the reclaimed moss had produced hay, turnips, oats, winter rye, barley, and potatoes, the latter being "of a quality peculiarly excellent."<sup>1</sup> It is typical of the man that he threw himself wholeheartedly into this new sphere of activity, for in 1787 he was the only person who took the trouble to send the Royal Society of Arts samples of Chinese hemp fibre in "a state fit for the purpose of manufactures" after that Society had distributed the seeds of the plant to a large number of persons for experimental growth.<sup>2</sup>

The extent of land Wilkinson reclaimed was variously estimated at 500 Lancashire acres and 1,000 statute acres.<sup>3</sup> In 1778 the moss was with difficulty let to local farmers at a penny per acre; by 1805 those portions of the moss which Wilkinson had only recently improved were worth between 30s. and 40s. an acre per annum, while land which he had reclaimed in the 1780's produced an annual rent of between £3 and £4 per acre.<sup>4</sup> Nevertheless critics said "that Mr Wilkinson might have bought, at a cheaper rate, the best land in Lancashire." Sir John Sinclair commented: "Perhaps so. But Mr Wilkinson must derive much higher satisfaction from the plan he has

pursued. By so doing, he has furnished employment to numbers of industrious people;—he has raised great quantities of food for man, where nothing, but for his exertions, would have been produced . . . and . . . he is justly entitled to be ranked among the best friends to the agricultural interests of the country."<sup>5</sup>

In 1791 Wilkinson was busy finishing off a big programme of tree-planting at Castlehead which had extended over a number of years.<sup>6</sup> In 1796 the landowners of Cartmel parish obtained an Act (36 Geo. III, cap. 64) for enclosing commons, waste lands, and mosses in the constituent townships of the parish, a process which lasted until the final award in 1810. Both John Wilkinson (Castlehead was in Allithwaite Upper township) and his brother William, who then had a house at Flookburgh, had interests in the enclosure. They were in fact the third (£1,880) and fifth (£1,415) largest recipients respectively of the Cartmel common land divided out by the Commissioners appointed under the act.<sup>7</sup> According to Stockdale, on the 12th of October 1798 William Wilkinson bought 28 acres for £685 "behind and upon Newton Fell" in Upper Allithwaite township at a public auction, while three days later, John, not to be outdone, requested the commissioners "that he might have an allotment

<sup>1</sup> *Communications*, p. 6. Wilkinson also grew chicory at Castlehead, presumably for horse fodder.—Holt, *op. cit.*, p. 72.

<sup>2</sup> *Trans. Royal Society of Arts*, v, 1787, pp. 171–2. It is not clear whether this hemp was grown at Broseley in Shropshire or on one of his other estates. Wilkinson's report on the product was unfavourable.

<sup>3</sup> *Communications*, p. 7; Holt, *op. cit.*, p. 105. The Lancashire acre varied. One, based on 7½ yards to the rod, was equal to 1.86 statute acres; another, based on a 7-yard rod, was equal to 1.62 acres.

<sup>4</sup> *Communications*, pp. 3, 7. The great rise in the value of the land during the early 1790's is shown by the fact that in 1795 John Holt had noted: "Mr Wilkinson's improved moss land was, before draining, worth from 7 to 10s. per acre, is now worth from 4l. to 5l. per acre of the large measure."—*op. cit.*, p. 47 n.

<sup>5</sup> *Communications*, p. 8. Wilkinson's methods were later applied to Trafford Moss in south Lancashire (Holt, *op. cit.*, p. 105). His schemes altered the landscape of the Furness wastes: ". . . before the drainage, the windows of the third story of Mr Wilkinson's house just appeared from a certain point; but from that place, at present, the windows on the first floor are plainly seen . . . the fall of the moss is about four feet and a half."—Holt, *op. cit.*, p. 106 n.

<sup>6</sup> Draft letter of 10 Oct. 1791, John Wilkinson to Dr Priestley.—Warrington Public Library, Priestley–Wilkinson Correspondence.

<sup>7</sup> For an account of the enclosure, see J. Stockdale, *Annales Caerмоelenses*, 1872, pp. 326–84. Stockdale had access to the Commissioners' minute books, and one of them, covering the period from 25 July 1796 to 3 July 1803, has recently been deposited in the Lancashire County Record Office, County Hall, Preston.

at or upon Wilson Hills, as it would be an advantage to his estate." Besides the 51 acres allotted to him at Wilson Hills John came into possession of over 40 acres at Blawith and Castlehead Moss in Broughton township, while William received allotments at Holker Bank and Winder Moor in Lower Holker township.<sup>1</sup> The Commissioners' award under the Act shows that the two brothers received other allotments by virtue of their status as local landowners; it is interesting to note that William Wilkinson bought out a number of small proprietors.<sup>2</sup>

Not content with these local acquisitions, "Mr Wilkinson of Castlehead, a gentleman of fortune, patriotism, and universal knowledge," became interested during 1786 in a vaster design put forward by John Jenkinson of Yealand. Jenkinson's plan was for "recovering from the dominion of Neptune that extensive tract called Lancaster and Milthrop (i.e. *Milnthorp*) Sands" by diverting the Kent and other lesser rivers.<sup>3</sup> After a survey of the area, which seemed to him to present few obstacles to the execution of the plan, Wilkinson proposed the opening of a subscription list and offered to lead it with £50,000 if the neighbouring landowners would raise the remaining £100,000 between them. But even though his estimate of £150,000 for reclaiming over 32,000 acres was considered to be unduly pessimistic by "many well-informed gentlemen," the plan never materialized, being "defeated, by a difference of opinion amongst individuals, claims of the lords of manors, &c."<sup>4</sup>

It was not only at Castlehead that Wilkinson undertook agricultural improvements. In

1792 he bought the Brymbo Hall estate, and later added to it a number of smaller estates and farms in the bleak township of Brymbo in Denbighshire, north Wales. On his death in 1808 the whole concentration amounted to about 872 acres.<sup>5</sup> The original soil was naturally poor, "being a hungry clay on a substratum of yellow rammel or coal schist."<sup>6</sup> By good tillage and heavy manuring with lime (10 tons to the acre) Wilkinson so improved crop-yields that the township's corn-tithes increased by £40 per annum in value. "A crowned head had assisted him in making his compost manures. Offa, King of Mercia, had employed men to bring together the soil; and Mr Wilkinson went to the expense of lime, to be mixed with it. Large cavities, of the shape of inverted cones, were cut at convenient distances, in Offa's dyke, which runs across Brymbo farm. The cavities were filled up with limestone and coal and then burnt. . ."<sup>7</sup>

At Brymbo, too, he experimented with powdered "sweet coal," i.e. coal with a very low sulphur content, as a top-dressing for grasslands. As compared with land manured with a compost of soil and lime, the area so treated produced the best and earliest grass.<sup>8</sup>

His lime-making activities in north Wales were not, however, confined to the township of Brymbo. At some date before 1798 he had secured a lease for forty-two years of land containing limestone adjacent to Lord Derby's estate at Hope in Flintshire. Here he had erected large lime-kilns, of which he wrote: ". . . my present lime work being so near coal of my own . . . enables me to sell it on easy terms to the country and to meet any competition whatever."<sup>9</sup>

<sup>1</sup> Stockdale, *op. cit.*, pp. 334, 340-1.

<sup>2</sup> Award of 8 February 1810 (Lancashire County Record Office, Preston), pp. 76, 100, 105, 431 ff., 434, 455.

<sup>3</sup> Holt, *op. cit.*, pp. 88-94; *Gentleman's Magazine*, LVI, 1786, pt. ii, p. 1140.

<sup>4</sup> Holt, *op. cit.*, pp. 90, 88.

<sup>5</sup> For details of these, see A. N. Palmer: 'John Wilkinson and the Old Bersham Ironworks', *Trans. Hon. Soc. of Cymmrodorion* (Session 1897-8), 1899, p. 40.

<sup>6</sup> Davies, *Agriculture of North Wales*, 1810, pp. 281-2. Of Wilkinson's Brymbo estate about 150 acres were originally "wild heath, till then abounding only in springs and furze." Palmer noted that the Waen Farm (76½ acres) was "enclosed from the common."—*op. cit.*, p. 40.

<sup>7</sup> Davies, *op. cit.*, p. 282. <sup>8</sup> *Ibid.*, pp. 297-8.

<sup>9</sup> Wilkinson to Mr Alty, Knowsley, Lancs, 9 May 1798 (Lancs County Record Office, DDK 447/9). When Wilkinson was granted a 7-year mining lease of land at Hope by Lord Derby in 1798, it was agreed

Wilkinson's last will and testament provides some evidence that his investments in agriculture extended to South Staffordshire. "... The late William Johnson's cash account with me is not settled, and the same cannot be adjusted without reference to the cashbook and diary of the said William Johnson... it is supposed they contain the transaction of my farm at Bradley blended with an adjoining one... held by William Johnson... and the produce of both farms were (*sic*) received for by said William Johnson."<sup>1</sup>

Attention has often been called to Wilkinson's role as a pioneer in the use of agricultural machinery. In 1798 the six counties of north Wales contained only two threshing machines. One of these, "of a cumbersome and expensive construction," was employed by Wilkinson on his Brymbo estate. Even more remarkable was the fact that his

machine was driven by steam power. The use of agricultural machinery was stimulated by the high wage rates typical of war-time conditions, and by 1810 improved threshing machines had become "too common to be enumerated" in north Wales.<sup>2</sup>

The general impression derived from a study of Wilkinson's farming and reclamation activities is therefore of large-scale, long-term 'ploughing' of industrial and mining profits into agriculture on marginal lands at a time when a rapidly expanding population and Government expenditure in connection with a series of wars (1776-83, 1793-1802, 1803-15) resulted in a rising price-level, a buoyant economy, and, towards the end, a considerable degree of inflation. Wilkinson was perhaps fortunate in that he did not live to see the depression in agriculture during the years immediately after 1815.

that he was not to burn any of the limestone brought out of the lead ore diggings: "he must be bound that he will not root and mangle too much of the rocks to the disadvantage of his Lordship... the old tenants... complain heavily that if Mr. Wilkinson will take all the rocks they will be entirely deprived of their living."—Edward Jones, Hope, Flintshire, to Mr Alty, Knowsley, Lancs, 3 July 1798, Lancs County Record Office, DDK 447/8/3 and 447/8/5.

<sup>1</sup> Document A, date-lined Bradley, 26 July 1804, subjoined to will dated 29 Nov. 1806, General Register Office, Somerset House, London. William Johnson's widow, Mrs Mander, was to be compelled by Wilkinson's executors to produce the accounts.

<sup>2</sup> Davies, *op. cit.*, pp. 121-2.

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#### NOTES AND COMMENTS (*continued from page 30*)

numbers. Down to 1870-1875 all the hills and mountains of Great Britain had been tenanted as 'hill rights' or common 'hill run', often mainly for the production of three- to four-year-old wether sheep which were sold fat off the hill at that age. They did not cost the farmer much except during the first winter, and he had three to four years' wool off them. But between 1870 and 1875 there sprang up a universal desire amongst the landed gentry to 'produce a shoot' on their moors and mountains, stimulated by the example of Edward, Prince of Wales, afterwards Edward VII, who was passionately fond of shooting and stalking. The advent of new types of effective sporting guns (both shot and rifle

type) encouraged a desire for big 'bags' of grouse from the moors and of stags on the Highland mountains. Everybody wanted to take a 'shoot', and to let this land was much more profitable than giving it free for sheep to tenant farmers. In consequence, the landlords took away the moors and the mountains and turned them into vast grouse moors, and in Scotland into deer forests. Very often no sheep were allowed at all. Sometimes, as occurs to this day on all Derbyshire grouse moors, the sheep are stinted in numbers, i.e. every farmer must have his sheep counted out on to the moor through a sort of stone 'trap door' by the Head Keeper on a given date. And

(*continued on page 57*)