

The Nailsea Glassworks,

Nailsea, North Somerset

Introduction

Nailsea Glassworks Study – 2004



on behalf of

Tesco Stores, Limited.

Andrew F Smith,
Avon Archaeological Unit

The Nailsea Glassworks,

Nailsea, North Somerset

Introduction

Andrew F Smith, BSc, MA, CEng, MIEE

Avon Archaeological Unit,

Bristol

April, 2004

The cover photograph, © Cloud 9 High Level Photography, dates from 1987/1988, and is an overhead view, looking approximately north-east, over the New House Cone base as excavated. Directly beyond the Cone are the local Council's temporary offices, and beyond these, with the slate roof, stands one of the then extant buildings on the site, the offices for the glassworks in 1870. To the left of this is one of the terraces of workers' housing on the north side of the High Street, while to the right may be seen the buildings of the former Avon Motor Company. These are in approximately the same position as the Tesco supermarket now occupies. It is reproduced by courtesy of Mr M Thurstan, "Denmans", 5, West Street, South Petherton, Somerset, TA13 5DQ, the owner of Cloud 9 High Level Photography.

CONTENTS

CONTENTS	ii
LIST OF FIGURES	ii
Abbreviations	ii
Acknowledgements:	ii
INTRODUCTION	1
1. THE FOUNDER AND HIS FAMILY	3
2. A CHRONOLOGY - VARIOUS TRADING TITLES, ETC.	5
CONCLUSION	8
BIBLIOGRAPHY	8

LIST OF FIGURES

Figure 1: John Robert Lucas by W A Hobday 4

Abbreviations

AAU	Avon Archaeological Unit
AIBT	Avon Industrial Buildings Trust
AOD	Above Ordnance Datum (also sometimes quoted as OD)
BCL	Bristol Central Reference Library
BCM	Bristol City Museum
BIAS	Bristol Industrial Archaeological Society
BRO	Bristol Record Office
GPS	Global Positioning System
NDLHS	Nailsea and District Local History Society
NGR	National Grid Reference
NMR	National Monuments Record Office, Swindon
NSM	North Somerset Museum, Weston-super-Mare
NS SMR	North Somerset Sites and Monuments Record
OS	Ordnance Survey
SRO	Somerset Record Office

Acknowledgements:

The author and Avon Archaeological Unit wish to acknowledge the assistance given by the following in the preparation and production of this study: Mr Vince Russett, North Somerset County Archaeologist, the staff at both the Bristol and Somerset Record Offices (including Mr T Mayberry, the Somerset County Archivist and Irene Andrews) and the National Monuments Record, in Swindon. David Evans, SMR Officer for South Gloucestershire, kindly gave me help with a query on a possible glassworks at Wick, and Bath & North East Somerset Council staff provided the SMR information on Stanton Wick Glassworks (BN 2247). The staff of the Bristol Central Reference Library, and of Nailsea Library, Mrs B Knutson in particular, also helped greatly in obtaining relevant details. Jane Hill, at the North Somerset Museum, Weston-super-Mare, was generous with her limited time, and Nick Goff, the manager there was most helpful in facilitating examination of the artefactual evidence and permitting the analysis of samples by English Heritage. Due acknowledgement must also be given to H. E. Dommett and Cyril Weeden whose comprehensive papers appeared in BIAS journals. Similarly to Margaret Thomas who has published a great deal of work as histories of Nailsea and district and the

glassworks in particular, as well as to all the unsung archaeologists, both amateur and professional, who have spent so much time on the site over the years.

Dr David Crossley, who is well known as a specialist in the subject, has been most helpful in considering such artefactual and other evidence as exists, and his contribution in this and other ways, and that of Michael Cable, via Dr Crossley, has been very valuable, as has that of Dr Justine Bailey and Gareth Hatton of the English Heritage Centre for Archaeology at Fort Cumberland, Portsmouth. Nina Walburg, also of English Heritage, was very helpful with information on the progress of scheduling the site.

Mr Ian Stuart, of Stuart Crystal, was most helpful and instructive when the writer visited the Red House Cone Museum near Stourbridge, and thanks are due to the staff there for their assistance and for permission to photograph. Similarly to Mr & Mrs Beadman and their staff at the Dial House Cone, presently operating as Tudor Crystal and Plowden & Thompson Ltd. Also to staff at the Broadfield Glass Museum at Kingswinford, and in particular to Roger Dodsworth, Keeper of Glass there, who not only was very helpful directly but recommended contacting Dr David Watts, editor of *The Glass Circle*, and also Dr Patricia Baker, editor of *The Glass Cone*. Both were extremely helpful, in offering to publish some of my queries, which was much appreciated. Helpful information was received from three readers of *The Glass Cone*, namely Mr John Westmoreland, Dr Michael K Baldwin, and Mr Ian Burgoyne, a former Curator of the Pilkington Glass Museum, who kindly included a copy of *Two Thousand Years of Flat Glass Making*.

Phil Brown of the Technical Advisory Service at Pilkington UK Ltd sent useful information. David Moore of the Society of Glass Technology gave similar assistance, as did Dr Hugh Willmott of Sheffield University. Similarly, Dr David Martlew, of Pilkington's research department, and Mike Tuffey of English Antique Glass, Bordesley Hall, near Birmingham; both gave valuable advice on furnace construction and the latter was most helpful with allowing a first-hand view of crown glass and broad glass manufacturing, and allowing photographs to be taken of the processes. Thanks are also due to his blowing team, Harry Prior and Andrew Hay, for their patience and help.

Mr M J Tozer allowed use of copyright images from his collection of local photographs and postcards, as did Mr M Thurstan of Cloud 9 High Level Photography. Mr T Bowen, Chairman of the Nailsea and District Local History Society was very helpful (as was Peter Wright of the same Society) and allowed the use of his reconstruction drawings, as well as giving invaluable help with updating the transcription of Coathupe's 1836/7 notebook. Thanks are also due to the Society for permission to reproduce some of their photographs. This also extends to Bristol City Museum and Art Gallery and staff there, in particular Karin Walton, for facilitating photography in the 'Glass' gallery, and helping with the issue of copyright. The same thanks are due to the National Trust and Mr. D Fogden, their Administrator at Clevedon Court, for facilitating photography of their collection of 'Nailsea Glass'. [There is also a collection at Taunton Museum, but this was not visited.] Acknowledgements are due to Mr and Mrs Woods of the Clevedon Archaeological Society for telling me of the display on the Glassworks and Nailsea Glass at the Scotch Horn Centre, Nailsea, to the staff there for permission to view and photograph, and to North Somerset Museum (Nick Goff) for permission to reproduce, the display being mounted by that museum.

Mr J Cornwell of Bristol Coal Mining Archive offered a useful commentary on the presence of coal mines and mining practices. Mr Keith Gardner had some very useful observations on local archaeological matters, having been involved in archaeology locally for many years.

Mr J Underwood, Information Librarian at the Science Museum, London, was also very helpful, and thanks are due to both him and his staff for providing the details of the Frisbie furnace feeder patent. The Arts and Social Sciences Library at the University of Bristol provided some useful references, in particular the book by J F Chance on the history of Chance Brothers, and Bevan's book containing statistics about workers in the glassmaking industry [among others] from 1871. Thanks are due to Kimberley Nusco, Reference Librarian at the Massachusetts Historical Society, for help with the 1804 price list (and for facilitating gaining the permission to reproduce it, received from Peter Drummey, Librarian, with thanks), to Miles Clark of Hillcrest Books, Crossville, Tennessee for assistance with the *Scientific American* article on the Frisbie feeder and to Rod Dowling of the Bristol and Avon Archaeological Society for drawing my attention to some relevant extracts from *Felix Farley's Bristol Journal*.

Laura Stanage and her colleagues kindly delved back in to the somewhat musty archives at The Office for National Statistics for data from 1871, which was forwarded for use in part 4 and due acknowledgement must be given to the Office for permission to use and reproduce that information. The information on crown glass windows at Longleat was kindly supplied by Dr Kate Harris, Curator, Longleat Historic Collections.

Mr M Chapman (AIBT), Mrs J Dagnall (Clevedon Archaeological Society) and Mrs J E Blackwell all helped with contact addresses/telephone numbers. Jane Shillaker of the Public Record Office provided the full reference for the thirteenth Report of the Commissioners of Excise, and information on copyright issues.

Numerous websites were searched for information, extensive use being made of the "Google" search engine, but very little technical information resulted, so it is not considered worthwhile listing these in the references. There are, however several *Glass* bibliographies and glossaries, but it was not considered necessary or particularly helpful to include them here, as there did not seem to be any one found that was truly comprehensive. It is regretted that some well-known establishments did not reply to repeated enquiries.

Late in the process, it became apparent that there is a 'Chance Collection' in the Special Collections section of the Library at the University of Birmingham. Christine Penny, responded to my enquiry to determine if there are any details of the Nailsea Glassworks in the Chance Brothers Archive, held in the Special Collections of the University of Birmingham Library. Phillipa Bassett, the Archivist there, was kind enough to detail their holding¹, and to tell me that they did not hold any records relating to the glassworks at Nailsea. She suggested contacting the Sandwell Community History and Archives Service, as holding additional records of Chance Brothers and Co. I am grateful to them and to S A Goode at Sandwell (who in turn told me that the Chance archive is held by Pilkington), and also to Mr Philip Webb, Corporate Affairs Manager at Pilkington who told me on 20th August 2004 that their Chance Archive is about to be transferred from Pilkington to the Sandwell Archives Service for permanent safe-keeping, so an enquiry to them would be appropriate in the near future (archives.service@sandwell.gov.uk).

¹ "Our Chance Collection comprises the records of three companies associated with the Chance family of Birmingham: Chance and Homer, William Chance and Son, and Chance Brothers and Co. Records comprise stock books of Chance and Homer, hardware factors, 1771-1880; ledger of William and George Chance, partners in the exporting firm later known as William Chance and Son, 1816-1824; private ledger of Sir James Timmins Chance, partner and manager of Chance Brothers and Co, glass manufacturers, 1838-1875; manuscript accounts of Robert Lucas Chance, partner and manager of Chance and Brothers, later known as Chance Brothers and Co, for 1831."

I am very grateful to Mr Mike Noble, Factory Manager at United Glass Limited, Alloa, for his interest and for being very generous with his time when I turned up without warning, hoping to photograph the cone there, in very inclement weather.

Thanks are due to Catherine Hardman and her staff at the Archaeological Data Service at York for advice and help towards getting the project made available on the world-wide web.

Finally, very warm thanks are also due to colleagues Andrew Young, Jonathan Erskine and Lynn Hume for help and encouragement with the preparation and production of this study, and to long-suffering friends and family, who lost me to glassmaking in the eighteenth and nineteenth centuries for nearly two years. It is hoped that the result justifies all the help so generously given, and that there are no omissions in the above acknowledgements. If there are, my most sincere apologies are proffered.

Note

Whereas Avon Archaeological Unit have taken all care to produce a comprehensive summary of the known and recorded archaeological evidence, no responsibility can be accepted for any omissions of fact or opinion, however caused.

Copyright

The copyright to the following text, drawings and photographs is, unless otherwise credited, the property of the author and Avon Archaeological Unit, to whom all enquiries should be addressed at:

Avondale Business Centre, Woodland Way, Kingswood, Bristol, BS15 1AW.

Telephone and Facsimile 0117 960 8487

e-mail avonarch@yahoo.co.uk

Visit our website at www.avonarch.freemove.co.uk

Plans and maps based on the Ordnance Survey Sheets are reproduced by permission of the Controller of Her Majesty's Stationery Office. © Crown Copyright Reserved.

Licence number AL 100005802

Picture Credits

The cover photograph, © Cloud 9 High Level Photography, is reproduced by courtesy of Mr M Thurstan, "Denmans", 5, West Street, South Petherton, Somerset, TA13 5DQ, the owner of Cloud 9 High Level Photography.

All other figures and photographs are by the author or derived from material held in the archive or in the North Somerset SMR, unless credited to the contrary in the text or adjacent to the Figure(s)/photograph(s) in question.

A particular exception is those photographs identified as '© Bristol Museums & Art Gallery'. A condition of photographing material there is the transfer of copyright to the Museum.

INTRODUCTION

The Nailsea Glassworks, in its time regarded as one of the most significant glassworks in the UK, was established in 1788 and was operated under a number of owners until 1873, when it ceased production, formally closing the following year.

The site was 'sold on' at least three times, and in the end it appears to have been sold piecemeal. Before this however, in 1905 it seems that the then owners had the idea of demolishing the cones in particular and selling the bricks. Local tradition has it that this enterprise largely failed, and that the remaining demolition material is reputed eventually to have been transported to north-west Bristol to be used as land fill for the extension to the runway at Filton. This was in order to accommodate the anticipated additional take-off distance required for the 'Brabazon' prototype airliner that was being developed there in the early 1950s.

This was rather an ignominious end to an enterprise that in its own way, in its day, was equally deserving of credit and was equally overtaken by events as was the 'Brabazon'.

The site apparently was quite derelict for a number of years, and was partially developed both before and after the Second World War, and there were repeated suggestions from local people that some restoration or at least preservation of the remaining structures should be attempted. For whatever reason these plans did not come to fruition, probably because commercial interests and considerations, both private and public, had a greater influence on the situation than that of a few local enthusiasts. There was not the same interest in the historic environment as now, and even now there are suspicions that our present Government is not as supportive as it might have seemed to be in prospect only a few years ago.

There were a number of development proposals for the site between the later 1980s and the turn of the twentieth century, with varying degrees of sensitivity to the historical value of the site, and archaeological interventions were carried out in response to each.

The one that came to fruition was that by Tesco Stores, Limited, and they have generously sponsored this Study from Avon Archaeological Unit. In turn, Andrew Young, head of the Unit asked the present writer to undertake the project.

The Study is in five principal parts, and it is intended that while making up a cohesive whole each may be considered in its own right. For this reason there will be some duplication of plans and bibliographies for example, so the reader who wishes to keep track of some detail does not have too much cross-, or back-, referencing to do.

First is the Introduction, which will cover some general points not specifically addressed in the subsequent parts.

Part 1 is a Desk-top Study. It is disturbing to note that this had not been required earlier, as it is now usual practice, before any archaeological intervention preceding development takes place, to commission a desk-top study to attempt to determine the archaeological sensitivity and potential of the site. For those not familiar with the term, a short description might be appropriate. Briefly, it consists of examining historical records in the form of maps, documentation, aerial photographs, etc, considering the landscape in which the site is set and any known or inferred archaeology in the vicinity. Hopefully this will result in a document that will focus the attention of the responsible parties involved in order to establish what, if any archaeological intervention is desirable, and, if it is judged necessary, its extent. It is in the form usually adopted by the Unit.

Part 2 examines the archaeological interventions chronologically. In order to add value, and admittedly with the benefit of hindsight and without having to translate fieldwork in to a report under pressure, this has been done critically, as certain errors were detected. It was felt that, if the document was to be useful, these should be commented on in order that the evidence might hopefully be more meaningful overall.

Part 3 looks at the technology, starting with a necessarily brief look at the history of glass, gradually narrowing the focus down with time from a world view to an European view to a British view, finally considering what was done, as far as is known or can be extrapolated, at Nailsea itself. It is hoped that this section will not only be intelligible to the general reader, but will also be of value to the specialist.

Part 4 takes a brief look at the social and economic effects of the introduction of a modern manufacturing facility in to a largely rural community, and how it fitted in to the wider economic picture. Not only the introduction but also the demise of the glassworks will be examined.

The intention from the outset has been that this whole study would be made freely available on the world-wide web. It is hoped that it will have achieved its purpose to illuminate as much as possible what has been done in, by and to the Nailsea Glassworks.

Acknowledgements with respect to the total project are given at the beginning of this introduction. The support, from busy professionals and amateurs alike has, in general, been very encouraging. It should be noted that the views expressed are those of the writer.

Where possible original documents have been sought out, in order to check secondary sources, but this has not always been feasible. As far as possible, if the information was not available about Nailsea itself, histories of other glassworks were examined for parallels, and a judgement made as to their applicability. It is hoped that the end result will have added something to our overall understanding of what happened at Nailsea. It has been written, hopefully, with the general reader in mind, as the specialists will undoubtedly know more than the writer. If something has not been clear to the writer he has sought an explanation – in any instances where this is not the case it will generally not be for the want of searching for an answer. There are still some details that are a puzzle, especially in the Old House Cone. It is to be hoped that one day someone will find the missing pieces of the jigsaw.

What became very clear was that the early part of the nineteenth century was an extremely vibrant time for the glass-making industry, even though it was in many respects hamstrung by Excise regulations, and handicapped by punitive duties. These do not always appear logical at this remove, some two hundred years later, but presumably they made sense to the legislators at the time.

It is vital that the reader remembers that all we have, in effect, are a few stills from a motion picture that ran, in the case of Nailsea, for eighty-five years. We have very limited cartographic and documentary evidence on which to draw, such limited company documentation as survived being destroyed in an air-raid in World War II, and the archaeology was, at times, with hindsight admittedly, not as well focussed as it might have been, possibly because there was no formal desk-top study commissioned at the outset.

It is very evident, when examining what evidence we have as well as the histories of some of the other glassworks that were broadly contemporary with Nailsea, that there was continual experimentation, often probably empirical: building, trying out; implementing if it worked, demolishing and trying another tack if it didn't. So, while we can make certain limited assumptions about the works based on the archaeology, we must not delude ourselves that we

can construct a reliable chronology of the structural forms of, and technologies employed in, the Nailsea Glassworks. While the cones themselves were probably a fairly constant part of the Nailsea skyline for some fifty years, before closure, what happened in and around them may only be surmised with some difficulty and less certainty. The result is a very broad-brushed canvas.

Readily available coal is commonly given as the reason for the glassworks coming to Nailsea. It is also suspected that Lucas maybe wanted to be away from Bristol to avoid industrial espionage. [It is interesting to note that despite this separation of the works from Bristol, there was still a significant staff in Bristol in 1836/7, and we have invoices issued from Bristol in 1846.] It is probable that there were attractions in a green-field site, but there were difficulties in the way with respect to extending enclosure on Nailsea Heath. It is regarded by the writer as significant that the proposed canal to Taunton from the River Avon, which would also connect to the south coast had an arm proposed not only right in to Nailsea, but right up to the glassworks, “to serve mines and works”². It was not merely proposed; the route had been surveyed and planned and the land had been bought by the Canal Company “for the purpose of a canal cut to the works”³. Although this was just after Lucas established himself at Nailsea, no doubt it would have been some time in gestation, and it is difficult to believe that it did not come in to his calculations. This would have given the Nailsea works a real edge, with ready, smooth waterborne transportation to transshipment, either to America and the colonies, but also to Ireland, and elsewhere in the UK. The export market was lucrative, as we shall see. If the land holdings of Lucas are any indication, he had his eye on Nailsea for some time in much the same way as some overseas companies view development areas in the UK now. He died, in 1828, a relatively wealthy man for his time, so there was probably not much wrong with his business acumen. We are told that on his death his estate was valued at £90,000.

The end of the glassworks seems to have been a bit protracted. The coal ran out, we are told, but there is a strong suspicion that there was not, in the later years the effective management that some competitors enjoyed. There was no strong family line such as sustained Pilkington, Chance and Hartley, which was probably why the capital investment was not adequate to ensure viability in a period of considerable change and development, coupled with increasing customer expectations as to product quality and price. The canal had not been built, because the railway arrived, but the railway was some way from the works. There was no question of a purpose-built branch line. It would appear that in the end Chance Brothers bought the works to keep it out of the hands of any competitor of theirs who might be prepared to make the necessary investment. This was admitted by Sir Hugh Chance in notes lent to R Vincent, who was writing a book about ‘Nailsea Glass’. They made a token effort to maintain its productivity, but closed it eventually.

1. THE FOUNDER AND HIS FAMILY

It is generally accepted that a Robert Lucas, originally from Worcestershire⁴, a ‘hooper’, or cooper, but obviously successful, moved to Bristol, ran a beer and cider works and had shares in a glassworks at Limekiln Lane, Bristol (see Part 1, p.6, Figure 1.3, and cover illustration, Part 4). He obviously saw the value in having an interest in a business (glass bottle making) that was directly relevant to his product. He was married to Elizabeth Butler, and they had four children who reached maturity: Ann, Mary, John Robert and Sarah.

² Lucas Papers - SRO DD/SB Box 11, Bundle 3, (vi) Abstract of Title of the Company of Proprietors of the Bridgwater and Taunton Canal to certain lands situate in Nailsea ...

³ *Ibid.*, 11/3 (i)

⁴ Thomas, 1987, gives Bromsgrove, while Chance, 1968, gives Hanbury

Robert Lucas died in 1774, aged 70. John Robert Lucas (born 18th December 1754, the eleventh of twelve children) succeeded to his father's business interests in 1775 as the only surviving son. His mother died in 1780, aged 64.

Ann married Henry Pater, Mary married Edward Homer and Sarah married William Chance.

The eldest surviving son of the latter couple, Robert Lucas Chance (born 8th October 1782) married a cousin, Louisa Homer, daughter of Mary and Edward. The Homer and Chance families, ironfactors of Birmingham, had become established social and business connections before the Lucas family moved to Bristol.

On 3rd September, 1781 John Robert married Anna Adams at Chelwood Church.



Figure 1: John Robert Lucas by W A Hobday

© Bristol Museums & Art Gallery

The Limekiln works produced bottles, as did that at Stanton Wick, an old-established glassworks south of Bristol. Lucas took a lease on the latter in 1787, following the bankruptcy of the previous operator, John Adams. It is not known if there was any relationship between Anna and John Adams, but her father, William, bought the freehold of Stanton Wick in 1815.⁵ [Lucas is described as surrendering the lease in 1815 (Buchanan & Cossons), or 1816, (Thomas). Bath & North East Somerset SMR BN2247 records that "The works existed from the late 17th Century until 1818 when fifteen local families of workers were transferred to

⁵ Thomas, 1987, p.2.

Nailsea to work at the parent company there. This reflects on Nailsea, but the detail has not been pursued.]

In 1788 Lucas took a lease on land at Nailsea Heath in order to establish a glassworks there. (Following his father's example, he was already in partnership with coal mining interests in Nailsea, and in due course this paid off handsomely.) In the meantime he was attempting to divest himself of his Bristol business connections, apart from warehousing in Nicholas Street⁶. [It is believed that this is now St Nicholas Street, in the City. The present Nicholas Street is on the edge of Knowle (SE Bristol). Of all the maps showing street names that are displayed in the Bristol City Museum only one, Matthew's *New and correct Plan* of 1815, gives 'Nicholas Street' in the city. Otherwise, from 1581 until 1780 and then from 1826 onwards it appears as 'St Nicholas Street'.] It seems that at this time he was in partnership with Pater and Coathupe, and started trading as "Nailsea Crown Glass and Glass Bottle Manufacturers". It would appear that Pater, a brother-in law, was principally a guarantor for loans taken out by Lucas, rather than an active partner.

In a transcript of a letter, dated 21st October 1958, Sir Hugh Chance writing to H St George Gray, states, " My uncle's Family History has a manuscript note that Lucas, Chance & Co owned the Elton, Miles Glassworks in Bristol in 1806, but he does not give his source of information." However, in his paper of July 1968, he notes from the private accounts of Chance and Homer 1771-1812 (Birmingham University Library), "the works in Bristol 'lately purchased of Elton, Miles and Co.' ." This has not been followed up, as not bearing directly on activities at Nailsea.

John and Anna Lucas had three children, but their eldest son, John, died in 1817, aged 33. A daughter, Louisa, had already died in 1807, aged 16. A second daughter, Emma, married Reginald Bean (died 1848, aged 51), and they had two sons, John Rodbard and Henry Lucas. J R Bean became Bean-Rodbard on inheriting property from an uncle.

Robert Lucas Chance, having been in his father's business in Birmingham, had, by 1810, shares in the works at Nailsea, and in 1811 came to manage them, and [as mentioned above] married Louisa on 7th May that year. He seems to have been a dynamic character; the frontispiece of J F Chance's book of 1919 shows a very handsome and lively looking individual. The story is told how, in 1812, he posted to Dumbarton and got James Hartley, regarded at the time as the Crown glass expert in the UK, out of bed, and brooking no argument haled him down to Nailsea. In 1815 he sold his shares and left Nailsea for London to become a glass merchant. In 1824 he bought a glassworks at Spon Lane, near Birmingham, and persuaded Hartley to join him there in 1827, on the expiry of Hartley's contract with Nailsea. It appears that this might have caused some ill-feeling in the family. He seems to have been known as Lucas Chance at Spon Lane.⁷

The following year, 1828, John Robert Lucas died on 15th July. The major part of his estate passed to his Bean grandsons, being held in trust by their father.

2. A CHRONOLOGY - VARIOUS TRADING TITLES, ETC.

The following chronology is derived from a number of sources: notes from *The story of our village*, 1980, in a folder "Nailsea Glassworks – History & Importance", held in archive at Weston-super-Mare Museum, three pages of typescript notes in the SMR 2397 papers (*NAILSEA GLASSWORKS after the death of J. R. Lucas.*, *NAILSEA GLASSWORKS DEEDS* and *HISTORY OF NAILSEA*

⁶ *Ibid.*, p.4. See Part 3:Technology, Appendix 4, last page: Wages to "other departments in Bristol" are almost $\frac{1}{6}$ of the weekly total.]

⁷ Chance, J F, 1919, p.2

GLASSWORKS) none of which have any date or attribution, “Notes on the Nailsea Glass Works, H St George Gray, *The Connoisseur*, March 1923, and notes on *John Robert Lucas* by B J Greenhill, held at the SRO, Thomas, M, *The Nailsea Glassworks*, and Chance, J F, 1919: *A History of the Firm of CHANCE BROTHERS & CO.* Where there have been occasional discrepancies a judgement has been made: for example, Gray had sight of some of the papers relating to the company, from Mr R B Bean, son of Henry Lucas Bean, while Chance had access to the Chance company archive.

1788: We have already seen how the company started as “**Nailsea Crown Glass and Glass Bottle Manufacturers**”.

1793: “**Lucas, Chance, Homer and Coathupe**

1807: Partnership renewed – capital of £60,000. “J. R. Lucas owned £33,000, William Chance and Edward Homer £8,500 each and William Coathupe £10,000. The property comprised the glasshouses at Nailsea and Stanton Wick; the counting and warehouses (leasehold) in Nicholas Street, Bristol; and the works in Bristol lately purchased of Elton, Miles and Co.”⁸ [The latter already mentioned above.] William Coathupe is described as “of the City of Bristol, Glass Manufacturer” and J R Lucas as “of Westbury College” [Westbury-on-Trym, Bristol] from an “Assignment of two several terms of 500 years & 1000 years”, dated 5th November 1817, identified as (xiv) in Box 14 of the Lucas Papers (SRO DD/SB).

1821: Expiry of the original partnership. W Chance sold his shares, and E Homer part of his, to William Coathupe. James Edward Homer, a son of Edward Homer was taken in to partnership. The firm then traded as “**Lucas, Coathupe and Homer**”. Edward Homer remained in partnership until his death in 1825, having retired from active business in 1807.

1833: Nailsea in the second rank of Crown houses and in the year to 5th January 1833 paid over £31,000 in Excise duty.

1835: Executors of J R Lucas (20) formed a partnership as “**Lucas, Coathupes, Homer and Cliffe**” with three Coathupes [William (5), C T (10), O (10)], J E Homer (10) and Thomas Cliffe (5) for nine years, until H L Bean came of age. Shareholdings in parentheses.

1844: Firm becomes “**Coathupes & Co.**”, partners (with holdings) being Charles Thornton Coathupe (£12,000), Oliver Coathupe (Bristol manager) (£12,000), J R Bean-Rodbard (£9,000), H L Bean (£9,000) and J E Homer (retired 1846) (£6,000)⁹. A billhead dated 20th February 1846 describes them as “Manufacturers of Crown Window Glass & Alcalis” (*sic*).

1848: C T Coathupe retired, Oliver Coathupe moved to Nailsea as works manager.

1854: A Richard Hadland and another took a lease for a few months. He had attempted to start production of rolled plate glass at Ecclestone, but this infringement of James Hartley’s patent was challenged. Hartley was for allowing him to proceed with manufacture at Nailsea, but this was not acceptable to the other licence holders.¹⁰

⁸ Chance, Sir H, 1968, End-note 9

⁹ *Ibid.*, End-note 20.

¹⁰ Chance, J F, 1919, pps.77-79

1855: Isaac White, [another White, James, (relationship not determined) had been in partnership with J R Lucas in coal mining in Nailsea] bought O Coathupe's shares. From the extant pattern sheet (see Figure 3.20, below) it would appear that the trading title was "**Isaac White & Company**" at the 'Nailsea, Crown, Sheet & Plate Glass Works, N^R Bristol.'

1857: J R Bean-Rodbard sold out to his brother, H L Bean.

1861: White could not make the works pay and they were shut down for a while.

1862: Early in this year the works were leased by Isaac White and Henry Lucas Bean to Samuel Bowen, glass merchant of West Bromwich, in partnership with John Powis of London. Now trading as "**Nailsea Glass Company**", and making patent ventilating glass, cut glass and coloured glass for stained glass windows the firm's notepaper was headed "The Nailsea Crown, Sheet and Plate Glass works." According to a reproduction of a newspaper item, dated Sept. 1862, on display at the Scotch Horn Centre, Nailsea, "an accident has occurred at the Nailsea Glass Works which will throw the workmen out of employ for at least three weeks to come. It appears that at the end of last week the crown of the furnace fell in, damaging a quantity of metals, &c., but fortunately without injuring anyone. The damage is stated to be considerable and the crown will have to be re-erected before work can resume." From Eyres' recollection it was that event that marked the end of crown glass manufacture at Nailsea.

1865: "**Nailsea & Stourbridge Glass Company**", around this time, or possibly slightly earlier.¹¹

1867: Nailsea freehold sold to Hartleys of Sunderland.¹²

1869: Bowen became bankrupt and he and Powis surrendered the lease.¹³

1870: May 19th, sold to Chance Bros. of Smethwick, Birmingham, for £14,000.¹⁴ This included the coal mine in the northern holding and a lease to work coal and clay.¹⁵

1873: Production ceased in May.

1874: "in March such workmen as remained were paid off and the works closed." However an interest was retained in the colliery until 1876.

Finally, "Although the works were stopped, the property remained first on the firm's hands, and then on those of its three senior partners, for a number of years. It was valued in April 1876 at £3250; thirteen acres of land at £750, the house at £500, thirty-four cottages at £2000. Morgan [the former colliery manager] was paid £1 a week for collecting the rents of these and for looking after the buildings and remaining plant. In 1885 Forster found all in good order and all the cottages but two occupied. By a conveyance dated 9th May 1889, John Chance took over sole ownership and before long sold the property."¹⁶ This was presumably at the auction advertised on 25th July 1889, after which the whole property was sold by Chance to Samuel Davis in a conveyance dated 14th October 1889. On the death of Samuel Davis "the land and

¹¹ Note in Scotch Horn Display, Nailsea; Eyres, J M, Extract from Autobiography; see Part 3 Fig. 3.18, for labelled glass sample

¹² Chance, J F, 1919, p.106

¹³ *Ibid.*

¹⁴ *Ibid.*

¹⁵ Chance, Sir H, 1968, p.35.

¹⁶ Chance J F, 1919, pps. 108-9

hereditaments known as Nailsea Glassworks” was sold by his trustees to Joseph James in October 1905.

CONCLUSION

It may seem a little strange to have a ‘Conclusion’ in, or to, the ‘Introduction’, but the modular form of the Study seems to make this the logical place to put it. The whole exercise has been, for the writer at least, a fascinating experience, the more so as it was not something that was ever envisaged as coming in to my remit. I am certain that there may be further information concealed out there, but time, with which Andrew Young has already been most generous and understanding, will not allow further work. At times it has felt like trying to unravel a tangled skein of wool, with several loose ends all demanding investigation, and it has at times been difficult to decide which were the important ones.

Glass is such a ubiquitous material, of great use and convenience to man [unless you stumble on it inadvertently in its broken form], and its use predates that of iron. The period of existence of the works at Nailsea was an insignificant time span compared with that of the history of glass, but it was of significance in its time to a lot of unknown and unrecorded people as well as to those who are known and recorded. For whatever reason Nailsea will for long be associated with the forms known as ‘Nailsea Glass’. It is only to be hoped, therefore, that the reader will find in this study something of interest, and maybe something new that encourages him or her to explore the subject further, be it through the archaeology, the technology, or whatever.

The conclusion may be best expressed in the closing words of the National Trust sheet associated with the display of ‘Nailsea Glass’ at Clevedon Court. Referring to the Nailsea Glassworks it states, “their remains might well have been regarded as eminently worthy of preservation in the Industrial Archaeology of England.” With which sentiment the present writer is in full accord.

BIBLIOGRAPHY

- Chance, Sir H, July 1968: *The Nailsea glassworks*, Paper read to the 8th International Congress on Glass – Studies in Glass History and Design, London, [By courtesy of the Society of Glass Technologists]
- Chance, J F, 1919: *A History of the Firm of CHANCE BROTHERS & CO. Glass and Alkali Manufacturers*, Printed for private circulation, Spottiswood, Ballantyne & Co, London
- Eyres, J M , Extracts from Autobiography. Origin and date unknown, but partial copy in SMR 2397 Folder E
- St George Gray , H: “Notes on the Nailsea Glass Works”, *The Connoisseur*, March 1923
- Greenhill, B J, 1975: *John Robert Lucas*, SRO PAM 947
- SRO DD/SB Boxes 10 – 14: Lucas papers – largely covering the estate settlement of J R Lucas following his death in 1828, but worth perusing. Some too fragile or too tightly bound to risk opening.
- Thomas, M, 1987: *The Nailsea Glassworks*, Thomas, H G and Thomas, M A, Bristol.