

The East India Company and gunpowder production in England, 1625–1636

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After over twenty years of relying upon the market for gunpowder to equip its ships, the East India Company decided to manufacture its own from saltpetre imported from India. For several years the Company organized production itself but in 1628 decided to sub-contract its facilities in an attempt to reduce costs. Political changes meant that in 1632 the Company lost the right to produce gunpowder and for a period its mills lay idle. This paper discusses the Company's production at Thorpe and Chilworth in Surrey, the political problems that this production involved, and the political changes which saw the Company withdraw completely from any interest in the gunpowder industry in 1636 but saw Chilworth emerge as the most important production site in England.

The Company's need for gunpowder

In February 1601 four ships sailed from Woolwich under the command of James Lancaster. It was the first voyage to India organized by the newly formed Company of Merchants of London trading into the East Indies, better known as the East India Company. This and subsequent voyages threatened the existing trade of the Dutch and Portuguese merchants and the ships were of necessity as much warships as cargo carriers. Lancaster's 600-ton flagship the *Red Dragon* carried 38 guns.¹ Gunpowder was thus essential to the Company's operations.

Gunpowder could be imported from Europe or purchased in London. In the first decades of the 17th century the English gunpowder industry was dominated by the Evelyn family who held a contract as sole supplier to the Ordnance Board. Yet this contract still allowed the family to supply private customers as long as they fulfilled their contractual obligations with the government. Other domestic producers existed, the Ordnance Board sold gunpowder to private customers when its reserve stocks were deemed adequate, and London merchants imported gunpowder for sale. For the first decades of its existence the Company was able to satisfy its needs from these sources.² Gunpowder was made in India at this date and East India captains could have purchased it there for the return voyage, but there is no evidence of this in the Company minutes.³

Gunpowder is made by incorporating saltpetre, charcoal and sulphur (formerly known as brimstone) by means, at this date, of water-powered pestles and mortars known as stamp or pestle mills.⁴ Saltpetre (potassium nitrate) is the main ingredient and its supply dominated the development of the industry. It can be manufactured from nitrogenous organic material but it also forms naturally in warm climates that have a regular dry season. From the beginning of Elizabeth I's reign the government had encouraged the development of a domestic gunpowder industry. An essential part of this policy was the manufacture of saltpetre in England, but domestic supplies were always insufficient and imports were essential. There were several sources. Germany and adjacent countries were major producers and a limited source of natural saltpetre, and some natural saltpetre from India and North Africa was acquired by Mediterranean merchants. India had large resources, of a quality much superior to that from Europe. The

1 Keay 1991, 14; Israel 1989, 67.

2 For the early development of the industry in England and the role of the Evelyn family: Bowle 1981, 5–7; Brandon 1984; Crocker & Crocker 1990; Stewart 1996, 80–95; *VCH*, 2, 306–29.

3 Young 1937, 63; Prakesh 1985, 58–60, 185. In the late 17th and early 18th centuries the Company did purchase gunpowder from Indian producers: Harding 1997–9, 3, 59.

4 Crocker 1999a.

development of sea routes to India was to bring major change and by the end of the 17th century India had become the dominant source of saltpetre for the English gunpowder industry.

Yet the East India Company had been in existence for nearly twenty years before there is evidence of any interest in importing the commodity, despite the fact that the Dutch were doing so.⁵ In January 1618 the Company set up a committee after Evelyn complained about shortages of domestically manufactured saltpetre. At first this committee inquired about importing saltpetre from the Low Countries or the Baltic, and contracts were signed with Evelyn to supply him in return for his supplying the Company with gunpowder. Then in November 1619 the committee was instructed to make provision from 'beyond the seas, from Croco [Cracow in Poland], Barbarye [the north African coast] or any other parte', and in January 1620 to continue to seek sources in the East.⁶ This initiative foundered, for reasons which are unknown because the Company minutes between April 1620 and July 1621 are missing, and it was not until 1626 that the first saltpetre cargo reached England from India in the Company's ships.⁷

The Company had been experiencing problems furnishing its fleet with gunpowder when the government was preparing for war with Spain⁸ and in December 1623 complained to the Commissioners of the Navy that the king was cornering the market. In reply it was stated that the Dutch brought back great quantities of saltpetre from India and it was suggested that the Company could do likewise. The Company accepted these strictures and in February 1624 decided that a ship should be sent annually to the Coromandel Coast of eastern India specifically for this purpose, the decision being justified as an acceptable service to the state.⁹ Thereafter saltpetre became and remained a valuable import for the Company, but the trade never relied on ships being sent only for this one cargo. Saltpetre proved to be a useful ballast, and was brought back as part of the cargo on numerous ships, especially since it enjoyed a retail mark-up of 1:4, twice that of the valued textile imports.¹⁰ Given the length of voyages to India, it was some time before the 1624 decision took effect. In the interim the Company imported gunpowder and saltpetre from Hamburg and Danzig and tried to purchase gunpowder from the Ordnance stores at the Tower of London or from the Evelyn family.¹¹

The Company's decision to produce gunpowder

A new option was suggested in December 1624, that the Company should set up its own mills to produce gunpowder from the saltpetre it imported. Within a month a committee was set up¹² which favoured the proposal and was eventually to supervise production. Unfortunately its minutes no longer survive. The committee did report to the Court of Committees, the supervising body of directors, but the minutes of this body do not include all the detail reported and there are substantial gaps in its records.

The Company met opposition to its plans. The Evelyn family wished to retain their monopoly rights and a strong body of opinion in government circles supported them. The Evelyn contract provided poundage income to the Crown on all gunpowder made, and was thought to guarantee adequate supplies for state purposes. Fears were expressed that if this monopoly was breached by the Company it might create a precedent which could lead to the collapse of the domestic

5 Raychaudhuri 1962, 168–71. The Dutch even began to produce gunpowder in India and other places in the Far East.

6 OIC: B/6, ff 49, 118, 138, 142–3, 449, 513.

7 Chaudhuri 1965, 189–90.

8 Stewart 1996, 88–9.

9 OIC: B/8, ff 322, 420; HMC Fourth report 1874, 314.

10 Chaudhuri 1978, 336–41; Foster 1909, 83, 208–9. Foster thought that saltpetre was not a particularly profitable cargo, but perhaps he was reflecting the initial fears of the Company: Foster 1907, xxxiii–xxxiv.

11 OIC: B/8, ff 514, 517, 520; B/9, ff 23, 67, 166, 208, 223, 239, 260, 264, 265.

12 OIC: B/9, ff 281, 298.

gunpowder industry and raise the possibility that the Ordnance would be unable to satisfy its needs.¹³

The Company had its own concerns, particularly to ensure that if it was allowed to produce gunpowder it would always be able to satisfy its own requirements and not suffer persistent interference and demands from the king and the Ordnance. It was imperative to obtain proper permission and advice was sought from John Sadler, a prominent government official, who advised caution and recommended that the Company obtain a 'strong commission' from the king to avoid opposition and protect its own interests.¹⁴

Different options were open. William Blyth, a man with previous experience in the industry, had offered to produce gunpowder for the Company. The sample he sent in had been made in a wooden mortar, but he promised it would be much stronger if worked in a brass one. Evelyn also made an offer to supply gunpowder but it was found that he 'gave not that Content which might encourage the Company to deale with him'. The quality of his gunpowder had been poor, but there was also concern about whether the king would consent and Evelyn admitted he had not obtained permission before he made his approach. Reports were also received that mills were available if the Company wished to set up its own production facilities. Within a month the committee came to favour this solution and engaged Blyth to manage operations.¹⁵

Meanwhile discussions with prominent officials continued. In February 1625 it was reported that a secretary to a great person had advised the Company to set up its mills quickly to forestall opposition. A few days later it was minuted that Robert Cary, later earl of Monmouth, who had advised setting up mills, now recommended in Privy Council that the Company rely upon Evelyn for its supplies. The Company countered by stating that it would not import saltpetre unless it could work it itself, and awaited a response. It was thought that if the king were to use his prerogative powers then the matter could proceed.¹⁶

While these political negotiations were continuing the Company pursued its investigations into the feasibility of the project. Mill sites were discussed and the committee continued to negotiate with Blyth, Evelyn and another powdermaker, Nicholls, whose offer to supply powder was rejected on the grounds that it would cost too much to send saltpetre to him and get the finished product back. It seems likely that he was producing near Bristol or elsewhere in the South-West as a gunpowder producer of that name was purchasing saltpetre at Andover in Hampshire in 1632. The committee also investigated existing regulations concerning patents. Then on 13 April, after a major debate, the Company decided to set up its own mill, despite a last minute offer from Evelyn to supply gunpowder at 20s per cwt, it being felt that 13s 4d per cwt was the proper price. At the same meeting it was decided to import 300 barrels of powder to meet immediate requirements.¹⁷

The East India Company's first powder mills at Thorpe, 1625–1626

It had been reported on 21 February that a suitable site had been found but it was decided not to name it until it had been decided whether to proceed, while on 4 March it was noted that there was more than one owner and that a good legal title would be needed.¹⁸ The Company minutes do not provide sufficient information to identify this site definitely but Chilworth mills had two owners at this date (see Appendix), and since the Company moved there after the closure of its first mill it seems possible that Chilworth had been considered from the start.

13 *CSPD* 1623–5, 489. This and most subsequent references to the State Papers are summarized in *Rise and Progress: Chronology* (1242–1700), 180–302.

14 OIC: B9, ff 300–1.

15 OIC: B/9, ff 305, 309–10, 327–8; Fairclough, biographical notes deposited in SyAS Library.

16 OIC: B/9, ff 346, 351, 356.

17 OIC: B/9, ff 354, 389, 422–3; PRO: SP 16/219 no 4.

18 OIC: B/9, ff 351, 361.

Several other sites had also been considered, at Tonbridge, at another location in Kent and in Sussex.¹⁹

The site that was chosen was at Thorpe in Surrey, although this is not clear from the Company's own minutes which use a variety of place names, referring on different occasions to a site near Brainford (Brentford, Middlesex, which is however some 20km from Thorpe), at Staines (also then in Middlesex), in Surrey, at Thorpe, and near Egham.²⁰ The State Papers describe the mills as being on the skirts of the Forest of Windsor. A survey by John Norden in 1607 shows that Staines was outside the confines of the Forest but that at a remote location, over a mile south of Thorpe and about two or three miles south of Egham, there was a watermill on the Bourne called Trumpsmill which stood within Egham Walk on the outskirts of the Forest (NGR TQ 005 674). In 1622 it was a corn mill belonging to Corpus Christi College, Cambridge, in the tenure of Mary Moore, widow. In the 20th century it was still known as Thorpe Mill, Egham.²¹ This confirms the identification of the site of the Company's first mill as being on the Bourne at Thorpe.²² Its location is shown in figure 1.

On 23 April 1625 the Company's gunpowder committee recommended an overshot mill 'about Brainford' and emphasized that an overshot mill²³ would save a 'third penny' in production costs. There was still discussion among the directors as to whether the Company should continue to purchase rather than produce gunpowder itself, especially in view of reports that two of Evelyn's mills had recently blown up, and there was still some discussion as to whether to lease existing gunpowder mills or erect new ones. No firm decision was taken. The committee was told to continue its investigations, but instructed that if the Company did erect its own mills the advice of a Mr BOWENS should be sought, for he was 'an understanding and experienced man in such affairs'.²⁴

In May 1625 work began. It was reported that an overshot mill 'at Staines' had been bought and a millwright had been hired at 2s 6d a day to supervise its conversion to a gunpowder mill. There was discussion about the purchase of alder charcoal, and about whether to purchase refined or unrefined brimstone and whether to import it from Venice or Sweden. There was a setback when Blyth, who had been employed to supervise work at the mills, announced that he would have to leave at midsummer to work for his brother-in-law in Lincolnshire. His resignation was reluctantly accepted, and the Company wrote to France for a suitable replacement.²⁵ However Blyth did not leave the Company's employ at this date and was to continue as manager. While these moves were afoot the Company entered into a short-term arrangement with Evelyn, who had just recovered from a serious life-threatening illness, whereby he made gunpowder for the Company from saltpetre it imported from Europe. Evelyn was still fearful of potential competition and in July offered to supply the Company with 600 barrels a year at £5 a barrel if it would put down its mills. The Company rejected this offer. It thought the price was too high, but it had already written to India for supplies and had already engaged Blyth.²⁶

Work on the new mills had already commenced, yet on 1 July 1625 it could still be minuted that it had been resolved to set up gunpowder mills as soon as possible, and that John Sadler was to be presented with a piece of plate worth 20 marks for his help in finding the site.²⁷ The Company was soon to face a major setback, for on 26 August Sir John Coke, a Secretary of

19 OIC: B/10, ff 1–2. The other site in Kent was owned by Sir Percival Hart. His will in 1640 noted that he lived at Lullingstone in Kent but owned a watermill at Orpington in the same county: PRO: PROB 11/188 sig 135.

20 CSPD 1625–6, 376; OIC: B/11 ff 172, 572–4; B/13 f 94.

21 BL: Harleian Mss 3749; *VCH*, 3, 423; Turner 1924, 69; Reid 1989, 2, 2, 12.

22 Crocker & Crocker 1990, 140.

23 Overshot waterwheels, whereby water enters the wheel at the top rather than near the bottom, were rarer at this date. In the 18th century, experiments by Smeaton and others proved that overshot waterwheels were the most efficient type. Evidence from the East India Company minutes shows that millwrights were already aware of such benefits: Smith 1981.

24 OIC: B/10, ff 1–2. Nothing more is minuted or known of this Mr BOWENS.

25 OIC: B/10, ff 42, 47, 51–2, 54–5, 62.

26 OIC: B/10, ff 30–1, 67, 72, 90–1.

27 OIC: B/10, ff 90–1.

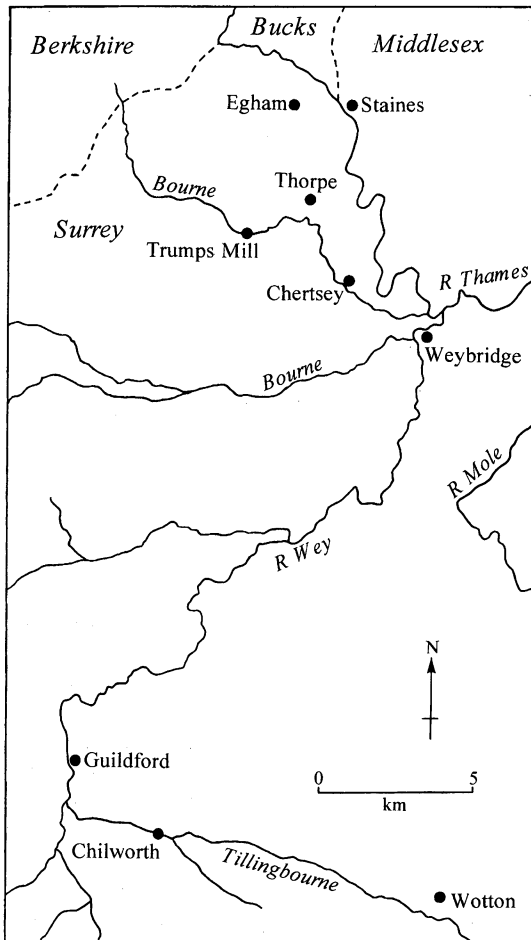


Fig 1 Location map showing the sites of the East India Company's gunpowder mills at Trumps Mill, on the Chertsey Bourne in the parish of Thorpe, and on the Tillingbourne at Chilworth

State, reported that the mills had been closed down because the king's deer had been hindered in their feeding. Sir Arthur Mainwaring had been responsible for this development. Coke thought that this order should be reviewed since war was imminent, and on 31 August it was reported that the Company had been given permission to proceed.²⁸ However Mainwaring returned to the fray in early September, preventing work once more, repeating his claims that the king's deer were being disturbed and adding that the local poor had need of the corn mill from which the gunpowder mill had been converted.²⁹ On 25 September the Company petitioned for a warrant to establish the mills, noting that it was urgent to make a start so that a season would not be lost.³⁰

Permission must have been granted, for on 19 June 1626 it was minuted that the mills had now 'come to perfection'. All else that is known of the works in the intervening year is that in May 1626 a decision was taken to build a 'brick powder house' in a field adjoining the mill and that the site had facilities for grinding charcoal and brimstone prior to incorporation.³¹ Another initiative was that in May 1626 it was decided to augment the management team by hiring a

28 *CSPD* 1625-6, 90, 93; PRO: SP 16/5 no 85.

29 *CSPD* 1626-6, 99; PRO: SP 16/6 no 25.

30 *CSPD* 1625-6, 109.

31 OIC: B/10, ff90-1, 461, 464, 488.

clerk to assist Blyth. There were six applicants for the post, and the Company hired Edward Collins at 40 marks (£26 13s 4d) a year. Collins had no previous experience of the industry and was reported to be sickly, but as a Company employee who had survived the Amboyna Massacre, in which a group of English factors were tortured and most of them executed by the Dutch, the appointment was obviously a way of providing him with some security.³² This management team was retained until the Company ceased to produce its own gunpowder in December 1628.

This first venture was not to last for long. By 26 June 1626 Sir John Coke had instructed the Company to pull the mills down.³³ Part of the reason must have been the continuing argument over whether any producers besides Evelyn should be permitted to exist, but Letters Patent granted to the Company in August 1626 said of this first mill, 'our pleasure was made knowne unto them that those mills soe erected being inconvenient for the situation of them should be pulled downe'.³⁴ It thus seems that the persistent complaints from Mainwaring about the effect on the king's deer eventually played a major part in the closure of Thorpe mills. Mainwaring was a JP who held an official post within the administration responsible for Windsor Forest.³⁵ His actions may have stemmed solely from this responsibility but there is a possibility that he had other motives. In August 1632 he and Andrew Pitcairns obtained a patent for making gunpowder by a new engine driven by a horse, while in June 1635 this pair competed for the contract to become monopoly suppliers to the king.³⁶ Whether Mainwaring already had an interest in the gunpowder industry in 1625 has not been ascertained.

On receiving Coke's instructions Thorpe mills were shut down. In September 1626 there was a request that the mills be used again for a short period while new mills at Chilworth were being erected but after this request was refused some of the equipment and buildings at Thorpe were transferred to Chilworth. During the winter of 1626–7 brimstone and charcoal were ground at Thorpe in preparation for incorporation at Chilworth, but this was only a temporary measure.³⁷

Chilworth mills 1626–1628: The East India Company as manufacturer

The Company was determined to continue manufacturing gunpowder, notwithstanding the closure of Thorpe mills. In July 1626 it petitioned the Privy Council, noting that the mills had been shut down as ordered, but requesting that a licence be granted to erect new mills in Kent or Sussex where it had found other convenient sites. On 17 August the Attorney General issued letters patent authorizing the Company to set up mills in Surrey, Kent or Sussex to manufacture gunpowder from saltpetre it imported. This patent specifically prohibited the Company from using saltpetre made in this country and from selling gunpowder to private customers.³⁸ The grant was part of a national policy whereby John Evelyn had the sole use of saltpetre made in England in order to fulfil his contracts with the Ordnance, but which allowed others to produce gunpowder from imported saltpetre or to import gunpowder.³⁹

By September 1626 the Company had found a suitable site in Surrey and an agreement for a lease had been made with the owners, John Sotherton and Sir Edward Randyll. The site was not named but it was at Chilworth on the Tillingbourne (TQ 024 475), further downstream from the gunpowder mills earlier worked by the Evelyn family and their associates at Wotton and Abinger (fig 1). Details of the lease were not minuted, and some confusion arises as to the length of its term. A legal case in 1631 suggests that it was dated 6 September 1626, while in 1654

32 OIC: B/10, f 460; Fairclough, biographical notes deposited in SyAS Library.

33 OIC: B/10, f 488.

34 PRO: C 66/2393 no 31.

35 PRO: C 99/122. In 1641 he was to report problems with local inhabitants who were hunting the deer in large gangs: Turner 1924, 74.

36 OIC: B/15, f 44; *CSPD* 1635, 29, 110–11.

37 OIC: B/11, ff 117, 129, 172.

38 *CSPD* 1625–6, 376, 407; PRO: C 66/2393 no 31; PRO: SP 16/31, no 85.

39 APC 1625–6, 240, 253–4, 375–6; APC 1626, 185–6; *CSPD* 1625–6, 170, 171, 172, 236.

Vincent Randyll stated that his father had given the East India Company a 21-year lease.⁴⁰ However other evidence concerning the award of a thirteen-year contract to produce gunpowder at Chilworth in 1636 suggests that the lease expired in 1649.⁴¹ It is possible that the Company took out a short-term lease while erecting the works and a longer lease once they were established (see Appendix).

The site at Chilworth is complex. Before the East India Company took it over there had been a corn mill and a fulling mill as well as a short-lived wire mill, and developments after 1636, when the Company ceased to have any interest in the mills, saw the emergence of three separate gunpowder production sites.⁴² A survey in 1677 by an Ordnance employee Jonas Moore shows that these were known as the Upper, Middle and Lower Works.⁴³ It is clear from records of court proceedings in 1631 that the East India Company had opened and operated only the Lower Works, where one incorporating mill was erected on the site of the dismantled fulling mill, another right by it, and a third on the site of the corn mill.⁴⁴

By October 1626 William Blyth was setting up the new mills at Chilworth, and by February 1627 gunpowder had already been produced there. Blyth gave the site ‘an extraordinary comendacon’ and estimated that using materials from the old site at Thorpe would mean that the total initial charge of setting up production at Chilworth would only be between £150 and £200.⁴⁵ While the new mills were being set up the Company had to borrow and purchase its needs again, facing problems of supply due to war in Europe.⁴⁶ There were further problems when Chilworth was brought into production.

A major setback reported in May 1627 was that a breach had occurred in the bank of the mill pond which could prevent the mills working for some time. Blyth reported problems with the control of water at another pond further upstream for which Sotherton was responsible.⁴⁷ This had put too much pressure on the banks of the Company’s mill pond and had caused the breach. Blyth maintained that it was Sotherton’s fault and estimated that it would cost £15 or £20 to repair, but Collins later noted £50. The breach was mended within a few weeks, but this was not the end of the problem. Sotherton brought legal action claiming £20 compensation for the loss of 700 tench and carp and flood damage to his hop grounds. The Company refuted this figure and in July 1628 offered £5 in spices or money, but the dispute was not settled and arbitration was still being discussed in April 1631, shortly before Sotherton died.⁴⁸

On 1 June 1627 Blyth reported continued expansion at Chilworth, noting the arrival of the ‘bottome brasses’⁴⁹ for the third incorporating mill which he predicted would increase capacity from 20 to 30 barrels a week. He estimated that it cost about £39 to produce 20 barrels of powder a week if the costs of moving and setting up at Chilworth were ignored.⁵⁰

Blyth’s reports were optimistic, but there were persistent problems with quality, and Collins submitted critical reports which raised questions about Blyth’s suitability as manager. In February 1627 it was minuted that the Master Gunner of the Ordnance Board had tested and

40 OIC, B/11 f 117; CSPD 1654, 4; PRO: SP 16/292 ff 21–36; SP 18/67 no 7; PRO: E134/7 Chas 1/Mich 5.

41 PRO: SP 16/392 ff 21–36. For details of the 13-year contract: Fairclough 2000 (this volume 113–26), 114.

42 Crocker 1999b, 1999c.

43 StRO: D742/M/1/13. John Seller’s map of Surrey, c 1679, names the three sites but represents the features of the Lower and Upper Works only: G Crocker 1999b.

44 PRO: E134/7 Chas I, Mich 5. John Aubrey, in his *History of Surrey* (4, 57), incorrectly stated that Chilworth gunpowder mills were the first in England.

45 OIC: B/11, f 129.

46 OIC: B/11, ff 48–9, 117, 138, 402–3.

47 OIC: B/11, f 551. The pond upstream of the mill pond was probably an artificial fish pond. This is the only known documentary evidence for another pond at Chilworth at this date.

48 OIC: B/11, ff 511, 543, 551, 568–9; B/12, ff 140–1, 157, 423; B/13, ff 86, 458–9; B/14, ff 88, 99–100, 106, 217; PRO: E134/7 Chas I, Mich 5.

49 Bottom brasses were the bowls or mortars in which the mixed ingredients were placed, to be incorporated into gunpowder by the action of the the stamps or pestles.

50 OIC: B/11, f 551.

rejected the gunpowder Blyth submitted. Blyth contested this and demanded a fresh trial.⁵¹ In May there were further discussions and Collins was instructed to investigate.⁵² His report, submitted on 20 June, was critical. It noted that despite promises of 20 or 30 barrels a week, Blyth had only delivered 55 barrels since Lady Day (25 March) and most of this was of poor quality whatever Blyth claimed. Collins stated that he could not explain this state of affairs as it was not within the scope of his responsibility. He suggested that if this was extended, he would ensure proper action. The Company agreed and wrote to Blyth instructing him to give Collins more detailed knowledge of operations at Chilworth. It was further minuted that some of the directors had doubts about Blyth's suitability, and that better workmen were available, especially one in Amsterdam who had recently offered his services. Collins's report had even stimulated discussion as to whether it would not be better for the Company to rent the mills to a producer who would supply its needs rather than continue operations itself.⁵³

On 22 June however, following a report that the Privy Council had again refused the Company permission to purchase gunpowder from Evelyn, it was judged that despite all the problems and expense it had been a wise decision to go into production. Two major problems were noted: the quality of the gunpowder and the discord that had arisen between Blyth and Collins. Blyth still defended the quality of his powder, but he also offered reasons for his under-performance — the need to mend the mill-pond breach, the need for a 'new casting of the pestles', his own absence for a fortnight, the reason for which was not minuted, and the refusal of his mill-keeper to work at nights unless he was paid to do so. He promised to deliver 30 barrels a week shortly. Despite Blyth's protestations to the contrary, the Company maintained that he did not keep Collins fully informed. Determined to improve Collins's ability to keep a check on affairs, the Company instructed Blyth to prepare a lodging room for him at the mill site since his existing lodgings were some distance away.⁵⁴

There were obviously problems, but other evidence suggests that the venture at Chilworth was proving to be a success. In November 1627 the Company had sufficient stores of gunpowder to be able to return 100 barrels borrowed from the City of London and to sell 30 barrels to some Turkey merchants.⁵⁵ In January 1629 the Company was prepared to sell gunpowder to the value of £7000–£8000 to the king.⁵⁶ Private sales were prohibited in the letters patent, but there are hints that this was ignored and that at this date a blind eye was turned to such infringements. Indeed Evelyn was later to claim that the Company had so reduced the price by its competition that his business had suffered.⁵⁷ Another indication of success is that in May 1628 concern was expressed that too much powder was being stored at the Company's dockyard at Blackwall for safety, and it was suggested that additional storage facilities be hired in the Artillery Gardens, near the Tower of London.⁵⁸ In July 1627 concern was expressed about the safety of gunpowder despatched to London, as it often lay at Bull's Wharf for two or three days before being carried in carts through the streets to the Company's warehouses at Blackwall. It was decreed that in future powder was to remain in the barges until the next tide allowed its transfer to wherries for carriage down the Thames to Blackwall.⁵⁹ In August 1627 Blyth requested that facilities be set up at Chilworth whereby waste material left over from the refining of saltpetre prior to incorporation could be mixed with earth and thus provide additional supplies of this precious raw material. Within a year this had been done.⁶⁰

51 OIC: B/11, ff 388, 402–3.

52 OIC: B/11, ff 506, 516.

53 OIC: B/11, ff 568–9.

54 OIC: B/11, ff 572–4.

55 OIC: B/12, f 137.

56 OIC: B/13, ff 238–9.

57 OIC: B/12, ff 261, 334; PRO: SP 16/361, no 9.

58 OIC: B/12, f 348.

59 OIC: B/12, f 17.

60 OIC: B/12, ff 65–6, B/13 f 86.

In May 1628 there was an explosion at the mills, but the Company reported that it was not serious; no one was hurt and only six barrels of powder had been lost.⁶¹ In October 1628 Mr Dyke and Mr Ferris, merchants trading with Barbary, were allowed to use the mills for several weeks to make gunpowder from two or three tons of saltpetre they had imported. The Company were loath to allow this, but eventually agreed because all its saltpetre had been worked up and the next cargo was still awaited. The merchants were asked to pay £10 as compensation for wear and tear to the equipment but this was later reduced to £5 as so little damage had been caused.⁶²

It is obvious that despite the reported problems the mills were operating and producing sufficient quantities of gunpowder to more than meet the Company's needs. There is even an intriguing minute in August 1627 that 'there is something more to be done there which may prove very profitable'. No further details are given but the membership of the committee supervising gunpowder production was increased from three to seven.⁶³ Yet there was also some dissatisfaction within the Company that caused it to cease production of gunpowder on its own account in December 1628 and to sub-contract Chilworth mills and its letters patent to a producer willing to supply gunpowder to the Company. The reasons for this switch and the events leading to it were never fully explained in the minutes, but the Company was facing severe financial difficulties at this date and any cost-cutting measures must have been given serious consideration.

In November 1628 an auditor's report noted that the Company had spent about £1000 setting up the mills but that Blyth had not met the stipulated production targets and Collins had not presented exact accounts. The Company minuted the opinion that the management of the works had been negligent. Aware of such feelings, Blyth made an offer to take over the mills and work as a contractor, proposing to deliver a hundredweight of gunpowder for every hundredweight of saltpetre delivered at 10s a barrel. The Company thought this too high, the equivalent of £7 a barrel, but asked him to set down his proposals in writing. It was also minuted that another offer was forthcoming.⁶⁴ In December several offers were made, by Blyth, Collins and unnamed others. It was decided that Collins's offer was the best, and an agreement was signed with him the same month.⁶⁵ This meant that Blyth was no longer required and his employment was terminated, with his salary paid until 25 March 1629 and a promise of future work if the Company ever had need. It was also minuted that his services had been dispensed with not because of 'any dislike they had of him'.⁶⁶ Blyth continued in the industry but there is no evidence that he worked with Collins in the ensuing years. It was not just the obvious tension between the pair, for Collins had learnt how to produce gunpowder from Blyth and did not require his expertise.

Chilworth mills 1628–1632: Edward Collins as manufacturer

After three years of effort the East India Company ceased to produce gunpowder on its own account, and never did so again. However the Company was still closely involved in events at Chilworth for a few more years. It still held the head lease to the mills and the letters patent which authorized activities there. Collins could only produce at Chilworth on the Company's terms. The intent of the contract with Collins was that the Company's needs for gunpowder for its fleet would still be met, but at a known and lower cost now that the Company was relieved of the costs and risks of managing operations itself.

61 OIC: B/12, f 364.

62 OIC: B/13, ff 74–5, 85–6; B/14, f 148; APC 1627, 360; APC 1630–1, 202.

63 OIC: B/12, f 65.

64 OIC: B/13, ff 138–9.

65 OIC: B/13, ff 189, 203.

66 OIC: B/13, f 203.

The exact details of the December 1628 contract were never minuted, but Collins agreed to pay a rent of £200 a year for the mills, deliver new gunpowder to the Company from imported saltpetre delivered by the Company to him, and repair decayed powder for 15s a barrel. Collins provided the Company with sureties for his performance of the contract: his father-in-law Mr Blincorne and his brother, a gentleman who owned lands to the value of £400. An inventory of the property was made before the mills were handed over to Collins.⁶⁷ There had always been those within the Company who had favoured such a contract but the new arrangement was to be disappointing. Collins was unable to make a success of the venture and political changes meant that in 1632 the Company lost its right to make gunpowder. Unfortunately discussion is hampered by the loss of the Company's minutes between July 1629 and July 1630, and between July 1631 and July 1632. It is therefore proposed first to discuss events leading to the cancellation of the letters patent before considering Collins's performance as a producer.

On 15 June 1632 the minutes of the Privy Council record that the East India Company had been granted a licence to make powder for its own needs but that it had been selling to private customers to the prejudice of Evelyn and the king. The Attorney General was instructed to examine the validity of the letters patent; meanwhile the Company and its assigns were instructed to make gunpowder only for its own needs. On 13 July 1632 it was minuted that the Company had attended on the Attorney General and had voluntarily surrendered the letters patent. Chilworth mills were now standing idle, and the Company wanted permission to work them again until the letters patent were approved or were called in by legal means. In August this temporary permission was given, and Collins was informed. He immediately requested £100 to meet the wages of his workmen during the period the mills had been shut down, but the Company pointed out that this was his own responsibility.⁶⁸

Permission to produce again was given on the understanding that there was a strict prohibition upon the sale of gunpowder produced at Chilworth without a special licence. Yet in September 1632 it was reported that Chilworth gunpowder had been sold to a London Chandler, after being seized by Collins's creditors. This was crucial. The Company again tried to defend its rights to the letters patent and argued that these rights could only be cancelled by proper legal procedure, but at the end of November it voluntarily surrendered the letters patent in exchange for a promise that existing supplies of saltpetre at Chilworth could be worked into gunpowder, that in future the Company could purchase powder at reasonable prices from the king's stores, that any saltpetre the Company imported would be guaranteed a market, and that any surplus of saltpetre after the king's needs had been satisfied could be sold abroad.⁶⁹

The Company had lost its right to produce ostensibly because the terms of the letters patent were being violated by sales to private customers. Yet earlier evidence shows that such sales had been made from the very start of production at Chilworth and that a blind eye had been turned. Changing political circumstances seem to explain this change in attitude. In March 1629 Charles I had dissolved parliament and resolved to rule without it, beginning a period known as the king's personal rule which was to last until 1640. This decision meant that the king had to seek other sources of income since the taxes granted by parliament were no longer available. One source was the granting of monopolies and during the 1630s a policy evolved whereby the production and sale of gunpowder came to be controlled in order to raise income for the king.⁷⁰ Cancelling the Company's rights to produce gunpowder was part of this evolving policy, but the Company was also viewed with disfavour in court circles at this date and this cancellation was only one of several setbacks that the Company suffered, setbacks which are said to have seriously threatened its viability.⁷¹

67 OIC: B/13, f 203, B/14 ff 66-7.

68 OIC: B/15, ff 14, 16-17, 31; PRO: PC 2/42, f 87.

69 OIC: B/15, ff 52, 54, 61, 129-30, 132, 134-8; PRO: PC 2/42, f 294.

70 For a discussion of patents for monopolies and other projects: Sharpe 1992, 120-4, 257-62; Scott 1912, 1, 208-22.

71 Brenner 1993, 288-9. For the king's personal rule see Sharpe 1992.

Collins had worked as a sub-contractor for nearly four years by the time the Company lost its letters patent. The evidence suggests that the venture had not been a success. As early as July 1630 Collins owed the Company over £500 and his assets were found to be insufficient to meet this debt. Collins argued that his original agreement with the Company had been unfair, that the quantity and quality of saltpetre delivered by the Company had increased this problem, and that he had suffered further when the mills stood idle while he made a visit to Holland. There had also been an explosion at the best of the three incorporating mills, but it was not severe and the Company soon repaired the damage. The Company did respond to Collins's complaints, promising sufficient stocks of saltpetre to allow him to work at all times, promising to refine the saltpetre more carefully before delivery, and abating his rent to £100 a year, but it did not alter the contract. Collins's costs in erecting a new storehouse and in converting an old house at Chilworth into a suitable habitation for his family were also met.⁷²

In September 1632 it was reported that twenty barrels of powder had been seized at Ham Haw wharf near the mouth of the river Wey to meet a debt Collins was unable to pay and that he had pawned other barrels of powder. It was thus Collins's parlous financial position which brought Chilworth gunpowder on to the market and which caused the Company to lose its letters patent. By this date Collins owed the Company £1500, yet a survey of the mills showed that he only had assets of £900 in gunpowder and saltpetre.⁷³ His position only worsened as the mills lay idle during the disputes over the letters patent and while he and his workmen had had to attend the Privy Council over complaints about working the mills during the prohibition and after the letters patent had been surrendered. It was not until February 1633 that Collins was finally freed from attendance on the Privy Council.⁷⁴

Collins was unable to meet his debts to the Company, and since production had stopped he had no means of changing the situation. The Company seized his assets at Chilworth and approached his brother-in-law, Billingsley, for further payment, after agreeing to reduce the debt claimed from £627 15s 1d to £480. The Company minutes describe Billingsley as Collins's partner, but this is the only evidence known of such a partnership; he may have been the brother who had been a guarantor in December 1628. Billingsley accepted his responsibility, but only for debts incurred after 1628, not for Collins's earlier debts, some of which related to his service in Amboyna. After further discussion Billingsley agreed to pay £300 and provided a bond for this amount. Another £67 13s was allowed for gunpowder and saltpetre at the mills. Soon afterwards Collins petitioned the Company for help but he was told that he had already benefited from the reduction of his debt and was advised to make as much profit out of the grass and pasture at Chilworth as he could. Collins still retained the lease and did so until his death in 1636. Payment of these debts was still being negotiated in March 1635, and had not been fully repaid when a new tenant, Samuel Cordwell, accepted responsibility for them when he acquired the lease from the Company in 1636.⁷⁵

Of events at Chilworth in the four years before the cancellation of the letters patent, little is known. One major factor was an explosion at the site, but the evidence is both insufficient and confusing. In October 1630 Collins reported the blowing up of the best of his three mills as one of the problems he had experienced since December 1628, but no further details of this event were minuted.⁷⁶ In November 1630 the Company informed the Lord Treasurer that there had been an explosion but that little loss had been incurred, no-one had been hurt, and the damage had been repaired. This may have been a diplomatic response, for it was in answer to a suggestion from the Lord Treasurer that the Company should not repair the damage since the king intended to take Chilworth mills into his own hands.⁷⁷

72 OIC: B/14, ff20, 66-7, 109.

73 OIC: B/15, f54.

74 OIC: B/15, ff134-8, 156-7; PRO: PC 2/42, ff286, 295, 382.

75 OIC: B/15, ff54, 190-1, 196-7, 204, 204-5, 243-4; B/17, ff79-80; Sainsbury 1907, 34-5, 38, 231, 244.

76 OIC: B/14, ff20, 66-7.

77 OIC: B/14, f96.

Other evidence suggests that the explosion was serious. In February 1631 Evelyn complained that, despite commands not to do so, Collins had repaired two of the mills and was in great forwardness with another, while evidence from the legal dispute in 1631 noted a serious explosion which had put all three mills out of commission and further noted that the layout of the mills had been changed during rebuilding. The mills on the sites of the old fulling and corn mills were rebuilt, but not the one next to the old fulling mill site. Instead a new mill was erected upon adjacent land called Steersland where wire mills had probably stood earlier.⁷⁸ It is not known who bore the costs of this rebuilding.

Chilworth mills 1632–1634: a wasting asset

The cancellation of the letters patent meant that the mills were to stand idle for over a year and many of the workmen were thrown on to the parish after losing their employment.⁷⁹ Collins still held a lease from the Company but it was an asset of little value and he was to spend some time in New England. The Company still held the head lease, an asset which brought no return, only problems and expensive responsibilities. In July 1633 there were even threats that the mills could be pulled down as part of a Randyll family dispute (see Appendix).

In November 1633 it was reported that the mill pond was decayed and Collins was ordered to repair it. It seems that he did not, for in August 1634 Sir Edward Randyll complained of his loss of fish and fresh orders to make the repairs were issued. In October it was reported that Robert Mullins had carried out these repairs for £23 7s 4d, the original estimate in 1633 having been £4. Mullins was a workman at the mills who in August 1634 was offered a place as a purser's mate on an East Indiaman to compensate for his loss of employment when the mills closed down. However the re-opening of the works meant he was to stay on at Chilworth.⁸⁰

Although the Company was prevented from making new gunpowder it had been able to obtain it from the Ordnance stores. It had however faced problems in getting unused and decayed gunpowder repaired which had been brought back by its fleet. By March 1634 it had been decided to allow the mills to be used for this purpose only. Since Collins was in New England, it was his wife Sarah who was awarded the first of such contracts and who made minor repairs to the two incorporating mills brought back into production.⁸¹ These developments encouraged the Company to approach the Privy Council in December 1634 with a request that it be allowed to produce gunpowder from imported saltpetre once more, as it was unable to obtain supplies from Evelyn.⁸²

The takeover of Chilworth mills 1635–1636

Within a week the Company was informed that it would not be allowed to produce gunpowder as the king intended to have the 'sole making and disposing of that commodity'.⁸³ This was notification of a major change in the national gunpowder policy whereby the Evelyn family were to lose their long-held monopoly rights, the king and his assigns acquired Chilworth mills, and new producers, Samuel Cordwell and George Collins, obtained monopoly rights and worked the mills, which thereafter emerged as the most important gunpowder production site in England.

In February 1635 the Company received an approach from a gentleman of quality who wished to remain anonymous. He wanted to establish whether the Company was prepared to sell or lease Chilworth mills. By April it had been established that the Company was anxious to

78 CSPD 1629–31, 496; PRO: E134/7 Chas 1/Mich 5; Crocker 1999c.

79 OIC: B/17, ff 128–9.

80 OIC: B/16, f 177; B/17, ff 22, 26, 34, 74, 96; Sainsbury 1907, 3.

81 OIC: B/16, ff 133, 312, 314, 316, 351; B/17, ff 5, 38, 66, 79–80, 116; Sainsbury 1907, 34–5.

82 OIC: B/17, ff 117–18.

83 OIC: B/17, ff 126–7.

free itself of the lease.⁸⁴ The approach may have been from Mainwaring and Pitcairns who were preparing to bid for the gunpowder contract⁸⁵ or it may have been an approach from those in government circles who were in negotiation with John Evelyn over the renewal of his contract with the Ordnance. On 4 March 1635 it had been reported that these negotiations had broken down when Evelyn refused to continue to supply gunpowder at 8d per pound. Other suppliers were therefore sought.⁸⁶

In July 1635 the Company minutes recorded that the king had taken note of proposals to make gunpowder at Chilworth and Edward Collins, back from New England, was ordered to set Chilworth mills in full working order. A trial production run was ordered and in October it was minuted that this trial had been satisfactory. Indeed, so satisfactory that at a proof comparison supervised by the Ordnance in September 1635, Collins's gunpowder proved superior to that supplied by Evelyn.⁸⁷ Of necessity the king had to extend Evelyn's contract, initially for six months and then for a year until October 1636,⁸⁸ but for the first time it was decided to have a second gunpowder maker licensed. In October 1635 Collins was awarded a contract to deliver eight lasts and eight barrels of gunpowder a month to the Ordnance until October 1636. Such plans meant a substantial increase in national gunpowder production. Since domestic supplies of saltpetre would be insufficient, the East India Company was awarded a contract to supply imported saltpetre.⁸⁹ During this year it was proposed that Evelyn was still to receive all saltpetre made in England, but that Evelyn and Collins would share the imported saltpetre. Imported saltpetre reduced production costs, so the Ordnance paid 8d a pound for gunpowder produced from domestic saltpetre and 7d a pound for that from imported saltpetre.

This planned increase in gunpowder deliveries to the Ordnance was not to meet the king's increased defence needs; it was part of the new policy whereby the king hoped to control the domestic sale of gunpowder. The new contracts banned Evelyn and Collins from supplying private customers, insisting that all their output was to be delivered to the Ordnance. At the same time production by others was banned. Thus the king would meet defence needs and any surplus would be sold to private customers who had no other source of supply. The profit would accrue to the king's coffers, and he would also benefit from the reduced prices the Ordnance paid for gunpowder as a result of these manoeuvres. There was a logic in such a policy, even if it was unpopular.⁹⁰

A major problem arises in assessing events during this first year of Collins's contract: the possibility that he did not produce any gunpowder at Chilworth during this period, although the evidence for this is negative and therefore inconclusive. The relevant Ordnance bill books meticulously note all contractual deliveries from Evelyn but none by Collins. Nor do the Ordnance minutes provide any hint of Collins making deliveries.⁹¹ Furthermore, the minutes of the East India Company provide evidence of Collins repairing gunpowder for its needs but none of him making new gunpowder, and no evidence of any investment in new capacity, investment that was essential if the output of the mills was to be raised from the known capacity of 30 barrels a week in 1630 to the 50 barrels a week required by Collins's 1635 contract.⁹² However, the Ordnance minutes for this period are incomplete and there is no need for the Company minutes to record Collins producing gunpowder or installing new capacity. Yet the absence of any deliveries in the Ordnance bill books is surely significant.

84 Sainsbury 1907, 29, 44, 44-5.

85 Their proposition in June 1635 referred to their three mills: CSPD 1635, 110-11.

86 CSPD 1634-5, 561; PRO: SP 16/284, no 18. The price is 8d, not 9d as calendared.

87 Sainsbury 1907, 76, 101-2; BL: Harleian Mss 429 ff 146-7; *VCH*, 2, 319.

88 CSPD 1635, 90, 422.

89 CSPD 1635, 513; PRO, SP 16/302, nos 119, 120. The last was a common contemporary measure for gunpowder: 1 last = 24cwt. A barrel held 1cwt.

90 CSPD 1634-5, 305, 386, 387, 468; CSPD 1635, 2, 7.

91 PRO: WO 49/65, WO 49/70; BL: Harleian Mss 429.

92 Sainsbury 1907, 131-2, 135.

There were problems with the ownership of Chilworth mills at this time. In July 1634 Sir Morgan Randyll had acquired a life interest in the mills (see Appendix), and by January 1636 he was seeking to repossess them from the Company and refusing rent. However the following month he was seeking agreement and requesting that a Chancery suit, which the Company brought against him for refusing the rent, should be dropped. This was done and the Company retained possession of the mills.⁹³ Collins's continuing lack of money and his death during the year would also have been a problem. Such difficulties might explain a shortfall in deliveries, but surely not a complete absence.

Events at Chilworth during 1635–36 cannot be properly explained, but any lack of deliveries by Collins did not prevent the king replacing Evelyn. By May 1636 a decision had been taken not to renew Evelyn's contract after November 1636. In the ensuing months a new monopoly contract was negotiated with Samuel Cordwell and George Collins, and from November 1636 until the early 1640s they used Chilworth mills to supply the Ordnance with gunpowder at 7½d per pound, successfully meeting production targets of 120 barrels of gunpowder a week. To effect such a change the king lent money to the new producers to expand capacity at Chilworth, and by November 1636 a new site had been opened there.⁹⁴

Such a switch in monopoly suppliers and such an expansion in capacity at Chilworth required careful planning if it was to be successful, and successful it was. There is no evidence whatsoever that the end of the Evelyn gunpowder business caused any problems with the supply of gunpowder to the Ordnance; indeed deliveries were larger and more regular after 1636 than in the decade before.⁹⁵ Can the absence of deliveries to the Ordnance by Collins before November 1636 be explained by the careful planning and political manoeuvring necessary to attain such success for the king's policy? Was the contract with Collins merely a ploy in these negotiations?

During the negotiations the East India Company had two concerns. It still held the head lease to Chilworth mills and it wanted to ensure sufficient supplies of gunpowder for its fleet. In April 1636 the Company had been approached to see whether the king could have a lease to the mills on the same terms that it had them from Randyll. The Company warily minuted that the king could rent the mills, 'feeling sure that the King does not mean to take them by force but on good conditions', but it also wanted some recompense for the £900 to £1000 spent on erecting them. It seems unlikely that such compensation was paid, but the Company did transfer its lease. In October inventories of the site were being made, and by February 1637 Samuel Cordwell had obtained the head lease from the Company. He paid £100 to render it harmless for all covenants in the lease and provided a bond for the £271 0s 7d that Sarah Collins, as administrator of her husband's estate, owed the Company. One final link was that in October 1637 the Company was given permission to have its old gunpowder reworked by Cordwell.⁹⁶

After 1636 the East India Company had no further interest in Chilworth mills, and it never again set up mills in England to produce gunpowder, although there is a possibility that in 1642 it was using a horse mill at Blackwall to repair decayed gunpowder.⁹⁷ The Company did continue to play an important role in the development of the English gunpowder industry after 1636 as its imports of saltpetre from India rose and became the main source of this raw material. This meant that the Company was always able to acquire gunpowder to equip its fleet and never again faced the need to take up production itself to guarantee supplies.

The Company's involvement at Chilworth had not been profitable. It never recouped the investment costs of establishing production at Thorpe and Chilworth, and it suffered further losses through the failure of Collins to make a success of his role as sub-contractor. However, production at Thorpe and Chilworth had allowed the Company to supply its fleet with

93 OIC: B/17, ff 128–9; Sainsbury 1907, 3, 141, 151, 170.

94 For developments at Chilworth in and after 1636 see Fairclough 2000 (this volume, 113–26).

95 This was not necessarily Evelyn's fault. The king was often slow in paying and insufficient saltpetre was produced in England to meet the targets. For discussion of Evelyn's contracts see *VCH*, 2, 315–17.

96 Sainsbury 1907, 171–2, 199, 231, 234; PRO: SP 16/370, no 47.

97 Sainsbury 1907, 221.

gunpowder at a time when political developments made this difficult, and it had boosted the import of saltpetre from India which was later to be an important and profitable staple of its trade. From this point of view its involvement as a producer had been a limited success.

APPENDIX

The ownership of Chilworth mills

The manor of Chilworth and two mills therein, a corn mill and a fulling mill, had been part of the property settled on Sir John Morgan of Chilworth when he married in 1589.⁹⁸ He died in 1621. In the previous year he had been involved in a dispute over whether he had made a lease of these mills and other property to his son-in-law, Sir Edward Randyll, or not. It was claimed that he had, but that the lease had later been returned. Sir John was survived by two co-heirs, his fourth wife, Elizabeth, who soon married John Sotherton, baron of the Exchequer, and his daughter Ann, wife of Sir Edward Randyll of Albury.⁹⁹ Thus it was that the East India Company negotiated the lease to Chilworth mills with Sotherton and Randyll in 1626; both held their moiety through the right of their wives.

In September 1626, when this agreement was first minuted by the East India Company, it was noted that although Sotherton had signed the lease Randyll had refused to do so. It was felt that enough witnesses had been present when a verbal agreement had been reached to enable the bargain to be enforced in Chancery, but it was decided to offer his wife a gift of £10 or £20. Yet the matter was not resolved. In November 1627 it was minuted that the lease had not been signed either by Sotherton and his wife or by Randyll and his wife, and in October 1628 that it still not been signed by the Randylls. On this last occasion it was noted that after the death of Sotherton's wife, who was old and sickly, the mills would pass into the sole ownership of Sir Edward and his wife. It was thought proper to offer a gift to Sir Edward's wife — a velvet gown was suggested — and to take legal action if this did not settle the matter. Indeed legal action had to be undertaken before it could finally be reported in June 1629 that the lease had been signed.¹⁰⁰ Is it possible that in September 1626 a temporary lease had been taken out when the Company first moved to the site, and that by November 1627 a second more permanent lease was being sought now that the works were established? Such would explain the fact that the 21-year lease expired in 1649 not 1648.

Sotherton died in 1631 and administration of his estate was awarded to his widow Dame Elizabeth on 8 October 1631. She did not long outlive him, making her will in November 1632, it being proved on 22 May 1633. The will made no mention of the mills which passed into the sole ownership of Sir Edward Randyll and his wife.¹⁰¹ In July 1633 the East India Company received a letter from Sir Edward stating that his son Sir Morgan Randyll intended to pull down the mills. This threat was made not because of any quarrel with the Company but because Sir Morgan was locked in a bitter quarrel with his father and had seized the manor of Chilworth. Sir Morgan excused his behaviour by claiming that his father had failed to fulfil promises made in the marriage settlement between him, Sir Morgan, and Anne, the widow of John Chesterton of Oxenford. It had been these promises which had made him marry Anne when he preferred another. He also claimed that his father held an unpaid legacy to himself from the estate of Sir Edward's mother. The Privy Council failed to resolve the quarrel but it was settled in Chancery. An agreement was reached in July 1634 whereby Sir Morgan held the manor of Chilworth and thus Chilworth mills during the life of Sir Edward.¹⁰²

98 *VCH*, 3, 104; Manning & Bray 1804-14, 2, 117-18.

99 PRO: C3 323/4; PRO: PROB 11/137 sig 32; Bruce Bannerman 1899, 33-4; Foss 1848-64, 6, 364-5.

100 OIC: B/11, ff 117, 129; B/12, ff 157, 166, 172; B/13, ff 110, 141, 399, 458-9.

101 PRO: PROB 6/14A, f 55; PROB 11/163 sig 42.

102 OIC: B/16, ff 8, 47, 172; B/17, ff 128-9; PRO: PC 2/43, ff 184, 207-8, 350, 389, 435, 544, 550, 629; PRO: C2 Chas 1 R24/19; C2 Chas 1 R63/81; C7 296/202; C8 73/129; PRO: PROB 11/195 sig 8.

By December 1634 Sir Morgan was complaining to the Company that it had not performed the covenants in the lease. The Company offered to give up the lease and Sir Morgan accepted as long as he received satisfaction for the damages he claimed to have received. After some further quarrel about whether he would accept rent from the Company or not, and the submission of a Chancery suit by the Company, Sir Morgan asked for the matter to be settled amicably in February 1635, which it was.¹⁰³

In November 1640 Sir Morgan Randyll was declared a 'lunatic not able to govern himself or his estate' at the request of his wife, Dame Anne Randyll, and by August 1644 he was dead. The mills now reverted to his father Sir Edward Randyll who died on 16 January 1646. Sir Edward's will made no mention of any property in the Chilworth area except a reference to new lands in Albury, but the mills must have been included in the 'rest of my lands' left to his son Vincent, the sole executor.¹⁰⁴ Vincent faced legal action over his title to the mills from Sir Morgan's widow Anne and her daughter of the same name, but he retained ownership and was eventually to take up gunpowder production himself in the 1650s.¹⁰⁵

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C99: Royal Forest documents
E134: Exchequer, Depositions taken by Commission
PC2: Privy Council minutes
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PROB 11: Prerogative Court of Canterbury wills
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