

3. DESCRIPTIONS OF PEAT WINNING

3.1 The 17th to mid-19th centuries

The drainage events of the early 17th century, in making the land east of Thorne more accessible and less difficult to exploit, impinged directly on to the south-western flank of Thorne Waste. This led to the formal division and allocation of that peat in 1651. The following statement by George Stovin, from the mid-18th century (Jackson 1882, Collier 1905-07, Chesterman 1950), explains what is known of the framework within which peat was removed and reclamation made possible from that date:

A Jury, for which John Starkey Gent, made Fine with the Lord [of the Manor of Hatfield] for forty Eight able Jurors to Lay out all the moors from Kirkbrigg Cawsey [1] in Thorne to the utmost part of our Graveship in Fishlake moors. This Jury sworn at a Court held at Hatfield the 31st day of March 1651

N.B. from this Time begun the Improvement of Thorn moors [Thorne Waste] as mentioned in the Brief Account of the Drainage of this Level.

The Jury, Left to the cawsay dyke on the wast[e] the Breadth of Two acres and a half. They left one Rood in Breadth and Length to the uppermost stake sett by them at Chadwick Dyke which is a Partition Betwixt Thorne and Fishlake moors.

And Because Fishlake moors had not been of Late Time sett out by Jury Therefore they were put to much Trouble to Lay them out in several places, Beginning at the moor ends next Thorne and Fishlake common to Deal Justly and to give every one their Due Proportion in all places. Therefore at the Lower End, next the Common Every acre hath in Breadth Twenty four Yards Two foot and nine Inches. At the crook Eighteen Yards and Two foot, at the Headings Eighteen Yards Two foot and Two Inches. In the Great waste Both Thorne and Fishlake moors, Twenty five yards and one foot for an acre in Breadth.

Seventeenth century references to peat winning within this parochial framework, or indeed elsewhere on Thorne Moors, are few and generally incidental. It is unlikely that significant differences existed between the Thorne Moors parishes, or even perhaps between neighbouring parishes holding quite separate peat resources, so slightly geographically wider references are also relevant here. It may also be noted that George Stovin (Collier 1905-07) provided the first traced allusion to Hatfield Moors peat exploitation, though its date in relation to the early 17th century drainage remains uncertain:

The master of the Game had his Turffs Lead to the manor house by the Tennants of the manor of Hatfield

Robinson (1858), in quoting the prices of commodities and other articles in the parishes of Snaith and Whitgift, based on probate records from 1568, referred to “graveing black turf” (1622) and “peate graved” (1664). He also adverted to a 1647 reference to a “turfe spaide”, presumably for local use. In the inventory of a Rawcliffe peat cutter, dated 1666, his assets included a “turfe spade” and “3 turfe barrows” (Rawcliffe History Group 1989). In the inventory of the goods of a Keadby man, dated 1684, occurs “Turfes black & white” (Peacock 1877).

Abraham de la Pryme (1671-1704), when curate of Hatfield, referred in his diary (8 August 1696) to “the sodds that they digg up within this country for fiering”, observing that “if they be got in thoue [thaw?] and wett, ferment and take fire, as hay and corn will when they are in stacks” (Jackson 1870, p.316). This implies peat stacks of a sufficient size to generate spontaneous combustion. De la Pryme later observed that “Workmens Spades” commonly cut and revealed paludified timber buried beneath the peat (de la Pryme 1701). He also noted that c.1650 at an unspecified moor, a human body had been found “at the very bottom of a Turf-pit”. In de la Pryme’s unfinished account of the town and parish of Hatfield (de la Pryme n.d.; Jackson 1870), he noted that Hatfield Moors “is Good for nothing but to digg up, to dry, & Burn for Turves”.

George Stovin alluded retrospectively to the discovery of other bog bodies during peat winning (Collier 1905-07), thus providing incidental references to this latter activity. He noted that 60-70 years earlier (1680s-90s), “the servants of Mr. James Empson of Gowle was Digging Turff”, apparently therefore on Goole Moor, when they cut through a body. Stovin noted that “about Ten Years ago” on Thorne Waste another peat cutter was again “Digging Turff” when he came across a burial. He also observed that, in 1747, female remains were revealed on Amcotts Moor, east of Crowle, by a man “Digging Turff” with a spade. It was added:

tho’ a Great part of this moor had formerly been graved off, she Lay seven foot Deep from the present Surface.

The Amcotts find was further described by Stovin (1747):

a labouring Man, was digging Turf or Peat in the Moors of Amcotts; and, at about six Foot, from the Surface, his Spade cut the Toe of a Sandal, which dropped into the cut he was graveing Peat in.

The most useful contemporary 18th century reference to the organization of peat winning is again that of George Stovin (Collier 1905-07), from the middle of the century. He observed that the Thorne turbary:

hass for above a Century, Employed their poor and will Do the Same for ages to come. The Labouring people Digg their Turff in the Summer, and their wives and Children makes them Ready for Sale, when the Harvest is over, the Men Brings them in Small Boats from the Moors Down the Canals and Drains made by the undertakers of the Drainage, into the River Don through Thorne Sluice

After noting that the inhabitants of Thorne “farr exceed all their neighbours” in reclamation fervour, he added:

every Inhabitant that had Right of Comon and Turbary in this parish, by Agreement had the moor measured [in 1651] in Breadth next to Thorne Common and they computed how many Yards Broad would fall to Each Common Right House, when this was Done, Every Person had his Equal Breadth next Thorne common to the west, and so was to Cutt to the East (Each man as farr as he Could). Then they Begun to Cutt Drains Betwixt each others moors; The Turff that came out paying for the Labour and Betwixt those Dykes they Graved their Turff. But they graved it to the very Bottom untill they came to the natural Soil which in many places is good Strong Clay, Sand &c. and so every Year clear'd as much of it as they could sell or Burn for fuel, so that now they have gott from Twenty to forty and Fifty acres Each of good firm Land...They are Every Year Improving and Draining this waste, that in the same number of Years that is past since the first Drainage to this Time. They may and possibly will gain as much more Land as they have already gotten, and so on for some ages to come. For there is no other Town that opposes them or makes any Improvement, and they having no Known Bounds Between them, the Thorne people will go on, until their Spades Clash against the spades of the Inhabitants of [Crowle, Eastoft, Haldenby, Fockerby, Adlingfleet, Ousefleet, Whitgift, Reedness, Swinefleet, Goole, Hook, Airmyn, Rawcliffe, Snaith, Sykehouse, Fishlake] almost at their own Doors.

Young (1771), writing of a visit to Thorne in 1768, commented on the reclamation of Thorne Waste:

the greatest curiosity to be met with in this country is the vast moors...It is all what they call turf, and is dug into square pieces for burning; when dried it is light as a feather, and

burns excellently; over all the moors it lays in an even stratum, about five or six feet deep,... The property of it is very remarkable; on each side, at the distance,...of several miles, are many little slips of cultivated land, generally an acre (28 yards) broad, some more, and others less; the proprietors of these possess a right to all the moor which borders upon their land in a straight line, until they met with the opposite possessors, who are in the same situation. These cultivated slips, which consist of many closes, have all (and probably most of the adjacent country) been gained in the course of many centuries from the moors; it is a good rich clay, that yields fine crops of corn and grass, but from its situation is liable to be overflowed in winter;...a proprietor has as much land as he thinks proper; but then the expence of digging away the turf is more than the land is worth, for a man seldom cuts above four square yards a day; they give it to the poor for their cutting and taking away.

The improvement of such land is a very dubious point: To view the moor, any person would think it totally incapable of any; but I must own myself of a different opinion. In the front of the piece, I viewed where the men were cutting the turf; I observed a trench was cut on each side, and across the moor, around a square piece against the field already cleared; this trench was not above two feet deep, and yet its effect in draining was very striking; we could walk very firmly within this trench, but on the outside of it not without danger of being swallowed up

Other, generally lesser, references from the 18th and 19th centuries provide further allusions. A reference from 1715 to the Isle of Axholme turbaries alluded to “the said turf graft” (Byford 1997). D[-----] (1785) observed of the peat dug on Hatfield Chase, and therefore including Thorne Moors:

The peat dug...is of two kinds: the first is generally black, and when dried and broken, resembles pitch, and undoubtedly contains a great quantity of bitumen. The second kind is from a very light to a very dark brown; it is not hard when dry, nor does it appear to be bituminous

The next is the (presumably generalized) wording in the Act for the cutting of the Stainforth and Keadby Canal (1793); clause LV refers to “Turves or Peats” that were “cut or digged” on Thorne Waste [2]. A 1797 reference (Haxey & Westwoodside Heritage Society 1988) to nearby Haxey Turbary also cited “digging Turves”. Of greater interest is a report (*Doncaster Gazette* 4 August 1848) on the fortune of a parliamentary bill, the Thorne Waste Improvement Bill of 1848, which provides the following evidence from a “turf-graver”:

who rented a turf-graft on Thorne [Waste] sixty years ago [c.1788]. He rented one graft and his neighbour rented another graft. They paid a distinct rent, and when they had dug out the turf, the owner took possession of the land and cultivated it.

It was further noted that:

The [peatland] property lies in strips, the width being defined by the width of the adjoining [property]. The moor lands have been let for the purpose of graving turves. After the turves have been taken off the land has been cultivated. The owner of the adjoining property took the land.

It was asserted that the “poor people cut the turf, but they paid for the privilege. The money is paid to the owners of the land”. The same account also observed that some owners of peat were said to be merely “poor cottagers”, which suggests that such ownership was not especially remunerative. No information was given about the turves themselves, although of related interest, Miller (1804) – writing of Hatfield Moors – noted the “cutting and forming [of] turf into sods the size and shape of a brick”.

There are two references to peat stacks in the 1850s. The *Doncaster Chronicle* of 13 October 1854 noted a fire doing considerable damage to “turf stacks”. In 1859, it was noted in the *Chronicle* (15 April) that a fire in that month had destroyed, again, “turf stacks”.

Thus the inhabitants of Thorne who owned the moorland strip holdings, either cut their own peat for commercial and/or personal use as fuel, or rented out ‘grafts’ on their land for others to clear as a worthwhile by-employment. The owners thus received a return on their peat resource and eventually gained the potential agricultural land beneath. Young (1771) commented on the minimal value of the peat to the owner, and the giving of this resource to the poor for them to win and sell, but these statements are not given credence by the other 18th century references. Nor are they supported by the existence of a significant and still worthwhile export trade in that century, employing 40 or so families in the 1790s in getting and transporting the peat. This must have been a significant percentage of all Thorne families. The population of Thorne in 1801 was put at 2655 (Minchin 1913).

3.2 Descriptions by William Casson

The 1829 edition of William Casson's *The History and Antiquities of Thorne* remains the first located source to provide a detailed account of peat winning methods on Thorne Moors. It is the detail provided by Casson that lifts his work above the writings of his predecessors. His account was prepared from personal experience, as there was family property on and adjoining the peat, giving him a close, first-hand knowledge. It is recorded (*Doncaster Chronicle* 27 May 1881) that "Mr. Casson had...a large quantity of turves destroyed", although it is not certain if William Casson was intended, or perhaps his nephew Francis, who took on many of the family's business interests. It does demonstrate, however, the family involvement with peat exploitation.

Writing in the reign of George IV, William Casson's description predates the work of Victorian topographers, historians and journalists/correspondents. Indeed, in the years before the moss litter industry, Casson's description, which he revised for the 1869 edition of the *History*, was never superseded. The final edition, dated 1874, contains an unchanged description. The 1869 revision is of great interest, and possible explanations for its necessity are given later.

The relevant part of Casson's earliest narrative imparts the following, undertaken within the contemporary strip framework:

On arriving at the morass, the workman proceeds with a sharp spade, adapted for the purpose, to clear the surface of the peat from the heath and other plants, with which it is covered; he then marks out a space, nine yards by one and a half, which, when cut to the depth of five feet, is considered a day's work, and contains about a boat load and a half. This space he divides into squares, each of these he again subdivides, by cuttings of two feet in depth into smaller squares, of about ten inches, which gives an appearance similar to the cheques on a draught board; this done, he steps below, and by five sharp strokes of his spade, one cut a space below the other, nearly severs the mass, and with a sixth stroke, sets it completely at liberty. He next casts it with the spade into the arms of a bearer, who stands ready to receive and carry it...a short distance, there to be piled in rows to dry.

When the peat is very wet, the children who carry it in their arms, are provided with thick aprons of sacking or leather, down which the water from the turf almost constantly trickles, and has a very cooling appearance on a hot summer's day. The tanning principle in the water, and the constant exposure to the sun and weather, soon give the children a very tawny complexion, which however is not permanent.

After the drying of the turf has been thoroughly effected, the rows before mentioned are collected, and formed into heaps or stacks, neatly piled, so as [to] preserve them from the wet, which can only be done to perfection by those who have been brought up to the business. After this, they are ready to be conveyed in boats along [Thorne Waste Drain].

From Casson's 1869/74 description of peat winning, the section of text that differs from the foregoing is quoted here in full. The rest of the account, being essentially unaltered, is omitted:

The workman, on arriving at the morass, proceeds with a sharp spade adapted for the purpose to clear the surface of the peat from the heath and other plants with which it is covered; he then marks out a space by six deep cuttings with what he calls a sworder (a steel tool of a long, oval shape and sharp at the point, and both edges), forty two benches in length, or twenty eight feet; these he cuts across at eight inches apart, and eventually carries the cutting down to the depth of seventy five inches, or fifteen turves, - thus, 42 by 6 by 15 = 3,780, which is called a day's work, or the original boat load and a half. The turf, when cut, is 10 by 8 inches on the surface, and 5 inches deep, or 400 solid inches, which, if multiplied by 3,780, gives a little more than 32 cubic yards to be cut in the day. Sometimes only the white or upper surface of the peat composed of sphagnum moss is required; in other places the peat varies in depth, but the number of turves required for a day's work is the same. When the surface of the peat has been cut into squares, like the checks on a draft board, the workman steps below, standing on boards, for the peat is too soft to bear his weight without a slight floor, he then, with two strokes of his spade, each cut five inches below the other, nearly severs one of the piles before mentioned, and, with a third stroke, sets three peats at liberty, and casts them into the arms of a bearer who stands ready to receive them; they are then carried a short distance, and piled two-turf deep in long, straight rows to dry. In a while they are separated, and raised into open rows until dry enough to burn.

Casson's two descriptions are separated by a span of 40 years, and it is surmised that the observed changes had three possible origins. These were seemingly linked with a conscious attempt – perhaps involving William Casson himself – to make peat winning more cost-effective in the declining years of the peat fuel trade. It also implies a relatively high level of control over exploitation at that time. There may have been a decreasing prevalence of family units, with the industry becoming concentrated into fewer land-owning hands, perhaps forced to examine the most profitable ways of organizing peat removal. It is likely that as the family tradition declined, in the wake of

ever more marginal markets and profits, there was greater employment of seasonal hired workers, perhaps less skilled, but working by the piece and able to become adequately competent by example. This would have allowed and promoted a new and probably coordinated assessment of the peat-winning procedure, leading to greater standardization and economies of scale.

The possible origins of the changes are:

1. An increased labour output per day. The approximate volume of peat to be cut was 22.5cu. yd (27 x 4.5 x 5ft deep) in Casson's 1829 edition, and 32.4cu. yd (28 x 5 x 6.25ft deep) by 1869. This difference in volume is so substantial that it precludes observational error or imprecision.
2. Evolution of methodology:
 - 2.1. Casson's 1829 description refers to vegetation clearance, marking out the surface, vertical cutting, horizontal severance and the lifting of turves, all by "sharp spade". In the 1869 description, marking out and vertical cutting were undertaken by a "sworder", whose specifications – as given – indicate an affinity with the hay-knife, from which it was possibly adapted, for greater efficiency than the accustomed spade. This later description also has a reference to the spade as "adapted for the purpose" of clearing the surface vegetation and 'baring'. The graving "knife" was a familiar hand-tool in the 20th century, alongside the graving spade which persisted for the other parts of the operation e.g. vegetation clearance and horizontal peat removal.
 - 2.2. The 1829 description delineated the turves as 10 x 10 x 4in, whilst the 1869 account noted that they then measured 10 x 8 x 5in. Although the dimensions had changed, the volume of 400cu. in remained constant.
 - 2.3. In 1829, Casson described the (27 x 4.5ft) 121.5sq. ft cleared strip as being divided into six squares, each 4.5ft square. Each square was subdivided by 2ft deep cross cuts into smaller 10in squares, so that only horizontal cuts were needed to sever the resultant columns of otherwise cut peat. The horizontal cuts were at 4in intervals, until the final, sixth, cut at the full 2ft depth, which finally severed the peat column. The six turves were then cast up to the assistant. Casson's (1869) version indicates that the (28 x 5ft) 140sq. ft strip was cut for the full length of the strip, there being six cuts, each 10in apart. The peat cutter then made 42 x 5ft cross cuts, each being 8in (one benk) apart, along the 28ft

strip. With this part of the operation completed, there were 252 columns of peat to be separated horizontally. It can be assumed that the depth of the cut was a little over 15in.

- 2.4. According to Casson's (1869) account, only three horizontal cuts were made, and consequently only three turves were tossed to the assistant. However, the graver had to work to a depth of 75in i.e. to five levels of 15in each, compared with 60in in the earlier description. In both instances, there were 15 horizontal cuts to each full column of peat, despite the differences in the depth of peat won. In the later description, the number of turves passed to the assistant was one half of that of the earlier account: three turves instead of six. However, the total volume of the turves removed was one half more. According to Casson (1829) the day's output could be contained in about one and a half boat loads. In 1869, the peat cutter's daily output was by then the equivalent of two boat loads.
3. Observational variations. In Casson (1829, 1869), it should be remembered that dimensions were probably sometimes approximate, and in consequence there are discrepancies through relating precise small measurements (e.g. of a single turf) to the overall volume to be removed. Perhaps the most significant measurement can be gleaned from Casson's (1829) description. The total volume to be cut per day was 22.5cu. yd (27 x 4.5 x 5ft), which was cut into, it is assumed, 2250 (5 x 5 x 6 x 15) turves, giving 100 turves per cu. yd.

3.3 Written sources 1863-1963

A number of useful, though often somewhat generalized, references to peat winning on Thorne Moors have been discovered from the years spanning Casson's (1869, 1874) later description and the demise of the British Moss Litter Co. There are also many passing allusions. The more significant of the foregoing are quoted here, the only criterion for inclusion being their provision of facts, even if these sometimes appear contradictory or uncoordinated when considered alongside other quotations or later knowledge. They include the moss litter industry, and provide the only link between the old fuel trade, as set down by William Casson, and recorded memory of the moss litter years.

In the early 1860s, C.W. Hatfield, apparently advertent to Thorne Moors (*Doncaster Gazette* 3 December 1863; Hatfield 1866), stated that peat, “when cut in small blocks and properly winnowed and dried”, formed an excellent fuel. John Tomlinson, a Thorne resident until c.1854, but perhaps describing a visit to Thorne Waste c.1858 [3], imparted information on both cutting and drying peat:

We went to see them “grave turves”, as it is called. A man with a sharp round-pronged [*sic*] spade, stands on a plank before the perpendicular spongy wall, which in this instance would be about seven feet high. Marking out a square of about ten inches from the surface, he cuts down for about two feet, then, detaching the piece by a horizontal stroke from the wall, he throws the sappy mass to a boy, who catches it in his arms and spreads it on the ground to dry, and so on until the digger reaches the soil below. When partially dried these masses of turf are split into five or six pieces, and neatly piled into large conical stacks ready for sale or conveyance.

Tomlinson’s curiously worded reference to a “sharp round-pronged spade” in the 1850s, conceivably referred to a spade with a convex mouth, perhaps apically somewhat more angular, much like Casson described. This latter suggests that Casson’s (1869) “sworder” was introduced, or at least became widely used, during the 1860s. Subsequent references to peat cutting by “spade” only, omitting any reference to the sworder, or to knives, seem to have been mistaken, vague or incomplete. Authors who were unfamiliar with the scene might record misleading impressions, or use the term ‘spade’ loosely for any hand-tool with a blade, or may not grasp the full complexity of what looked deceptively uncomplicated.

There are two references from the early 1880s. Firstly, in describing the effects of a fire in 1881, the *Doncaster Gazette* and *Doncaster Chronicle* (27 May) referred to the loss suffered by William Chappell of Thorne. He was characterized in the *Gazette* as a “working man” who had “made a rather large business” of graving turves for sale. The *Chronicle* stated that “the whole of his large stock of turves, two carts, barrows and planks” were totally consumed by the flames. It was added that “Mr. Casson had also a large quantity of turves destroyed”. Secondly, Tomlinson (1882) substantially repeated his description of two decades earlier. The graver still had a “round-pronged” spade, suggesting that the term was intended. However, the “perpendicular spongy wall” had become 9ft high, and the “large conical stacks” were by then simply “conical stacks”.

One aspect of peat winning from the 19th century that has escaped any kind of description is the cutting of fuel peat for the Paraffin Mill and later moss litter works. They still exist in a flooded state. The only paper evidence is cartographic, although the cuttings are also visible on aerial photographs. The cuttings are situated between east and north-east of the mill, on the other side of Durham's Warping Drain. Six parallel series of typically ladder-like workings cover perhaps 12ha, and form three pairs. The pair in the west is wider than the others and unequal in size. The central and eastern pairs are more equal in extent, the latter pair being relatively unworked compared with all the workings further west.

The development of the moss litter industry from 1884 transformed the winning of peat on Thorne Moors. No longer was the strip system well adapted to prevailing circumstances, having evolved to supply older needs. Neither was the peat routinely taken out so deeply. Only the brown, upper layers were used for moss litter and related products, though there was a residual requirement for deeper, humified fuel peat. However, the new companies did not have an automatic legal right to take any of the lower, black peat, for example to power their works, or to satisfy remaining fuel requirements from their customers. Nevertheless, some deeper peat was graded, with at least a percentage of these turves – and perhaps all – cut smaller than those for other purposes. An agreement reached in 1903, to work two areas of deeper peat for fuel, specifically referred to the adoption of Dutch methods to obtain it.

Each of the works, adapted or established on the edge of Thorne Moors by individual companies, became unified under their successors, but continued to retain an historic moorland 'territory' from where raw material was derived. Of particular interest from the later 19th century is a piece, from the *Goole Times* of 16 July 1886, about the peat winning operation based at the Creyke's Sidings Works. The company involved, the Peat Moss Litter Co., had only recently become established. The account of its methodology is of especial value because it appears to have been written within the framework of part of Casson's (1869, 1874) portrayal, adapted as the writer felt necessary. It includes an erroneous description of Casson's 'sworder', or knife, as an oval "spade". Notwithstanding this, the writer passed on a particularly valuable connection between William Casson's description from the fuel trade years and the succeeding moss litter period. It is not known how typical of the early companies this

account is, though as the litter industry became very competitive, there was probably little real variation between the companies. The *Goole Times* observed:

The work of peat cutting is necessarily done by hand labour and the 70 or 80 men have been employed upon it mostly from the villages near the Moor, all being employed by the piece. Taking a spade of oval shape, specially adapted for cutting, sharp at the point and both edges, he marks out a piece of ground and in this case a chain in length. A peat chain, we may explain, is 22yds long, 4ft. 6in. wide and 4ft. deep; this he cuts across at eight inches apart and carries the cutting down to a depth of 4ft. When the surface of the peat has been cut into squares, like the checks on a draft board, the workman begins to remove the peat. He looses a block, 12in. by 9in. about 7in. in thickness, and having deftly divided it into two parts, his assistant (usually a lad but sometimes a woman) puts it upon the floor adjacent where it remains until it is dry enough for walling. Standing on the edge of the moor, one saw on all sides a large quantity of cut peat, some in a more advanced stage of drying than others, but all rapidly preparing for the next process, walling or stacking.

Also in 1886, a writer (Scrivener 1886; *Goole Times* 20 February) reported the peat cutting implement in use on the 'Medge Hall' moor (south of Mill Drain) to be a "graving or turf-cutting spade". Another (*Goole Times* 17 September 1886), describing the Swinefleet Works and its moor (north of Mill Drain), operated by Bennett's Moss Litter Co., stated that many thousands of turves had been "cut and walled" February-September 1886, adding:

and the greater part of them have been stacked in piles varying from 10ft. to 15ft. in height and of proportionate breadth. Thus stacked, they are able to resist the winter's moisture.

It was also commented that employment was being afforded to "a considerable number of men and youths". The *Goole Times* (4 and 11 June 1886, quoting from the *Yorkshire Post*), again describing the Swinefleet Works, observed that the peat cutting "is all done by piece-work at the price of 8s. [40p] a chain, and the trenches [peat cuttings] are 4½ft wide and 4ft deep".

A fire near the Medge Hall Works in July 1887 destroyed much drying peat, though "pyramid after pyramid" was moved to safety (but it is difficult to see how), and thus much of the stock of cut peat, "graved for the season's work", was preserved (*Doncaster Gazette, Doncaster Chronicle* 15 July). Writing of the fire, the *Goole Times* (15 July) noted that the Thorne fire-engine was initially employed in dousing the flames

on “a large peat stack, containing about ten tons”. It was added that c.400 acres of moorland was affected, involving the destruction of 400-600 “peat stacks”, containing in total 2000-3000 tons of peat. The untouched “stacked” peat also amounted to “some thousands of tons”. The misfortune seems to have been soon overcome. In December 1888 (*Goole Times* 23 August 1889):

The stacks of peat might have been counted by thousands, and form a most novel sight...The peat from which the blocks are dug is from 25ft to 30ft in thickness, but it is not workable at such a depth. It is dug to 4ft only, the purest [least humified] moss being thereby obtained...Altogether a square mile has been worked, and there is a second square mile which is yet unworked. The quantity now cut and dried is about 25,000 tons per annum. In cutting, the brick-shaped pieces are built into walls, then into small pyramids, and finally into stacks.

Describing peat winning employed by the Hatfield Chase Peat Moss Litter Co. on Hatfield Moors, the *Doncaster Chronicle* of 23 August 1889 remarked:

The mode adopted...is the same as that on the Thorne Moors some time ago. The first process is what is called “graving”, or digging the peat from the ground, in which men and boys are engaged. The top sod, containing ling [heather], is taken away and burnt. Then the peat is cut out in squares and placed in rows, and, when almost dry, is formed into walls, so that the drying process may continue. The peat is next placed in conical-shaped heaps, and subsequently made up into large stacks for storing over the winter.

An 1895 description (*Goole Times* 18 October, quoting from the *Leeds Mercury*) of the establishment of the new Dutch methods, on the Griendtsveen Moss Litter Co.’s sector of Thorne Moors, outlined the main change for the local workers employed by the company. This sector comprised an area apparently bordered by Shearburn & Pitts Drain, Thousand Acre Drain, and a line approximating to the west-east alignment of Angle Drain:

Hitherto they had cut the turf in large blocks, and these were carried away by boys and stacked to dry; now the one block was to be cut into three, the boys were discharged, and the men themselves were provided with barrows in which to wheel the sods away.

This appears to be the origin of wheelbarrow use on the more central parts of Thorne Moors: by the Griendtsveen Moss Litter Co.’s immigrant workforce, by their English employees, and probably emulated in all other areas as the benefits became perceived in a fiercely competitive industry. It is likely that pre-existing local wheelbarrows were pressed into service alongside the Griendtsveen ones.

Both the *Doncaster Gazette* and *Doncaster Chronicle* of 15 May 1896 described the effects of a fire in May of that year. The *Gazette* correspondent wrote that the Moss Litter, Charcoal & Manure Co., based at Medge Hall, “had eight or ten thousand tons of cut moss stacked [for drying] in small pyramids”, all of which was consumed in the fire. It was added that the conflagration had “occasioned the loss of about 12,000 stacks [pyramids] of peat moss”. Bunker (1898) unhelpfully referred to the peat being cut with “peculiarly shaped tools”, to a depth of “perhaps three or five feet”. He continued:

The turves are placed on the surface, where they become partially dry; they are then built into small stacks in such a manner that the wind plays freely round them, and when well dry, into larger stacks the size of small cottages.

Further details are available, from the *Goole Times* of 3 March 1899:

The area to be cut is usually cleared of the growth of brushwood, heather, and vegetation, and then large parallel drains or dykes [peat cuttings] are cut six feet wide by four feet deep. The turf which is displaced to form these drains is cut in regular sections about ten inches by five, and stacked upon the banks, sufficient space being left between the stacks to admit of the plate-way for the tram trucks...the labourer, who is equipped with a trowel like spade, specially adapted for the purpose, stands upon a plank or board, as the moor will not bear his weight by itself, and cuts the turves in sections, and then throws three of them up at once to the assistant who stacks them. So spongy is the character of the soil that it is quite a usual thing for a trench, which was four feet deep at night, to be found to have risen nearly two feet during the night...After the peats have remained on the bank top a short time, they are stacked in tiers, and this process is followed by further stacking of pyramids. These three stages of the drying process will, in an average summer, occupy approximately six weeks; in a damp and cloudy season perhaps more.

In 1903, the *Doncaster Gazette* of 20 February, in apparently referring to the local method of peat winning, stated that peat was “cut into handy blocks 10 inches long, 4 inches wide, and 4 inches deep, and in pieces also one half the length”, the latter probably specifically the black fuel peat. Bunker (1905) noted that the peat was cut into turves, “to a depth of perhaps five feet, in fact, as deep as the peat is fibrous, and does not contain too much water”. A few further details were documented by Nunn (1905), who wrote that the peat harvest was maintained throughout the year, except during periods of frost. He added that the workers operated in pairs, “one man cutting the turves with a sharp spade, and the other carrying them off on a fork”, this latter reference being the earliest known to the use of a fork. The turves, which he described as c.16in in length, were laid out in walls, and then stacked, remaining in the stacks

until required. In August 1907, the Hull Scientific & Field Naturalists' Club held an excursion to Goole Moor. A report on the day (*Goole Times* 30 August) observed, with uncertain accuracy about the depth:

Much of the moor has been cut up into long, deep dykes [peat cuttings], from 6ft. to 8ft. deep, by the Moss Litter Company, and the peat taken from these is piled up into large stacks to dry. Rows of such stacks extend for miles, looking in the distance like a huge village of thatch-roofed houses, and monotonous in the extreme.

A major fire – perhaps the most destructive ever recorded – in April 1911 was reported on by all the local newspapers (21 April). The *Goole Times* remarked:

Starting near a small farmstead known as “New Zealand”, close to Medge Hall, the flames were fanned by a gale of wind...reaching the long rows of turf stacks owned by the British Moss Litter Co...

...one by one the huge stacks of turves were caught up by the flames, very soon to become a charred mass...

...The spot where the fire occurred was literally studded with turf stacks, each containing from six to ten tons of drying material, and these became a ready prey to the flames, and considering that the stacks are some six feet high and several yards long, and of almost equal breadth, the size of and heat from a bonfire of several hundreds of these can easily be imagined.

In describing the same event, the *Yorkshire Post* (also 21 April) observed that Thorne Moors is “studded with hundreds of such turf stacks, each comprising from six to twelve tons”. In the following year, Dobson (1912) wrote of Thorne Moors:

After removing the herbage from the top, the peat is cut into blocks or turves with knives specially adapted for the purpose. These turves, as removed, are walled in pigeon-hole fashion in order to let the air dry them. Afterwards, they are built into small stacks or pyramids, and then when thoroughly dry, are made into large stacks, in which condition they remain until they are required at the peat works. In due course, the turves are conveyed from the moors to the works, this being done by means of trucks drawn by horses along a tramway.

An account of taking the deeper, fuel peat on Thorne Moors appeared in the *Goole Times* of 6 September 1918, at a time of coal shortage:

The recovery of the black or fuel peat on the Thorne moors is a simple process. The litter peat is cut to a depth of about four feet, and reveals a layer of denser and darker peat, varying from two to three feet in thickness. This is the fuel variety. It is cut or “graved”

in blocks of ten inches to a foot in length, six inches wide, and about four inches thick. These are dried by being exposed to the air first singly and then turned, and afterwards reared in pyramids with a draught through them. Stacking for winter use completes the process. The whole process must be completed in good weather and before winter arrives, for it must be stocked in solid lumps. Should it be frozen before it is dried, it is useless for fuel; it will then crumble, and be of no more service than the moss litter which has no fuel value.

A fire on Thorne Moors in early July 1921 was reported on in the Doncaster press, the *Gazette* (8 July) noting that “Great stacks of peat, more or less dry and ready for the mill, came within the fiery grasp, and thousands of tons, it is stated, have been destroyed”. In 1927, the *Doncaster Chronicle* (10 June) documented that there were still a few Dutchmen following their own methods. These were characterized by the use of “narrow spades” (presumably *bonkschoppen*), with each individual worker operating independently, loading his own wheelbarrow and trundling it away. It was noted in contrast that the native ways required two men for the same job, who cut larger turves and stacked them differently. The same writer also observed:

Almost two miles out, where the work of extracting the peat is in full swing, the moor presents a barren aspect as if a hurricane had swept over and removed all signs of life. Standing up on the horizon like the pyramids of Egypt are huge avenues of Stacks – blocks of peat ingeniously arranged to allow the air to penetrate from every side. They stand there in the heat of the sun until every drop of moisture is evaporated.

From the following decade, brief manuscript allusions to peat winning are available in the J.S. Taylor archive, at Doncaster Archives, written c.1935 [4]. These state that the peat was won with “long knives”, and then walled, pyramided and stacked. At the end of the decade, Pontefract and Hartley (1939), in describing Hatfield Moors, remarked:

The graving seemed hard work, but two old men whom we watched had been on these moors respectively forty-four and fifty years. They worked as partners, one graving and one carrying the blocks to dry. The graver wore sandals, made with wooden soles and leather toe-caps and heels, over his boots, so as not to kick up the soft peat. They showed us the roots, called ‘rag’, inside the peat...

The blocks of peat are spread in various processes to dry, and are finally built into long stacks like enormous potato pies.

For the years beyond World War II there is little written documentation. Anon. (1946) commented that the peat was cut by hand with a knife, “very similar in shape to a hay knife”. Taylor (1953) observed vaguely that the British Moss Litter Co. “aimed at an improvement upon existing methods”, but also noted its general lack of success. Hyde (1954), although writing generally about peat winning, included in his article a photograph of a peat stack (“The larger stack on the left”) likely to have been taken on Hatfield Moors. A short description of peat winning on Thorne Moors in the 1950s is given by Watson (1995). However, with its “long broad spades with the traditional lip on one side”, peat walls looking like Stonehenge from the air, etc., it can only be disregarded.

3.4 Notes

[1] This causeway linked Thorne and Crowle, its course traversing the southern part of Thorne Moors. In 1725, it was referred to as “Causey Bank” in the Thorne Vestry Meeting minutes (Taylor 1957). There are 19th century references to “Kirkbridge Causeway”, and the feature appears as “Causeway Bank” on the Ordnance Survey six inches scale County Series Yorkshire (West Riding) sheet 266 (published 1853). Interestingly, tithe payments (per acre) for land holdings on Thorne Moors differed to the north and south of the causeway (Lawton 1842)

[2] An Act for making and maintaining a Navigable Canal from the River *Dun* Navigation Cut, at or near *Stainforth*, in the West Riding of the County of *York*, to join and communicate with the River *Trent*, at or near *Keadby*, in the County of *Lincoln*; and also a Collateral Cut from the said Canal to join the said River *Dun*, in the Parish of *Thorne* in the said Riding. [7 June 1793]

[3] This first appeared in the *Doncaster Chronicle* in 1858 (not seen), and was republished in Tomlinson (c.1860)

[4] Referenced DZ.Tay 1/4. This is a notebook entitled ‘Notes on the History of Thorne and District IV’, compiled in 1935