

Chilworth gunpowder mills in the period of the Dutch Wars

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This paper deals with the history of the Chilworth gunpowder mills in the third quarter of the 17th century and thereby completes the principal author's study of the mills from their establishment in 1626 to the end of that century. It attempts to distinguish the parts played by the two gunpowder makers involved, Josias Dewye and Vincent Randyll, in particular regarding Dewye's role in the 1650s and its bearing on the development of the site. The paper also discusses the performance of the Chilworth gunpowder makers in what was a period of intermittent war and hence of widely fluctuating demand for the product.

Introduction

Previous papers have dealt with the history of the Chilworth gunpowder mills during the term of the East India Company's lease (1626–36), during the tenure of the Cordwell family (1636–50) and during that of Sir Polycarpus Wharton (1677–98) and his partner John Freeman (died 1684).¹ The present paper covers the intervening years of the Interregnum and the Restoration, during which three Dutch Wars were fought, in 1652–4, 1665–7, and 1672–4. The period provides a marked example of the widely fluctuating demand for the product which characterised the gunpowder industry and caused a perennial problem for producers.

Chilworth manor was owned at this time by Vincent Randyll, whose father, Sir Edward, had let the mills to the East India Company in 1626. In 1636, after the East India Company had withdrawn from the industry, Charles I provided a loan for the expansion of the mills and Samuel Cordwell was brought in to organise the business. Despite problems associated with the collapse of the king's gunpowder policy in 1640 and 1641 and with Chilworth being a contested site during the Civil War, Cordwell had continued to produce gunpowder at the mills until his death during the winter of 1647–8. His brother Robert had then taken over the business and had controlled it as a trustee for Samuel's widow and children until his death in June or July 1650. Robert's widow Mary had fulfilled his existing contracts but within a few months of her husband's death had sold the family interest to a group of merchants who took over production and leased the mills on an annual basis from Vincent Randyll. No details survive of the lease, the partnership, or the names of the individuals concerned and Giuseppe, in the *Victoria County History*, did not identify the merchants.² It has become clear, however, that the principal member of the group was Josias Dewye, who was previously in a partnership at Temple Mills, Leyton, in the Lea valley in Essex.³ The identities of his associates remain unknown.

The Chilworth site

A detailed survey of the site has been undertaken by English Heritage.⁴ In 1650, when the Cordwell family's interest in the business ceased, the mills occupied two sites within a 2km stretch of the Tillingbourne, the tributary stream which enters the river Wey some 2km south of Guildford, as shown in figure 1. The mills established by the East India Company in 1626

¹ Fairclough 1996; 2000a; 2000b.

² *VCH*, 2, 322; Fairclough 2000b, 123–4.

³ Fairclough 2001.

⁴ Cocroft 2003.

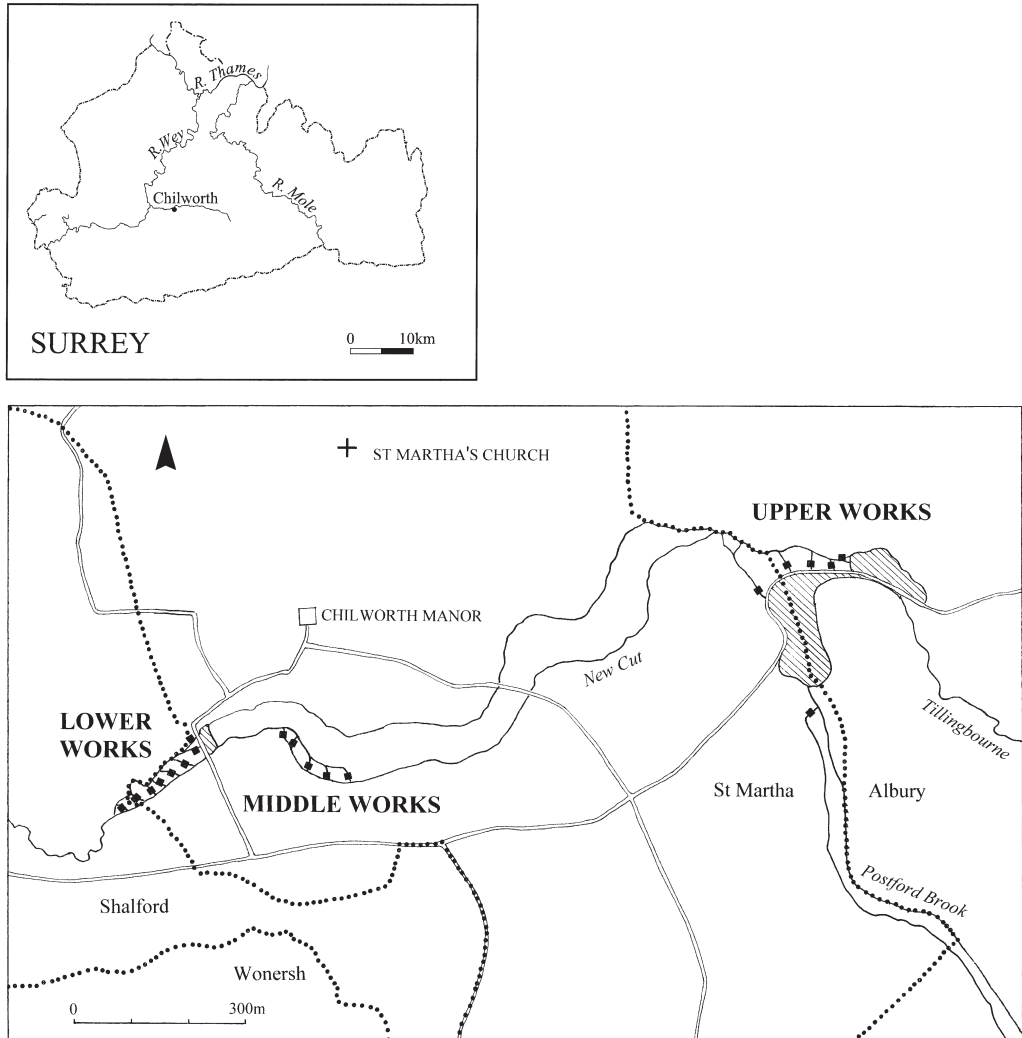


Fig 1 Chilworth gunpowder mills showing the Lower, Middle and Upper Works as they were located in the period 1652–98. Dotted lines represent parish boundaries.

were on the site of a disused corn mill and fulling mill at the dam (TQ 024 475) along which the modern Blacksmith Lane passes. This site became known as the Lower Works. The expansion financed by Charles I involved the building of a new group of mills, which became known as the Upper Works, at Postford (TQ 039 479).⁵ It has been deduced that the mills at the Lower site began to be extended down the valley during the events leading up to this development.⁶

The mills were further expanded in the early 1650s by the building of the Middle Works on a new leat, known as the 'New Cut', which used the head of water available between the Upper and Lower sites. As shown in figure 1, this was dug from a point just below the outflow

⁵ Fairclough 2000b, 115, n15 (n15 is incorrect; the correct reference is PRO: SP 16/292, f 38).

⁶ Crocker & Crocker 2000, 11–13, 16.

of the ponds of the Upper Works, across the valley bottom (which was used for cultivating hops), and along the south side of the valley.⁷ Several secondary channels were taken off in parallel to serve water-wheels and their combined tail water fed into the millpond of the Lower Works. The terms Lower, Middle and Upper Works first appear in a written survey by Sir Jonas Moore, the Ordnance surveyor, in 1677, and are shown on John Seller's map of Surrey of c 1679. The 1677 survey states that 'the Middle work Stands over against Mr Randills house, and was built by Mr Randill in the first Dutch warr'.⁸ It lists the process buildings on each of the three sites. In total there were seventeen incorporating mills – water-powered stamp mills in which saltpetre, charcoal and sulphur (known as brimstone at the time) were combined to form gunpowder. There were six at the Upper Works, four plus a charcoal and brimstone mill at the Middle Works and seven at the Lower Works, of which two were situated at the dam of the millpond and five plus a charcoal and brimstone mill were on a leat flowing westwards out of the pond.⁹

The gunpowder makers

JOSIAS DEWYE

Josias Dewye (born 1619) was one of England's most important gunpowder producers. His career at Carshalton gunpowder mills, which he took over in 1661 and where he remained until his death in 1698, is well documented and is discussed by Wilks.¹⁰ However, his identification as the leading member of the group of merchants who leased Chilworth mills after the Cordwells, and of Chilworth as his manufacturing site throughout the 1650s, has been confused by an apparent anomaly. The first clear evidence of his presence that Giuseppi cited was dated April 1656, when Dewye was seeking contracts to supply gunpowder to the Ordnance. His petition stated that he had supplied 150 barrels weekly during the Dutch War (1652–4) and had sent 1800 barrels to Portsmouth.¹¹ It indicated that he operated at Chilworth for it stressed the advantages of the site, pointing out that the mills had a reliable water supply and could work when other mills were stopped. Furthermore, Dewye warned that if new contracts were not forthcoming he and his partners would be 'forced to demolish the workes'. Yet two years earlier, in March 1654, Vincent Randyll had stated that the merchants' annual lease had expired and he was himself seeking a contract to supply the Ordnance in their place.¹²

Further documentary evidence now shows that the earliest definite date for Dewye's presence at Chilworth is 1652. In March 1653, he petitioned the government for an advance of £200 to erect a second stove at 'our Mills', stating that during the previous year the stove had blown up and that no gunpowder had been made for seven or eight weeks while a new one had been built. Since the country was now at war such an interruption in the future could be disastrous and hence this request for an advance to erect a second stove.¹³ This petition did not mention the location of the mills but a complaint by Dewye in the same month, about the difficulty of obtaining sufficient carriage for his gunpowder in the Guildford area and his need to engage three of the Portsmouth wagons, makes it clear that he was operating near Guildford.¹⁴

Care in dating is necessary because there is a possibility that gunpowder delivered to the Ordnance under Dewye's name in 1651¹⁵ could have been made at Temple Mills, Leyton,

⁷ BL: Althorp Papers, PG4, General survey of Chillworth St Martha, 1728.

⁸ StRO: D742/M/1/13.

⁹ StRO: D742/M/1/13. Extracts from the survey are transcribed in Crocker & Crocker 2000, 25–7.

¹⁰ Crocker *et al* 2000, 22–32.

¹¹ *VCH*, 2, 322.

¹² PRO: SP 18/67, no 7; *CSPD* 1654, 4, 2 March 1653/4.

¹³ PRO: SP 18/48, no 6.

¹⁴ PRO: SP 18/48, no 7.

¹⁵ PRO: WO 49/84, f 164; WO 49/86, ff 143, 145, 154, 155; *CSPD* 1651, 567, 571, 572.

where he had been in partnership with George Boreman from March 1650. Boreman, who was evidently the senior partner, had supported the king in the Civil War and was in political trouble. The course of events at Temple Mills suggests that Dewye probably took over at Chilworth in late 1650. His choice of site may have been influenced by the fact that he was related by marriage to Mary Cordwell for both she and Dewye's wife Elizabeth had the maiden name of Richbell.¹⁶

Dewye's production at Chilworth from then until May 1654 is well documented and is discussed below. The question arises as to where he was working thereafter, when Vincent Randyll and his partners were operating Chilworth mills themselves. He did not move to Carshalton until 1661 but clearly remained active meanwhile, as shown by his petition for contracts and threat to demolish the works in 1656. Other evidence of his activity is that on 5 May 1654, after Randyll's March petition for contracts in his stead, he wrote to Cromwell stating that because of a scarcity of brimstone he had arranged for the import of 10 tons which was expected daily and asked for speedy customs clearance to be arranged.¹⁷ Also, although he did not obtain any Ordnance contracts in the late 1650s, he was selling gunpowder to the East India Company in 1658 and 1659.¹⁸ He may therefore have been producing gunpowder for private trade, but to what extent is not known since records are scarce compared with those for supply to the government.

VINCENT RANDYLL AND HIS PARTNERSHIP

The mills that Vincent Randyll inherited in 1646 were one of England's largest gunpowder manufactories but it seems unlikely that he had planned a career as a gunpowder producer for his family had previously been content to be country gentlemen who let the mills to others. Perhaps the changed environment of the Interregnum and developments at Chilworth mills encouraged him to think differently. The first known indication of his interest in the industry was his petition of March 1654 in which he expressed his desire to obtain an Ordnance contract on the same terms as the group of merchants whose annual lease of the mills he stated had just expired and who, it has been deduced, were headed by Josias Dewye.

In order to finance the venture, Randyll formed a partnership with George Duncombe (Duncumb) and John Woodroffe, both of whom were from local landed families which were connected by marriage. George Duncombe, for example, was uncle to Vincent Randyll's wife Dorothy Duncombe.¹⁹ The partners engaged an agent, William Wiche, whose name appears as the supplier in Ordnance records. In June 1655 the original three partners brought in a fourth and articles of agreement were signed between Colonel Edward Grosvenor of St Martin in the Fields, esquire, Vincent Randyll of Chilworth, esquire, George Duncombe of Shalford, esquire, and John Woodroffe, citizen and Merchant Taylor. The partnership was to last for 21 years from 14 June 1655, each partner was to hold a quarter share, and Vincent Randyll was to let the mills to the partnership for £120 a year. John Woodroffe shortly sold his share to his kinsman George Woodroffe of Poyle, gentleman, for £1000.²⁰ There is reason to suspect that the partnership did not last for the intended 21 years. In a petition following the Restoration in 1660 Randyll stated that he and others held possession of the works,²¹ but there is no other evidence of this partnership thereafter. The wills of George Duncombe, made in 1672, and Sir George Woodroffe, made in 1688, make no reference to the partnership, nor to any link with the gunpowder industry or Chilworth mills, while Vincent Randyll's will made in 1673 implies that at that date he was working solely on his

¹⁶ Fairclough 2001.

¹⁷ PRO: SP 18/71, no 28; *CSPD* 1654, 152.

¹⁸ Sainsbury 1916, 275, 308, 311, 358.

¹⁹ For family trees see Manning & Bray: Randyll: 2, 118; Duncumb: 2, 126/127; Woodroffe: 3, 176.

²⁰ SHC: G101/1/59.

²¹ PRO: SP 29/22, no 112.

own.²² It seems likely that the partnership did not last long beyond the Restoration, if that long.

The building of the Middle Works

Consideration must now be given to the sites occupied by Randyll's partnership and the possibility that Dewye was still operating some of the mills.

Information on ownership of the sites is contained in the 1677 survey, which states that the Randyll family owned the land on which the Lower and Middle Works were built but only part of the site on which the Upper Works stood, the rest of which belonged to the parson of Albury. There were also small pieces of land within the gunpowder works owned by a Mr Boothby. The rents negotiated by Sir Jonas Moore in 1677 were Mr Randill £167 10s, The Parson £24 13s and Mr Boothby £7 17s, totalling £200.

Details of Randyll's landholdings in the 1650s comes from a mortgage deed of 1654 whereby George Duncombe lent £700 to Randyll on the security of land in the parishes of Albury and St Martha and also 'Berkeley lands alias Steeres lands' and the gunpowder mills erected thereon.²³ Trustees for this arrangement were two of George Duncombe's sons, Francis and Thomas, and Randyll was to repay George £742 within a year. The property consisted of:

All messuage tenements farme with appurtenances etc called Postford in the parishes of Albury and St Martha on the Hill. Also one moor therewith, lately purchased and lying at or near the Lithies in the parish of Albury, late in the tenure or occupation of Nicholas Gyles [...] And all lands called Berkeley lands alias Steeres lands [...] in Shalford, Wonersh and Chilworth and St Martha on the Hill. And all gunpowder mills howses and buildings thereupon erected.

Parish boundaries are shown on the map in figure 1; it should be noted that Chilworth is the name of the manor, not the parish. The name 'Steeres lands' was probably associated with Thomas Steere, a London ironmonger, who illegally and briefly operated a wireworks at Chilworth in 1603–6. This was probably on a leat running west from the mill pond at the site which became the Lower Works.²⁴

A more detailed description of the buildings on Steeres lands is given by the assignment of lease whereby John Woodroffe sold his quarter share of the Randyll partnership to George Woodroffe in June 1655.²⁵ Reference was made to an agreement earlier that month whereby Vincent Randyll had let to the partners:

All those lands called Steers lands in parishes of St Martha upon the Hill and Wonersh. And all those four gunpowder mills stow [ie stove] watch house and brimstone house and other buildings erected upon the same [...] and one Pightell or plot containing by estamacon one acre lying in Chilworth aforesaid therein bounded. And all those two gunpowder mills erected and being upon or neere the said lands and pightell and several other mills and things in the said indenture menconed, for the term of 21 years from the feast of St John Baptist next.

These descriptions correspond roughly with Sir Jonas Moore's survey of the Lower Works in 1677, though with only four gunpowder mills, rather than five, on the leat running through Steeres lands.

²² PRO: PROB 11/349, sig 135, will of George Duncumb proved 1675; PROB 11/396, sig 116, will of Sir George Woodroffe proved 1689; PROB 11/344, sig 10, will of Vincent Randyll proved 1674.

²³ SHC: G86/2/55.

²⁴ Crocker, G 1999.

²⁵ SHC: G101/1/59.

Neither the 1654 mortgage deed nor the 1655 assignment of lease gives details of mills at Postford, which was the site of the Upper Works and is partly in the parish of St Martha and partly in that of Albury. However, the 1655 document indicates that the gunpowder works at Chilworth, Shalford and Albury were managed by the partners and the inclusion of Albury definitely proves that the Randyll partnership was to operate at the Upper Works. The fact that these works were not described in more detail may be due to uncertainty about Randyll's title to them. They had been built by Samuel Cordwell in 1636 with a loan from Charles I which had not been repaid. Indeed, after the restoration of the monarchy in 1660, Vincent Randyll was to seek a grant of letters patent to establish his ownership.²⁶

The Middle Works, which was entirely located in the parish of St Martha, might be included in the 'several other mills and things' referred to in the 1655 document but this would seem an understatement considering the scale of the engineering works involved in opening the site. The absence of any reference to Randyll letting the Middle Works to the partners could suggest that it was not included in the facilities to be worked by them. Dewye's threat to demolish the mills if no contract was forthcoming in 1656 shows that he and his partners still held an interest in Chilworth. It could be therefore that the Middle Works were on a separate lease which did not expire in 1654.

Sir Jonas Moore's statement that the Middle Works was built by Randyll in the First Dutch War presumably relates to Randyll as landowner, while in practical terms the manufacturing plant was probably set up by Dewye. There is some contemporary evidence of expansion by Dewye at Chilworth during the First Dutch War, for in his petition for money to erect a second stove in March 1653 he added a postscript, 'shall wright downe to the Mills for the workemen to see if there might be more Mills put on there, what it will cost'.²⁷ A possible scenario for events at Chilworth during that war and immediately after is that Dewye and his partners bought out Cordwell's interest in the gunpowder facilities at Chilworth in about 1650 and continued to lease this property on an annual basis from Vincent Randyll; that Dewye and his partners took advantage of high wartime demand to open a new site at Chilworth, the Middle Works; and that after the end of the war in 1654 Dewye and his partners retained their interest in the new site while Randyll and his partners took up production at the Lower and Upper Works.

Gunpowder production at Chilworth

Output at Chilworth in the 17th century was about 10 barrels (of 100lbs) of gunpowder per mill per week as shown by the 30 barrels per week produced by the East India Company's original three mills. Known production targets, of 50 barrels per week in 1635, 120 for Cordwell's 1636 contract and 150 for Dewye's output throughout the First Dutch War, are consistent with expansion starting at the Lower Works, the Upper Works being established in 1636, and the Middle Works coming into production by the summer of 1652.²⁸

DEWYE AND RANDYLL IN THE 1650s

Dewye's deliveries to the Ordnance are recorded for April, May and June 1651 and show that during these months he delivered a total of 1900 barrels of gunpowder at £4 12s per barrel. It is not known how many weeks of actual production this represents but it suggests that after arriving at Chilworth in late 1650 he began working the mills more or less to capacity. One other major supplier at the time, Daniel Judd, who was operating at Faversham

²⁶ The status of the king's mills is discussed by Fairclough (2000b, 124–5); PRO: SP 29/22, no 112; *CSPD* 1660–1, 388.

²⁷ PRO: SP 18/48 no 6.

²⁸ Crocker & Crocker 2000, 16.

in Kent, supplied some 1450 barrels over the same period.²⁹ Dewye was definitely the most important supplier of gunpowder to the Ordnance throughout the duration of the First Dutch War. In July 1652, a few days after war was declared, his company was awarded a contract to supply 150 barrels of gunpowder per week from August onwards. Another three separate producers signed contracts to supply another 150 barrels a week between them from the same date. On completion of these contracts in December 1652 new contracts were signed which maintained the same proportions.³⁰ In April 1656 Dewye stated that he had made his last delivery to the Tower in May 1654, having supplied the Ordnance with 150 barrels a week throughout the war.³¹ This is confirmed by Ordnance records.³² Furthermore, an Ordnance report of April 1653 indicates that not only was Dewye the largest producer but he seemed to be the only one capable of meeting delivery deadlines and fulfilling the contracts he had agreed.³³ In May 1653, however, he and another gunpowder maker, John Freeman, were forced to petition the authorities on behalf of themselves and other producers over the perennial problem of slow payments and as a result of this the Council of State issued instructions to make money available for this purpose.³⁴

In February 1654 Dewye obtained a new contract from the Ordnance, but it was in the following month that Vincent Randyll stated that the merchants' annual lease had expired and that he was seeking a contract to supply the Ordnance in their place.³⁵ It seems anomalous that Dewye, who had shown himself to be a good and reliable producer, received no more Ordnance contracts at this stage while Randyll and his partners, who obtained contracts in 1654 and later, did not perform well. The reasons must probably remain matters for speculation.

William Wiche, the partners' agent, took delivery of 10 tons of saltpetre from the East India Company in July 1654³⁶ and obtained an important contract to supply the Ordnance with 150 barrels of gunpowder per week in August of that year.³⁷ The end of the First Dutch War in April 1654 had meant a sharp drop in demand from the state for new gunpowder, so the new partners were immediately at a disadvantage compared with the previous partnership led by Dewye, despite their success in obtaining this important contract. This situation was not to change until the outbreak of war with Spain in February 1656. However the available evidence suggests that the performance of the new partners at Chilworth was so poor that they put themselves at a disadvantage compared with their competitors.

The contract for 150 barrels of gunpowder per week was at a higher level than that of any of the partnership's competitors and meant that the known capacity of Chilworth mills should have been used to the full. Yet there is no record in the Ordnance bill books of any delivery being made by Wiche, although deliveries by competitors are regularly recorded.³⁸ Production problems at Chilworth are suggested by instructions issued by the Ordnance in February 1655. There was some concern that war could soon break out and instructions were issued to several producers immediately to deliver all the gunpowder they could. Among those contacted were 'William Wyte partners at Hammersmith'. At present no explanation can be offered for this geographical location except that it might have been a base closer to London where materials were stored. However, other evidence makes it clear that Wiche was engaged at Chilworth. This other evidence is unusual in itself, for whereas other producers seem merely to have received a letter from the Ordnance emphasising urgency, additional measures were

²⁹ PRO: WO 49/24; WO 49/26.

³⁰ PRO: WO 47/2, 8 July 1652, 28 December 1652.

³¹ PRO: SP 18/126, no 58.

³² PRO: WO 47/2, 17 June 1653, 21 October 1653; WO 47/3 f 340, 21 February 1654.

³³ PRO: SP 18/50, no 61.

³⁴ PRO: SP 25/69, p 148; *CSPD* 1652–53, 350.

³⁵ PRO: SP 18/67, no 7; *CSPD* 1654, 4, 2 March 1653/4.

³⁶ Sainsbury 1913, 328.

³⁷ PRO: WO 47/3, f 330.

³⁸ PRO: WO 47/3–4 *passim*, WO 49/87–88, *passim*, WO 51/2, *passim*; WO 47/3, f 75.

considered necessary in the case of Wiche. Thus Daniel Judd, who produced gunpowder at Faversham in Kent, was asked to go to meet 'Wyte' at Chilworth to deliver the Ordnance order about the immediate despatch of gunpowder and instructed to oversee this despatch himself. He was further asked speedily to report any refusal to comply or delay in the proceedings so that further action could be taken.³⁹ The very tone of these instructions and the lack of any record of deliveries of gunpowder by Wiche suggests major difficulties. Perhaps it is not surprising that Wiche left the partners at about this time. He himself claimed in the previous month that he was no longer employed by them. In January 1655, he was called before the Admiralty Commissioners to account for the poor quality of his gunpowder. This was part of a dispute involving several producers who had been required to repair old decayed gunpowder which they claimed could not be made good. In his petition, Wiche described himself as 'late concerned' as the agent of Vincent Randyll, George Duncombe and John Woodroffe and stated: 'I attended yesterday on your summons, about some Hamburg powder delivered in and repaired; but my contract was by direction of my employers, and if there be any defect, it concerns them and not me.'⁴⁰

Colonel Edward Grosvenor, who came in as the fourth member of the partnership in June 1655, had served in the army in the Civil War, had retired from active service, and appears to have become an important confidant in government circles.⁴¹ If the partners hoped that his involvement would bring them access to new large contracts, they were to be disappointed. Despite the outbreak of war with Spain in February 1656, there is no evidence of the partners gaining any contract to supply new gunpowder, but they were to become involved in a major quarrel between the Ordnance and the gunpowder producers.

In 1656 the Ordnance carried out a second proof of old unused gunpowder which had been left over from the First Dutch War and had remained in store until the outbreak of war with Spain. Although all the gunpowder had passed proof when first accepted, probably as early as 1653 and 1654, the failure rate at this second proof was considered too high. A report by the Committee for the Admiralty and Navy included a table of the proof results showing the failure rate. Josias Dewye and John Samyne (of East Molesey) had high success rates but stringent criticisms were made of some of the gunpowder makers, to the extent that some were accused of wilful fraud. Reports to the Admiralty Commissioners noted that of 209 barrels delivered by Wiche that had been tested 120 were defective and added that if this proportion had been the average for his deliveries then 503 barrels would have been substandard. The report contained little discussion of his performance and merely concluded that it had 'nothing [...] considerable relating to his actinge'.⁴² The calculations imply that fewer than 1000 barrels had been delivered by Wiche, far below the level needed to meet the terms of the 1654 contract.

The report did not permanently harm the Chilworth partners and on 27 October 1656 Randyll obtained a contract to deliver 2240 barrels of gunpowder.⁴³ On 30 April 1658 a certificate was issued to Randyll and his partners confirming that they had completed this contract 'in full satisfaction for 100 tons of saltpetre delivered to them'.⁴⁴ Payments to several producers, including Randyll, were made at this time by debenture and in part by deliveries of unserviceable powder from the stores, which they would have repaired for their own private trade.⁴⁵

Randyll had some problems fulfilling the October 1656 contract, as shown by the rejection rates listed in table 1.

³⁹ PRO: WO 47/3, ff 74v, 75.

⁴⁰ *CSPD* 1655, p 29, no 50.

⁴¹ *CSPD* 1652–53, 152, 206, 209, 285, 299, 301, 320; *CSPD* 1654, 106, 166, 204, 205; *CSPD* 1655, 154; *CSPD* 1656–57, 187.

⁴² PRO: SP 18/126 no 64. The proof failure table is printed in *CSPD* 1656, 15 April 271–2 and is reproduced, with Wiche omitted, in *VCH*, 2, 322–3.

⁴³ PRO: WO 47/4, f 16.

⁴⁴ PRO: WO 47/4, f 131.

⁴⁵ PRO: WO 49/91.

Table 1 Proof of gunpowder delivered by Randyll.
Source: Ordnance Board Minutes (PRO: WO 47/4)

Date	100lb barrels	Good	Bad	% bad
<i>1657</i>				
Jun 24	140	133	7	5
Jun 29	120	105	15	14
Jul 24	60	59	1	1.6
Aug 20	60	50	10	20
Sep 17	140	11	129	90
Sep 24	200	140	60	49
Oct 1	80	0	80	100
Oct 8	132	0	132	100
<i>1658</i>				
Feb 10	20	20	0	0
Mar 9	132	132	0	0
Apr 6	120	118	2	1.6
Apr 27	97	96	1	1
Totals	1301	864	437	34

At present, no explanation can be given for the sudden rise in the rejection rate in mid-1657. Although quality obviously improved in the early months of 1658, the failure rate may explain the fact that the partners never received another contract during the late 1650s. Problems with Grosvenor may have been another reason. On 23 August 1659 the minutes of the Council of State note that ‘Colonel Grosvenor’s business’, the nature of which is not stated, was to be considered the following day. On 19 September Bradshaw’s report on the matter was discussed and an order issued that Grosvenor was to be freed, but only after he had provided two sureties and bonds for £3000.⁴⁶ The records of the Committee for Examinations which had investigated the case do not survive, but the Council of State minutes imply severe problems, and these must have affected Grosvenor’s standing in government circles and so affected the fortunes of the partnership at Chilworth.

VINCENT RANDYLL AFTER THE INTERREGNUM

When Vincent Randyll tried to establish his legal title to the Upper Works in 1660, because the loan made by Charles I had never been repaid, he received no formal confirmation but the king never made any claim.⁴⁷

After the completion of his contract in 1658 it was not until the outbreak of the Second Dutch War in 1665 that Vincent Randyll supplied gunpowder to the Ordnance again. On 2 January of that year the Ordnance minutes record that earlier that day Charles II had expressed concern over the ‘great want of mills to be employed for making gunpowder’ and the Ordnance officers were ‘authorised to impresse soe many Mills for the making of gunpowder [...] as they shall think fitt’.⁴⁸ The signing of a contract with Vincent Randyll on 1 February 1665 was not minuted, but on 5 February an advance to him of £400 was authorised, as agreed in the contract of a few days earlier.⁴⁹ In March 1665 saltpetre was delivered to Randyll and by August the first contracted delivery of 280 barrels a month reached the Tower.⁵⁰

⁴⁶ *CSPD* 1659–60, 137, 211.

⁴⁷ Fairclough 2000b, 124–5.

⁴⁸ PRO: WO 47/6, f 106.

⁴⁹ PRO: WO 47/6, f 126. The date is obtained from later records of delivery which specify the date of the contract the deliveries fulfilled.

⁵⁰ PRO: WO 51/6, f 7.

Table 2 Deliveries of gunpowder by Randyll during the Second Dutch War. Source: Ordnance Board Bill Books (PRO: WO 51/6; 51/7; 51/8)

Date	Quantity	Price	Price per barrel
<i>1665</i>			
25 Aug	280 barrels	£232	16s 8d
23 Sep	280 barrels	£232	16s 8d
23 Oct	280 barrels	£232	16s 8d
<i>1666</i>			
25 Jan	280 barrels	£192	13s 8½d (approx)
26 Mar	124 barrels 78lbs	£83 7s 6d	13s 4d
26 Mar	190 barrels repaired	£133	14s 0d
25 Apr	280 barrels	£232	16s 8d
19 May	280 barrels	£232	16s 8d
20 Jun	280 barrels	£232	16s 8d
13 Jul	280 barrels	£232	16s 8d
13 Aug	280 barrels	£232	16s 8d
21 Sep	280 barrels	£232	16s 8d
26 Sep	82 barrels	£67 18s 4d	16s 8d
29 Oct	100 barrels	£410	£4 2s
21 Dec	154 barrels 92lbs	£128 5s 10d	16s 8d
<i>1667</i>			
17 Apr	280 barrels	£184 19s 4d	13s 4d
23 Jul	280 barrels	£232	£4 2s
30 Aug	50 barrels	£205	£4 2s

There may have been problems in bringing the mills back into production. On 4 June 1665 Randyll was one of several gunpowder producers who received a plea from the Ordnance that they work their mills night and day including Sunday in order to serve the state,⁵¹ but two days later the Ordnance reported that Randyll was not keeping up with his contractual deliveries.⁵² Thus the first delivery in August may have been late. Thereafter Randyll maintained regular deliveries to the Ordnance throughout the war (table 2).

Further details of the contractual arrangements can be discerned from these delivery records. In most cases Randyll received coarse saltpetre from the Ordnance, his contract stipulating that he double refine this saltpetre and deliver a specified number of barrels of new gunpowder from the quantity of saltpetre provided. Thus most of the deliveries recorded were for 280 barrels at 16s 8d per barrel. Randyll was expected to provide the other raw materials, brimstone (sulphur) and charcoal, himself. However, in January and March 1666 and April 1667 deductions were made from the Ordnance payments to allow for the fact that the new gunpowder delivered had been made with brimstone supplied by the Ordnance, the deduction being £20 per ton. In October 1666 and August 1667 however Randyll received a payment of £4 2s per barrel. This was because the gunpowder had been made with saltpetre that Randyll had obtained himself. It seems likely that he had purchased imported saltpetre from the East India Company, for on 15 May 1668 he was one of those asked to clear their debts with the Company,⁵³ the only occasion on which his name appears in the index to the published calendars of its court minutes after the Restoration. In addition, on 26 March 1666 there was one delivery of repaired powder at 14s per barrel.

⁵¹ PRO: WO 47/7, f 78.

⁵² PRO: WO 47/7, f 80.

⁵³ Sainsbury 1929, 61.

Randyll was thus a regular supplier during the Second Dutch War but was never the major producer that Dewye had been at Chilworth during the war of 1652–4. The Ordnance records show his ranking among contractors, of whom there were nine in June 1665, delivering a total of 2780 barrels per month. Of these nine, the biggest suppliers were two other Surrey gunpowder makers, Josias Dewey of Carshalton with 32% of the total and James Lloyd of Wandsworth with 25%. John Samyne of East Molesey, Surrey, followed with 11% and Randyll with 10%, while Thomas Carter of Bedfont, Middlesex, accounted for 7% and the remaining four for 15% between them.⁵⁴

After the war ended in 1667 demand dropped and in the late 1660s Randyll received only a few contracts to repair small quantities of old decayed gunpowder⁵⁵ and in August 1669 a payment of £74 19 4s for refining saltpetre for the Ordnance.⁵⁶ In early 1669 he was also paid £10 by the Ordnance to go to Portsmouth on their behalf to test whether powder dust brought from the Barbary Coast of North Africa by a merchant, Thomas Warren, was suitable for making gunpowder.⁵⁷

In 1667 contracts had been with sixteen powdermakers but by 1670 only two, Robert Richardson, who had mills on Hounslow Heath, and William Buckler, then at Faversham, were kept as contractors. They were awarded a twelve-year contract as partners although they produced and supplied the Ordnance separately.⁵⁸

It was not until 1671 that Ordnance demand for gunpowder rose again and on this occasion Randyll emerged for a few years as one of England's leading producers. On 25 March 1671 he signed a contract to supply new powder at £3 2s 6d a barrel from saltpetre provided by himself. In May he delivered 100 barrels, and then 400 barrels monthly in June, July, September, November and December and 800 barrels in February 1672.⁵⁹

With the outbreak of the Third Dutch War in 1672, other suppliers also obtained Ordnance contracts and the move towards long-term contracts ceased. During peacetime the Ordnance had relied upon its suppliers to obtain their own raw materials, but the outbreak of war saw it take the initiative once more. On 1 February 1672 the Ordnance negotiated a contract for the supply of gunpowder at 17s 6d a barrel from saltpetre supplied by itself to the producers. This contract, for 900 barrels per month from April 1672 onwards, was with two separate producers, Randyll and Robert Richardson, who signed it jointly but continued to manage their mills separately and only co-operated on this one contract. Their contracted monthly deliveries were met, but the contract was to last less than a year, the last deliveries being made in January 1673.⁶⁰ During this same period Richardson also continued to make large deliveries under his separate contract with Buckler and the bill books show that during 1672 Randyll accounted for approximately 25% of the gunpowder delivered to the Ordnance compared with 41% supplied by Richardson and 17% by Buckler.

In February and March 1673 Randyll negotiated new agreements. In September 1673 he was paid £797 10s for 900 barrels, while in March 1674 his executors were paid £525 for 600 barrels.⁶¹ Randyll's death in December 1673 brought production at Chilworth to a halt.⁶²

⁵⁴ Tomlinson 1979, 114–15, 115n; Crocker *et al* 2000, 38–9.

⁵⁵ PRO: WO 51/8, f 111; WO 51/9, f 121; WO 51/10, f 19.

⁵⁶ PRO: WO 51/10, f 97.

⁵⁷ PRO: WO 47/19A, f 179, WO 51/10, f 19.

⁵⁸ Tomlinson 1979, 115; Crocker *et al* 2000, 38–9; *CSPD* 1670, 428; WO 55/392, pp 9–10. The mills on Hounslow Heath are identified with Bedfont mills: Crocker 1988, 16–17.

⁵⁹ PRO: WO 51/12, f 195; WO 51/13, ff 20, 44, 81, 114, 121, 154, 156; WO 51/14, f 41.

⁶⁰ PRO: WO 51/14, ff 64, 100, 113, 150, 170, 176, 196; WO 51/15, ff 67, 117, 159, 195).

⁶¹ PRO: WO 51/17, ff 31, 185.

⁶² PRO: WO 51/18, f 172.

AFTER VINCENT RANDYLL

Vincent Randyll's will contained no details of his gunpowder business, except for the plaintive remark: 'and because I have a greate sume of money due to me from his Majestie, as aforesaid And I know not how and in what manner the same may be paid Therefore I doe not think fitt further to devise in Certainty then what is expressed in this Will.' He did note that his heir at law was his eldest son, Morgan Randyll, so it was he who inherited the business and the production site, but the will implies that much of the site was mortgaged for £500.⁶³ Chilworth mills and the debts associated with the site and the business were inherited by Morgan Randyll, but neither he nor any of Vincent's other children can have been prepared to continue production.

In February 1672 Randyll had negotiated an agreement whereby the Ordnance agreed to rent Chilworth mills for 11 years in order to make gunpowder. The exact details and reasons for this development are not recorded in the extant Ordnance records, and the agreement is only known because it is referred to in later rental payments.⁶⁴ As part of these negotiations Sir Jonas Moore, the Ordnance surveyor, had visited the site at Chilworth in December 1671.⁶⁵ Why did the Ordnance agree to rent the mills for 11 years in 1672? Was it part of an agreement to cover their failure to pay for the gunpowder Randyll had produced, an attempt to keep the facilities at England's largest manufactory intact and for production to continue during the war despite Randyll's growing financial problems?

After Randyll's death the Ordnance continued to pay an annual rent of £267 10s for the mills even though the site remained idle until 1677.⁶⁶ Sir Jonas Moore's survey of that year echoed Josias Dewye's statement in 1656 about the excellence of the site, stating that the mills could work in dry years and in the greatest frosts and were well situated for delivering powder both to London and Portsmouth. He recommended that the works and their watercourses be kept in good repair for nearly 1000 barrels of gunpowder could be made by them every month.⁶⁷

John Freeman, who was producing gunpowder at Sewardstone on the river Lea in Essex, appears to have had some involvement at Chilworth during Vincent Randyll's lifetime. On 12 November 1674, not long after Randyll's death, the Ordnance minutes record that Mr Freeman was to be ordered to 'take away all his powder proved yesterday in the Tower by him brought into His Majesties Stores upon Mr Randylls account'. He was also to be ordered to send in no more powder upon any account but to return all the king's saltpetre in his hands.⁶⁸ Had Freeman been supervising production at Chilworth during Randyll's lifetime? Had he agreed to take over Randyll's contract without the authority of the Ordnance having been gained? It is not known, but in November 1677 Polycarpus Wharton and Freeman took a 21-year lease of the works and from then until the end of the century Chilworth emerged once again as the largest and most important gunpowder manufactory in England.⁶⁹

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⁶³ PRO: PROB 11/344 sig 10.

⁶⁴ PRO: WO 51/18, f 172.

⁶⁵ PRO: WO 48/10 f 144. Details of Sir Jonas Moore's 1671 report do not survive.

⁶⁶ Fairclough 1996, 127 n13; PRO: WO 47/7, f78; WO 51/18, f 172; WO 51/19, f 196.

⁶⁷ StRO: D742/M/1/13.

⁶⁸ PRO: WO 47/19b, unfoliated, 12 Nov 1674. For Freeman's varied interests as an entrepreneur see Edwards 1995, 114.

⁶⁹ Fairclough 1996, 126.

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