

## MOSSLAND RECLAMATION IN NINETEENTH-CENTURY CHESHIRE

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**M**OSSLANDS are a distinctive feature of lowland Lancashire and Cheshire. Although much has been written about the development of the Lancashire mosses,<sup>1</sup> little is known about the reclamation of mossland in lowland Cheshire. This comparative neglect is partly a result of mosses being smaller in area and more widely scattered in Cheshire and partly because full-scale attempts at reclamation were much later in Cheshire than in Lancashire, not beginning until the middle of the nineteenth century.<sup>2</sup> The purpose of this paper is partially to remedy this neglect by examining the reclamation of the largest lowland moss in Cheshire, Carrington Moss, between 1840 and 1900.

### CARRINGTON MOSS ABOUT 1840

Carrington Moss is located in the north of the county (Fig. 1). It is part of a belt of lowland mosses that lie along the valley of the Mersey between Eccles and Warrington and which were formed in depressions inherited from the last glaciation.<sup>3</sup> By 1840, Carrington Moss covered 917 acres. The greater part lay in Carrington, 95 per cent, the remaining 5 per cent being found in Ashton upon Mersey and Dunham Massey (Fig. 2).<sup>4</sup> At the edges of the moss, there was evidence of slight, piecemeal reclamation and of some peat-cutting from moss rooms. However, the moss itself was not cultivated and was described as a barren tract, dominated by *Sphagnum*, cotton-grass, heather and birch.<sup>5</sup> Owned by the Earl of Stamford and Warrington, it was used mainly as a grouse-moor.<sup>6</sup> The area of uncultivated moss had changed little over the first half of the nineteenth century, a map and survey of Carrington Moss of 1800 recording the mossland at 915 acres.<sup>7</sup>

The survival of Carrington Moss by 1840 is surprising, for there were strong economic motives for its reclamation. It was located close to Manchester, the population of which was growing

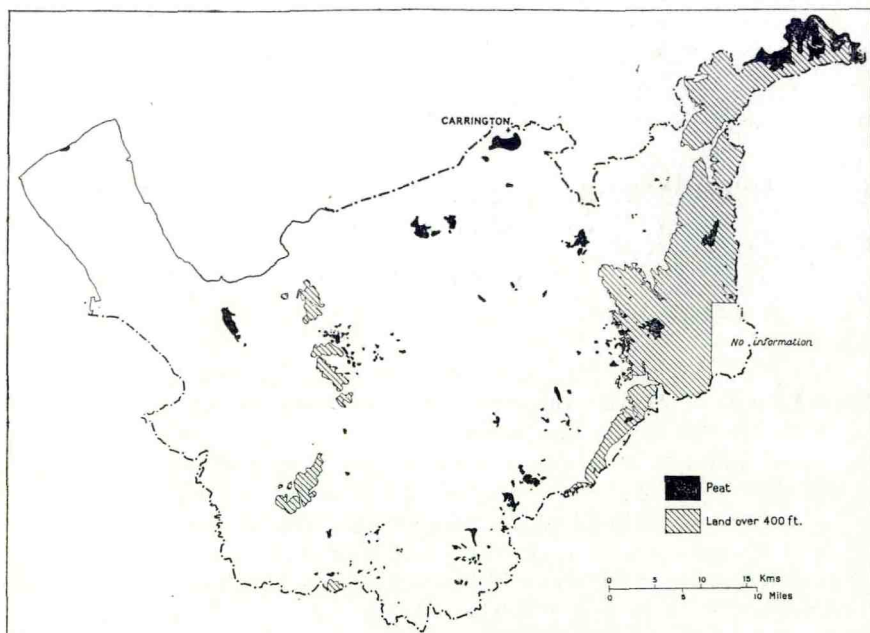


FIGURE 1 DISTRIBUTION OF PEAT IN CHESHIRE.  
(Sources: 1" O.S. Geological Survey sheets 96-9, 108-10)

rapidly. Between 1801 and 1841, its population increased by over 200 per cent to 235,000 and would have provided a ready and expanding market for agricultural produce. Indeed, much of north Cheshire around Altrincham had developed by the 1840s as a market garden area supplying the Manchester market by way of the Bridgewater Canal. For example, by about 1840 arable occupied 42 per cent of the four parishes and townships (Partington, Warburton, Ashton upon Mersey and Dunham Massey) surrounding Carrington.<sup>8</sup> Moreover, as Fletcher has shown, many of the neighbouring Lancashire mosses were being effectively and profitably reclaimed in the first half of the nineteenth century.<sup>9</sup>

#### CHANGES BY 1880

Although progress in reclamation was slow, the area of moss-land had declined by about 1880. The construction of a railway in the southwest of the moss had led to the largest single reclamation (Fig. 3). The railway was built to improve the Cheshire Lines Railways' access between Manchester and Liverpool. In 1865, the Great Northern, the Manchester, Sheffield and Lincolnshire,

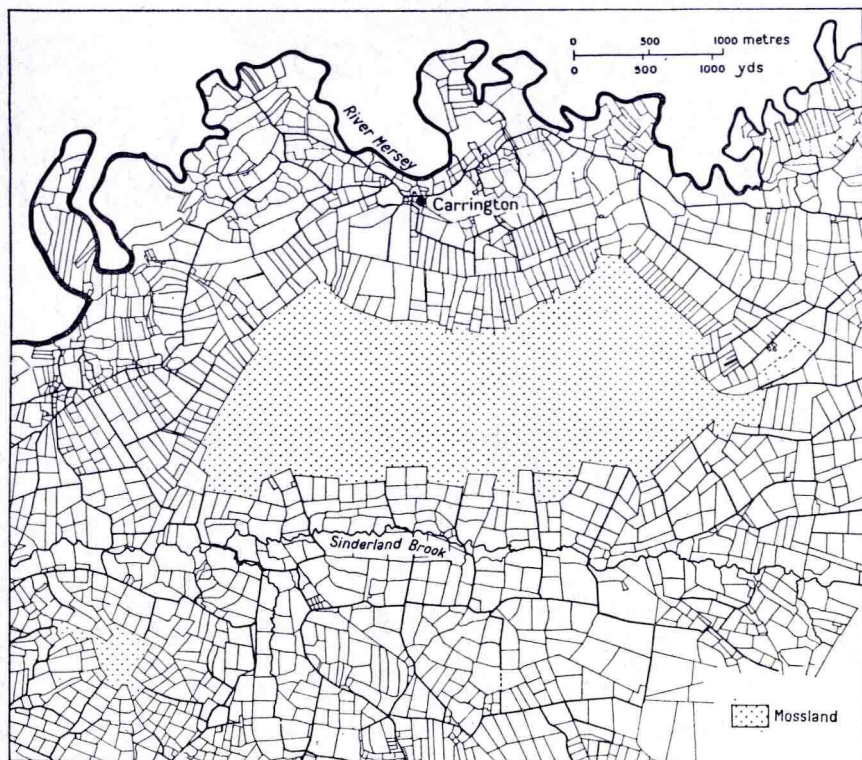


FIGURE 2 CARRINGTON MOSS AROUND 1840.  
(Sources: C.R.O., EDT/22, 88, 144, 319, 412)

and the Midland Railways signed an agreement to regulate the Cheshire Lines Railways. At this time, the Cheshire Lines had to use the London North West Railway to obtain access to Manchester from Liverpool. To remedy this situation, the Manchester, Sheffield and Liverpool Railway Act, 1865 was passed, authorising the construction of a link from Old Trafford to Glazebrook and a further line from Timperley to Glazebrook. This second line was to run across the southwestern part of Carrington Moss.<sup>10</sup>

To build this link, the Cheshire Lines Committee purchased 38 acres in Carrington, Dunham Massey and Altrincham from the Earl of Stamford for £14,400, the agreement being made in 1871, although not finally settled until 1879. Of this area, only 9 acres lay in Carrington, but entirely on unreclaimed mossland. To achieve a degree of stability for the track, a considerable quantity of more solid material was placed on the peat, while the

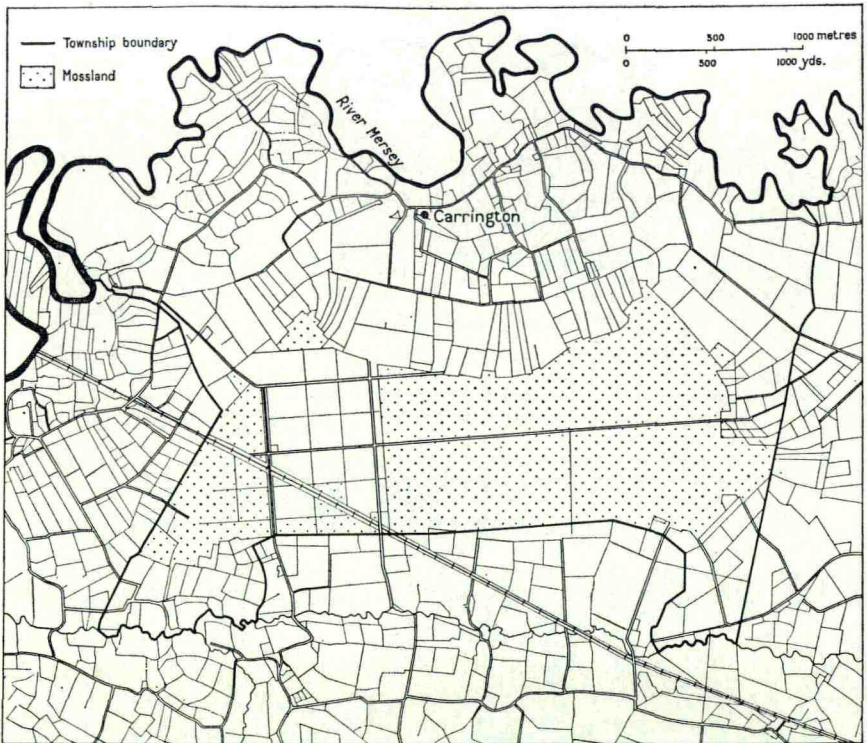


FIGURE 3 CARRINGTON MOSS AROUND 1880.

(Sources: 6" O.S. Cheshire, sheets 8 NE, SE, 9 NW, NE, SW, SE, 1st ed., 1882)

line was bordered by ditches to remove excess water. The railway opened in 1873.<sup>11</sup>

Only a small area of mossland was reclaimed with the construction of the railway. Associated with its building, however, an attempt was made by the Earl of Stamford to reclaim that part of the moss to the north and south of the line. An area of about 165 acres was involved, bounded to the east and west by occupation roads, constructed to aid reclamation. The land was laid out in rectangular plots, each of about 8 acres, being bounded by drainage ditches (Fig. 3). By 1886, 82 per cent of this land had been reclaimed, being cultivated as arable.<sup>12</sup>

Besides this scheme, piecemeal reclamation of the moss continued. Between 1840 and 1880, there was the consolidation of land already reclaimed, revealed by the removal of boundaries to create larger fields, while at the edge not only were existing fields

being enlarged but new ones were being established at the expense of the moss. In this 40-year period, about 100 acres of mossland were reclaimed in this fashion.

Despite these changes, by 1880 a large area, about 600 acres, of uncultivated mossland still remained.<sup>13</sup> However, its reclamation was being urged. As the *Manchester Guardian* noted in 1884, 'the idea does not seem a bad one to convert a thousand acres of barren morass into the most fertile cropping or market-garden land . . . and although a thousand acres of first-class garden ground would not meet all our demands, it would be as well for the citizens of Manchester as the same area 200 miles distant'.<sup>14</sup>

#### RECLAMATION

The complete reclamation of Carrington Moss began in 1886. In that year, Manchester Corporation bought the moss in an attempt to improve sanitation within the city. As Manchester's population increased, the problem of disposal of nightsoil, street sweepings and other refuse grew. By 1885, 215,000 tons of refuse were being produced annually in the city. About 35 per cent of this amount was treated at the Holt Town sanitary works in the city, but the remaining 138,000 tons, collected mainly from south and southwest Manchester, provided difficulties. Existing tips were rapidly filling and there was a growing objection to the storing of 83,000 tons of nightsoil, 47,000 tons of street sweepings and 9,000 tons of slaughter-house refuse, bell dust and stable manure within the city. As a result, much of the refuse had to be sent by rail and boat to parts of Cheshire, Lancashire, Yorkshire and even Lincolnshire. However, as districts were added to Manchester, the situation became more difficult: thus, the incorporation of Bradford, Harpurhey and Rusholme increased the 1885 refuse total by a further 25,000 tons.<sup>15</sup>

As a partial solution, the Health Committee of the corporation suggested that some of the refuse should be sent away each day, as collected, to a locality remote from residential property. At the same time, the refuse could be used to improve such land agriculturally, for nightsoil and street sweepings when mixed produced a valuable manure. However, the cost of transporting the material restricted the locality to be as near Manchester as possible, within 15 to 20 miles, and with good river, canal and rail access. In 1884, Henry Whiley, superintendent of the Cleansing Department, submitted a report to the Health Committee detailing five locations suitable for the dumping of refuse: Astley, Barton, Carrington, Irlam and Worsley Mosses.<sup>16</sup> Of these, the committee considered Carrington to be the best in terms of its

size and accessibility. In 1884, the trustees of the late Earl of Stamford were approached and, in 1885, they agreed to sell the moss to Manchester Corporation for £38,000. The corporation applied to the Local Government Board to borrow, under the Public Health Act of 1875, £38,000 for the purchase of Carrington Moss and £22,000 for the costs of transporting nightsoil and of reclamation. The loan, to be repaid over 50 years, was sanctioned in July 1886.<sup>17</sup> The estate that the corporation bought amounted to 1,093 acres. Of this, there were 593 acres of uncultivated mossland; 211 acres of cultivated mossland, of which 73 per cent was in arable and 27 per cent in pasture; 283 acres of farmland under annual tenancies and life leases, all of which was in arable; and 6 acres of land leading to a wharf on the Mersey (Fig. 4).<sup>18</sup>

All tenants were given notice to quit and in 1886 the Health Committee appointed a farm bailiff, James McConnell, to supervise the reclamation and cultivation of the mossland (Fig. 5).<sup>19</sup> The first stage in reclamation was drainage. A central east-west

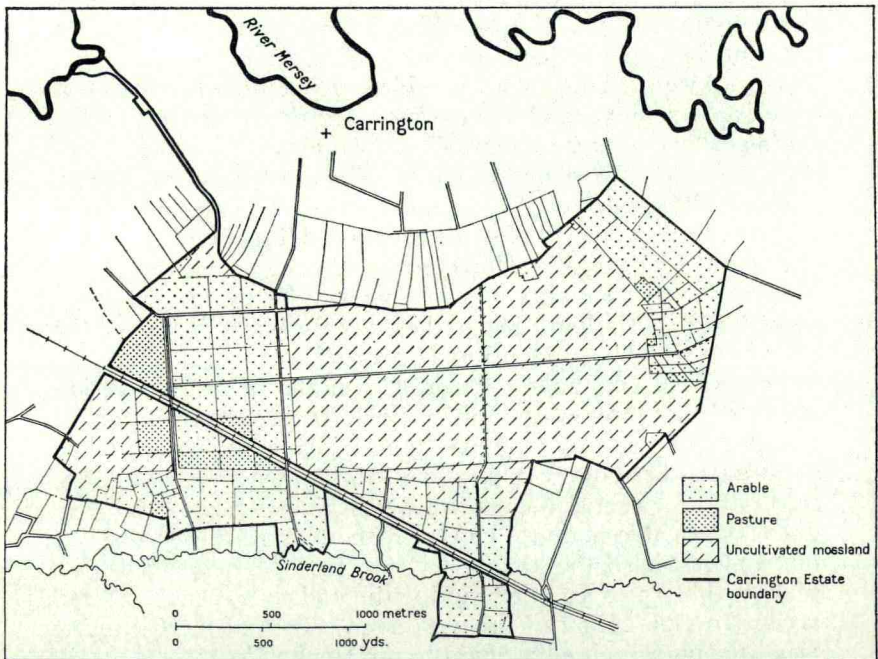


FIGURE 4 CARRINGTON ESTATE PURCHASED BY MANCHESTER CORPORATION, 1886  
(Source: M.C.A., Deed of conveyance, 1886)

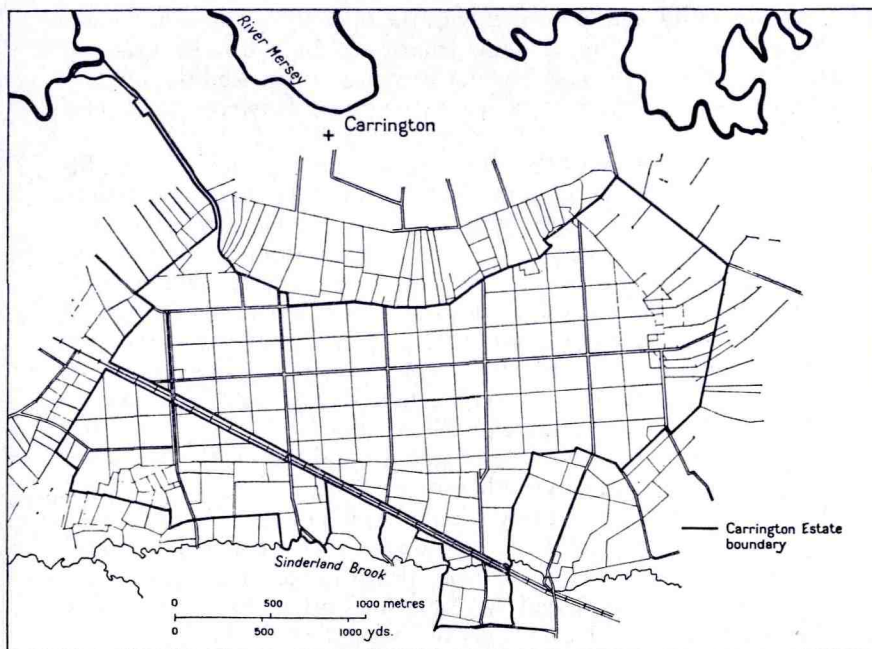


FIGURE 5 RECLAMATION PLAN FOR CARRINGTON.  
(Source: M.C.A., Map of the Carrington estate, 1894)

road was constructed across the moss bounded by open drains. Subsidiary roads and drains were built to the north and south of this central road. Between these roads, fields were laid out in rectangular plots, each of about 8 acres, and bounded by open drains. These fields were subdivided into 2-acre blocks by drains 4 feet deep. Each 2-acre block was underdrained by spit drains 4 yards apart. As the moss became more consolidated, these were replaced by pipe drains 4 feet deep and 20 yards apart.<sup>20</sup>

The second stage in reclamation was to add nightsoil to render the peat fertile and cultivable. To distribute nightsoil over the moss, a light railway,  $2\frac{1}{2}$  feet wide, was constructed along the side of the roads, which by 1890 covered 12 miles. The railway came into use in 1888 and by 1890 three small locomotives and over a hundred trucks delivered refuse over the estate.<sup>21</sup>

The nightsoil was carried from Manchester by rail and water. In 1886, the Health Committee made an agreement with the Cheshire Lines Committee for the construction of a siding in Carrington for the refuse brought by rail from Manchester.<sup>22</sup> Between 1886 and 1894, 99 per cent of all nightsoil came to

Carrington by rail. However, with the opening of the Manchester Ship Canal in 1894, a large wharf was built on the canal in Carrington and thereafter water carriage of nightsoil dominated, accounting for 68 per cent of the total between 1895 and 1899.

The open texture of the moss enabled large quantities of nightsoil to be deposited and in the first year of reclamation as much as 300 tons per acre were placed on the uncultivated mossland. Less nightsoil was used as the peat became drier and more consolidated and by 1900 about 30 tons were being applied per acre each year. Between 1889 and 1899, 591,000 tons of nightsoil were sent to Carrington, on average 54,000 tons annually, with each acre of mossland receiving about 730 tons.<sup>23</sup> The amount of nightsoil sent to Carrington, although not solving, partially relieved Manchester's refuse problem.

After the initial heavy application of nightsoil, the mossland was left for a year. It was then dug over deeply and cultivation began. The first crop to be planted was potatoes. Usually they were grown for a second year, although oats were used as a second crop. The mossland was then put down to clover and rye grass, and afterwards ploughed for oats and other crops, cabbages, carrots, turnips and mangolds all being tried.<sup>24</sup> The decline of mossland on the estate was rapid. In 1886, there had been 564 acres of uncultivated mossland. By 1888, this area had fallen to 440 acres. Less than 200 acres remained in 1891 and, by 1895, there existed about 70 acres. By 1899, the whole of the former mossland was cultivated (Table I) and an area of wild mossland had been converted into a planned agricultural landscape.

#### AGRICULTURAL DEVELOPMENT

The agricultural development of Carrington Moss may be demonstrated by the letting of land to tenants, by the type of cultivation and by the financial return on the whole improvement. The Health Committee intended that as the mossland became ready for cultivation it should be let. The first tenancies were made in March 1887, when 571 acres of the estate were let (Fig. 6).<sup>25</sup> This area represented little advance on what had been reclaimed by 1886. In March 1888, a larger area, about 720 acres, was available for letting (Fig. 7). However, the Cleansing Department of the Health Committee decided to cultivate directly part of the moss under the control of the bailiff and the area let to tenants fell to 375 acres (Table I). In addition, the English Peat Moss Litter Company of Whitchurch, Shropshire, was allowed to occupy 150 acres of the uncultivated moss at the rent of 4 shillings



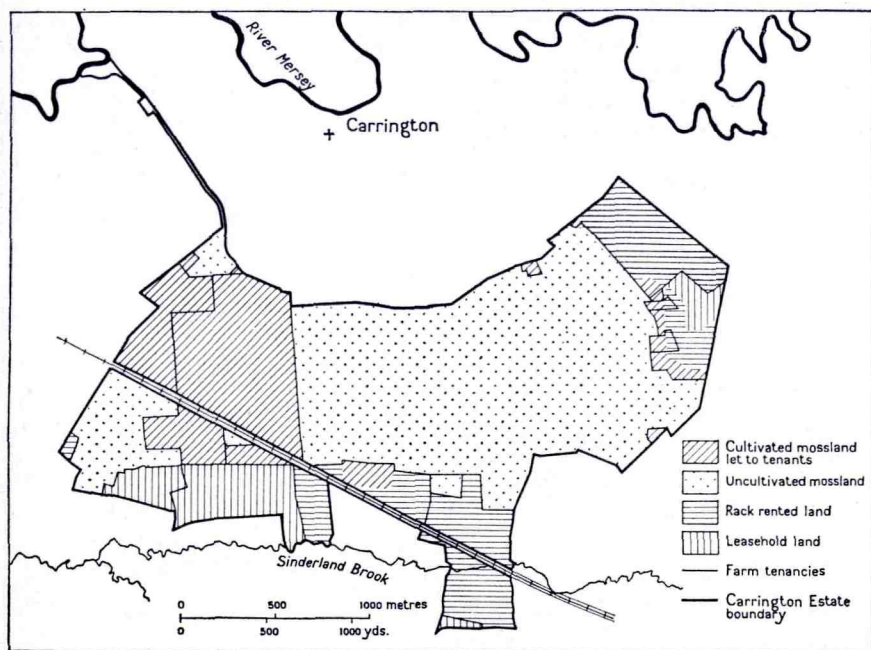


FIGURE 6 CARRINGTON TENANCIES FOR 1887.

(Source: M.C.A., Proceedings of the Health Committee, 9 (1885-7), 17 Jan. 1887)

per acre to produce peat. This agreement ended in 1892 as reclamation spread.<sup>26</sup>

Gross agricultural rent grew quickly on the estate, rising by 80 per cent in the 10-year period 1888-97. This increase was partly the result of the growth of the tenanted area (Table 1). Indeed, entirely new farms were created on the mossland, new farmhouses and buildings being constructed in 1892, 1896 and 1899. By 1893, £3,700 had been spent on the erection of farm buildings on the estate. Total rent also grew by the fact that the rent of the mossland rose annually by 5 shillings per acre for six years after it was first let, as its fertility developed with the constant application of nightsoil. The Cleansing Department maintained its farm of about 340 acres until the mossland had been fully reclaimed. With reclamation complete in 1898, all the mossland was let in 1899, producing a gross rental of £1,865 from 17 holdings (Table 1).<sup>27</sup>

The reclaimed land was used mainly for arable and market garden crops for the Manchester market. A comparison of the proportion of crops grown in Carrington between 1874-75 and

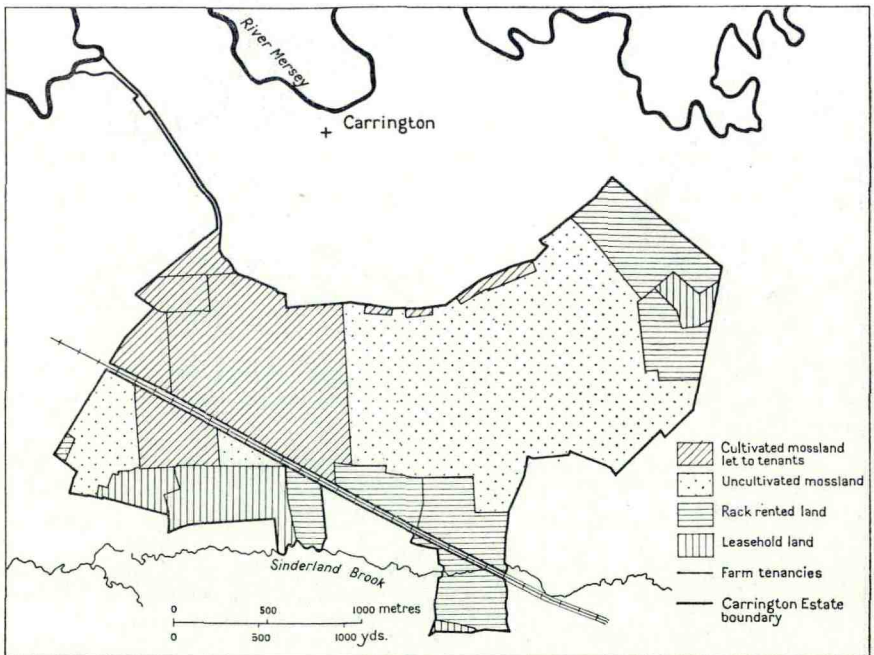


FIGURE 7 CARRINGTON TENANCIES FOR 1888.

(Source: M.C.A., Proceedings of the Health Committee, 10 (1887-8), 12 March 1888)

1899-1900 reveals an increase in the proportion of oats, potatoes and cabbages, and a decline in clover, seeds and pasture (Table 2). Such figures, however, apply to the whole township and may mask the cultivation practices of the reclaimed land. Cropping data for farms on the moss are rare and have been found only for the Cleansing Department farm for 1890 and 1895 (Table 3). These figures confirm the importance of market garden crops but also reveal that the growth of animal fodder, especially clover hay and oats, for Manchester's horse population was also a distinctive feature of the agriculture of the mossland.<sup>28</sup>

The success of the reclamation of Carrington Moss can best be expressed in financial terms. Between 1886 and 1899, the total cost of reclamation, including repayment of the purchase loan, wages and the cost of running the Cleansing Department farm, amounted to £123,800. Rent received over the same period totalled £14,040 (Table 4). In itself, rent provided a 11 per cent return on the capital outlay of purchasing and reclaiming the moss. Agricultural improvement in the nineteenth century rarely

TABLE 1 *Reclamation of Carrington Moss*

<i>Year ending 31 March</i>	<i>Estate area (acres)</i>	<i>Uncultivated mossland (acres)</i>	<i>Plantations and roads (acres)</i>	<i>Land farmed by Health Committee (acres)</i>	<i>Land let to tenants (acres)</i>	<i>Gross rent due (£)</i>
1886	1093	564	29	—	500	—
1888	1093	440	82	—	571	843
1889	1093	292	82	344	375	895
1890	1093	292	82	344	375	993
1891	1093	178	82	321	512	1162
1892	1093	178	82	321	512	1070
1893	1093	178	82	321	512	1111
1894	1093	110	82	353	548	1366
1895	1097	70	84	346	597	1319
1896	1101	50	93	326	632	1451
1897	1101	34	91	342	634	1517
1898	1101	5	86	371	639	1588
1899	1101	—	88	—	1013	1865

Sources: M.C.A., Deed of conveyance, 1886; Health and Cleansing Department accounts, 1877-92 and Cleansing Department accounts, 1893-99.

TABLE 2 *Changes in crop in Carrington, 1874-75 to 1899-1900*

<i>Date</i>	<i>Cultivated acreage</i>	<i>Wheat</i>	<i>Oats</i>	<i>Potatoes</i>	<i>Percentage in Cabbages Other green crops</i>	<i>Clover and seeds</i>	<i>Pasture</i>	<i>Orchards</i>	
1874-5	1203	12	16	11	—	4	25	29	2
1899-1900	1989	11	21	16	2	4	18	25	3

Sources: P.R.O., MAF 68/347, 404, 1772, 1829.

TABLE 3 *Crop acreages on the Cleansing Department farm, 1890 and 1895*

<i>Date</i>	<i>Area</i>	<i>Oats</i>	<i>Potatoes</i>	<i>Hay</i>	<i>Acreage of Carrots</i>	<i>Swedes and mangolds</i>	<i>Pasture</i>
1890	344	105	105	110	6	6	14
1895	346	175	34	90	17	5	25

Sources: Health and Cleansing Department account, 1890; Callison, *Memorandum*, I.

provided as much return as this, especially during the period of depression after the 1870s.<sup>29</sup> In addition, the Cleansing Department of the Health Committee ran a farm on the mossland between 1889 and 1898. The provision of oats, clover and hay to other departments of the corporation for their horses and the sale

TABLE 4 *Cost of and return on reclamation, 1886-99*

<i>Total reclamation expenditure, 1886-99</i>		<i>Total return on reclamation, 1886-99</i>	
	£		£
Loan repayment, rates, rents, insurance	25,265	Rents	14,040
Wages	60,316	Livestock sold	2,466
Fencing, draining, roads, railway, farm buildings, repairs	13,764	Agricultural produce sold	38,353
Livestock and maintenance	7,099	Nightsoil sold	3,803
Fuel for railway	2,425	Other receipts	2,360
Carriage of nightsoil	7,272		
Tools, seeds for farm	5,877		
Sundries	1,800		
<b>TOTAL</b>	<b>123,818</b>	<b>TOTAL</b>	<b>61,022</b>

Sources: M.C.A., Health and Cleansing Department accounts, 1877-92 and Cleansing Department accounts, 1893-99.

of market garden produce and livestock over this period yielded a further £41,000. The return from rents and the farm by 1899 represented 49 per cent of the total expenditure. By the end of the century, income was beginning to match expenditure on the estate (Fig. 8). Reclamation had considerably increased the value of the estate. In 1886, it had been bought for £38,000: by 1899,

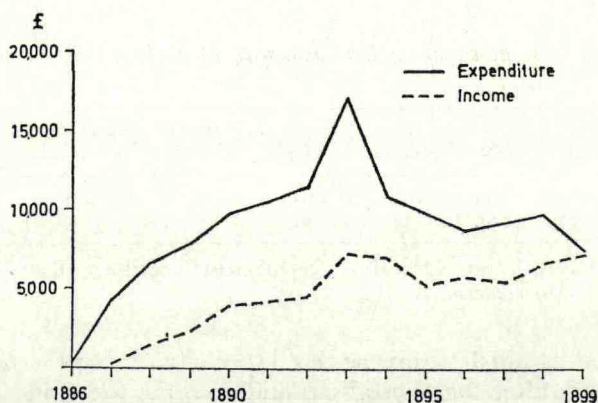


FIGURE 8 EXPENDITURE ON AND INCOME FROM RECLAMATION, 1886-99. (Sources: M.C.A., Health and Cleansing Department accounts, 1877-92 and Cleansing Department accounts, 1893-9)

Carrington Moss fully reclaimed was valued by Manchester Corporation at three times that amount, £118,147.<sup>30</sup>

#### CONCLUSIONS

Carrington Moss was reclaimed late in the nineteenth century. It was bought by Manchester Corporation primarily as a site for the disposal of large quantities of refuse produced within that city. The conversion of mossland into agricultural land, although important, was a secondary aim. However, both in the amount of nightsoil sent from Manchester and in the reclamation of the moss for agricultural purposes, the scheme was a success. Indeed, it was so successful that in 1895 Manchester Corporation bought from Sir Humphrey de Trafford 2,500 acres of Chat Moss, Lancashire and, by a similar scheme of refuse disposal, the remaining uncultivated area of this moss was converted into agricultural land.<sup>31</sup>

The influence of towns on the agriculture of surrounding areas in the nineteenth century has long been realised and seen especially in the development of dairying and market gardening. The reclamation of Carrington Moss, and for that matter Chat Moss, provides a more direct example of the impact of towns on agriculture. Both were converted into agricultural land in an attempt to solve the growing sanitary problems of Manchester. Rarely can an urban population have so directly affected the agricultural development of its hinterland.

Carrington Moss was reclaimed in a period when expenditure on agricultural improvement was at a low level, even in Cheshire which probably fared best of all the English counties during the agricultural depression after the 1870s.<sup>32</sup> Yet, the return on the capital expenditure of reclamation was considerable, as high as that recorded from the enclosure of waste at the beginning of the nineteenth century.<sup>33</sup> The reclamation of Carrington Moss demonstrated that the improvement of waste land for agricultural purposes was a profitable exercise, even late in the nineteenth century, especially where the area was located close to a large urban market, such as Manchester.

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