
POST CARD.
This Space may be used for Communication in the British Isles, etc.
The Address only to be Written Here.
Hello you'
I am nearly
burnt black
with the Sun
Having a glorious
time Love S'
Mrs Lumsden
15. Stratford Pl.
Oxford St
London W 1.
NORTH FORELAND LIGHTHOUSE

North Foreland

Extracted from: Light On The Forelands by Ken & Clifford Trethewey, Jazz-Fusion Books (2022)

Queen of the lighthouse postcards; Tourist attraction; A hidden network of light keepers; Signal stations; Radio beacons

Postcards - Public and Private

There is something about a postcard that gives a slight tingle. With images emblazoned on the front that are instantly recognizable to many, the reverse carries a very personal one-to-one message, highly condensed - like the phone text of today.

"Hello you! I am nearly burnt black with the sun. Having a glorious time. Love S."

The only thing missing is: 😎

Such a message might seem trivial to you and me, but to historians it can sometimes reveal a lot. For example, a message such as this, with a readable postmark, can convey a useful historical fact.

"Visited the lighthouse today, but it was shut."

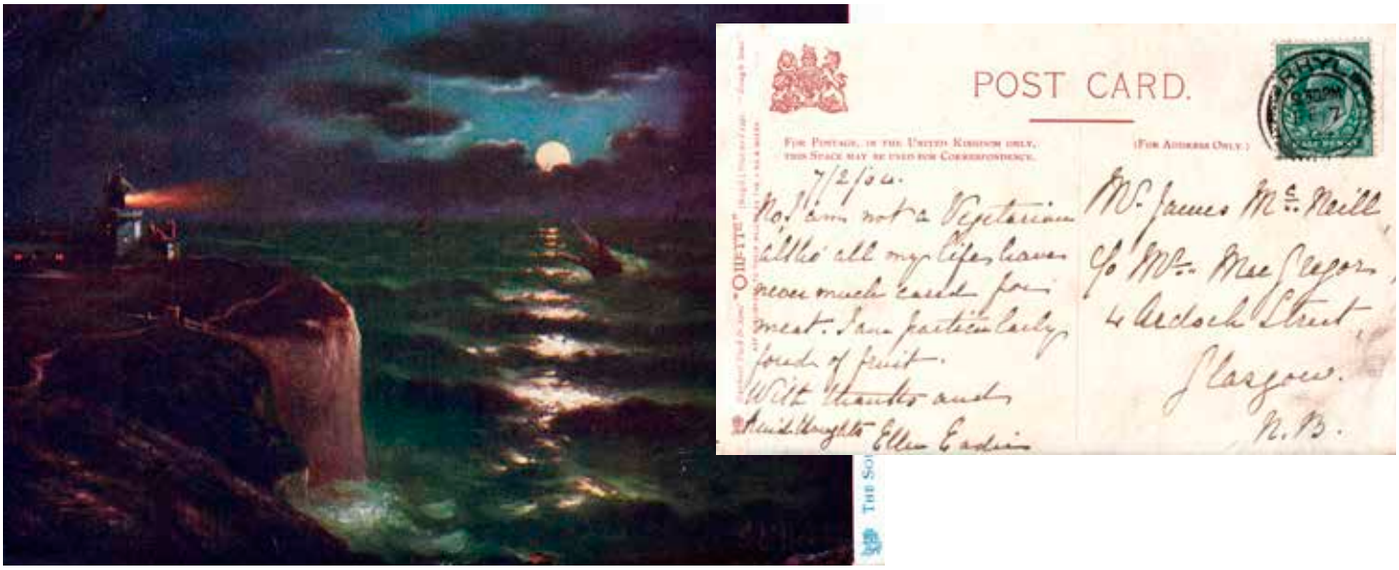
In the old days of collecting it only took a moment after a collector of lighthouse postcards had decided to visit a postcard fair. He arrived at the dealer's stand with a mixture of subdued excitement and resigned indifference. He thumbed through the index cards to 'L' wondering how many would be in the slot. A lot or a few? If it should be a lot then his temperature would rise until he saw the same old images – Beachy Head, The Needles, Smeaton's tower on Plymouth Hoe... Then his sense of expectation might be dissipated, as it had been so many times before.

Today's postcard collector, working on E-Bay without even rising from his sofa, soon gets to know which cards sold a lot in the early 20th century. One contender for top spot - besides Smeaton's Tower on Plymouth Hoe, is North Foreland. It wasn't that the lighthouse was daily crammed with visitors (although it would have done well on that index) but more to do with the proximity to London and the number of popular resorts nearby.

A card illustrated overleaf written to Cissie (who lives in London) from Annie tells how she is enjoying her holiday in Margate and how "tomorrow" she will be checking out Ramsgate. At this time in August 1913, she has found Margate to be crowded and expects Ramsgate to be no different. We don't know whether she visits the North Foreland lighthouse but she would almost certainly have passed it on her way between the two locations. I would expect many Londoners to be quite familiar with the lighthouse, and Annie must have been attracted to the image and bought the card in Margate to tell her sister how she is enjoying her holiday. Her reference to the "Mad Cap" leaves us wanting more, however. But, limited by space, the conciseness of the message is the prevailing factor here.

We are indebted to the legacy left to us by the old publishers of lighthouse postcards, for as historical documents - if only for their images - they are hard to beat. We have therefore used them liberally throughout this work. As lifetime collectors of lighthouse postcards, we are especially aware that, notwithstanding the great number of different cards of North Foreland that were published, there

LEFT: The oldest postcard of North Foreland lighthouse that we are aware of is this Victorian image by C. W. Faulkner & Co Ltd, 79 Golden Lane, London E.C. The company became a prolific postcard publisher, operating between1870-1920, but the artwork depict a much earlier period before the station was rebuilt.
ABOVE: A painting used on a card in the Tuck's "Oilette" series of the late 19th century.



ABOVE: A postcard of South Foreland Low Light from the Tuck's "Oilette" lighthouse series dated 1904. Its delightfully curious message from Ellen reads: "No, I am not a vegetarian altho' all my life have never cared for meat. I am particularly fond of fruit. With thanks and kind thoughts..."

is little variation in the image used. Whether in landscape or portrait orientation, we need no words to tell us that the lighthouse is a tall, octagonal, stone tower with a keeper's cottage symmetrically placed on either side. Occasionally, the view is broadened to include some of the adjacent road, but, as any visitor today will attest, the number of angles offering a good shot to the photographer are severely limited, especially as the surrounding vegetation has obscured much of its view. Thus it is not surprising that the range of postcards of North Foreland is so limited. What is more surprising is the great number of times it has been photographed. Other observations are that there has been so little change to the station buildings and layout over so many years, although that does not apply to the great changes to the adjacent trees and shrubs. What appear to be open landscapes have become crowded with undergrowth and overgrowth.

Earliest black-and-white photography began to be developed in the early 1830s thanks to people such as Daguerre and Fox Talbot. Clearly it was some years for it to be capable of commercialization. It took until 1888 when Eastman's Kodak camera went on sale, and it was a further twenty years before photographers could commonly create colour photographs. So those in the growing business of publishing postcards needed to change their

Above: This card from 1909 is more typical of the holiday message with a tiny amount of friendly business included. "There is a grand view from the top of this Lighthouse. Did you go up when you were at our last year? It is well worth the climb, for the view repays you even if you get cramp in the legs from going up so many steps! I forget whether you told me you had been up. This is a [?] sort of day isn't it? Can you find out for me and tell me if you come out on Sunday evening whether the Coopers and Dudleys are at home? I want very much to know, so don't forget. All good wishes. A.C.M."

methods as the economics evolved.

In the earliest years, postcards were a very popular way of maintaining easy contact when telephones were only for businesses and those who were better off. With photographic processes still quite expensive, publishers commissioned artists to make the images, and this was especially true for the conveyance of messages like *Merry Christmas* and *Happy Birthday*. But soon monochrome photographs became cheaper than people labouring with their easels. Though black-and-white postcards were clearly very popular, to make them even more appealing it was quicker for the publishers to pay artists to add colour manually to the black-and-white photographic images which were often of poor quality. Thus many of the colour postcards around the early 20th century were of this nature until commercial reproduction of colour photographs became sufficiently economical.

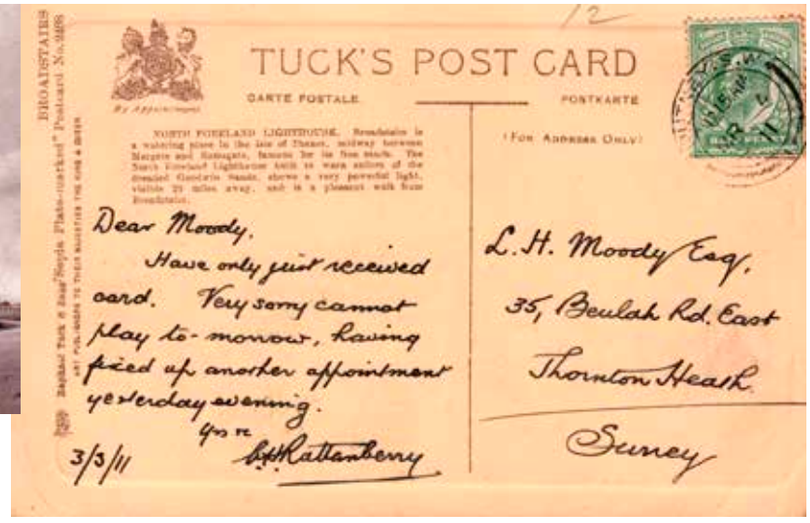
Besides the obvious objective of conveying messages, publishers soon recognized the attraction of collectibility and began publishing series of cards with common features and designs. One of the most prolific was the "Oilette" postcard by Raphael Tuck and Sons, which over a long period became extremely popular. As many as twenty-six thousand such collectible images were published from the early 1900s onwards, and the lighthouses at both North and South Forelands were featured.

Throughout the twentieth century, North Foreland lighthouse was far better known than its sisters in the south and we have seen how the holiday postcard has had a lot to do with that. Indeed, the fame of North Foreland has undoubtedly helped to shape the English perception of a lighthouse in the minds of those who know little about them. As we now know, the history of the South Foreland lighthouses is enormously more significant than their northern sister where the story is one of steadfast reliability. So it is either very fitting or simply ironic that since the takeover of South Foreland by the National Trust the reverse is now the case. Limited opening of the Broadstairs light has severely restricted our appreciation of its wonderful fixtures and fittings, whilst the Dover location receives great numbers of eager visits throughout the long opening times.

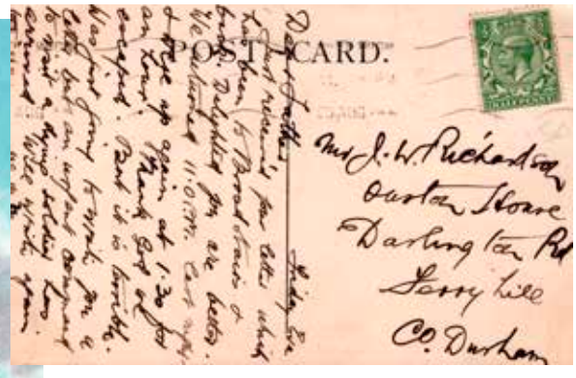
When "Romance" Was Differently Perceived

There was rarely a sight as welcoming to a Victorian seaman than the first glimpse of an 'English' lighthouse. It might have been the Bishop or the Lizard, even the Eddystone that warmed his heart, but after weeks at sea on open decks or high in the rigging, he knew that home was no longer a distant memory. Yet it must not be forgotten that these were hazard lights warning his ship to evade the reef they were guarding, but not so the North Foreland. This light was a marker. This was an important light as it marked an important place for the seafarer leaving or searching for the Thames and the largest port in the world – London. Its antiquity underlined its importance, yet the men who kept the brazier bright are unknown, unrecorded and dismissed as uneducated labourers, fit for little else.

The spirit of my muse was captured by Rudyard Kipling when in 1893 he penned a 6-verse poem entitled *The Coastwise Lights* in which the last two verses ended;



This wonderful postcard from Tuck & Sons highlights the speed with which events took place, even using the postal service. Written on 3rd March 1911, it has a postmark of 12.15 a.m. on 4th and refers to the sender's inability to play "tomorrow!" Of great significance to us also are the numerous masts on the right of the image.



This undated wartime card conveys a serious message. "Friday Eve. Dear Father, just received your letter which has been to Broadstairs and back. Delighted you are better. We returned 11 pm last night and were up again at 1:30 for an hour. Thank God we escaped. But it is terrible. I was first going to write you a letter but an urgent command to visit a dying soldier has arrived will write again tonight. W & M"

Come up, come in from Eastward, from the Guardports of the Morn!

Beat up, beat in from Southerly, O Gypsies of the Horn!

Swift shuttles of an Empire's loom that weave us Main to Main,

The Coastwise Lights of England give you welcome back again.

Go, get you gone up-Channel with the sea-crust on your plates.

Go, get you into London with the burden of your freights!

Haste, for they talk of Empire there, and say if any seek,

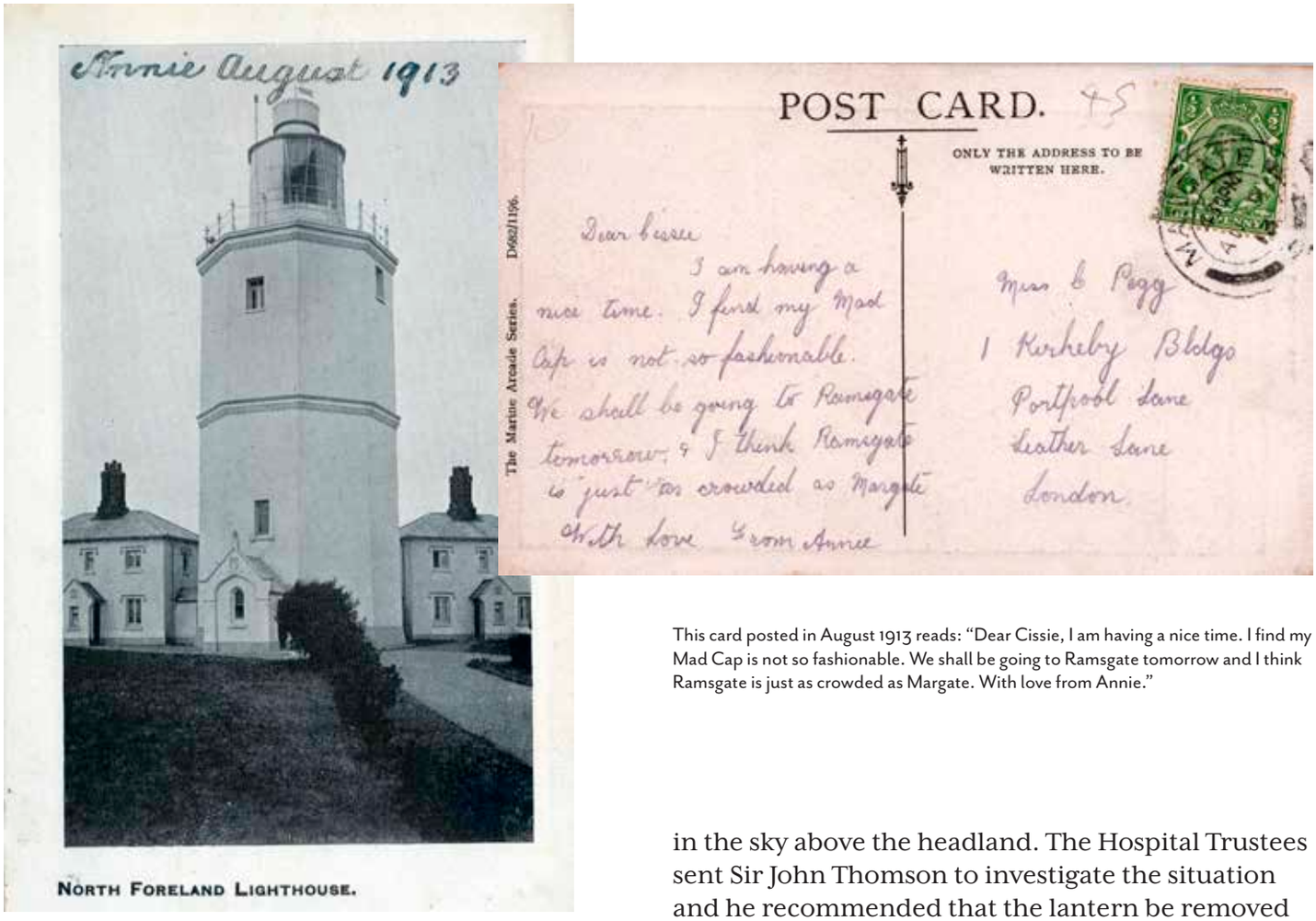
The Lights of England sent you and by silence shall they speak.

This book has sought to redress the light keepers' anonymity, which is particularly acute at North Foreland, as unlike its twin lighthouse at South Foreland no ancient names have survived the ravages of time to tell their story and feature in this book.

A Little Bit of History

A light was shown from the foreland as early as 1499, but in 1634/36 Sir John Meldrum was given a patent to exhibit lights at both North and South Forelands by Charles I and this empowered him to collect dues of 1 penny per ton from British ships and 2 pence per ton from foreign vessels. The lighthouse was similar to its sister light at South Foreland and is thought to have consisted of a two storey octagonal tower made of timber, lath and plaster with an unprotected coal burning grate on the top. Ironically the fire was its undoing and although it had survived for 47 years it was burnt down in 1683.

By 1691 a new tower almost 40 feet high (12m) had been built from brick, stone and flint, much of which survives in the present lighthouse and a record exists that suggests that the brazier consumed 100 tons of coal in 1698. The keepers were expected to keep the fire bright by the constant use



This card posted in August 1913 reads: "Dear Cissie, I am having a nice time. I find my Mad Cap is not so fashionable. We shall be going to Ramsgate tomorrow and I think Ramsgate is just as crowded as Margate. With love from Annie."

of bellows on calm nights, but they were paid £13 per annum with a free cottage and coal in return for their labour. Jackson suggests in his book, a somewhat different chronology. He says that following the fire in 1683 it was replaced by a coal-fired beacon ten years later and this was also burned down soon after it was lit. It was then that the octagonal brick and stone tower was built.

The lighthouse came into the hands of the Trustees of the Greenwich Hospital in 1719 and they used the surplus from the light dues for the upkeep of the hospital for the benefit of seamen. They enclosed the fire in a glazed lantern soon afterwards, probably in an attempt to economize on the coal consumption. Bellows again had to be employed throughout the night to keep it bright as there was now no natural wind-assisted draught, but the rudimentary window panes soon blackened with soot and negated the reason for enclosing it. There arose a steady stream of vociferous complaints from seamen that it could not be seen in anything other than clear weather and some shipping casualties were blamed on the lack of a visible light. Seamen who regularly plied the Channel said that the glow from the open brazier could easily be seen reflected in the sky above the headland. The Hospital Trustees sent Sir John Thomson to investigate the situation and he recommended that the lantern be removed immediately and the status quo restored and this is thought to have happened about 1730/32.

Thus it remained for 60 years, when in 1793 it was decided to increase the height of the tower by another two storeys adding 45 feet to its height and raising it to over 85 feet. A copper floor was laid in the lantern gallery and the coal brazier was replaced by 18 oil lamps, but these were seriously troubled times. Following the French Revolution in 1789, England had strenuously attempted to stay out of any conflict and remain neutral, but the French were opposed to all monarchies and Europe was reduced to a chaotic series of land campaigns known as the First Revolutionary Wars (1792-97). As the French focused upon the Belgians and the Dutch, British naval activity in the Nore increased, as a significant naval threat from the French could not be ignored. All of our trade was funnelled through the Downs and this may have been an unstated reason for the increase in height of the light tower. It was not that the light needed to be higher so that the French could see it better, it was that the view from the tower could encompass the Downs to the Nore in one sweep of a telescope. It was in this respect that the North Foreland was different.

ABOVE: Another early hand-coloured photograph on a postcard presents a landscape very different from today. Clearly busy with 'excursionists' we might wonder if the numerous masts sparked their curiosity?

Guiding Light Keepers

North Foreland became unique among lighthouses for its attraction to 'excursionists' as the Victorians came to call them. Yes, it was a Georgian visitor attraction and it was not the insignificant little village of Broadstairs that attracted them but the seaside resort of Margate. In 1825 London's popular *Morning Post* carried three exhortations to 'visit Margate' and the lighthouse seems to feature prominently as it says:

"No one should omit ascending the North Foreland lighthouse about 3 miles from Margate, the prospect from where is truly magnificent, particularly just at this time when the corn is ripe for the sickle, the coast of France is seen very plainly and the Wooden Walls of old England ride majestically in the Downs. Coasters constantly sailing by add to the panoramic view of the Isle of Thanet to compose a picture that baffles description."

This seems to be deviating from the principal function of the lighthouse, as a guiding light to seamen, but the tone of the paragraph suggests an 'open house' with the light keepers playing a different role. No doubt they would have been willing to show visitors their private panorama for a penny in their cap.

There is little doubt that there are far more contemporary engravings and watercolours of this lighthouse than there are of South Foreland and every image shows more than one cottage near the base of the tower, yet the structure of the tower suggests that the keepers' families lived within it. The tower has never had the tradition of a family lighthouse in the same way as the South Foreland light. In fact the two locations could not be more different and the only thing they shared in common was their ownership. Each time it changed the lighthouses remained together as a 'Foreland Package.'

They are only 22 miles apart, yet in 1825 they could not be considered as close neighbours. A second exhortation from the *Morning Post* reads thus:

"A trip to Dover from hence (Margate) is strongly recommended. Coaches leave at 8 o'clock and arrive at Dover at 12; they leave there at 4 o'clock allowing four hours to visit the castle and return to Margate by 8 o'clock passing through Ramsgate, Pegwell Bay, Sandwich and Deal. The country is highly cultivated and the road is excellent."

ABOVE: The car 'abandoned' on the wrong side of the road adds surprise this photo that also shows the house now built behind the radio station buildings. An interesting little building is present in the neatly trimmed triangular garden at the entrance to the lighthouse that is now almost hidden behind the hedge on the left.

In this Georgian period of the early 1800s there is only one freely available source that might lead to a name of a light keeper and I refer to the revised baptism register of 1813. North Foreland is in the parish of St. Peter the Apostle, Thanet and fortunately that register is available on line. It was now a standard, printed format with 8 baptisms on each of 200 pages, making the odds for finding a light keeper and his family quite good.

It soon became clear that about a half of the parish residents were labourers and the remaining half was divided between yeoman farmers and seamen sprinkled with a liberal dusting of tradesmen.

As the book progressed Customs Officers, Riding Officers and Revenue Men were prominent, which gradually transformed into Coastguards from Kingsgate and occasionally Broadstairs. Sixteen hundred entries between the 3rd January 1813 and the 23rd October 1836 revealed several stable keepers, one toll gate keeper, one billiard table keeper, but not a single light keeper. This suggests a conclusion that is difficult to accept: the light keepers were either very elderly or single men.

A Hidden Network Of Light Keepers

Throughout this book, as we have sought to achieve our aims to identify light keepers and explore their careers and family circumstances, unexpected links and relationships have been uncovered that are often not fully understood. When men work together, relationships are inevitable. Some lead to genuine, long-lasting friendships, whilst others remain tolerable for the sake of the duty they were obliged to perform.

Yet these men did not generally work close to each others' families. The nearest equivalent might have been a tenant farmer with two or three hands living in nearby tied cottages, but that wasn't the circumstances of a light keeper. As a consequence it is tempting to say that it was a unique lifestyle and although they were apparently moved around by the faceless institution of Trinity House, there was in fact a network that is fundamental to human nature. There was nothing quite like it and as this book will record, it ended at this lighthouse at North Foreland in 1998.

One of the themes of this book has been an

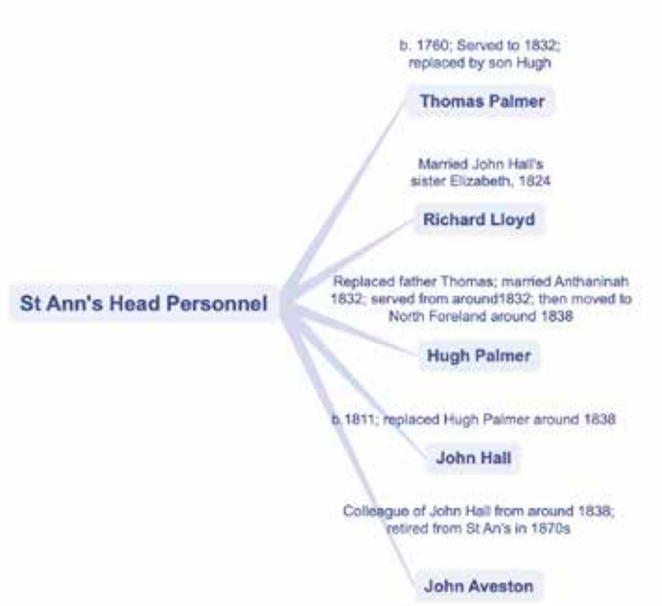
attempt to illustrate the often repeated suggestion that Trinity House inherited light keeping dynasties with the lighthouses they absorbed into their institution. Family lights did not fit into the pseudo-naval structure that was the basis of their policies as owners of all the lighthouses of England, Wales and the Channel Islands. We have concluded that the practice stemmed from the days of the coal-fired beacon, when the light was owned by one man, who had recruited trusted, local residents to light the fire and keep it burning every night of the year. That was no mean feat, but it was the reality of the situation. A trusted family that could hand the responsibility from father to son, was a simple solution for the owner and provided continuity with the sons understanding the responsibility and accepting the onerous and unpleasant conditions. This was the situation at St. Ann's Head and South Foreland and it should have been similar at North Foreland, but it doesn't seem to have been the case. What has been uncovered is what seems to be a network of families and friends that dictates the career paths of a proportion of the light keepers, whilst others apparently fared randomly. If there was an early form of Human Resources Management in the Trinity House then it is yet to be discovered.

Snapshots of St. Ann's Head

To present the findings of my research fully, it is necessary to delve more deeply into the light keepers who served at St. Ann's Head in Pembrokeshire and were either born in or retired to Dale, a nearby village.

Thomas and Priscilla Palmer

This story began at the end of the 18th century with men like Hugh Palmer, who was born in Dale, Pembrokeshire in August 1804 to Thomas and his wife Priscilla, but they didn't baptize him until 1811 when he was nearly 6 years old. As I have said many times already, the pages of the parish registers of this period do not reveal anything beyond a name and a date in spite of their fragmentary survival, but Thomas Palmer was a light keeper at St. Ann's Head. The chance discovery of a burial in the Dale Churchyard on the 23rd March 1831 from the lighthouse led to a situation steeped in poignancy. It was Elizabeth Palmer aged 32 years (born 1799) who must have been a daughter to Thomas and Priscilla and a sister to Hugh Palmer. Yet Dale Parish had barely a handful of burials each year. Two burials and two months later, Priscilla Palmer aged 71 was



buried on the 21st May 1831 by William Allen, the Curate who had buried her daughter just a few weeks before. These circumstances revealed that Priscilla's children had been born when she was quite old to be a mother and with the early death of her daughter she had lost her helpmate. Thomas Palmer had lost both of his helpmates and this seems to have precipitated his son Hugh into marriage.

Hugh and Anthanina Palmer

On the 20th November 1832, Hugh Palmer married a girl from the parish with the most unusual name I have ever seen, yet it never fails to be spelt correctly in the records I have seen. She was Anthanina Bayley, but her presence at the light did not save Thomas Palmer. He was buried on the 14th March 1833 aged 73. The baptism of Hugh and Anthanina's first child in January 1834 revealed that Hugh was a 'lightsman' at St. Ann's suggesting that he had taken his father's place at some time around the death of his father. During the next five years the Palmers baptised three daughters in the Dale Parish Church, the last being Sarah Jane on the 6th June 1837. Then, during the next 18 months or so, they moved to the far side of England where their first son, named Hugh, was born in the North Foreland lighthouse in the spring of 1839.

Richard and Elizabeth Lloyd

St. Ann's was an old lighthouse dating from 1714 and tradition has it that this had always been the Lloyd Family light. Hugh Palmer was working with

Richard Lloyd who was also bringing children to the church for baptism. So, by the time that Hugh Palmer brought his new wife to the light in 1832, Richard and Elizabeth Lloyd had a family of five children.

John and Elizabeth Hall

I am obliged to pause for a moment as Richard Lloyd is linked to the Hall Family and Betty Roberts[1] would have been delighted to tell you of the links with her grandfather Henry Thomas Knott, also a one-time keeper of St. Ann's Light. The Halls were 'incomers' as the Cornish would call them, and the first, Thomas Hall, had arrived in Dale as a seaman from Northumberland by 1760 when he married Margaret Mussavin in the parish church by licence on the 2nd February of that year. Perhaps inevitably they had a large family and one of them, John Hall, was born in 1770.

It seems very likely that John Hall married Mary Miller in her parish church of Castlemartin on the 12th January 1802 by licence, but both signed the register in very confident hands. Castlemartin was on the opposite headland across the Milford Haven and behind Linney Head that overlooked the infamous Crow Rock for which St. Ann's Light was the sentinel. In 1801 it had a population of 496, but the church of St. Martin was austere and unadorned with its solid tower dominating the building.

John Hall and Mary had four daughters before 1810, Sarah, Mary, Elizabeth and Margaret, but whilst Mary was carrying her fifth child in 1810, her husband John was drowned. This was noted in the Parish Register when she took her new son for baptism at Dale Parish Church on the 10th February 1811. It was this boy, named John after his lost father, who would become the first light keeper in the Hall Family, but not before his sister Elizabeth had married Richard Lloyd. Richard Lloyd and Elizabeth Hall married in the Dale Parish Church on the 20th March 1824.

John Hall replaced Hugh Palmer at St. Ann's, but it is not entirely clear where he had been in the years before. I am now venturing into the territory occupied by Betty Roberts' side of our family and she wrote in her book that John Hall had been working on a lightship from London, and that it was here that he met his wife Elizabeth Wyles of Leominster in Herefordshire. They were married in St. Andrew's Church, Holborn in 1831 and within the year they had a daughter they named Elizabeth Emma in 1832. So, when John and Elizabeth arrived at St. Ann's they brought their only daughter with them.

On the 17th October 1840 they took a new son to Dale Parish Church for his baptism and they named him Thomas Owen Hall. Yet this was not a single family event. This was an occasion celebrated by *two* new light keepers bringing *two* new children for baptism.

John and Mary Aveston

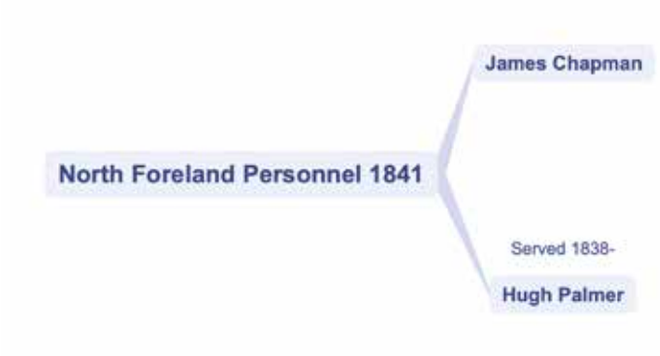
John Hall's colleague was John Aveston. This was not only unexpected, but also a demonstration of just how convoluted the Trinity House network really was for St. Ann's hides one or two more surprises. John Aveston only left the lighthouse to retire at sometime in the 1870s, as the 1881 Census found him living with his wife Mary in Rose Cottage, Dale as a superannuated light keeper. This situation was exactly what Trinity House was working against, so why was it that an exception was made for John Aveston? Why did he hold a lifelong tenure on one lighthouse and what happened to Richard Lloyd? Surprisingly, he *did* retain his position until retirement in the 1870s when he preceded his colleague into the village of Dale to enjoy a long retirement.

These cameos of St. Ann's lighthouse would not be complete without a final word about John Hall and his time on the light in the company of Lloyd and Aveston. All three of them continued to increase their families during that time, but it was not without some sadness. On the 24th July 1845, John and Elizabeth Hall baptised a new daughter Ellen Harriet at Dale Church, but eight months later they returned to bury her on the 12th February 1846. There hadn't been a burial in the churchyard for more than five months, but she wasn't recorded as Ellen, it was Elinor Harriet Hall - another case of 'family historians beware!'

In these times, parents didn't dwell on their loss as they might today. Instead they tried again and on the 11th July 1847 Ellen Margaret Hall was baptised into the family only to grow into a fine woman and catch the eye of Henry Thomas Knott when he was Assistant Light Keeper to John Hall on the Skerries light in Anglesey, but that was 30 years into the future and recorded in more detail in another chapter (see p259).

The early 1840s was the period when the nation was mesmerised by the exploits of the young daughter of a light keeper named William Darling.

1 Our 'Cousin Betty'; H. E. G. Roberts: *They All Lived in Lighthouses*.



In 1838 Grace had been instrumental in persuading her father to attempt a rescue of survivors from the wreck of the paddle steamer *Forfarshire* not far from their Longstone lighthouse in the Farne Islands off the coast of Northumberland. The seas were tumultuous, but they brought to safety four people in a boat that should have had a crew of three instead of a light keeper and his young daughter. Her father went back to rescue the remaining four survivors and as a result, both father and especially daughter Grace were rewarded and fêted throughout the land.

Grace Darling died of 'consumption' (now known as tuberculosis) in 1842 and when her brother William had a daughter born in 1844 he named her Grace Horseley Darling in memory of his brave hearted sister. This Grace Horsely Darling married Thomas Owen Hall, after they had met at the Coquet Island lighthouse in Northumberland, and, as has already been said, Thomas was the elder brother of Ellen Margaret Hall. The marriage united the Knott family with the Darling Family in the history of light keepers. Family folklore had become fact.

The two keepers present on the North Foreland light on the 6th June 1841 were Hugh Palmer and James Chapman. They were both about the same age and both had four children with the youngest in each case being born at North Foreland in 1839/40, so neither keeper had been there for very long. It is curious that neither family went to St. Peters for a baptism, as a page by page search from 1836 to 1841 revealed – nothing! However, if North Foreland needed a keeper from the 'old school' of light keeping then Hugh Palmer was the man.

When Hugh Palmer left North Foreland sometime between 1845 and 1848, he did what he had done on his arrival and he travelled the entire breadth of the country, this time to Cornwall. Perhaps he knew that there was no possibility of returning to St. Ann's with Richard Lloyd and John Aveston firmly in post, so he chose the Lizard for his next station. I say 'chose' deliberately as I am almost certain that some keepers, at least, had an input into their appointments and the Lizard has many similarities in its location to the light at St. Ann's.

His choice of light was unfortunate, for it led to the premature death of his wife for Anthanina was buried in the Landewednack Parish church yard on the 4th May 1849.

He also stayed there for life, for he died in this village on the Lizard Peninsula in 1873 aged 69. But I must return to North Foreland and the second census year of 1851.

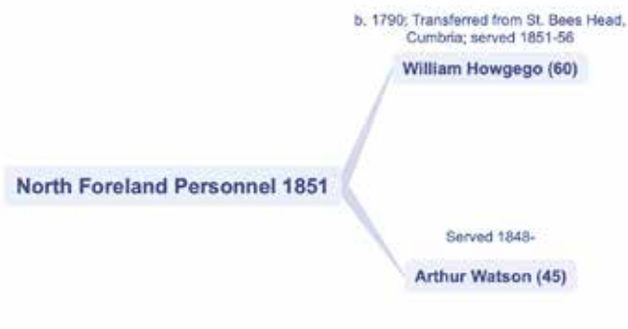
North Foreland Tower Is Unfit For Purpose

It has already been highlighted that the accommodation for the light keeper and his family seemed to have been within the tower on two floors and the 1841 census depicts the tower as 'one inhabited house,' yet it would be more practical for the families, perhaps, to have had a floor each. An engraving within this book (see p52) shows windows on the first two floors that resemble domestic windows whilst those above are more industrial. So, based upon the assumption that the keepers lived in the tower, then Palmer and Chapman (1841) and Howgego and Watson (1851) were the keepers known to have lived in those circumstances.

During the fifty years at North Foreland from 1851 to 1901, two men stand out as having longer than usual periods of duty spanning two censuses. James Chapman seemed to have been there twice in 1841 and 1861, whilst John Watson was there over 1861 and 1871. John Watson also represents a father and son combination as John had spent some time on the tower as a boy with his father, Arthur, being named light keeper in 1851.

William and Lucy Howgego

Arthur Watson's colleague in 1851 was William Howgego, an unusual name of Flemish origin concentrated almost entirely in Essex with the earliest known record dated 1646. It is said that the name originated from Romford in Essex and there were only 12 families in Essex in 1891, by which time the name had spread a little farther. However, William Howgego was neither a natural, nor a long-served light keeper when he made his first appearance at the Harwich light in 1841 at the age of 50. In fact his life seems to have been a series



of idiosyncrasies that began with that very census when he reported four children aged between 10 and 2 years old. Searches for the children revealed that there were six altogether and five of them had been baptised together in the Harwich Parish Church of St. Nicholas on the 10th January 1837. At that ceremony William was a pawn broker and not a light keeper, so that was a surprising career change. However, the birth of a boy, Edgar, in the following year 1838 who was not baptised, makes me think that the ritual baptisms were a part of that transition. Light keepers were establishment men and pawn brokers were treated with a wary suspicion, so that when once he had earned his uniform, I doubt that he ever revealed his past to his colleagues.

William was the first of three light keepers to bear that name, but no link has been found between William and the other two keepers who were father and son, Jeremiah and Harry.

William's entry in the 1851 census at North Foreland also attracts attention for its unconvincing entry. They had arrived at North Foreland with a 2 year-old 'son' born at St. Bees in Cumberland. Usefully this tells me where he had come from and approximately when, but to say that Thomas was their son is unreasonable as in 1849, his 'mother' Lucy was 52. So whose son was he and why was the subterfuge necessary?

William and Lucy's eldest daughter was Sarah and towards the end of 1850 she had married John Spence in Whitehaven, Cumberland where they stayed when her parents moved back to Kent. If they had been there to witness their daughter's marriage then the move to North Foreland was very close to the date of the census on the 30/31st March 1851. The marriage also suggests that young Thomas was the result of a promiscuous affair by their other daughter, Mary Ann, which may have precipitated the move to North Foreland, a lighthouse as far away from St. Bees as it is possible to get within the jurisdiction of Trinity House. I can imagine a shrewd Yorkshireman like Arthur Watson having a quiet word with his wife Emma concerning his new colleague's family relationships.

William Howgego was now 60 years old, his wife Lucy was 54. That is not considered to be a great age today, but in 1851, life was all but over. Five years later, Lucy was dead. She died, not in Kent, but in Poplar at the end of 1856, so their time at North Foreland was not unusual, nor was it exceptional. Her widowed husband, William, had retired to Deal by 1861 and the census return raises eyebrows once again. He was living at No. 4 New Street with a lady named Louisa Bristow who was the wife of a Cinque Ports Pilot. Louisa was the head of the household and everyone in that household had to be related to her and she said that William was her father, so at 44 years old she had been born in Harwich in 1817. There was also a 'nephew' in the house, 12 year-old Thomas Howgego. This then correctly identifies him as the son of one of her sisters. However, William exuded pretentiousness by describing himself, not as a 'superannuated light keeper,' but as a 'fund holder.' He was a wealthy man with sufficient means to employ a 19 year-old domestic servant girl from the town. His days as a pawn broker had obviously borne fruit.

This was almost the end of the Howgego tale, but the story itself lacks a beginning and his declared relationship with Louisa needed investigation. Fortunately, baptism records for Harwich have been made available on the Internet and it would seem that Louisa was born on the 2nd November 1815, and baptised 18 months later at the parish church of St Nicholas, on the 16th July 1817. Her mother was named as Louisa and, since there is no burial record for a Louisa Howgego in Harwich, the names Louisa and Lucy may have been interchangeable. Without a marriage record for William and Louisa little more can be said, but at their daughter's baptism in 1817, William Howgego was a baker when he was 26 years old and his wife had presented him with their first child when she was just 18.

Arthur and Emma Watson

Arthur Watson's story is as enigmatic as William Howgego and the lighthouse may have played a significant part in that conclusion. Arthur Watson

was born in Hull, Yorkshire in or about 1806 and nothing is known of his early years. Assuming 1806 as his birth date made him 26 years old when he appeared on the record of Milford Parish Church in Hampshire. It was here that he married Emma Anne Carey. Milford is the village closest to the lighthouses at Hurst Point although the lighthouses are within the parish of Hordle and this can be misleading.

Their first child was a son, Arthur George, born on the 29th August 1833, but he wasn't baptised until the 1st February 1835 when a double baptism was held for him and his new baby sister Laura Charlotte. At this baptism the Minister noted that Arthur Watson was a schoolmaster and not a light keeper. Yet when the couple came back for the baptism of their third child on the 2nd April 1837, no occupation was added.

The census for 1841 changed that as Arthur was now one of the two light keepers on the Hurst High Light with Emma and all three children. It was from there that they moved to Dungeness, and on the 1st August 1847 they baptised a second daughter Emma. This birth ended an unusually long gap of ten years and often comes with unexpected consequences.

When Arthur and Emma moved to North Foreland with their youngest two children, the eldest two were left behind. Their eldest, Arthur George stayed in Milford as the schoolmaster, confirming the information that his father had been the schoolmaster before him. He was lodging with a local bricklayer, James Ireland and his wife Janet in their cottage on Milford Common. Arthur's sister had found a place as a nursery maid in the parsonage of the Rev. George Morris and his wife Elizabeth. This parsonage was at Sarisbury near Titchfield on the other side of Southampton Water where Morris was the 'Perpetual Curate.'

So for the next five years these two unlikely light keepers - Howgego and Watson - had to share their stone tower and the responsibility of keeping their light burning bright every day of the year, but by 1861 both keepers had been widowed and were retired. Lucy Howgego had died in London at the end of 1856 and Emma Watson was buried in the churchyard at St. Peter's in Thanet on the 9th October 1857. It is true that Lucy was 60 years old to Emma's 50, but it is just possible that the living conditions at the lighthouse played a part in their deaths.

On the 10th September 1859 the following item was published in the *Dover Express*:

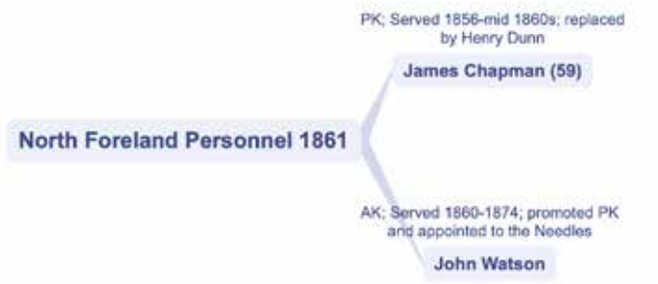
"Extensive alterations have been going on for some time at the North Foreland Lighthouse. Some symptoms of decay having been found in the posts of the wooden floors and the building being anything but fireproof, it was determined by Trinity House to remove them, substituting for them iron girders and slate floors and to case the interior with 9-inch brickwork. The lantern will be communicated with by a circular, stone staircase, so that the case will now be thoroughly fireproof. The works are being carried out by the contractor, Mr. Smith of Ramsgate, from the designs of Messrs. Walker & Burgess, engineers to the Board ably represented by Mr. Morris the resident engineer."

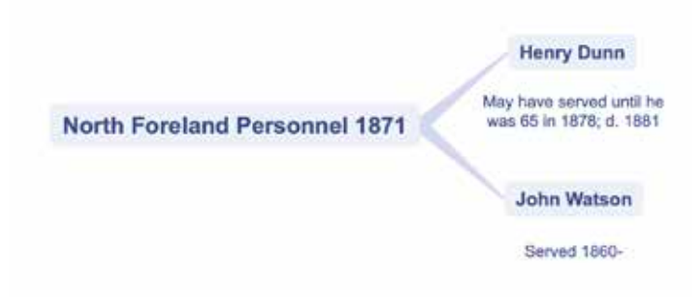
William E. Smith, contractor for the works, was born in Minster on the Isle of Sheppey in 1817 and by 1861 he and his sizeable family were living in No. 16 Augusta Terrace, Ramsgate. It was here on this census page that he declared that he employed 104 men and 16 boys so it was a considerable business worthy of a major undertaking like the North Foreland lighthouse. Yet, surprisingly he employed no servants although the substantial middle class property was built to accommodate them with a 'below stairs' with 'trade' entrance and attic bedrooms for the staff which can still be seen today.

The floors of the lighthouse were clearly rotten, and with today's knowledge we might expect the death certificates of the two wives to record 'consumption' or tuberculosis or something similar as the cause of their deaths. Whatever, the end result was that the lighthouse tower would no longer be a residence and it is believed that accommodation was provided at this time in two beautifully proportioned houses on either side of the main lighthouse entrance which were connected to the tower by a short corridor.

After many years studying documents relating to the lives of light keepers and their families, it is true to say that the death of a child at a lighthouse made little difference to the family beyond a brief period of mourning the loss, but the death of a keeper's wife was very different. Almost every one that I have seen concluded with the man leaving the light shortly afterwards. This current situation was close to being an exception and the reason may have been the presence of the other keeper, James Chapman.

It seems that he and his family returned to the light after Howgego left in 1856 following the death of his wife. Born in Gillingham just along the north Kent coast, James Chapman, now 59, was 'coming home' prior to his retirement. He brought with him three unmarried daughters aged between 18 and 24,





so there was no shortage of housekeeping talent and companionship for Arthur's daughter Emma who was aged 10 in 1857.

John and Anne Watson

It also gave Arthur Watson's son, John Henry, the opportunity to join Trinity House and initiate his training which could not be done overnight. At this period in the evolution of Trinity House, induction, training and probation had become the norm and John was obliged to follow the rules, but someone allowed him to head back to the North Foreland light once his probation was finished, allowing his father to retire. Towards the end of John's two-year probation on the Bishop Rock lighthouse he married Anne Rogers in the parish church of Madron serving Penzance, where he was in lodgings. The wedding took place on the 3rd December 1859, sometime after which the newly wedded couple set off for North Foreland. At this point his father left the service and returned to Milford in Hampshire where he married Mary Elizabeth Howey at the beginning of 1860.

There is one final twist to the tale. In 1861 Arthur Watson and his new wife were found in Milford. They were in the household of two elderly spinsters who were stepsisters. Ivy Bank Cottage had a modest household of three domestic servants - housekeeper, cook and housemaid. Mary Elizabeth Watson was the housekeeper, but also in the house overnight and classed as a 'visitor' was Arthur Watson – librarian!

When John Watson returned to North Foreland with his new wife it seems likely that his father was there to meet him as John's young sister, Emma, would remain on the light with the newly married couple, but as with all of these changeovers between keepers the circumstances are never clear. One thing that can be said is that they were welcomed into their new house by James Chapman as his Principal Keeper.

It is very clear that John and Anne enjoyed and appreciated their new house as ten years later in 1871 they were still there, but with six children.

Henry and Anna Dunn

As expected, James Chapman retired as a superannuated light keeper to Broadstairs just down the road, and was replaced as Principal Keeper by Henry Dunn. He belonged to that small group of keepers who had been born in Westminster, London. When he married Anna from St. John's in Newfoundland he joined another very small group of keepers who had no children.

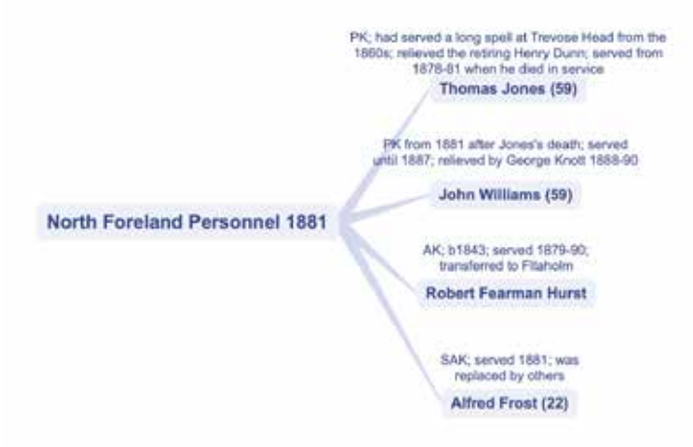
I have often wondered about these couples, living together with medium to large families in the confined, even claustrophobic atmosphere of a working lighthouse with its relentless routines. Henry, like James Chapman before him was approaching 60 and his retirement years, but every social group has its elders and it was an environment that they accepted.

Seniority Lists are curious documents, familiar to anyone who has experience of the Civil and Military Services. Every passing year takes a name inexorably towards the head of the list and that year came for John Watson in 1874. He had been 14 years on the North Foreland and that was about the average time it took to reach the pinnacle of the AK tree, but he was very fortunate to spend all that time at one lighthouse, especially one as benign as North Foreland. His first light as a Principal Keeper could have been another rock lighthouse as it was for George Knott, but the ticket he pulled from the hat was unusual – it was the Needles. Remarkably, this had not always been treated as a rock station as there had been a time in the past when the families lived with their menfolk in such perilous locations as they did also at Skerries, South Stack and others.

John would have joined William Iddes who had been there since just before 1871. Iddes played his cards to perfection as he was still there in 1901

having picked up his own promotion to Principal Keeper at some point in the 1880s after dutifully completing his 14/15 years service as an Assistant Keeper.

For Henry Dunn as for several of his predecessors, North Foreland was his last lighthouse. What happened to him is unclear. Dunn is not a particularly uncommon surname, but there were only six entries in the 1881 census for a man born in the vicinity of 1814. None of them was a retired light keeper. However there was a burial of one Henry Dunn aged 68 in the churchyard of St. Mary the Virgin Dover on the 17th February 1881 that was the only one of a similar age for the entire decade of the 1870s. The probability it is our man is very high.



Thomas and Ann Jones

As a marker, Henry Dunn was 65 years old sometime around 1879 and I would suggest that he had retired a little earlier, but his relief as Principal Keeper at the North Foreland was another man with a very straightforward background and a long tenure of the light at Trevose Head from the mid-1860s. Thomas Jones was a true Welshman from Holywell in Flintshire, or so he said, as it is known that his mother's name was Penelope. 97 boys named Thomas Jones were baptised in Flintshire between 1819 and 1823 including two families at Holywell. Not one of them had a mother named Penelope. But it would not surprise me to learn that he had been a Welsh speaker in his youth and had retained his lilting Welsh accent during his long sojourn in Cornwall.

The 11th April 1881 was a Monday. It was a week since the census forms had been completed and handed to the Enumerator. It was Thomas Jones' responsibility to complete the form for the North Foreland Lighthouse. Towards the end of the week Thomas Jones died and eight days after the census, on the 11th April, Thomas was being lowered into his last resting place in the St. Peter's Churchyard with his two Assistant Keeper's standing beside his grave with their caps under their arms. There were no wives to comfort Thomas's wife Ann as Robert Hurst and Alfred Frost were unmarried. Ann Jones needed her daughters now as she and her four adult children had lost their home.

It was unusual to have two bachelor keepers on a land light, but Alf Frost was a 22-year-old Supernumerary Assistant Keeper who had only arrived a few days before the census. This was a temporary arrangement whilst Ann Jones nursed her husband Thomas until his death. With two keepers at the light, no emergency manning was required until a new Principal Keeper was appointed, but that did not happen very quickly. After two months it was usual practice for an SAK to move on and Alf Frost was sent to the Wolf Rock in June 1881 with no Principal Keeper in prospect. Another SAK would be required and he could stay until August after which a third SAK would take his place.

John Williams

The Lighthouse Log Book does not record the arrival of the new Principal Keeper until Thursday 27th October 1881. His name was Williams without any initial or forename to identify him. There were nine men named Williams known to have been keepers in the relevant half of the 19th century and six of them can be eliminated due to a dearth of knowledge about them. Two more can be confidently eliminated leaving one possibility - John Williams, born St. Enoder in Cornwall in 1822. In 1881 he was 59, the same age as Thomas Jones when he died. He had been on the South Foreland light until about 1874 when he moved to St. Catherine's on the Isle of Wight. After 5/6 years as Principal Keeper there he would be in line to move once more before retirement and that fits the trend that has existed at North Foreland since the censuses began in 1841.

The Log Book records his departure as the 7th March 1887 and the Baptism Register for St. Enoder records his baptism to John and Grace of Chiprase as the 6th March 1822, so he was 65 years old and he left the lighthouse for his retirement in Cornwall without meeting his relieving Principal Keeper.

ABOVE: From a higher elevation the footpath can be clearly seen, inside the modified perimeter wall, but with the new perimeter marked out by a wire fence. Behind the lighthouse is farmland and the sea is in the distance on the right. The mast still stands.

Robert and Mary Hurst

1881 had been a chaotic year for Robert Fearman Hurst, but he was used to frequent change as he had come to North Foreland from its sister light, South Foreland where he had seen a great many changes. He married a local girl from Broadstairs named Mary Ann Lawrence on Tuesday 12th April 1887 who was twelve years his junior when Robert was 44 years old. In that year he had been in the light service for 20 years and he seems to have been one of those occasional people who lack ambition and shun promotion as he was always willing to work for someone else. However, he was now alone on the light so he could not shirk the responsibility of a succession of young and eager Supernumeraries until the new Principal Keeper arrived.

This assumption has no factual basis and 20 months seems to have been an unusually long gap between tenures of a Principal Keeper as an SAK would only stay for 2 months at a time. It seems odd that Trinity House could not find a suitable young Assistant Keeper without encumbrances to serve at North Foreland for that period of time. In the same way it seems odd that they did not move Robert Hurst. What was it about him that allowed him to do as he liked? What was his hold on North Foreland beyond being born in St. Lawrence, Thanet? Was his late marriage a 'political' or tactical move to defer the inevitable? If that was true then the forthcoming baby may also have been a further tactic.

Ethel Mary Hurst was registered in the Thanet registration district in 1888/2Q, and she was the first baby to born on the light since the days of John Watson, 20 years before, but she made it possible for her parents to stay a little longer.

Returning to Kent From Devon

It was a small, but silent group that gathered in the courtyard of the Bull Point Lighthouse, on that chilly November day in 1888. As the two ladies – Clara Tonkins and Emma Squibb - self-consciously fidgeted with their coat buttons, the door of the Principal Keeper's cottage opened and Florence Knott appeared with her mother Catherine

Seemingly similar images can provide much information about the changes to the site over many years. Clearly, the amount of trees and shrubs can change quickly and disguise the presence of other features. A triangular patch of garden at the entrance has a shed that changes its shape in different images. The presence of an early Victorian postbox at the entrance is a valuable marker, present LEFT TOP and absent LEFT BOTTOM. Later images from the 20th century show the presence of the public telephone box, allowing the photo to be dated to the mid 1930s. Careful examination shows it to be located on the same site as the old post box.

behind her. She recoiled at the sight of the farewell gathering and tried to push back inside, but her mother blocked her attempt. No one knew quite what to say to each other. George Knott closed the front door behind him for the last time and walked over to Jonathan Tonkins with his hand held out. George's emotions at the parting were mixed and confused. He felt that he was deserting a job he loved. It was just a month before his 60th birthday and he felt that he should have stayed until his retirement, but he couldn't live with that fog horn any longer.

The two young children of the two Assistant Keepers ran to Florence and clutched at her skirts. Neither toddler was more than 18 months old, but as Florence was no longer at school, she had spent a lot of time with both Hilda Squibb and Fred Tonkins and both had come to see her as an alternative 'mother,' but the time had come to leave.

The last handshakes had been made, the last words had tailed off into an embarrassed silence and Florence had disentangled the young children from her skirts, so George and Catherine turned to walk to the front gate where Gammon was waiting with

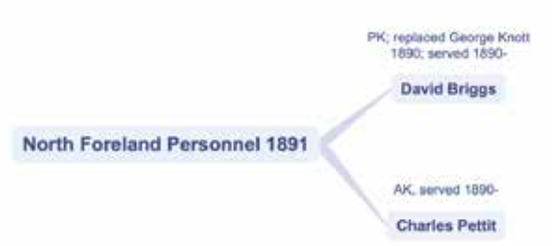
one of his cabs to take them to the station. Their trunks had been collected the previous day by the station porter with his horse-drawn wagon, so they should be well on their way to Broadstairs by now and Catherine was hoping that they would get there before them.

The lay of the land and the direction of the lane to Morthoe soon rendered the lighthouse invisible and George was glad that he could no longer see it. He wanted to look to the future and the sooner he could reach his home county of Kent the better he would be pleased. A long train journey lay in front of them beginning at Morthoe, through Braunton to Barnstaple for a change to the Bideford to Exeter train; they then had to change again for the train to Paddington via Bristol, which was followed by a ride in a Clarence or 'growler' carriage through London's Trafalgar Square to Charing Cross for the South Eastern Railway train to Ramsgate. George and Catherine would get off at Broadstairs and find another cab which would take them along the coast road to the aristocrat of lights, North Foreland. It was a long journey. They would not get there until after dark, but this time Catherine had only Florence to concern her and she was no bother – no bother at all.

It was already getting dark when the train set off from Charing Cross station to make its way across northern Kent passing through Chatham, Faversham, Herne Bay and Margate until finally reaching Broadstairs. It was late when the Knott family stepped from the train, but the friendly porter had no difficulty in calling a cab. It was less than two miles to the lighthouse, so they would be there in ten minutes as Florrie fumbled her way into her seat without knowing where she was.

The Last Lighthouse For George

The first thing that George did after breakfast on his first day of duty at the North Foreland lighthouse was to take a quiet walk around to see what equipment it had and whether he was familiar with it. He started at the optic in the lantern and worked his way down to the ground level. It was so nice outside that he was attracted to walk around the lighthouse grounds, admiring the shape of the lighthouse and its proportions. He began to think over his time on the South Foreland Light and to wonder why he had never served here before. He had always known about the light, yet it was an old friend he had never met. It would make a splendid model.



It was a lovely location, so different from all of his previous lights. Naturally there was always a sea view. The light was 57 m (188 feet) above the high water mark, but this was not a rocky cliff top, this was a rural landscape with the sea at a distance. Its perimeter wall was edged by fields that had been recently ploughed, so there must have been a crop there. The light was surrounded by dozens of little cottages occupied by agricultural labourers and the scattered community had a strange name – Reading Street. The main road between Broadstairs and Margate - North Foreland Road - passed the front gate and just a mile down the road was Broadstairs itself. It was a very pleasant little town, totally unlike Morthoe and Braunton, yet it was St. Peter's, Thanet, rather than Broadstairs that locals seemed to call it. It was a place that was on the brink of change. Soon, there would be another industry – house building – as the middle and upper classes discovered its delights and wanted to live there. Large, expensive villas would begin to line the cliff top by the end of the century, but that was in the future. George was just glad that there would be no fog signal to disturb his days and he could enjoy a walk along the new promenades with Catherine on his days off.

Of course South Foreland Light was his immediate neighbour to the south, but he thought it unusual to be surrounded by half a dozen light ships - Cork, Galloper, Girdler, Kentish Knock, Sunk and Tongue. What a curious collection of names! But this was the approach to the River Thames Estuary, an extremely busy place that was also a hazardous one where sand banks abounded. His colleagues in the Trinity House service (his eldest son, Henry, included) manned curious lighthouses on legs with even more curious names like Mucking, Chapman and Maplin.

A fussy northerly wind had begun tugging at the Trinity House flag, rattling the lanyards against its pole. It was open sea all the way across to Harwich and beyond. George buttoned up his frock coat and shook himself out of his reverie. It was time to get down to work.

The End Days

George Knott's time on the North Foreland Light was very short. It lasted less than two years, but this is the first time I have had the advantage of access to the precious log book of the lighthouse which gives precise dates for the movements of the keepers. George arrived on Saturday 3rd November 1888 and Robert Hurst was his Assistant Keeper.

Robert was a local man and knew the area and the lighthouse very well - just the sort of colleague George needed, unpretentious and totally reliable as George needed time to shed the tensions that had brought him to breaking point with the fog signal at Bull Point. Robert Hurst would remain in post whilst George was his Principal Keeper.

It was the 6th October 1890 before Trinity House moved the Hurst family to Flatholm, an island in the Bristol Channel off Cardiff. So, Robert had been at North Foreland when George arrived and he was there when George left the lighthouse for his retirement in Dover on Friday 29th August 1890. It was four weeks before his relief arrived and as a consequence George Knott never met Principal Keeper David Briggs, a Scotsman from Fifeshire. It must have been something of an anti-climax to shake hands with a single keeper and walk down the drive from the lighthouse with Catherine on his arm holding Florence's hand. Where were they going? What would George do now? What would life be like not living in a lighthouse? Perhaps it was for the best that he didn't meet the man that took his job.

David and Isabella Briggs

David Briggs arrived with his family on the 25th September 1890, accompanied by his wife Isabella, also from Scotland (Lanarkshire) and their daughter, a music teacher 23 years of age with an eye-catching name – Ellen Margaret Hall Briggs - eye-catching for it is the same name as that of the lady who married George Knott's eldest son Henry. I should explain. Ellen had been born at Whitby, the same light as the one claimed by the Hall Family as 'their own' and in 1871, when Ellen was 3 years-old, she was one of five children, who with her parents lived in the High Light. The South Light was manned by John Hall (60) who lived there with his wife Elizabeth (60) and their daughter Ellen Margaret Hall who was 23 years-old. It suggests that the name originates from a very close friendship between the Halls and the Briggs and it is not the first time that we have seen such a phenomenon in the Knott Family.

Charles and Emma Pettit

When the Hurst Family moved away at the beginning of October, they were replaced on the 14th November 1890 by Charles Daniel Pettit and his wife Emma bringing with her their young son Charles Stanley who had been born at the South Foreland Light early in 1889 (1Q Dover). Charles Daniel was another local boy from the parish of St. Peters, Thanet, but Emma was born in the tiny village of Chilham between Ashford and Canterbury. They married in Emma's parish church at Chilham on Sunday 29th September 1878 and their first lighthouse together was Trevose Head in north Cornwall where they stayed for five years. They moved to South Foreland in 1883 before moving along the coast to North Foreland. Charles made the lighthouse service his life's career and in 1901 he and Emma with two children were on the famous Farne Islands with keeper Robert Darling. By 1911 Charles was the Principal Keeper at Winterton in Norfolk.

The information obtained from the fifty years covered by these censuses from 1841 to 1891 suggest a pattern in the manning of the North Foreland lighthouse. Almost without exception (and in contrast to South Foreland) its Principal Keepers were on their last lighthouse before retirement. One died before he could enjoy his leisure years, but many were more fortunate and retired locally. Disregarding supernumeraries, North Foreland provided work for only nine keepers. George Knott was its tenth. It was the perfect choice for George as he moved to Dover.

It also reveals frequent and persistent links between keepers and the stations at which they worked. Also apparent is an apparent disinterested approach by Trinity House to the relief of its keepers which needs more explanation. If Trinity House was intent on running a watch system, then that system is a continuous process. It cannot be left for a month, as there was a keeper left unsupported. The document set out here (p321) shows the detail and the depth to which Trinity House expected its keepers to work. Any keeper found wanting would be disciplined, but no one would dare to suggest that Trinity House had failed its keepers.

It it possible that, somehow entwined and disguised in this analysis, the employers - occupying such different social spaces as they did - took their employees' domestic circumstances into account after all?

In 1890, when George Knott was in his last year as Principal Keeper, there is a suggestion that an 'improved lantern house' was built (or was it rebuilt?) on the top of the tower. It was alleged to be an unusual design derived to accommodate a 3-tiered array of parabolic reflectors, but these were not fitted until 1904. Instead, a pair of eight-wick burners using heavy mineral oil was installed in 1894, made to a Trinity House pattern. This maintenance instruction has survived to give an insight into the work of the light keepers.

TRINITY HOUSE Lightkeepers' Manual 1896 – Oil Lamps

Every morning at daybreak, the keeper should ascend to the lantern and proceed with his duties as follows: if the apparatus is revolving, the motor weight of the clockwork will be entirely wound up and fastened, the work stopped and the wheel which communicates motion thrown out of gear.

If the lamp be mounted in the apparatus on a movable table, that table will be lowered. If the apparatus be hoisted on a bracket, it will be lowered until it rests on the service-table intended to receive it.

The light will be extinguished, observing the precautions mentioned above, and the chimney will be wiped with care within and without, then wrapped in a dry cloth and placed where it will be free from dust.

The lamp will be removed from the apparatus, and, if it be a constant-level one, placed on its service-stand.

The apparatus will be dusted by a feather brush, and wiped with a soft linen cloth that is free from dust. If any part be spotted with oil, it will be washed with a little spirits of wine. The apparatus will then be covered with its linen cover. The glass of the lantern will be carefully wiped within and without, and, if necessary, cleaned with whiting, or, if necessary, with polishing-rouge.

If the lantern be provided with curtains, they will be hung in place.

The service-table, the pedestal and interior part of the lantern wall will be dusted, and the staircase swept.

This done, the lamp will be taken into the store-room and weighed to ascertain the amount of oil consumed during the night; then it will be emptied, and the oil poured into the strainer. The oil which has fallen into the drip-cup during the night will be placed in the vessel kept for leavings, and reserved for the use of the keepers.

The burner will be cleaned with care within and without. The burned oil attached to its edges will be removed with the triangular scraper; a bottle-brush will be passed through the interior air-tube, and the outside wiped with a linen cloth.

The buttons of the lamps burning schist oil will be carefully wiped.

The body of the lamp will be wiped and cleaned. Finally, the lamp will be filled, the wick trimmed or replaced, and the lamp again set in the apparatus, so that everything may be ready for lighting up at evening.

Care will be taken that the spare lamp, which should be in the light-room, is in a serviceable condition. If the apparatus be sidereal, two extra wick-carriers, provided with their wicks, should be ready to be placed in the lamp. A can filled with strained oil will be carried up into the lantern, or placed at the foot of the pedestal, to be poured into the spare lamp if required.

Every evening at sunset, the keeper will ascend into the lantern, after having provided himself with a lighted lucerne.

If the morning duties have been regularly performed, the following state of things will appear:

The lamp of the apparatus will be in place and ready to be lighted; its chimney will be in the service-closet, as will the extra lamp, the burner, the two chimneys and the service box containing various utensils.

The weight of the revolving machinery in lights varied by flashes will be found entirely wound up, the main wheel held by its bolt, and the wheels which communicate motion out of gear.

The cover of the apparatus will be removed, and the lighting commenced half an hour after sunset, so that the light may be at its full brilliancy by nightfall, and in this operation the directions just given will be followed.

If the apparatus be on rollers, it will be placed in the position it ought to occupy during the night, and kept there by means of a stop-bolt.

At nightfall the curtains of the lantern will be removed, folded and placed in the service-closet, if the apparatus contained in a fixed lantern.

If the apparatus be in a moveable lantern, this will be hoisted to the full height of the scaffold or pedestal.

If the apparatus shows a variable light, the revolving machinery will be put in motion immediately after lighting. To do this it is sufficient to gear the cog- wheels, withdraw the bolt of the main wheel, and remove the pin which holds the motor-weight.

When the cold is so intense that colza oil will congeal, the following precautions will be taken before lighting:

1st: An hour before sunset the lamp will be taken down and emptied, and the oil heated until too hot for the hand to be held in it; after which the burner will be plunged in it and kept there some moments; it will then be restored to place, and the oil poured back into the lamp.

2nd: The heater will be got ready and put in place. From April 1st to October 1st, the light will be visited by the keeper at least once every night, and during the remainder of the year twice every night, and oftener, if from any cause there may be reason to fear that the light may go out or decrease much in intensity.

These nocturnal visits will be made during the summer at about midnight; in the winter at about 11 p.m. and 2 a.m. At each visit the keeper will carry the lighting-lamp.

When the keeper sees that the wick is charred, and should be trimmed or cleaned, he will proceed as follows, according to the kind of lamp.

If it be a constant-level or mechanical lamp, he will immediately replace it with the spare lamp, having filled this with oil and lighted outside the apparatus. If the lamp belonging to sidereal apparatus, he will remove the wick-carrier and replace it with one of the spare ones, which he will immediately light. All these operations should be performed as quickly as possible.

Having properly placed the new lamp, the one taken from the apparatus will be set on the service-table, and then trimmed so that it may be returned to place if necessary.

The piston of the moderator lamp should be wound up at each visit.

When the apparatus is lighted by a schist-oil lamp with a cistern below, care should be taken to change the service lamp towards the middle of the night, lighting the extra lamp before putting it in place. In no case should oil be poured into a schist-oil lamp while it is lighted.♦

Above: The author's photograph of the site in 1974 as used in a published set of lighthouse postcards. [B&T Publications, 1996.]

A View Through The Ages

North Foreland lighthouse benefits more than many others by having a strong photographic records of changes to the site across nearly a century and a half. Its prolific use as an image on postcards has enabled us to observe many alterations - to the environs, if not the exterior of the lighthouse itself.

The selection of images printed on these pages well illustrates a location very different from the sister lights at South Foreland. Once somewhat detached from any neighbours, the immediate vicinity here has seen a notable growth of habitation and, of course, vehicle traffic on the adjacent road. From the narrow, gravel track of Victorian times, the road had to grow in response to the increased demands. On the far right of the photo above we notice how there is an apparent gap in the perimeter wall to create a public footpath alongside the road where it has been widened but remains narrow. It is unlikely that the Trinity Corporation would have given up a strip of perimeter land so we conclude that the original high wall was knocked down and a new lower wall built to separate pedestrians from vehicular traffic at this narrow point.

Of special interest is the positioning of an early postbox in an image on p304. The first postboxes in England dated from 1853 and it was unusual for a box to be as short as the one shown. Boxes were not normally red until the colour was standardized from 1874; it took a further ten years for them all to become red. That there was a box sited on the spot at all is of interest for there was little population nearby and we might speculate that its position was chosen because of mail - both official and personal - that needed to be regularly sent from the lighthouse, or even resulting from the activities of the nearby signal station. By 1974, the postbox was long gone, replaced by a telephone box in the mid-1930s and then itself removed by the 1970s.

The small triangle of land is a further curiosity for throughout its life it seems to have been orphaned, outside the perimeter of the Trinity-owned land lying neglected and forlorn for lack of ownership. Nevertheless, it did serve as a small plot of interest to some unidentified individual for, surrounded by its fence, there was a gate into it directly behind the post box. For a time there was also a small shed or outhouse against the wall at the rear (see p318).

Much of the grounds at the front is screened by tall bushes and shrubs. And the lighthouse is OPEN to the Public! Will we ever see that again?

Signal Stations

The strategic position of North Foreland as the most distant point of land at the entrance to the Thames and the once-vital London docks made it an obvious choice for observing the movements of ships, and even for using simple means of communication with them. The sending and receiving of signals from points on land to ships at sea is probably as old as lighthouses themselves, and the practice was well used by the Romans to send messages between adjacent military posts, as well as ships.[1] Then, over many centuries, it became an accepted practice to have a chain of beacons at points along the coast of southern England, each beacon visible to the next in line, as a method of sending a warning of impending attack by enemy forces. In the 19th century, the invention of the telephone and telegraphy highlighted the benefits of sending messages across great distances - far beyond the horizon, but with wires. Then Marconi changed everything.

The methods employed for visually communicating with ships at sea is too broad for much detailed comment, and in any case was often carried out by agencies outside the remit of the lighthouse service. However, we do need to at least outline the history of signal stations and telecommunications because of the close relationship of the signalling function of lighthouses.

Above: The Lloyd's Signal Station at Bass Point on the Lizard, Cornwall UK. The whitewashed two-storey masonry building has a five-sided full-height bay on its south wall, and a flat roof surrounded by a castellated parapet. It is 9.1m high and has a lookout structure with a stout mast for flag signals on its roof.

Lloyd's of London

Curiously, it was the business of coffee that sparked a remarkable new industry - that of insurance. At the time of the Great Fire of London in 1666, coffee was a relatively new import that had begun to revolutionize the social activities of a nation. As Londoners slowly recovered from the great tragedy, they began to gather in large numbers in coffee houses to conduct their business.

Edward Lloyd's Coffee House in Tower Street, London was reported in the press in 1688 once it had become the focal point for a great deal of the maritime business transactions between ship owners, merchants, captains and insurers. Besides the obvious needs for operational, navigational and personal communication from ships at sea, the business managers responsible for the valuable cargoes, as well as the owners of the ships that carried them, needed good information as to their progress. The business of insurance was of such importance that an organization called Lloyd's of London sprang up, a company that became the pre-eminent centre in the world for high value insurance.[2]

Lloyd's Coffee House published daily shipping news, informing people about departures and arrivals, the cargo aboard each ship, where other country's fleets were operating and where pirates were known to be active. The first official edition of the *Lloyd's List* was first published by Thomas Jemson in 1734 using the Lloyd's name, which had built such a reputation for reliable intelligence that members of the shipping community were prepared to pay a subscription for it. One of the world's oldest continuously running journals, the paper still provides weekly shipping news.

By 1827, insurance underwriters began to provide reports directly to Lloyd's, gathered via semaphore signals passed from ships to shore along a chain of hilltop signal stations that Lloyd's had established along the coast. Clearly, strategic points such as Lizard Point, St Catherine's Point (Niton) and North Foreland were pivotal in providing such a service.

In 1874, Henry Hozier became Secretary of

1 Ken Trethewey: Ancient Lighthouses, p19.

2 Later, a separate offshoot body called the Lloyd's Register of Shipping became an international organization devoted to marine safety.

Lloyd's at a time of great change. He recognised the importance of intelligence and became a pioneer of telegraphy. Under his leadership, by 1884 Lloyd's had 17 coastal telegraph offices in the British Isles and 6 abroad, not just for business purposes, but for the sharing of vital intelligence with the Admiralty.

In Britain, the Lloyd's Signal Stations Act (1888) formally conferred upon that venerable institution the powers to establish Signal Stations for Telegraph Communication - and for "other purposes." The signal stations set up by Lloyd's took visual signals sent by semaphore (flags by day and flash light by night) and transmitted the messages onward by means of wired telegraph.

There were, of course, competing interests. For example, in 1872 ship owners in Falmouth set up their own signalling station on the Lizard, close to the lighthouse, but not so close that it would interfere with its light. In fine weather messages were transmitted using coded groups of flags. At first, paper messages were then sent by post or horse rider to the nearest telegraph office at Helston. Soon, a telegraph cable reached the signal station and the Post Office established an office there. In November 1872, the station began night-time signalling using steam whistles, guns, rockets and arrays of coloured lights. By 1877, more than a thousand vessels were using the station each month.

In December 1882, Lloyd's of London stated their intention to set up 27 signalling stations around the British coast, one of which was to be at Lizard. As serious competition to the privateers, it was clearly sensible for the small, but valuable business to reach agreement with Lloyd's for the lease of the building to the company so that they could take over the signalling and reporting services; the telegraph was operated by the Post Office. Lloyd's took over on 1st January 1883, and the large black lettering on the building's west wall was changed from "V R Telegraph Office" to "Lloyd's Signal Station".

A Bright Idea

One of the best business ideas of all time was to charge people for the sending and receiving of messages. As a greater proportion of the population gained the power of literacy there developed an increasing need for the regularization of a system for the sending of paper messages. In England in the mid-17th century this business idea became reality with the formation of the Post Office - later the GPO. But they didn't get it right straight away. The first idea was to charge by the distance travelled between sender and receiver (good idea) and to charge *only the receiver* - who had the right to refuse to pay! (*Bad idea!*) It might be obvious to us now, but that was not a successful business model and the apprentice who dreamed it up was probably fired. Oddly, it took time to establish the principle by which only the sender of the message paid a universal postage rate, but it was always within the remit of national government (and has been so until the comparatively recent deregulation of the industry allowed competition from private companies).

The full monetary value of the idea came about when the Treasury learned that there were other ways to send messages.[3] With the Telegraph Act of 1868, the government wasted no time in charging for the sending of Morse-coded telegraph messages along wires. The GPO started a telephone business to carry messages in the form of human speech in 1878 and began to take over licensing of *all* equivalent private businesses in December 1880 (except in Hull and Guernsey), a process finally completed by 1912.

Next came the transmission of messages wirelessly by radio. The priceless contributions of inventors and entrepreneurs such as Marconi, allowed rich rewards at first, but were quickly drawn within the reach of the public purse as the government realised the full earning potential of the business. Control over the sending of telegraphs was made by the Wireless Telegraphy Act of 1904.

Probably the greatest breakthrough occurred when in the 1920s one-to-one messaging was replaced by one-to-many transmissions - the idea of public broadcasting. Now every citizen was a potential fee-paying customer. The government allowed the formation of the BBC in 1922 with a monopoly and the power to charge a license fee for all who wished to receive its transmissions. Even today it is necessary to have a TV licence in the UK if you wish to receive broadcast transmissions, Although the many methods of delivery and receipt of broadcasts available today have made TV licensing increasingly illogical. The licensing of all telecommunications equipment was thus for many years under the jurisdiction of the GPO, a government-owned business finally sold off to private enterprise in the 1980s. Altogether the intellectual property relating to the sending and receipt of messages proved unimaginably profitable to the government for at least a century and a half. As far as I am aware, no license has ever been necessary for the ownership and use of carrier pigeons.

3 In 2000, the British government sell-off of 3G licences to telecoms companies raised a staggering £22.5bn.

Above: An aerial image from 1920 shows the site of the masts and buildings of the North Foreland radio station in the right foreground in front of the lighthouse. The B2052 North Foreland Road runs diagonally across the photo from top left to bottom right and today no trace of the installation remains; the land is now covered with private houses.

Radio Navigation

So far in this chapter I have made much of the story of North Foreland as told by the charismatic old postcards. Yet there is so much more than this that the reader would be forgiven for not seeing. Whilst the images of the bricks and mortar have become so familiar, apparently unchanging across the decades, the activities represented by a constantly changing landscape of aerials pass by mostly unnoticed. North Foreland has played an important but less well known role as a radio beacon, exercising its power and influence across a far bigger area than its light could.

The full story of the plethora of metalwork that has filled the air immediately surrounding the lighthouse is too complex to relate here, as well as being poorly documented elsewhere for that reason. However, with the help of a few dedicated radio enthusiasts, I have been able to shed some light on this part of the lighthouse history.

Part of the complexity arises from the different purposes for which the new technology of telecommunications was developed. I have already indicated some of the many methods by which messages were sent from shore to ship and vice versa. Much of this activity was done outside the direct scope of the lighthouse authorities. A full history would include military, civilian and coastguard uses of the site that did not involve safety of navigation. Nevertheless, there was - and still is - much overlap.

As the signal stations were developed, it was logical to site them in strategic coastal locations, of which North Foreland was one, but the technology developed rapidly and the land available was not always suitable for the changes that were needed. As we shall see, this was true especially at North Foreland which was not sufficiently remote from the places where housing developments formed a competing priority.

As a first step, I must explain for the non-technical reader the difference between a mast and an antenna or aerial. Twentieth century mages of the North Foreland lighthouse are dominated by the presence of a large metal mast on the perimeter of the site. It was Marconi himself who named the vital element of radio equipment as an antenna.[1] A mast is simply a metal (originally wooden) structure that is used to raise the antenna to a sufficient height for it to work optimally. The mast, of course, is not itself the antenna, a role that belongs to the metal conductors of a great many forms and sizes that are attached to it. In this case (and other lighthouses such as the Lizard) the antenna is comprised of three metal wires stretched between the mast and the lighthouse.[2] [3]

The limitation imposed on signalling systems based on telegraphy was, of course, the need for wires, and it was not until Marconi's wireless inventions at the turn of the century that ships were fully able to benefit from a new range of methods for establishing position at sea. Marconi was very successful in rapidly improving his equipment and, following his successes at South Foreland, quickly set up transmitting and receiving equipment along the south coast of England at Niton on the Isle of Wight - close to, but not at the St. Catherine's Point lighthouse - and in two positions at the Lizard in Cornwall, again, not at the lighthouse itself. He soon proved that radio waves were not limited to the visible horizon, as was feared by many contemporary observers.

Our next objective is to highlight the difference between using a signal for navigation purposes, rather than communication. With the newly established speed of light (and radio waves) at their disposal, it was a relatively simple task to extend the age-old geometrical method of triangulation to navigation by radio. Now it was necessary for two widely separated transmitters to emit signals at precisely the same moment, and for a third party such as a ship (or aircraft) navigator to use electronic equipment to determine the time (or phase) difference between the two received signals. [4]

In 1907 Ettore Bellini and Alessandro Tosi in Italy developed the first practical direction finding system. Direction finding was used operationally in World War I. By the early 1920s, a series of stations in Europe and North America were providing guidance to ships and aircraft and the image from 1920 at the start of this section well illustrates the extent to which the activities at North Foreland had already grown. Instead of transmitting or receiving in all directions, now antennas had been designed that could be directional and by determining the direction of two distant signals a navigator could fix his own position at sea. The role of the lighthouse had now become even more important since the transmission of a light ray to the horizon was no longer a limitation.[5] However, the new gadgetry from the realms of physics rather than mechanical engineering fell on the edge of, if not outside the boundaries of the light keepers' duties, and although they were generally aware of the presence of the equipment, there was little input from humans, except by specialist engineers who came on site to remedy problems. Dave Appleby, one of the last keepers at North Foreland recalled:

> *"When I was at North Foreland I seem to remember that the mast at the station was used for a Loran or Decca Navigation system or something similar... I do know that there were two or three other Trinity House lighthouses that had the same set up. Flamborough Head I think was one. In my earlier days in the job several lighthouses had radio beacons with radio masts outside. They were usually grouped together with another four stations and transmitted a Morse signal (two letters) at a prescribed time in the five minute cycle. This entailed the keeper on watch to check the signal and co-ordinate it with the BBC radio Greenwich time signal at 0900 each day. Souter Point had this and also a short range radio beacon which again transmitted a two letter (PT) signal which helped ships to calibrate their radio*

1 Slyusar V I: To History Of Radio Engineering's Term "Antenna". International Conference on Antenna Theory and Techniques, 20-23 September, 2011, Kyiv, Ukraine pp. 83-85.

2 Wikipedia - Radio Antenna: In radio engineering, an antenna or aerial is the interface between radio waves propagating through space and electric currents moving in metal conductors, used with a transmitter or receiver. In transmission, a radio transmitter supplies an electric current to the antenna's terminals, and the antenna radiates the energy from the current as electromagnetic waves (radio waves). In reception, an antenna intercepts some of the power of a radio wave in order to produce an electric current at its terminals, that is applied to a receiver to be amplified. Antennas are essential components of all radio equipment.

3 We must also remember that a single, thin, metal rod rising vertically from the top of a mast is generally a lightning conductor!

4 Note that for this to happen it is necessary to have two perfectly synchronized clocks at each of the transmitters. Improvements to the accuracy of direction finding systems have been as much concerned with improving the precision of clocks as other technologies. Today, satellites for DGPS use atomic clocks.

5 It is well known that light of sufficiently high intensity could sometimes be seen beyond the horizon in certain weather conditions, a property known as 'loom'.

Above: In this photograph, taken from the sea in 2021, a number of antennas are visible attached to the mast and fulfill different roles. Less visible are the three lines stretched between the mast and the lighthouse, known as the T-wire antenna. (The fore-shortening effect of the telephoto lens makes the private house look much closer to the lighthouse site than it is.)

Above: The three lines of the T-wire travel from the mast and are fixed to the lantern of the lighthouse.

Above: The same arrangement can be seen at the Lizard lighthouse, another strategic location for ship navigation. Once again, the T-wire is suspended between the top of the support mast and the lighthouse lantern.

direction finding equipment. There was a white light on the gallery which was turned on when the main light was extinguished and at the same time that the beacon started. Ships from the Tyne and Wear often used this after repairs etc in the rivers, and I suppose the light in gloomy conditions allowed them to "line" their vessels up. The keepers at North Foreland had no direct involvement with the radio/electronic equipment there. Technicians occasionally visited and did what they had to do."

North Foreland signal station was built by Lloyd's on land near the lighthouse in 1901, although there is known to have been a semaphore station on the site from at least 1862.[6] In 1909 it was taken over by the Post Office and then acquired by the armed forces during WWI. Masts next to the front of the lighthouse can be identified in photographs from 1920 and there was a small building adjacent to a mast which may have been a wireless station. However, by the mid-1920s such was the importance of the signal station that it was decided that the land available was no longer big enough and it was moved to a site 2.75 km distant where there is now a supermarket on the A256 at Broadstairs.[7] Known as North Foreland Radio, it became a valuable part of the UK's telecommunications system operating from the new location at Broadstairs, not from the lighthouse until it was taken out of service in 1990-91.[8]

It was not long before the navigation of aircraft became the dominant objective for radio navigation and in the USA in 1926 the National Bureau of Standards undertook the creation of a nationwide system of directional radio beams called the Radio Range to provide guidance for commercial aircraft. This system remained in use in the United States until the early 1970s.

Meanwhile, other functions had been adopted by Trinity House to continue operating from its real estate. For decades, marine navigators made reference to official directories giving details of all useful radio signals.[9] Seven stations were listed in Great Britain as sites transmitting Direction Finding (D/F) signals: Niton, Lands End, Portpatrick, Wick, Cullercoats, Humber and North Foreland. We note that these were not the responsibilities of lighthouses, but under the auspices of the GPO in Britain and by international agreement had also been set up by different national authorities around the world.[10] Niton was one of the first stations built by Marconi and in January 1901 exchanged signals with Lizard Radio, at that time a record distance at 196 miles. On 29th September 1909 Marconi's existing station was taken over by the British General Post Office. Four years later the GPO took on the rent of land at Niton Undercliff where there was already a Lloyd's Signal Station and Coastguard Houses together with a building in which the new Niton Radio was installed. This site was subsequently purchased by the GPO in 1951.

On the other hand, a second D/F aid was indeed part of the lighthouse functions and these were the Radio Beacons. In navigation, a radio beacon is a device that marks a fixed location and allows direction-finding equipment to find relative bearing. Radio beacons transmit a radio signal that is picked up by radio direction-finding systems on ships, aircraft and vehicles to determine the direction to the beacon. Radio beacons transmit a continuous or periodic radio signal in all directions with limited information (for example, its identification or location) on a specified radio frequency. Occasionally, the beacon's transmission includes other information, such as telemetric or meteorological data.[11]

Thus, in the same way as the light flashes had been presented in coded sequences known as the characteristic for much of the 20th century, so also did the lighthouses allocated radio beacons transmit a coded Morse signal at a given frequency. All of this information was also presented in the same Admiralty List that now contained far more locations than the seven British D/F stations.

At North Foreland the system produced the following signal:

Frequency	301.1 kHz continuous
Characteristic	Range 50 mi, 80 km
NF (— · ··—·) 4 times	19.6 s
Long dash (——)	25 s
NF (— · ··—·) 2 times	9.1 s
Silent	6.3 s
Period	60 s

6 Found on first edition maps of the Ordnance Survey.

7 https://historicengland.org.uk/content/docs/research/fww-wireless-stations-27may16-pdf

8 Bennett, p337-362.

9 Admiralty List of Radio Signals provided details of Radio Direction Finding Stations and Radio Beacons, Hydrographic Department, London.

10 General Radio Regulations, International Telecommunications Convention 1947.

11 Wikipedia: Radio beacons.

Decca and Gee

The link between popular records and marine safety seems tenuous, to say the least, but is an interesting tale to tell. In 1914 Barnett Samuel and Sons began manufacturing gramophones in London, and sold them under the name of *Decca*. Thus the Decca Gramophone Company was formed. In 1928, fearing that sales of gramophones had peaked, Samuel sold his shares and a new company was formed in 1929 by Edward Lewis to bring the manufacture of records and gramophones into one business. Thus the Decca Record Company absorbed the Decca Gramophone Company. By the mid-1930s the company had expanded to include the manufacture of radios and televisions; the Decca Radio and Television Company was formed in 1938, under the parent company Decca Records. In this way a long and vital relationship with telecommunications was begun.

The intensification of research as part of the war effort led to Decca supporting an American invention of radio direction finding, but they were unaware of parallel development in Britain of a similar system called *Gee* which had already gained much momentum and was generally adopted by the British during the war years. However, Decca was able, through collaboration with the British Admiralty, to redirect its efforts and build upon the successes of Gee so as to develop the now more well known Decca Navigation System. These systems became known as hyperbolic systems because of the patterns formed on the measuring equipment. The Decca/Gee systems were entirely unknown to the Germans and played a critical role for minesweepers to clear the path for the invading forces on D-Day.

Another hyperbolic system, the American Loran, was suggested in 1940 and aimed to provide accuracy of 1 mile (1.6 km) over a 200 mile (320 km) range. However, Gee could give much better accuracy of a few miles over a range of 1250 (2010 km) miles. Obviously, the wartime effort led to rapid developments and the Loran system - by no means dead - was in common use across 72 stations by the end of the war. By the late 1950s, it had been adopted by the US Coast Guard.

DGPS

Many developments occurred in many systems across the second half of the 20th century and it is clear that the arrival of Differential Global Positioning Systems (DGPS), coupled to advanced digital equipment and communication with satellites enabled technology to pinpoint positions with centimetre accuracy, other systems, including LORAN, were not entirely discontinued, their value being recognized as back-up for times when DGPS was disabled. Today, three masts are present on the Trinity House site (see the panorama image on p303). The mast visible in many postcard images is the original structure used for radio navigation. Another in the southwest corner of the plot is part of the much more modern international DGPS network and a smaller mast nearby in the lawned area at the front is a back-up in case of failure of its big brother. As of 2022 there are seven DGPS stations in the jurisdiction of Trinity House, and fourteen in total around the British Isles.

ABOVE: In the mid-1980s, there was a VHF D/F antenna for use by the Coastguard, here seen as the red apparatus at South Foreland. The same antenna is shown BELOW at North Foreland on a tall mast behind the cottage.

ABOVE: The antenna just to the right of the tower was to be found at South Foreland too. This was the radio beacon at both stations. Note, the wooden flagpole has been a long-time feature of the station, essentially unaltered over many decades.