FRAM

The Journal of The Framlingham & District Local History & Preservation Society

Number 15



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5th Series Number 15 April 2010

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> Heir of Antiquity! - fair castle Town, Rare spot of beauty, grandeur, and renown, Seat of East-Anglian kings! - proud child of fame, Hallowed by time, illustrious Framlinghame!

> > From: *Framlingham: a Narrative of the Castle,* by James Bird (1831)

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FRAM

5th Series Number 15 April 2010

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Editor: M. V. Roberts, 43 College Road, Framlingham

This issue of *Fram* includes the first of a series of articles comprised of extracts published in the *Framlingham Weekly News* from December 1893 to May 1894. We are greatly indebted to Society member and long-established historian of Framlingham John Bridges for providing these items for reprinting here; my only regret is that for technical reasons it is impracticable to reproduce the extracts in facsimile.

John has provided an introduction to the first extract giving the context and provenance of these items, but I would now like to share a few thoughts about their historiographic significance for English local history studies.

The Victorian and Edwardian periods were a golden age for the foundation of local history societies at county level. Interestingly, the societies usually eschew the phrase "local history" from their official titles: "antiquarian", "archaeological", and even "natural history" are more normally part of their names. During this time most of the county record societies also began their invaluable role reprinting texts relating to their geographical area (though interestingly it was 1929 before the national body, the British Records Society, was founded). A brief but very useful account of this aspect appears in the latest issue of *Local History News* (no. 94 Winter 2010 p. 9). At a more local level, towards the end of that time a few societies concerned with areas now comprised by London boroughs began to flourish, as did a number of provincial societies at major town and city level.

One broad generalization may perhaps be made about all these foundations: their membership was principally composed of middle and upper class antiquarians, who would also have been responsible for and readers of the items appearing in their respective publications. The creators of the latter would generally have been committed amateurs; it was many years later that, most notably, Leicester University established local history as an acceptable academic discipline.

In the latter part of the twentieth century, the social profile and geographical areas of interest in local history have developed exponentially. Our own Framlingham and District Local History and Preservation Society began life quite early on in this process, in 1956. Innumerable societies providing meetings, visits, and publications (monograph and serial) have sprung up since then, not just at town but at small village level. Local history has become democratised, and every modern local newspaper includes extracts of news items appearing in the newspaper concerned many years before. Indeed, our own sub-regional paper, the *East Anglian Daily Times*, regularly devotes two whole pages to "Flashback", not only incorporating photographs from earlier times, but also inviting and printing inputs from readers on the people and scenes depicted.

All of this provides a fascinating context to the series of extracts to be provided in successive issues of this journal, thanks to John Bridges.

The Framlingham Weekly News was a "mass-circulation" weekly newspaper, in a local context. One can be reasonably confident that much the greater part of the population of

Framlingham and the surrounding villages would have read (even if not always actually bought) most, if not all, of its weekly issues. Like many local papers of the period, the *Framlingham Weekly News* was able to allot only limited space for very local news items. Its front page comprised mainly advertisements, while the centre fold gave national news brought down from London in sheets by the railway. Only the back page was entirely devoted to local news.

This is what I feel to be significant about the series of historical extracts to be reprinted in *Fram*. Perhaps the original articles might be regarded as being used as fillers in no-news weeks. On the other hand, cumulatively they were occupying a significant number of column inches out of the limited amount available for local news, and there was the commitment to continue publishing the articles as a series over a defined period on the part of the newspaper's publisher, Robert Lambert.

What may this tell us about local attitudes to the town's local history at the time when the articles were originally published? In a small town such as Framlingham with a population not much less numerically than we have today, a newspaper's continued survival depended upon the ongoing support of the whole social range of its readers. That the proprietor of the *Framlingham Weekly News* chose to publish this series of articles demonstrates, I feel, that here in Framlingham, an interest in and commitment to the history of the town and its immediate area was not the preserve of leisured antiquarians, but engaged a much wider social constituency at this comparatively early period.

I wonder if this was the case elsewhere in East Anglia.

Our last issue's editorial paid tribute to Muriel Kilvert, lately deceased, and all that she achieved for the local history of Framlingham and its surrounding area.

Mention must now be made of the late John Symonds, formerly of Well Close Square. Although not recently a member of our Society, John did yeoman service at the town's museum, the Lanman at Framlingham Castle, keeping the display area clean and tidy, changing light-bulbs and tubes, and helping wherever needed when individual displays needed to be changed or replaced.

He was a loyal supporter of this town's heritage, and will be sadly missed.

There is one particular source of reference that has been of immense value to me when researching information on the town in the nineteenth century. It was back in about 1974 that Harold Lanman lent me a scrapbook that had passed into his hands many years before. This turned out to contain a series of newspaper cuttings from the Framlingham Weekly News, starting in December 1893, and continuing each week until the final part in May 1894. The series of articles were entitled "Framlingham Sixty Five Years Ago". I made a photocopy of the cuttings, which although mainly complete, were not always in chronological order, and not that easy to read.

The basis of these articles originated from an old county directory that had been given to the newspaper. This was the 1830 edition of Pigot and Co's National Commercial Directory; Comprising a Directory and Classification Of The Merchants, Bankers, Professional Gentlemen, Manufacturers and Traders Of Norfolk And Suffolk.

The newspaper provided, in many cases, further comment on the original entries along with developments over the ensuing years, bringing the readers up to date with the situation in 1894.

Over the years I have found this to be an invaluable reference, but as with any document, you need to be wary about accepting everything at face value. Bear in mind that Robert Lambert, the proprietor of the paper, was not born until 1835, so he would have been dependent on the memories of other people.

The information in the articles will be published over several issues of the Journal. Some aspects are more interesting than others, but all will be included as they form an important resource, which up to now has not been easily accessible. Previously, it would have been necessary to visit the Record Office in Ipswich and transcribe the information from the microfilm copy, a task not to be undertaken lightly.

John Bridges

OLD FRAMLINGHAM

With the closing of the year we beg to congratulate our subscribers upon the long and amicable relations existing between us. We are able to look back upon a period of 34 years since the first issue of our paper appeared. During those years many and varied have the changes been in the social life of the town. The leading men of that day have since gone to their reward; and the younger – then comparatively untried men – have become "old stagers" in Framlingham life. We have yet one old tradesman of the long ago left to us as a kind of connecting link with the past, in the person of MR CHAS WATERS, cooper, who still in his great and advanced age amuses himself in putting a new hoop around a keeler, or a new bottom into a pail. With him also MR E LANKESTER, wine and spirit merchant, MR S W WRIGHT, musician, and MR J WALLER, carpenter, belong to the past.

Nearly all the businesses of the town have changed hands since the first copy of the *Framlingham Weekly News* was given forth to the town; in fact, some of the prominent families have either died out or removed to other localities. All the public houses have been transferred to others except the White Horse Inn, which has come down to the son.

We have just had placed in our hands a copy of a Directory for Framlingham (Piggot & Co's) some 64 years since, which recalls to us what great changes have taken place in the old town. Among the number found under the heading of "Nobility, Gentry, Clergy" we find the following:

Barlee, Rev. Charles Davies, Rev. Edward Esdailie, Rev. John Ling, Mrs Frances Pain, William Standford, John Warner, Henry Wyatt, Mrs Ann Chaston, Mrs Mary Ann Edwards, John Hindes, Mrs Miall, Rev. James Pierson [*sic i.e.* Peirson *ed.*] Jasper Toms, Rev. Samuel Say Warner, Mrs Mary

The REV. C. BARLEE was for several years prayer reader at the Church under Sir Robert Hitcham's will, succeeded in 1831 by the Rev. J. Darby. He was a magistrate for Framlingham and Yarmouth. The Barlees are a family now entirely unconnected with the town and neighbourhood. They sprang

from the vicinity of Bungay. The Rev. Edward Barlee was rector of Worlingworth for many years, and had a large family grow up around him, one of the daughters becoming an author of some note on religious subjects.

MRS MARY ANN CHASTON - Can any of our readers furnish any particulars?

REV. EDWARD DAVIES was curate for the Rev. J. Norcross, an absentee rector, and upon him devolved the rectorial duties, who died in 1831. He married a Miss Brady, of Hollesley, by whom he had a son and daughter.

JOHN EDWARDS carried on the business of a tanner on the premises now occupied by Mrs Revett. The family originally dwelt at Dennington Hall. He resided in the house now occupied by Mrs. Webber. His wife was the eldest daughter of Nathaniel Clubbe, gent. She died at the early age of 21 years. He died from drowning at Aldeburgh. His second wife was a Miss Bloomfield, of Great Glemham, and she long survived her husband and died at "The Haynings".

REV. JOHN ESDAILIE was co-pastor with the Rev. Samuel Say Toms at the Unitarian Meeting House in 1829, and succeeded on the retirement of Mr Toms to the pastorate. He married a Miss Woolnough, daughter of John Woolnough.

MRS FRANCES LING came into the town from Badingham Bridge Farm and occupied the house now belonging to Mr Gleed, and was grandmother to Mr J. Ling, Braiseworth Hall, Tannington.

REV. J. G. MIALL was minister of the Congregational Chapel from 1826 to 1832. He lived at the house now occupied by Mr R Whitehead, and was brother to the late Edward Miall, Esq., of Ecclesiastical renown.

WILLIAM PAIN – His tombstone stands enclosed by iron palisading just on the right hand of the entrance to the church porch. He was at one time landlord of the Crown Hotel, assessor of taxes, and postmaster.

JASPER PEIRSON was father to the late John Peirson, Esq., of Broadwater, and late Goodwyn Goodwyn, Esq., and was captain over the old Volunteers of that early date. The family is now disconnected with the town, the last link being severed recently when Mrs Goodwyn Goodwyn passed to her rest. The Peirson family were deservedly much honoured in the town, as to John Peirson, Esq., the town certainly owes gratitude for the fact of being connected with the Great Eastern Railway. Mr. Peirson's efforts were so indefatigable and highly appreciated at the time that we believe we are right in stating that £1,000 were raised by subscription and handsome silver salvers and other centre pieces were presented to him as a token of their esteem and thanks. Jasper married a sister of Mr John Edwards, the tanner.

JOHN STANFORD was, we are informed, father to the late Wingfield Alexander Stanford, of Badingham, grandfather to the present W A Stanford Esq. He was a Major in the old Volunteers, and resided at the house now occupied by Dr. Drew.

REV. SAMUEL SAY TOMS, as previously noted, was minister of the Old Meeting House from 1773 to 1829 and it was during his ministry, we have heard it stated, that he espoused Unitarian ideas, his congregation mainly accepting them from his teaching.

HENRY WARNER was an independent gentleman, a bachelor, and resided at Mills' Tomb House.

MRS MARY WARNER, widow of Mr Warner of Broadwater. She resided at the Guildhall and died there.

MRS ANN WYATT resided next to Guildhall, was widow of the rector of Framlingham, and sister of the Rev. J. Hindes Groome of Earl Soham Her husband was instituted rector in 1782, and died 1813. He was interred in a vault under the altar in the church.

(Published 30 December 1893)

FRAMLINGHAM SIXTY-FIVE YEARS AGO

In resuming the consideration of Pigot & Co's Directory of 65 years ago, we would note the remarkable steady balance which has existed in the number of the inhabitants of the town. The return in 1821 gave 2,327 inhabitants; in 1891 the numbers were 2,525, including the College pupils and staff.

At the date of the publication of the said Directory, we learn that the Post Office was then held at the Crown Inn and SAMUEL WORDLEY BLOSS was postmaster and landlord. He afterwards removed to the Crown and Anchor Hotel in 1832-3.

There were then five other Inns; viz: - Hare and Hounds, James Aldridge; Queen's Head, James Coots; Waggon and Horses, Francis Bilney; White Hart, Melicent Thompson; White Horse, John Oakley. The Farrier's Arms, the Castle Brewery; Railway Inn, and Station Hotel are therefore all increases in this particular trade.

Our readers will notice that there was not at that time an house of the sign of the Crown and Anchor as now. But we understand that when Mr. Geo. Brooke Keer, brewer &c was sold off with his brewery and 21 public-houses in 1832 (of which we shall have somewhat to say later on), the White Hart Inn was purchased by Mr. Cobbold, of Ipswich, and he gave Mrs. Melicent Thompson, the then landlady, notice to quit, and also changed the sign of the house to the Crown and Anchor, by which it has been known ever since. Mr. Abraham Thompson, a builder in the town, son of the landlady, felt somewhat annoyed at Mr. Cobbold's treatment of his mother, and he purchased a portion of the malt office adjoining the new-named public, and erected the house now occupied by Mr. R. Green, hairdresser, and christened it with the discarded name of the "White Hart Inn". A considerable amount of liquour must have been imbibed if all the bricks along the front bearing the initials of those who laid them, represented a half-crown a piece.

At the death of Mr. Thompson this opposition house was purchased by Mr. Cobbold, and has been used otherwise than a public house ever since. The lane to the stables is still called by the older people "The White Hart Lane", whilst the younger give the honour to "Crown and Anchor Lane".

It is curious that none of the foregoing innkeepers left much posterity to the town. John Oakley, who in after years removed from the White Horse Inn to the Crown Hotel, was rate collector for some years for the parish. He had two sons (William and Robert), and a daughter who married Mr Butcher, but none of them left any issue. William Oakley will be remembered by many of the present inhabitants as being rather proud of his knowledge of the law. There are no descendants of either Coots, Aldridge, or Thompson in the town.

MR. S. BLOSS married the widow of John Grinling (her maiden name was Ellis and she was fond of paint and powder to her latest day). Mr. Grinling was drowned in 1826 whilst bathing in a clay pit on the Great Lodge Farm, the pond going by his name to this day as "Grinlings". Mr. Bloss left no issue, and the name has since died out in the town.

MR. FRANCIS BILNEY kept the "Waggon and Horses Inn", which is the house now occupied by Mr. Plant Wolton, whose father took it in 1860, since when he purchased it and the licence has been dropped. Mr. Bilney was also a butcher as well as innkeeper. It was his custom to drive to Norwich Market and back the same day, week after week. He was considered to be an excellent judge of beasts and wool. He rose from a humble station in life, and in his successful business days he could neither read nor write; but he was marvellously quick at figures. Mr. Bilney was boy at Mr. Folkard's, butcher, who carried on business on the premises now occupied by Mrs. Robins, in Church Street. He has left no issue. The Waggon and Horses Inn was never a house for kitchen or tap-room company. Neither the late Mr. Bilney nor his wife would favour any loitering: you had to drink your half-pint and be gone! But in the halcyon days of farming there used to be weekly (Tuesday) gatherings of the well-to-do farmers of Badingham, Parham, Cransford, Glemham, and neighbourhood – parlour company – who would spend a whole afternoon in chit-chat, freely intermixed with spirits or wine, imbibed during rounds of games at cards, protracted far into the night. All this company have since gone over to the great majority.

The "Professional Persons" returned are: Clubbe, Charles, attorney; Edwards, William, attorney; Jeaffreson, William, surgeon; and Wilson, John, surgeon.

MR. C. CLUBBE was the son of Nathaniel Clubbe, Esq., attorney. He was born in 1787, and was baptized within three days of his birth, as it was feared by his parents he would not live; but he reached the good age of 89 years. He was articled to his father and was admitted an attorney in the Queen's Bench, in Easter Term, 1806. He married Miss Wyatt, daughter of the rector, by whom he had two daughters, but she died about 1840. He erected the commanding residence now occupied by G. O. Edwards, Esq., in Church Street; but he removed from there to the residence now held by Mrs. Webber on the Market Hill. Ultimately he purchased the house now occupied by F. G. Ling, Esq., solicitor, where he for many years had a successful practise, filling the position as clerk to the

Magistrates from the period of his admission, and was Registrar of the County Court. He died in 1876. One daughter survives him.

MR. W. EDWARDS originally occupied the house now owned and held by Mr. B. Norman; but when Mr. Clubbe removed to the Market Hill, he purchased the premises now held by the family in Church Street, and there he carried on his profession for very many years, and was a leading "light" in the town. At his death two of his sons continued the practise; but ultimately it was allowed to drop, they having a business in London of a larger and more lucrative character. His widow only died some six years since, aged 90 years. He was one of the best employers of labour in the town; and was the leading moving spirit in introducing gas into the town. He was a man for educating the poor, and took great interest in the British School, which was held in the large building now used as a warehouse by Mr. Rodwell in Double Street. He presided at the first anniversary of the Star of the East Lodge of Oddfellows, from which date the Society went on by leaps and bounds. He was a Liberal, and a Churchwarden for many years. In fact, the family of Edwards's moulded the political thought and action of the town, the influence of which has not passed away to this day. He had a large family of sons and daughters, many of whom have passed to their rest. The only male representative in the town is in the person of George Octavius Edwards, Esq.

MR. WM. JEAFFRESON, father of the present G. E. Jeaffreson, Esq., commenced his practise in Double Street, at the residence now owned by Mr. Rodwell. Thence he removed to the house now occupied by F. G. Ling, Esq. But at the death of Mr. R. Bloss, butcher, he purchased the premises and enlarged and heightened the house now occupied by his son, on the Market Hill. Beneath this roof a large and highly-gifted family were brought up, their mother being sister to Charles, George and William Edwards, Esqrs. John Cordy Jeaffreson, elder son, became a barrister, and is an author of considerable repute. Geo. E. Jeaffreson and Horace Jeaffreson both followed in the footsteps of their honoured father, and adopted the medical profession. The daughters – six in number – mostly reside at Brighton, and none have married. Two have died – one at Brighton and one at Jerusalem. Mr. Francis Read has a well executed water colored drawing of the Market Hill, showing its features in 1820, and the house of Robert Bloss as it then stood.

JOHN KINNELL practised as a surgeon in the house now occupied by Mr. Rodwell, Double Street, where he died. He left no issue. His widow lived and died in the house now occupied by Mr. E. Lankester.

JOHN WILSON commenced practise in the house now occupied by Mrs. Cockinge, Church Street. He used to walk to his patients, then rode horseback, and ultimately in a trap. He removed to the Hermitage, and then purchased and lived at The Limes, now occupied by Dr. Vernon. The only one now bearing the name in the town is a widow of the eldest son, John Wilson. A daughter resides at Aspall. Mr. Wilson was a special favourite with the poor people. His practise was taken over by the late Mr. Geo. Jones, and is now in the hands of Dr. Drew.

From the foregoing we see that the number of medical men is maintained; whilst Mr. F. G. Ling is now the solitary representative of the law practising in the town.

The Bankers in the town were then Messrs. Gurneys, Turner, Brighton and Lloyd, the agents being Messrs. Charles and George Edwards. The Norfolk and Norwich Joint Stock Banking Company, Mr. Manning Keer, agent. In this profession also there is a falling off, Messrs. Gurney being now the only firm.

The business of a tanner carried on by Mr. Edwards (as noted last week), employed several hands, but was dropped at his untimely decease. The fish-pond near the cottage supplied the tan pits with water, and the premises now occupied by Mr. Button, miller, was also used in the trade, which was a large one in its day. This is an industry lost to the town. The mill house was added to and converted into a residence by Mrs. Edwards, the widow, where she resided for a time, and afterwards the Misses Oseland carried on a lady's boarding school for many years; and one of them subsequently married one of Mr. Barlee's sons from Worlingworth. The tannery plant was bought by Mr. Bond, and removed to Woodbridge.

[Mrs. MARY CHASTON, referred to last week, we are informed, was grandmother to the present Coroner, C. C. Chaston, Esq.]

(Published 6 January 1894)

AN INVESTIGATION OF GAS PRODUCTION IN THE NINETEENTH CENTURY, WITH PARTICULAR REFERENCE TO EAST SUFFOLK

By Tony Broster

Gas was the first service after water to be available piped from a central production to all buildings within a city, town and even larger villages. Town gas or coal gas was first publicised at the end of the eighteenth century. Its use for lighting was publicised at the same time. The commercial production of town gas did not start until the early nineteenth century. The essential raw material for the production of the gas was coal or on occasions coke. The main problem with this was the cost of transport, when for places away from ports or navigable rivers, the cost of a ton of coal doubled. This may be why the first gas works were in such places as London, on the Thames, and in Suffolk, Ipswich on the Orwell. In this paper it is intended to discuss the gas production in central and eastern Suffolk, relating it to the national position, including that of London. It is intended to cover how the gas was produced, where the gas was produced, the control of the production, the use to which the gas was put, and the figures arising.

How the gas was produced and distributed.

The first records concerning gas were made as early as 1688 by the Reverend John Clayton D.D., FRS, later Dean of Kildare¹. He had been told of a flooded ditch "wherein the Water would seemingly burn like Brandy"². His investigation of this found a "shelly" coal seam under the ditch. He took samples to his laboratory there he heated them in a retort over an open fire, where he found a black liquid tar. The gas was then amassed in a bladder, in which he was able to store it. His experiments appeared to have gone no further than pricking a pin hole in the bladders and setting fire to the escaping gas, which produced a bright light. He reported these findings to the Honourable Robert Boyle in 1688. This paper was lodged with Boyle's at the Royal Society, and nothing more happened except the paper was published in the *Philosophical Transactions of the Royal Society* in 1740. In 1760 a pilot gas plant built by George Dixon to make "illuminating gas" was abandoned after an explosion.³

The real founder of the British gas industry was William Murdoch, a Scottish engineer who was working for Boulton and Watt as the firm's representative in Cornwall in respect of steam-powered water pumps for draining the tin mines. In 1792^4 Murdoch experimented in his house and garden at Redruth; this was to establish how "a viable plant could be constructed and operated to make, store, distribute and use coal gas as an illuminant."⁵ Murdoch's ideas were not really taken on by Boulton and Watt, but they did illuminate their works in Soho and soon went on to illuminate the Manchester cotton mill of Philips and Lee, with 904 gas lights. This was the beginning of a flood but there was a problem in that Boulton and Watt had not taken out a patent on the work of William Murdoch. However in those first years they did sell some £3,105/11s/-d of goods to Philips and Lee and made a profit of £617/9s/-d from this, and in the years 1806 to 1811 they sold £11,448/3s/5½d worth of apparatus and made £2,357/3s/3½d⁶ profit. This was their peak and soon competition caused a significant drop in sales and margins.

The year 1812 saw the foundation of the first gas company, the London Gaslight and Coke Company, established by royal charter. Four years later came the earliest provincial companies, in Preston and Liverpool, and there followed a rapid extension of the industry to most major towns by the mid 1820's.⁷

It could be that the opening of the Woodbridge Gasworks as reported by Whites *Directory 1855*⁸ as in 1815 was wrong, although earlier Whites also quoted the same date⁹ "and lighted from the gas works established in 1815 at the cost of about £6,000 and now belonging to six shareholders."¹⁰ It could be that the gasworks started as a unlimited liability partnership and did not become a limited company until later. The 1855 Whites *Directory of Suffolk* refers to Woodbridge Gas Light & Coke Co Ltd, The Quay, Woodbridge and it may be that the records M. E. Falkus had access to were only the Parliamentary ones, with no reference to the unincorporated organisation. Further investigation of the date of the opening of the gasworks has revealed that the first quarter that they are recorded as

paying poor rate was to August 1845 when $\pounds 3/11s/8d$ rates were paid for the quarter. There was nothing in any of the earlier four quarters. The Lighting Inspections rate book to 18^{th} May 1852 revealed that the gasworks paid $\pounds 1/17s/7\frac{1}{2}d$ lighting rates for the quarter.¹¹

Soon however Boulton and Watt had competition. A foreigner called Winzler (later Winsor) proposed a universal gas-lighting company authorised under the "Gas Light and Coke Company Bill" of 1809. The development of Town Gas as a lighting fuel now took place on a gradual basis until it was replaced in Britain by Natural Gas from the North Sea in the mid to late twentieth century. The chief problems were the nature of the processes used to obtain the gas from coal. There were two: the gasification, and the carbonisation systems, the latter soon predominated in Britain. The type of coal was important as for lighting purposes an impure gas was sought that burnt with a yellow flame; this was best obtained from bitumastic coals.

The early gas retorts were horizontal tubes about twelve inches in diameter which were charged (filled with coal) and having given off the gas, discharged (the coke removed) by hand through an iron door at one end called the mouthpiece. It was slow, dirty back breaking work.

These retorts were made of iron and distorted badly with prolonged heating. Fire clay retorts with iron lids were introduced around 1822 and the through retort (charged at one end, discharged from the other) was developed by George Lowe in 1831.¹²

The size of the brick-built buildings holding the retorts varied usually with the quantity of gas required. The brick linings had to be replaced every two or three years, until better quality bricks were available. "Automatic stoking machines were first used in 1868, and gravity fed, inclined retorts were developed by Andre Coze of Reims in 1885".¹³ Further major improvements to gas production did not happen until the twentieth century.

Other problems were the transmission of the gas, and its storage, (if this was required). Cast iron pipes were used throughout the nineteenth century; at the start surplus musket barrels were used, but these caused a problem with their short lengths (27" to 46") and the subsequent frequent joins. Their bore was $\frac{3}{4}$ " which was not adequate when demand increased, the quality improved over the years, and the question of their diameters to maintain pressure was quickly resolved. The storage of the gas was a problem; and therefore the first gas works produced gas for direct consumption. This was not very efficient and storage tanks were quickly introduced. The earliest tanks were rigid and waterless, with no external indication of expansion or contraction.

Some feared that gas in holders was unsafe. In order to show that such fears were unfounded, Samuel Clegg, in 1814 took a workman's pick and punched a hole in the side of a gasholder and lit the escaping gas. As Clegg knew, gas will not explode unless it is mixed with air in the right proportions.¹⁴

The telescoping types which were used in Britain until 1983 using the manometric property of water to provide water seal. There were two other types; the earlier one had external frames to hold the tanks. These tanks were invented by Tate in 1824. The later ones had a spiral guide with each lift (moving tank) rotating as it rose or fell. Telescopic gasholders had a great advantage over any other method of storage in that they were able to maintain a constant pressure on the system, unless like the author you live in the last house on the North Thames Gas Board's main¹⁵. Another important development was the invention of the gas meter which meant that gas was sold on a consumed basis rather than a fixed quarterly or annual price, (their introduction must have been like the introduction of domestic water meters in the last twenty years, good for small consumers bad for large ones). The meter was developed by Samuel Clegg in 1817 (Clegg was William Murdoch's assistant at the time)¹⁶; while the prepayment meter was not developed until 1870, the date of the patent by T S Lacey.

Where in Suffolk the gas works were,

There were many gas works constructed in Suffolk during the nineteenth century. The town of Ipswich was believed to have had the first and the records first mention this in 1828¹⁷. However Whites *Directory* of 1844 states that Woodbridge gasworks started in 1815, even before the early London gasworks while the last to be built was that of Felixstowe which was constructed in 1884¹⁸. There are at least two theories as to when and why gas works were built. As can be seen from figure 1 below the bigger towns, Ipswich and Lowestoft were the first to do so. They also had the advantage of

being ports and therefore coal was cheaper. (Records show that in Framlingham the cost of coal was 14s/6d a ton at Woodbridge and 20s/6d at Framlingham). Towns that acquired gas works in the 1830s were largely connected to the sea by rivers or navigations, Beccles and Bungay both on the River Waveney, Halesworth on the River Blyth Navigation, Stowmarket and Needham Market on the Gipping Navigation. The size (population) of the town is important, but then Bungay with only a population of 1,689 in 1851 had obtained its gas works, probably because its neighbour and rival was building one. The towns that acquired gas works in the 1840s largely acquired them as a result of neighbours who would be in competition for trade doing so. They all wanted to be rivals in their own way to places like Ipswich. By the 1860s with the advent of most of the railway lines in the county, coal became cheaper and it was more economical to have gas lighting, and certainly the light was brighter than that provided by oil lamps or candles. The first mill or factory had been illuminated by gas in 1806, the Manchester cotton mill of Philips and Lee, and Pall Mall in London, in 1807, by gas supplied by Frederick Windsor.¹⁹

Town	Population 1851	Mentioned	Suffolk Record Office Reference
Aldeburgh	1,627	1858	EE1/P1/5/
Beccles	4,398	1837	White's Directory 1892
Bungay	1,689	1837	186/H2/1
Eye	2,587	1850	White's Directory 1892
Felixstowe	691	1884	White's Directory 1892
Framlingham	2,450	1847	IH1/6/1
Halesworth	2,262	1837	IH1/7/1
Ipswich	32,759	1821	HA2/H2
Leiston	1,580	1851	HC30/E1
Lowestoft	6,781	1837	White's Directory 1892
Needham Market	1,148	1847	IH400/2/1
Saxmundham	1,180	1848	White's Directory 1892
Southwold	Not reported	1848	White's Directory 1892
Stowmarket	3,404	1837	IH1/10/1
Wickham Market	1,697	1867	White's Directory 1892
Woodbridge	5161	1815	White's Directory 1892

Table 1 Suffolk towns, showing population 1851 and earliest record of gasworks

Suffolk County Record Office (SCRO) and http://www.visionofbritain.org.uk/census/ (Accessed 21 November 2008)

Table 1 shows the towns of Central / East Suffolk for which there is some record of a Gas Works either directly or via the various trade directories.

As can be seen in Figure 1 almost every town in East Suffolk had a Gas Works by the end of the nineteenth century, and those that did not were small towns, with populations of less than one thousand.

The exact locality of the gas works in each town is not always easy to establish. There are Ordnance Survey plans of towns showing some of these, trade directories often give their addresses as "Gas Street" and this name has now disappeared from most towns as it is suspected people don't seem to mind living in "Station Road" but do in "Gas Street". Some were placed near the railway, others near the harbour, still others down wind of the town centre. Towns like Leiston and Wickham Market, where a local industrial unit had sold gas surplus to their requirements to the town had no choice, the gas works were part of the existing facilities. The position of Saxmundham Gas Works is shown in figure 2. This is west of the town centre, but in an area that is being developed for tenanted property, adjacent to the railway which was not opened until 1862.



http://www.eastanglia24.co.uk/suffolk/ (Accessed 12 January 2009) Purple dots show towns with gasworks recorded

Then there are the exceptions to all the rules, those gasworks which were created by local industries to provide light for their workers. There were two such gasworks in east Suffolk, one at Leiston, which used the gas from Richard Garrett and Sons Ltd works.²⁰ Also from the records it appears that the gasworks was taken over by a separate company, but this may have been a part of Garrett's empire as no financial records are to be found at the Record Office. The other town which was supplied in the same way was Wickham Market, where the factory of Whitmore & Binyon engineers and millwrights supplied the gas. The only reference to this in the record office is the Lighting Inspectors records and the fact that even today there is a "Gas Alley" in the town, leading to part of the company's workshop site.²¹

There is an old plan showing the position of the gas works in Lowestoft based upon the Ordnance Survey map of 1904^{22} . The Gas works here were situated on Lowestoft Ness just South of Ness Point, not far from the Sewage Outlet. Surprisingly enough the street is still known as Gas Works Street, and there is still what appears to be a gasometer there. This area of Lowestoft is industrial and this is why the name Gas Works Street remains.



Figure 2 Location of Saxmundham gasworks

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Saxmundham Museum - Flick & Son sale plan 1881



Robb, Ian, G., Lowestoft A History & Celebration, Salisbury, 2005

The site of the Gas Works in Framlingham had been on the market for several years, and is in College Road, just down hill from Framlingham College. Access to this was not good in respect of transporting coal, even after the railway was opened. The main reason for the building of the gas works here was the availability of the land near the town centre, and not the building of the College about four-hundred metres away, which was completed fifteen years later in April 1865²³, although the College proved to be a major customer. The gas company even installed and supplied gas for lights on the entrance gate at no charge, and at least by this time (from 1st June 1859) coal only had to be carted from the railway station in Framlingham, no longer from the Quay in Woodbridge.

Figure 4 College Road, Framlingham. Site of gasworks



Field work on 31st July 2008 photograph by author

The gasworks at Stowmarket is situated between the Gipping (river or navigation) and the railway, an ideal site in many ways to enable reasonable carriage costs. It must be realised that the gasworks were opened in 1837 but the railway from Ipswich to Bury St Edmunds was not opened until December 1846, nine years later, so the railway was not the explanation for the location of the works, but it is expected that the most logical place to build any railway, proposals for which had been made by 1837, (the railway mania) would have been adjacent to the river as this offered a level location. The Gipping Navigation would have been used to transport the coal from Ipswich until the railway opened. The Halesworth gasworks was situated on the Norwich Road, and the author is told by the curator of the Halesworth Museum that it is still possible to see burn or at least black marks on the wall that still remains. The site on Norwich Road being about 100 metres from the railway or 200 metres from Halesworth Station, for modern day location, just north of Wissett Road, and the Halesworth Divisional Police Station. This railway was opened on 1st June 1859, some twenty years after the gasworks were constructed. This time the gasworks like those at Framlingham were some way from any cheap source of transport for the coal, it being a good half mile from the quay on the Blyth Navigation, and even then was the harbour of sufficient size to handle any collier of a size to offer cheap coal, although the Navigation was deeper and wider than the river that remains today? The records for Bungay show an agreement between the Town Reeve and Feoffees²⁴ of Bungay, with Thomas S. Peckston to "contract for lighting town of Bungay with gas."²⁵ The contract was dated 27th April 1837 and was to run for seven years from 1st October 1837. Peckston was to purchase land, erect buildings and storage, fit up street lamps with necessary fittings. All the broken fittings were to be replaced no matter how they were broken, the lamps were to be equal distance apart (this distance was not specified). The lamps were to be lit for 1,100 hours a year from October to the following April.

Figure 5 Close view of foundation plate in College Road, Framlingham

Field work on 31st July 2008 photograph by author



Sparkes, Ivan, G., Halesworth Through the Ages Volume Six. The Nineteenth Century, Halesworth, 1997

Control of gasworks, gasometers and gas mains by central government and the board of directors

The control of the gas industry really started after

A loud explosion at the Peter Street Works of the Gas Light and Coke Company in October 1813 was the cause of great alarm among the Citizens of Westminster. Although no lives were lost and little damage resulted, rumour spread and there was a sharp reaction against the new gaslights.²⁶

This caused a stir with worries about storing some 14,000 cu. ft of explosive gas in the City (Westminster), and the Home Secretary wrote to Sir Joseph Banks (President of the Royal Society), (probably the most knowledgeable group) asking the society to examine and report which was done The committee reported to the effect that provided the gas was properly within a month. manufactured and stored it was safe. The problem that has caused the explosion was identified and new procedures put in place.²⁷ Sir William Congreve (inventor of the military rocket) was appointed to inspect gas manufacturing establishments, this was not until 1822. The inspections took place on a weekly basis with the assistance of the inspector. Reports were published in Congreve's name in 1822 and 1823, looking at storage but also the laying of the gas mains all the companies were allowed to dig up the highway and lay mains. This did not matter in rural Suffolk, but in London and other big cities where there were several gas companies in competition caused problems, with gas companies stealing from one another amongst the problems. In 1825 the Royal Society were again called in by Robert Peel (Home Secretary) to look at the activities of five Metropolitan companies. The report cruised the ventilation of buildings, construction of gasometers and mainlaying operations, and was the last report made by the society to the government. But even then there was little central control. and the main control rested with the local politicians and justices. But of course most of the gas companies were formed before the first Companies Act of 1862 and had private / local Acts of Parliament to govern them in the case of the early ventures like that of the Woodbridge Gas, there appears to have been no private act setting up a company, and unfortunately none of the business records were passed over to Suffolk Record Office by Eastern Gas Board. It is assumed that this was because these records were not passed over to the Board.

In the middle of the nineteenth century there were a selection of Acts controlling Gasworks, including the Gasworks Clauses Act of 1847, and its amendment of 1871. This act was amended in the Victorian fashion by general Amendment acts in 1863 and 1869; there was also a Sale of Gas Act in 1859²⁸.²⁹ The Gasworks Clauses Act and its subsequent amendments are largely concerned with the local gasworks and setting out the regulations which are required to either be incorporated within each individual private act or at least adopted by the company so created. Several of the amendment acts also cover the water industry, (both gas and water required holes to be made in roads, pavements and across private as well as public land). The regulations largely required that the supply companies created as little disturbance as possible and made good afterwards. A requirement that has only in the last 10 years been required again of the utility companies.

The Sale of Gas Act 1859 covered England, Wales and Ireland, (there was a separate act for Scotland). The main theme of the act was to define the measurement for selling gas, *An Act for regulating Measures used in Sales of Gas* [13th August 1859]³⁰ the measurement was stated to be the cubic foot of gas, and the cubic foot was further defined as that which "holds 62.321 Avoirdupois Weight of distilled or Rain Water at a temperature of sixty-two Degrees Fahrenheit and a Barometer of thirty inches"³¹. There were model testing instruments and all local authorities had to appoint an inspector to test the measure used by the gasworks in the locality their measure had to be approved and stamped as such by the Exchequer. No repairs were allowed on these measures without them having to be retested and stamped. This seems to have been one of the earliest consumer protection acts.

Later acts required all the gasworks companies to produce and file with the regulators financial accounts. The exact layout was specified which was something that general company law did not attempt until the 1970s. Gas production also had to be reported again measured in thousands of cubic feet.³² The published return dated 1857 only reports Bury St Edmunds, but the information provided is the price of 1,000 cubic feet, the coal used, the amount of gas per ton and the illumination power compared with Sperm Candles. The cheapest gas was 4/- per 1,000 in Bradford, and Bury was 10/-. The gas per ton ranged from 5,500 to 10,400 cubic feet, the candle power was between 9 and 19 candles. The main legislation is covered in the various Gasworks Clauses Acts between 1847 and

1871. These cover regulations for digging up roads, entering premises, making good, notifying local authorities of the need to dig up streets and pavements (except in emergency).

The actions of the companies' boards of directors are well recorded but largely mundane after the initial set up of the gasworks. The initial recorded meetings (often before the gasworks company was formed) took place at a local pub, (Needham Market at the Swan, Stowmarket at the Kings Head). The essentials were whether to have street lighting, the cost of setting up the works, the charge to the parish for the lighting, and where to build the works. After this directors were appointed, a superintendant also (Needham Market used Mr Goddard from Ipswich Gas Works). Sometimes the gas company maintained the street lights, damaged lights repaired (there was vandalism in the 1830s in Stowmarket). After this the matter raised were routine, i.e. the price of coal, the charge for 1,000 cubic feet of gas, the source of the coal, provision of meters, the introduction of lime to filter the gas, its price and subsequent sale to farmers, the extension and repair of the mains, general meetings, and special meetings held off these premises. Halesworth had long discussions (in 1889) on converting the company so that it had the better protection that was offered by the Gas Clauses Acts, council's opinion was sought. There were reports towards the 1890s of a falling of the consumption of gas.

Use of gas by commerce, industry, local authorities and private individuals

The only use of gas from its first commercial production was that of lighting, to replace tallow candles, or in wealthier establishments' oil lamps. The gas light was not like that known today by campers and caravanners, but a naked flame burning yellow (i.e. not efficient combustion) and, depending on the mains pressure, from 5cm to 150 cm in length. At first these lights were used in factories and mills, to enable work to continue for the full working day of twelve plus hours in the winter. The cost of the gas light was calculated to be about half that of candles.

At the north end of the Hall, Mr Peto is now erecting (from Mr John Thomas's design) a "Winter Garden", which will be lighted with gas – having a ring of gas jets around the interior of the dome. The length of this garden (chiefly of iron and glass) is 126 long by 107 wide, height to apex of central dome, 55 feet.³³

The gas used in the lighting of the "Winter Garden" at Somerleyton Hall would have been provided by a small private gas works. This type of works was not efficient, but could be used to impress visitors.

Street lighting was the main reason why most Suffolk towns acquired gas works,

Gas bore witness to night scenes, to aspects of the city that were hidden by day. Street lamps represented the intrusion of daytime order and the rational space of the improved city into the darkness of the city at night. Gaslight never fully conquered the night however, but was also absorbed by its poetry, evil and irrationality.³⁴

The gaslights were extremely visible for the proud leading citizens to show off. They wanted to emulate London, "The belief that the streets at night had a peculiar beauty and poetry was a product of the gas industry and the spread of public lighting to more areas of the city than had been lit by oil."³⁵ The early lights were just a hole or end of the pipe with no form of burner. Burners were soon introduced and produced different shaped flames, "rat-tail, cockspur, cockscomb and batwing."³⁶

By the early years of Victoria's reign, gas lighting had converted London nights into day, and to many writers in the period it seemed that London was the most illuminated capital city in Europe. Gas, as a source of street lighting, had been introduced in the city at the beginning of the nineteenth century. Its social advantages and economic possibilities were soon realised and gas rapidly replaced oil as the main form of illumination in the public spaces of the city.³⁷

Gas lights had competition from both early electric lights and oil lamps. Gas mantles appeared on the scene in 1887 after Carl Auer, a chemist at Bunsen's laboratory in Heidleburg, discovered by accident that asbestos soaked in "rare earth"³⁸ compounds gave an intense glow when heated by gas.³⁹

These mantles were expensive and very fragile. Gas street lighting had gone almost completely by the 1950s.

The main use for gas at first was to light the streets and main public buildings. It took a little while for the number of private customers to build up. As soon as the gas company commenced its business in Colchester, the Channel and Paving Commissioners started erecting "handsome cast iron fluted pillars" along the High Street to take the new form of illumination. It was the same everywhere.⁴⁰

The next use of gas was to cook. The first cooker in Britain were developed by a manager of the Northampton Gas Company, who installed an experimental gas cooker in his home in 1826 and with sponsorship from Earl Spencer, began producing cookers commercially in 1834. Models were exhibited at the Great Exhibition in 1851.⁴¹ The idea of cooking by gas became popular after the Manchester Gas Committee, and other gas producers started to rent cookers to the public in 1884. The thermostat did not come in for another forty years, but it is probable that cooking by gas prior to this introduction was no more difficult than cooking on a range powered by coal or coke. Certainly the instant heat of a gas fired hob is still very popular with cooks both professional and domestic.

Another popular use of gas in the home was heating with different types of radiant heaters. There was a problem however in the earlier years that impurities in the gas lead to unpleasant smells. John Malden had suggested space heating by gas in 1813, produced by playing a gas flame over figures of cast iron. It was not until the mid eighteen hundreds that radiant gas heaters were developed. In 1849 heated pumice balls were developed by Edwards and in 1851 glass and firebricks by Smith & Phillips and asbestos fibre by Goddard in 1852. Leon developed a gas fire using a firebrick back embedded with asbestos tufts this was in 1852. All these fires used a bunsen type burner to give a well balanced hot gas flame.⁴²

The other domestic uses of gas were in heating water, the Ascot, and the provision of refrigeration; most of this development took place in the twentieth century.



Figure 7 Aldeburgh Gas Light advertisement in the guide of 1935

Aldeburgh Corporation, Aldeburgh Official Guide, Norwich, 1935

The industrial and commercial uses of gas were to start purely for lighting, shops, factories and pleasure grounds.

The disadvantages of existing illuminates were considerable. Tallow candles needed frequent snuffing if their light was not to be impaired by smoking and guttering, while the alternative wax candles were from three to four times as expensive as

tallow. Oil lamps tended to smoke in draughts, regulation of the supply of oil was difficult, while the cheaper types of oil burned with an unpleasant smell. Oil lamps and candles were most inconvenient where large areas needed lighting, for then the labour involved in constant snuffing, the smoke and heat, and the dangers from sparks, were at their greatest. Much light was required by factories and workshops on winter evenings and also by shops and inns. Theatres and assembly rooms, which became common features of Georgian social life, were also large consumers. Street lighting, too, was another area where existing methods of illumination were found increasingly inadequate.⁴³

A classic example of the lighting of pleasure grounds was that of the Cremorne Pleasure Grounds in Chelsea west London on the Thames, with river boats (steamers) calling at the private pier. This was a modern (in 1861) version of the Vauxhall Gardens.

The history of Cremorne in the middle of the nineteenth century is the history of the speculative and entrepreneurial management [Edward Tyrrell Smith] of metropolitan leisure and entertainment. The opening hours of the gardens were extended so that visitors could enjoy sunny afternoons, as well as long, gaslit nights and each season the program offered more extraordinary attractions, which, on occasion, took the management to the brink of legality and social acceptability.⁴⁴

These gardens were very popular, both with families during the day and early evening, but gentlemen and ladies of doubtful reputation later at night. The price of entry at 1 shilling remained from the opening in 1846 until its closure in 1877, was affordable to the middle classes and clerical classes, but not to the "labouring sorts". "At night they [visitors] would see gaslights; strung along the walks and in the trees and blazing around the sites of the main attractions and side-shows"⁴⁵. The gardens were popular and certainly in the early years very profitable but later ceased their popularity and became notorious. The gardens were closed, sold and became building plots for housing (nothing changes).

Another interesting use of gas was that by the end of the nineteenth century the bigger railway companies who had been using gas to light their stations, signal-boxes, and goods sheds, started to use it for carriages, carrying compressed gas in cylinders on each carriage. This replaced the oil lamps previously used.

Financial and statistical information

The records that are available at the County Record offices vary greatly, based purely on those that were handed over by the Eastern Gas Board. In some such as Framlingham there are the minute books recording directors and share holders (general) meetings including those made when the gasworks were being planned, and also giving details of gas volumes sold and the yearly financial figures. Records available for other gas companies include private ledgers, sales ledgers, sales day books itemising both the volume and value of gas sold to each customer. This was usually on a quarterly basis rather than a monthly basis, especially during the off peak summer months. Waste records, recording gas, coal, coke, tar and lime not sold but wasted in some way, not always explained. Cash books and letter books are also available. The best company for these records was the Needham Market Gas Light Co.⁴⁶, but the towns of Aldeburgh, Framlingham, Halesworth and Stowmarket all had good records that were passed on to the Suffolk Record Office. An analysis of the records available was made, amongst things it showed that the companies were normally profitable and paid a dividend of 5% or more once a year, except when there had been exceptional expenditure i.e. major repairs to retorts or gasometers, which reduced the profit or created a loss. Gas productions increased with the occasional blip right though the available records. See appendix 1 to see the full amount recorded. The average gas consumption has been compared with the average population of the towns see figure 8 below.

Years Recorded	Towns	Average Cu Ft Produced	Average Population	Cu. Ft. per Head	Comments
1858-94	Aldeburgh	1,198,282	1,861	644	Broad Period
1852-63	Framlingham	1,659,040	2,447	678	Mid Period
1882-91	Halesworth	1,886,311	2,429	777	Late Period
1848-58	Needham Market	328,617	1,211	271	Early Period
1841-49	Stowmarket**	1,205,037	3,798	317	Early Period
	Average	1,255,457	2,349	537	:

Table 2 Ratio of gas production to population

**Figures doubled as only Private Consumption recorded

Suffolk Record Office (Ipswich) towns gas records.

As can be seen the average consumption per head of population increases in the later years. Halesworth is top but has the latest period, Aldeburgh's figures finish later than Halesworth, but these are reduced as they start twenty-four years earlier. The figures for Stowmarket and Needham Market are similar low averages, but the period reviewed is also similar. It is interesting to note that the Needham Market Gasworks was closed in 1954, and the supply taken over by the Stowmarket gasworks.⁴⁷

Looking at the figures in table 3 it appears that gas consumption per head of population increased during the century, table three below supports this

Years	Average Annual Cu Ft Gas	Population	Cu Ft per Head	
	Alde	eburgh		
1858-61	591,120	1721	343	
1862-71	955,620	1990	480	
1872-81	1,302,990	2106	619	
1882-84	1,184,437	2159	549	
	Fram	lingham		
1852-61	746,740	2252	332	
1862-69	1,448,763	2569	564	
	Hale	sworth		
1882-91	1,886,311	2316	814	
Needham Market				
1848-51	212,538	1148	185	
1852-58	400,050	1243	322	
Stowmarket				
1841-49	602,518	3404	177	

Table 3 Growth of gas consumption per head in nineteenth century

Suffolk Record Office (Ipswich) towns' gas records

The financial figures are just as interesting. There are figures available for Halesworth from 1888 to 1900, Needham Market from 1848 to 1851, Stowmarket from 1841 to 1849, and Framlingham from 1855 to 1871. These figures cover a variety of town sizes but with the exception of Halesworth approximately the same decades. The figures shown in tables 4a and 4b show a variety of figures with

annual sales of gas as low as £85 for Needham Market, but as high as £958 for Halesworth whose population was only about twice the size not ten times. Framlingham is the only gasworks to have shown a loss, but this is because for some unrecorded reason no money was received for the gas supplied for street lighting. This also explains the drop in profit margin from the range of 36% to 48% to as low as 14%. Based upon the average population of these four towns in the century, Framlingham and Halesworth were of similar sizes, with populations of 2,400, Needham Market was the baby with 1,200 and Stowmarket was a giant with 3,800. This really means that only two towns are comparable, but the range is reasonable Stowmarket's profit was lower than that achieved by Halesworth but Framlingham's was on the low side, perhaps too much discount had been given to the College. The results show that gas production was usually a profitable venture giving a good return to the investors.

	Average	Lowest	<u>Highest</u>
HALESWORTH		1888 - 1900	
Gas Sold	881	780	958
Other income	202	140	248
Total Income	1,083	972	1,199
Direct Costs	688	588	764
Overheads	124	30	211
Total Costs	812	655	955
Profit	271	129	358
NEEDHAM MARKET		1848 - 51	
Gas Sold	136	85	162
Other income	49	37	76
Total Income	185	122	238
Direct Costs	111	99	135
Overheads	34	11	54
Total Costs	145	100	189
Profit	40	22	64

Table 4a Results of two Suffolk Towns

Suffolk Record Office (Ipswich)

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STOWMARKET 1841 - 49 Gas Sold 392 342 432 Other income 461 319 569 Total Income 853 661 1,001 Direct Costs 443 348 532 Overheads 174 97 247 Total Costs 618 445 779 Profit 235 156 310 FRAMLINGHAM 1855 - 71 Gas Sold 415 182 605 Other income 67 34 117 704 117 704 117 Total Income 483 216 721 721 721 721 Direct Costs 270 164 446 721 71 71 Direct Costs 270 164 446 771 71 Overheads 146 66 325 71 71 Profit 67 (64) 143 71 Profit 67 664		Average	Lowest	Highest
Gas Sold 392 342 432 Other income 461 319 569 Total Income 853 661 1,001 Direct Costs 443 348 532 Overheads 174 97 247 Total Costs 618 445 779 Profit 235 156 310 FRAMLINGHAM 1855 - 71 34 117 Gas Sold 415 182 605 Other income 67 34 117 Total Income 483 216 721 Direct Costs 270 164 446 Overheads 146 66 325 Total Costs 416 230 771 Profit 67 (64) 143 Dividend 68 - 102	STOWMARKET		1841 - 49	
Other income 461 319 569 Total Income 853 661 1,001 Direct Costs 443 348 532 Overheads 174 97 247 Total Costs 618 445 779 Profit 235 156 310 FRAMLINGHAM 1855 - 71 Gas Sold 415 182 605 Other income 67 34 117 101 117 101	Gas Sold	392	342	432
Total Income 853 661 1,001 Direct Costs 443 348 532 Overheads 174 97 247 Total Costs 618 445 779 Profit 235 156 310 FRAMLINGHAM 1855 - 71 34 117 Gas Sold 415 182 605 Other income 67 34 117 Total Income 483 216 721 Direct Costs 270 164 446 Overheads 146 66 325 Total Costs 416 230 771 Profit 67 (64) 143 Dividend 68 - 102	Other income	461	319	569
Direct Costs 443 348 532 Overheads 174 97 247 Total Costs 618 445 779 Profit 235 156 310 FRAMLINGHAM 1855 - 71 Gas Sold 415 182 605 Other income 67 34 117 Total Income 483 216 721 Direct Costs 270 164 446 Overheads 146 66 325 Total Costs 416 230 771 Profit 67 (64) 143 Dividend 68 - 102	Total Income	853	661	1,001
Overheads 174 97 247 Total Costs 618 445 779 Profit 235 156 310 FRAMLINGHAM 1855 - 71 34 605 Other income 67 34 117 Total Income 483 216 721 Direct Costs 270 164 446 Overheads 146 66 325 Total Costs 416 230 771 Profit 67 (64) 143 Dividend 68 - 102	Direct Costs	443	348	532
Total Costs 618 445 779 Profit 235 156 310 FRAMLINGHAM 1855 - 71 1855 - 71 Gas Sold 415 182 605 Other income 67 34 117 Total Income 483 216 721 Direct Costs 270 164 446 Overheads 146 66 325 Total Costs 416 230 771 Profit 67 (64) 143 Dividend 68 - 102	Overheads	174	97	247
Profit 235 156 310 FRAMLINGHAM 1855 - 71 1855 - 71 Gas Sold 415 182 605 Other income 67 34 117 Total Income 483 216 721 Direct Costs 270 164 446 Overheads 146 66 325 Total Costs 416 230 771 Profit 67 (64) 143 Dividend 68 - 102	Total Costs	618	445	779
FRAMLINGHAM 1855 - 71 Gas Sold 415 182 605 Other income 67 34 117 Total Income 483 216 721 Direct Costs 270 164 446 Overheads 146 66 325 Total Costs 416 230 771 Profit 67 (64) 143 Dividend 68 - 102	Profit	235	156	310
Gas Sold 415 182 605 Other income 67 34 117 Total Income 483 216 721 Direct Costs 270 164 446 Overheads 146 66 325 Total Costs 416 230 771 Profit 67 (64) 143 Dividend 68 - 102	FRAMLINGHAM		1855 - 71	
Other income 67 34 117 Total Income 483 216 721 Direct Costs 270 164 446 Overheads 146 66 325 Total Costs 416 230 771 Profit 67 (64) 143 Dividend 68 - 102	Gas Sold	415	182	605
Total Income 483 216 721 Direct Costs 270 164 446 Overheads 146 66 325 Total Costs 416 230 771 Profit 67 (64) 143 Dividend 68 - 102	Other income	67	34	117
Direct Costs 270 164 446 Overheads 146 66 325 Total Costs 416 230 771 Profit 67 (64) 143 Dividend 68 - 102	Total Income	483	216	721
Overheads 146 66 325 Total Costs 416 230 771 Profit 67 (64) 143 Dividend 68 - 102	Direct Costs	270	164	446
Total Costs 416 230 771 Profit 67 (64) 143 Dividend 68 - 102	Overheads	146	66	325
Profit 67 (64) 143 Dividend 68 - 102	Total Costs	416	230	771
Dividend <u>68 - 102</u>	Profit	67	(64)	143
	Dividend	68	-	102

Table 4b Results of further Suffolk Towns

Suffolk Record Office (Ipswich)

The main reason that the towns of Suffolk built gasworks was to provide street lighting; there does not appear to be any consideration in the records as to profitably, only not to lose money. Despite this, all the records show consistent profitability except for the one exception for Framlingham. Gas was a gift to the Victorian mind; it gave them what they thought of as control over the night! However the gas industry suffered the same problem as twentieth century industry, constant innovation. In this case it was electricity, which stopped the growth and could have killed the industry if it had not modernised itself. As can be seen from earlier paragraphs gas lighting in many localities continued until the 1950s and later. It was High Streets, main roads and new lighting areas that received the benefit of electric light. The use of gas continues to this day (February 2009), but town or coal gas was replaced by North Sea Gas (Natural Gas) following its discovery in the mid 1960s. The production of coal in Britain has declined, which could have been partly caused by the change to natural gas. The present day effect is that it would not be possible to produce town gas. The site of the Framlingham Gasworks was on the market for several years for housing development, but it is expected the probability of pollutants on the site prevented its sale. Town gas was dirty and smelly to produce with many potential pollutants as side lines, even without the advent of North Sea gas it would have been killed off with the Health and Safety laws, especially with the gasworks being so near centres of population. Nevertheless, Town Gas was extremely beneficial to the majority of the population in its prime.

¹ Hutchinson, K. "The Royal Society and the Foundation of the British Gas Industry", *Notes and Records of the Royal Society of London*, Vol. 39, No. 2. (Apr., 1985), pp. 245-270.

² Ibid, p. 245

³ http://www.gasmuseum.co.uk/milestones2.htm (accessed 12 December 2008)

⁴ Other authors state 1794 for Murdoch's experiments

⁵ Hutchinson art. cit. p. 249

⁶ Falkus, M. E., "The Early Development of the British Gas Industry, 1790-1815", *The Economic History Review*, New Series, Vol. 35, No. 2. (May, 1982), p. 224

⁷ Falkus, M. E. "The British Gas Industry before 1850", The Economic History Review, New Series, Vol. 20, No. 3. (Dec., 1967), p. 494.

⁸ White's Directory of Suffolk, 1855 (1855).

⁹ White, William, History, gazetteer and directory of Suffolk. 1844. (1844)

¹⁰ Ibid.

¹¹ The Woodbridge Gas Company was taken over by the Ipswich Gas Company in 1928 or 1929 depending on which statutory instrument is followed no 1020 or 1097

¹² http://www.gasmuseum.co.uk/milestones2.htm (accessed 12 December 2008)

¹³ Ibid

14 Ibid

¹⁵ Little Bushev Lane, Bushev Heath .Hertfordshire between 1944 and 1960. Sunday's roast was served up well after 2 p.m. when there was sufficient gas pressure to operate the gas oven.

¹⁶ http://www.gasmuseum.co.uk/milestones2.htm (accessed 12 December 2008)

¹⁷ Suffolk Record Office (Ipswich) HA2/H2/1/49, 50 Ipswich Gas Light 1828

¹⁸ Whites Directory of 1892

¹⁹ http://www.gasmuseum.co.uk/milestones2.htm (accessed 12 December 2008)

²⁰ Suffolk Record Office (Ipswich) Report of the Leiston Lighting Inspector.

²¹ Author's field trip on 25^{th} August 2008.

²² Robb, I., Lowestoft A History & Celebration, (2005) p75

 ²³ The Journal of the Framlingham & District Local History & Preservation Society 5th Series Number 6 pp 12 - 20

²⁴ The term Feoffees was used to describe the holders of a grant of land which could be used for charitable purposes.

Suffolk Record Office (Lowestoft) 186/H2/1

²⁶ Hutchison, art. cit.p. 253.

²⁷ *ibid.* p. 254..

²⁸ www.nationalarchives.gov.uk/A2A/records

²⁹ Copies of all these Acts of Parliament except for the Sale of Gas Act 1859 are not available in Suffolk; the copies which should be available in the Central Reference Library were missing on 19th January 2009. However copies of the bills that should have become the acts are available through

http://parlipapers.chadwyck.co.uk/home, as are copies or reports and regulations made under the acts, in fact the web page has 194 items under the heading of Gasworks, ignoring local gasworks and metropolitan ones. ³⁰ Sale of Gas Act 1859, c.66

³¹ Ibid

³² HMSO Gas works. Abstract of return of all gas works established under acts of Parliament. (1857).

³³ Williamson, T. Suffolk Gardens & Parks, (2000), p. 130.

³⁴ Nead, L. Victorian Babylon people, streets and Images in nineteenth-century London., (2000) p. 83 ³⁵ Ibid, 101

³⁶ http://www.gasmuseum.co.uk/lighting.htm (accessed 12 December 2008)

³⁷ Nead, op. cit. p. 83.

³⁸ Lanthanum , Cerium, Praseodymium, Neodymium, Promethium, Samarium, Europium, Gadolinium, Terbium, Dysprosium, Holmium, Erbium, Thulium & Ytterbium.

³⁹ http://www.gasmuseum.co.uk/lighting.htm (accessed 12 December 2008)

⁴⁰ Brown, J. The English Market Town, (1991), p. 140

⁴¹http://www.gasmuseum.co.uk/cooking.htm (accessed 12 December 2008)

42 ibid.

⁴³ Falkus, Early Development pp. 217-234.

44 Nead, op. cit. p. 109

⁴⁵ Ibid, p. 110

⁴⁶ IH-400/2-IH-44/6. Needham Market Gas Light Co. SRO(I)

⁴⁷ Durrant, M., (editor), Stowmarket - Then and Now, (2003), p. 156

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