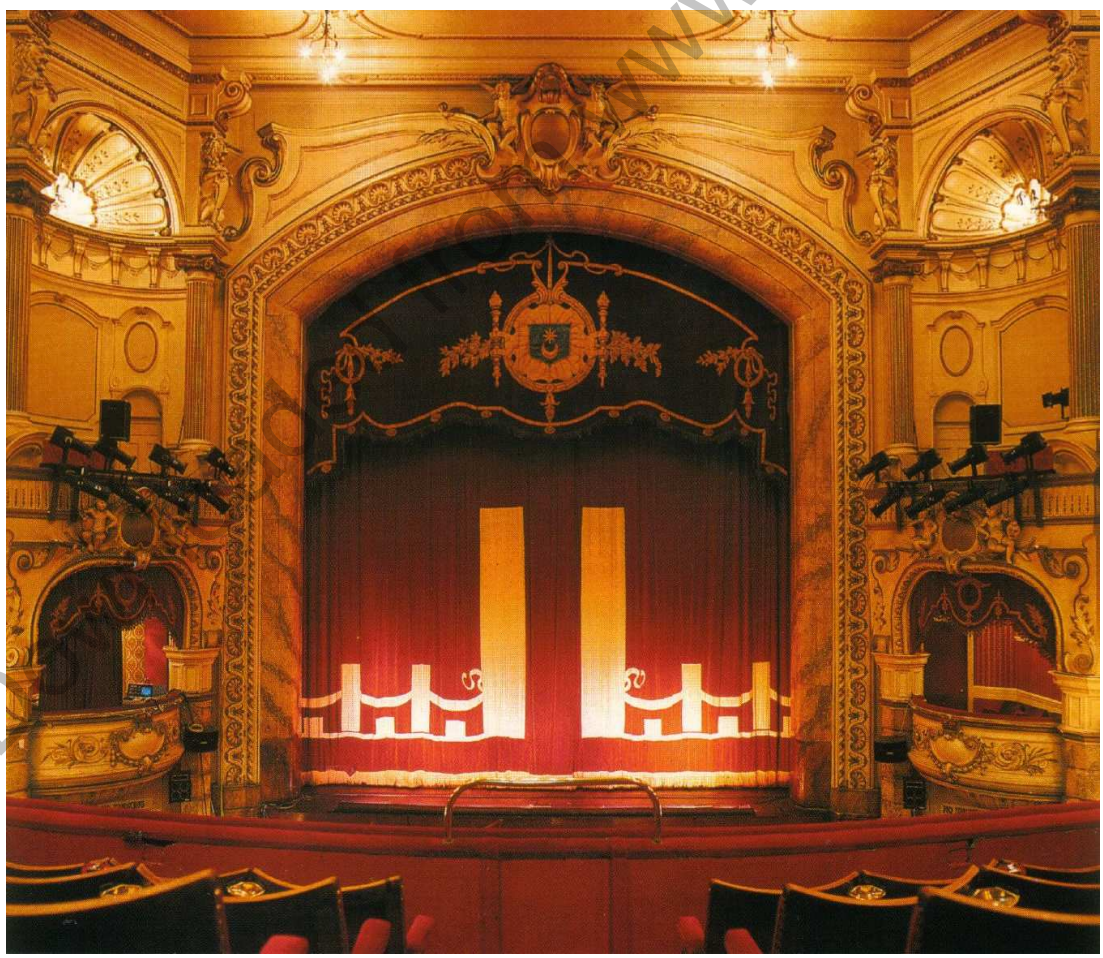
ISSN 2043-0663

Hampshire Industrial Archaeology Society

Journal No. 21

(2013)



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Front cover picture:
The restored auditorium of the Kings Theatre, Southsea. (Ron Hasker)
[see page 3]

Back cover pictures:
Top: Postcard view of Netley Hospital from the pier, with the dome of the chapel (still extant) dominating the centre. (Jeff Pain)
[see page 9]

Bottom right: The lantern of J. E. Webb's patent sewer gas destructor lamp in The Square, Winchester. (J. M. Gregory)
[see page 14]

Bottom left: 22 000 lb (10 tonne) Grand Slam bomb case on display at the Yorkshire Air Museum, Elvington. (Richard Hall)
[see page 24]

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Hampshire Industrial Archaeology Society

(formerly Southampton University Industrial Archaeology Group)

Journal No. 21, 2013

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Editorial

Welcome to Issue **21** of our *Journal* as we set out on our third decade. As usual, we have tried to include articles on a variety of subject areas in Industrial Archaeology in Hampshire.

Our first article is on the Kings Theatre Southsea. Many of our provincial theatres have been lost in the last fifty years. Ron Hasker has provided a short history of the theatre and its construction and has chronicled its rebirth under the management of a local Trust. The restoration has retained most of the original features. Jeff Pain tells us about the Royal Victoria Hospital, Netley; a military hospital built after the Crimean War to treat soldiers wounded in battle and brought back to the UK. It saw enormous expansion during the First and Second World Wars but most of it was demolished in 1966. The site is now that of the Royal Victoria Country Park. Your editor provides another in a series of articles on Winchester utilities, adding Gas to Sewerage (*Journal* No **13**, 2005), Refuse (*Journal* No **14**, 2006), Electricity (*Journal* No **15**, 2007) and Water (*Journal* No **16**, 2008). Richard Hall writes about the Ashley Walk Bombing Range, a remote section of the New Forest used for testing munitions during the Second World War and now back to its natural state unless you know where to look.

Martin Gregory
June 2013

Published by the Hampshire Industrial Archaeology Society, Registered Charity Number 276898
Edited and produced by Martin Gregory

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The Contributors

Martin Gregory
Martin Gregory is a retired schoolmaster. His interest in the history of technology goes back over 50 years. He has researched and built model steam and Stirling engines for many years and also works on the history of the sewing machine. He has been a member of HIAS and its predecessor for over 40 years, has served as Secretary and Chairman, and is the present editor of the Journal.

Richard Hall
Richard Hall has had an interest in aviation, railways, stationary steam engines and most things mechanical since a very young age. Born in Winchester, he still lives in the city. He has worked as an engineer within the heating industry for over 30 years. A keen photographer of aircraft and landscapes, most summer weekends will either find him at an air show or taking photographs of the British countryside. Along with the photography, an interest in former military airfields has resulted in a desire to research and keep alive the memories of long forgotten sites which are so much a part of Britain's aviation history. Richard is also an active member of the Airfields Research Group.

Ron Hasker
Ron Hasker was born in Portsmouth but grew up in the outback of Australia before returning to the UK in the late fifties. He attended local schools during which time he was taken to a schools production of the Mikado by the D'Oyle Carte Opera Company at the Kings and that is where the love affair with the Kings really started. His professional life is rather more mundane, working for an accountant as a self-employed book-keeper. He was first involved with the Kings when AKTER took control of the theatre in 2001. He became the fundraising trustee and went on to become Chairman in 2003 when the restoration process began. His greatest pride as chairman was receiving a Civic Award from Portsmouth City Council to recognise the value of the theatre to the City and also to acknowledge the work given freely by so many. In the twelve years to date, the Trust has raised over £2M for the restoration, which is now about 60% complete, and now employs 35 staff and enjoys the contributions of 120 volunteers.

Jeff Pain
Jeff Pain has been a member of the Hampshire IA group since its early days in the 1960s. He was born in Southampton and, apart from wartime, has always lived and worked in the area. Educated at Taunton's School, he followed his father into the shipping world, being employed in Freight, Passenger and Ship Agency work. After the reorganisation of shipping, he spent twenty years or so with Pirelli, first at Southampton and, when that closed, at Eastleigh. His main interest has always been in transport, covering ships, railways and aircraft, with road interest limited to trams and buses.

Acknowledgements

My thanks are due to all who have contributed to this edition of the *HIAS Journal*. Acknowledgements and thanks for the provision of illustrations are made as follows:

Martin Gregory, (Figs. 23-25, 30-31, 36 and Back cover lower right); Richard Hall, (Figs. 39-53 and Back cover lower left), Hampshire Record Office (HRO), (Figs. 21, 26-29, 32-35, 37); Ron Hasker, (Figs. 1-8 and Front cover); Jeff Pain, (Figs. 9-20 and Back cover top); Southern Gas Board, (Fig. 22); The New Forest Research & Publication Trust, (Fig. 38).

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The Kings Theatre, Southsea

Ron Hasker

Sometimes called “Southsea’s biggest secret”, the dignified and beautiful Kings Theatre - with its Italian Renaissance style of decor - is one of the best examples of the elegant Edwardian playhouses to be found in the British Isles and has most of its original features intact. It is the result of the vision and business acumen of John Waters Boughton and the architectural prowess of Frank Matcham, one of the greatest and most prolific of theatre architects. He was responsible for the design and construction in the UK of eighty theatres from the ground up and a further eighty ‘makeovers’ of existing, but tired theatres. Only around twenty four now exist and not all are operating as theatres.



Figure 1. Frank Matcham.

In the mid 1850s, the theatre manager Henry Rutley took over the Landport Hall in Portsmouth. His previous experience in both theatre and circus persuaded him that a theatre could not only be made profitable but would also be a social asset to the town. With a licence for only a limited period he had the faith to re-open the Landport Hall as the Theatre Royal in 1856. J. W. Boughton became his assistant and, after the death of both Henry Rutley and his successor J. C. Hughes, Boughton took over the reins of Portsmouth Theatres Company in 1882. One of Boughton's first decisions was to undertake a major rebuild of the Theatre Royal, re-opening it as The New Theatre Royal in 1884. To do so he engaged the most famous theatre architect of the day, C. A. Phipps, who had earlier built London’s Gaiety, Theatre Royal and The Haymarket. This was the Boughton style - to go for the best and to be commercially bold, or, if you prefer, to give the customer what they want.

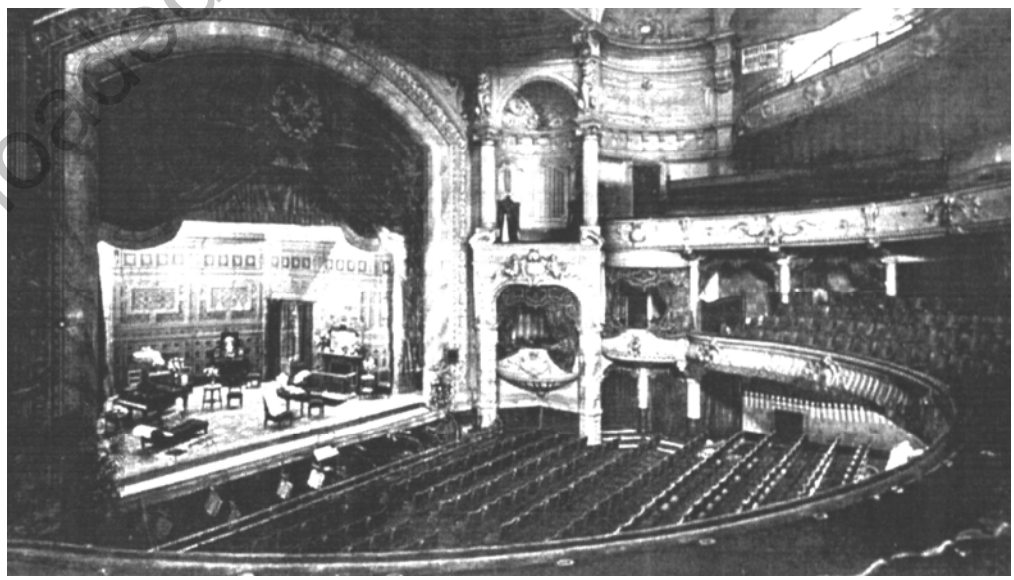


Figure 2. The auditorium of the Kings Theatre c1928.

In 1891 Boughton employed the rising theatre architect Frank Matcham to rebuild and enlarge the Princes Theatre in Lake Road, which had been destroyed by fire several years before. He employed Matcham yet again to remodel the New Theatre Royal in 1900, and took him into his confidence early in the new century when he began to discuss the building of a Drama and Opera House in Southsea. So confident was he, Boughton paid for the initial design out of his own pocket, only disclosing his action to his company’s directors in June 1906. He was reimbursed for every penny and his foresight was approved, so that this new theatre - the Kings - became the third theatre owned

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by the Portsmouth Theatres Company. Opening night, 30th September 1907, was a most glittering occasion. H. B. Irving, son of the great Sir Henry, played three of his father's successes in the first week: Charles I, The Lyons Mail and The Bells. On the opening night, as the curtain rose, the Portsmouth Orpheus Society sang the National Anthem.



Figure 3. The tower and exterior c1908.

J. W. Boughton died in 1914 but the Company continued to operate the Kings Theatre until 1964 when Commander Reggie & Mrs Joan Cooper purchased it. After the death of Cdr. Cooper in 1987, Mrs Cooper was joined by local businessman Mr Ivor Barnes. In 1990, Hampshire County Council bought the Theatre, but Mrs Cooper and Mr Barnes stayed as co-lessees. Unfortunately when the lease expired in 2000 the future looked very grim and the building was put up for sale and almost sold to a pub chain to be converted into a theme pub.

In 2001, after a successful campaign by AKTER (**A**ction for **K**ings **T**heatr**E** **R**estoration) to keep the theatre open, it was bought by Portsmouth City Council and leased to the Kings Theatre Trust Ltd who took responsibility for the building's restoration and repair. With the Trust also overseeing the running of the theatre, there have been many successful productions staged by both professionals and amateurs. More than one million people have purchased tickets in the first ten years of the Trust's tenure.

The Kings was constructed in under twelve months at a cost of £37 234 which sounds very reasonable but, at that time, the average wage of a downstairs maid in service would have been around £50 per year which puts the cost more into perspective. With it, the City gained a veritable palace with its gilding and ornate plasterwork. During the restoration process much information has been discovered of its early décor; we know that the interior colour scheme was not the red that we see now but a beautiful turquoise blue colour scheme as used in many of Matcham's other theatres such as the Buxton Opera House and the Gaiety on the Isle of Man. The Kings construction was of the standard steel frame with brick and concrete.

The auditorium is arranged over four seating levels and six boxes. Because of the social segregation of the audience each level had its own entrance, ticket box, bar and toilet facilities. At no time did any of the four 'classes' meet within the theatre. We can easily describe these areas as Stalls and Pit for the blue collar workers, the Dress Circle for the senior management, the Upper Circle for the middle management with the Gallery for the rest of society. The cost of a ticket was appropriate to where you sat both physically and socially. In 1908 when the theatre reverted to variety, to sit in one of the lower boxes was 10/6, or half a

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guinea. To sit on one of the bench seats in the Gallery was just 3d. To bring that up to today's values a £10 seat in the Gallery using the same ratio would mean a cost of £525 to sit in the box! This explains why the view from a box is 60% of the stage but 90% of the audience, or, if you prefer, 90% of the audience could see that you could afford a box.

Unlike earlier theatres the Kings has only four support columns in the auditorium, two in the stalls and two in the upper circle. The steel frame is of a cantilever design which meant that there was little need for additional support and which improved the view for the majority of the audience. Many earlier theatres were a horseshoe shape with many columns to support the upper levels, the Leeds City Variety Theatre being a good example.



Figure 4. A view of the auditorium from the stage today.

The Kings was built in the new and exciting twentieth century and with it came many innovations, such as the new electric light. The theatre's primary source of lighting was electricity provided by the local generating company based in Old Portsmouth. Because of the eccentricities of the electricity supply gas was also installed as a secondary lighting system.



Figure 5. The Gasolier in the centre of the auditorium ceiling.

Air conditioning. Yes, the Edwardians enjoyed such benefits. When you have over 2000 people in an auditorium where you could enjoy your beer and smoke your pipe during the performance and given the questionable standard of personal hygiene at that time, the

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quality of the atmosphere must have been less than comfortable. Matcham had designed into the centre of the highly decorated ceiling of the auditorium, a Gasolier. This was a contraption that worked very efficiently, having a number of gas jets and above it a vent to the outside. When the gas jets were lit a couple of grills in the walls at the ground floor level were opened and the wonderful world of science took over: hot air rises and draws in fresh air from the outside, evacuating the stale air from the auditorium through the vent to give us our Edwardian Air Conditioning.



Figure 6. The re-created stained glass windows in the Irving Room.



Figure 7. Ropes in the fly tower for raising or lowering scenery.

Another great invention from the late eighteen hundreds was the Briggs Automatic Panic Bolt or, as we now know them, the push bar on the exit doors. Robert Briggs from Sunderland learned of a terrible disaster at the Victoria Hall where 2000 children were watching a performance by a conjuror called Mr Fay. At the end of the performance, to control the children as they were leaving, the exit door had been partially closed and locked. There was a build up of the more impatient children at the back and 183 children died in the crush caused. Matcham adopted the use of the Panic Bolt in his theatres. The design has developed over the years and they must have saved countless lives; many of the original Briggs push bars are still in use at the Kings.

One of the more curious discoveries has been the plumbed-in vacuum cleaner. Around the public areas are steel tubes with screw-on brass caps. These pipes led to a large vacuum pump under the stage which, when switched on, created a vacuum in the system. A cleaner could easily carry around a hose to attach to the nearest point and vacuum the expensive carpet (in the posh areas). It was a great invention, but it didn't work and was scrapped quite quickly but we still have some of the pipes *in situ* and, being a grade II* listed building, we are required to keep them.

A principal policy of the Trust is that whatever we do, we can undo. An example is the flying bars above the stage that hold scenery and backdrops. These bars are suspended on ropes in the fly tower. We are an original hemp house with all of our bars still in place. In fact all of the rope which has been replaced recently was made for us at the Chatham Historic Dockyard. As we need to receive professional touring companies we are expected to have modern facilities, so, at great expense, we installed thirteen computer controlled bars which have been installed in between the original bars. If we wanted to return our theatre to a full hemp house by removing the modern equipment, we could.

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Since its opening in 1907, many productions have visited the theatre. For example, it was the venue for the opening of the famous Aldwych Farces. After a short closure during the "phoney" war at the start of World War II, the Kings held a large programme of shows and concerts to keep up morale during those difficult years, including the popular musical concerts moved from the bombed Guildhall. Another interesting phase was the presentation of special "Flying Matinees", with the London cast, direct from their London theatres, coming down for one special afternoon performance. Many stars of stage and screen have performed at the Kings, including Sarah Bernhardt, Noel Coward, Sean Connery, Rex Harrison, Spike Milligan, Ivor Novello, Sybil Thorndike and H. B. Irving to name but a few of the greats of the last century. In May 1974 a large part of Ken Russell's film 'Tommy' was filmed at the Kings featuring The Who and Elton John.



Figure 8. The restored tower of the Kings Theatre in 2009.

The Administration and Box Office are now fully computerised. A professional and dedicated staff runs the commercial operations, with much valued volunteer assistance. The seating has been reduced from the original maximum capacity of 2187 to 1600 to align with modern safety requirements and comfort for the patrons. Much wonderful restoration work was completed in 2007 to restore the auditorium and some other public areas to their full beauty to celebrate the theatre's centenary. The outside of the building has altered little over the years and the look is almost original. The statue of a lady, originally mounted on the top of the Tower, was lost for many years and only found again by chance in 1998 in a Hampshire scrapyard. Renamed "Aurora", she is now on display in the main foyer, and a glass fibre replica was reinstated on the top of the tower in 2009 as the crowning glory of a £200 000 restoration of the whole tower.

Since the City Council bought the theatre, over £2M has been raised by the Trust and spent on bringing the building up to date and improving the facilities. Much important repair and restoration has been done, and many improvements have been made to all aspects of the theatre.

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Netley Hospital, 1855 – 1918

Jeff Pain

In the 1850s there was much disquiet about the provision of suitable hospital accommodation for army personnel. Concern was raised by the pioneering efforts of Florence Nightingale during the Crimean conflict. Queen Victoria, having visited the current army hospital at Fort Pitt, Chatham, was unimpressed with the facilities there and wrote to the Secretary of State for war expressing her opinions.

This did indeed stir the establishment into action and the Deputy Inspector of Fortifications, Captain R.M. Lalban, was charged to find a suitable location on the South Coast for a new hospital. His first suggestions included sites near Haslar, Gosport, Porchester Castle, Herstmonceux in Sussex and Appuldurcombe on the Isle of Wight. However, none of these was considered suitable.



Figure 9. The main gate house on Victoria Road, Netley. The building on the left remains in use as accommodation for the Park Staff.



Figure 10. Invalids getting some fresh air (note the carriages). A view towards the main building from the pier.

Next came a proposal from the Queen's physician about a site at Netley which he had noticed on his way to Osborne House to visit the Queen. There was initially some opposition to this location as apparently, during the Napoleonic Wars, troops camped nearby on Sholing and Netley commons had been afflicted with outbreaks of cholera and it was thought this might be endemic to the area. Also, at low tides the mud could be infected with sewage carried down river from Southampton. However investigations discovered that a small brig the 'Partridge', stuck in the mud, was being used as a home by members of the Coast Guard and their families who were all in good health. On examining the local grave stones, the good age reached by most was noted. With this positive evidence, negotiations began in August 1855 with the local landowner, Thomas Chamberlayne, for the purchase of some 110 acres (45 ha) at a lot price of £15 000, the deal being finalized in January 1856. Some additional acreage was acquired later by compulsory purchase.

So a grand design was proposed which was visually impressive and, on 19th May, Queen Victoria came to lay the foundation stone. To facilitate this it was intended to use a

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temporary pier 300 ft (90 m) long which had been erected to handle incoming building materials. The pier was suitably decorated and covered with red cloth. Unfortunately, when the Royal Yacht and its flotilla arrived the wind was too strong to use the pier and a Royal Barge was run onto the gravel beach without the red carpet. So work commenced which was estimated to take 2 years and cost £150 000.

Like many large projects, things did not go smoothly as many voices were raised against the design, including that of Florence Nightingale who is thought to have visited only once. That visit was in 1857 to confirm her dislike of the plans. In spite of many doubts and cessations of work whilst these objections were considered, the project was eventually completed in March 1863 with very little alteration from the original plans. It had taken seven years and cost over £350 000. Strangely enough there appears to have been no opening ceremony, probably because Queen Victoria was still in mourning over the death of Prince Albert.

One odd fact was that two railway engines of 2-2-0 design by Bury & Co were used in the construction, not for the movement of materials but as stationary engines to drive mixing machines for mortar to bond the bricks. Although there was railway track from the pier to assist with transfer of material this was presumably horse-drawn. After the hospital was completed the works pier was dismantled and in 1865 a new cast iron pier was completed, some 560 ft (170 m) long by 15 ft (5 m) wide with a "T" shaped head. Presumably for reasons of cost, this was shorter than the 1200 ft (360 m) originally intended which would have reached the deep water channel and, with a more substantial pier head, would have allowed disembarkation of patients direct from ocean going ships. At this time 'hospital' ships were mainly single trip conversions for the transport of casualties.



Figure 11. The pier viewed from the land. Note the cranes presumably used to lift stretcher cases from barges.

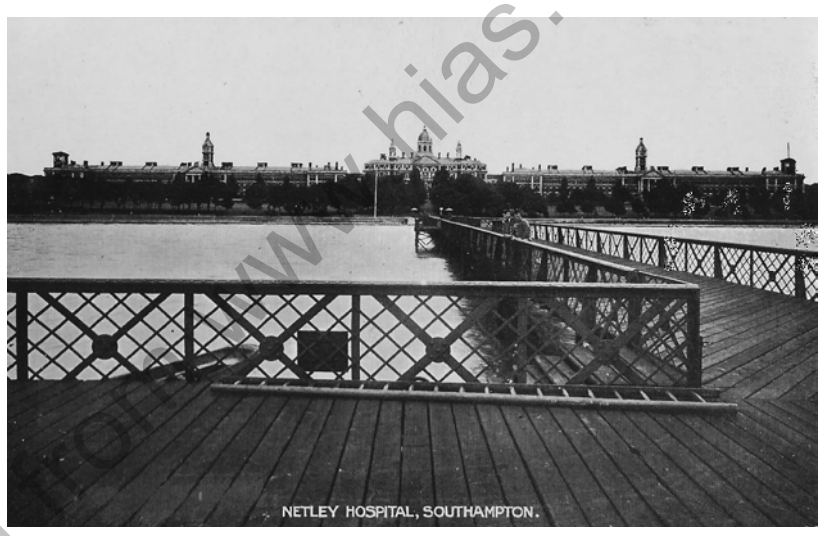


Figure 12. Looking from the pier head to the 480 yard (440 m) long hospital building in the background. The dome of the chapel is visible in the centre.

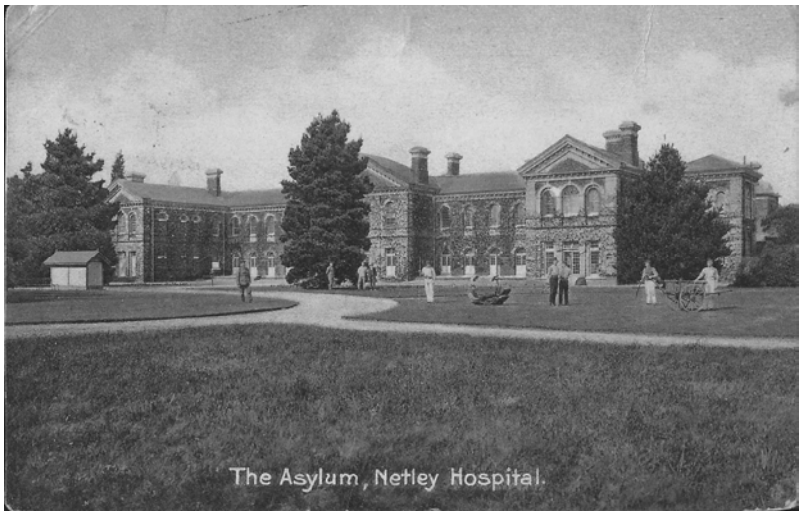


Figure 13. The asylum block which was encircled by a high brick wall. Much of the wall remains with some of the buildings which are now used by the police.

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Figure 14. An aerial view taken c1921 showing the extent of the emergency wartime hutted accommodation to the rear of the main hospital.

With the building of the Hospital plans for a railway to it were soon proposed, initially from Fareham, then from St. Denys. After various options had been considered, the Southampton and Netley Railway's Act was passed in 1863, though the company amalgamated with the L&SWR before completion. Services began on the 5th March 1866.to Netley village station. At this stage the line finished in the goods yard east of Netley station, with a platform against Hound Road to serve the Hospital. From here the wounded (and goods, coal etc.) were taken the half mile on down to the Hospital, via the North gate, on horse drawn vehicles.



Figure 15. The inside of the chapel which still stands but without the pews. It now serves as a museum of the site's history.

The line was continued beyond Netley to Fareham in 1899 and the hospital platform in the goods yard was lengthened and provided with a waiting shelter, these being the first improvements for 30 years. However by now the Boer War had started and in anticipation of increased demand, an extension first proposed in 1884 was authorised, from a connection in Netley goods yard to a station at the back of the Hospital. The line was opened in April/May 1900 and was 48 chains (970 m) long, mainly on a falling gradient of 1in 80 with curves of 8 chains (170 m) radius (not the easiest of conditions for working trains). The terminal platform was 196 ft (60 m) long. At the same time five special ambulance coaches were built by the L&SWR for use between the Hospital and Southampton Docks. These were housed in their own shed beyond the platform at the Hospital. The coaches were each 48 ft (15 m) long: the central section with 4 ft (3.6 m) wide doors, had 12 beds, the compartments at either end had, at one end, (a), 6 seats, and a lavatory together with basic kitchen facilities,

whilst the other end, (b), was equipped with 2 seats, which could be converted into a bed normally for use by a medical officer.

It is interesting to note that Queen Victoria showed great concern for the welfare of her troops and made many visits to the Hospital, indeed in 1898 she came three times, the first travelling from Osborne on February 11th in the Royal yacht 'Alberta' to Southampton Docks, then by train to Netley Station and thence by carriage through the village, entering the Hospital by the main gate. The second visit on the 14th May was by Royal train from Windsor to Netley Station and onwards by landau drawn by two grey horses; the third visit on 3rd December was again from Windsor and followed same pattern as the second visit.

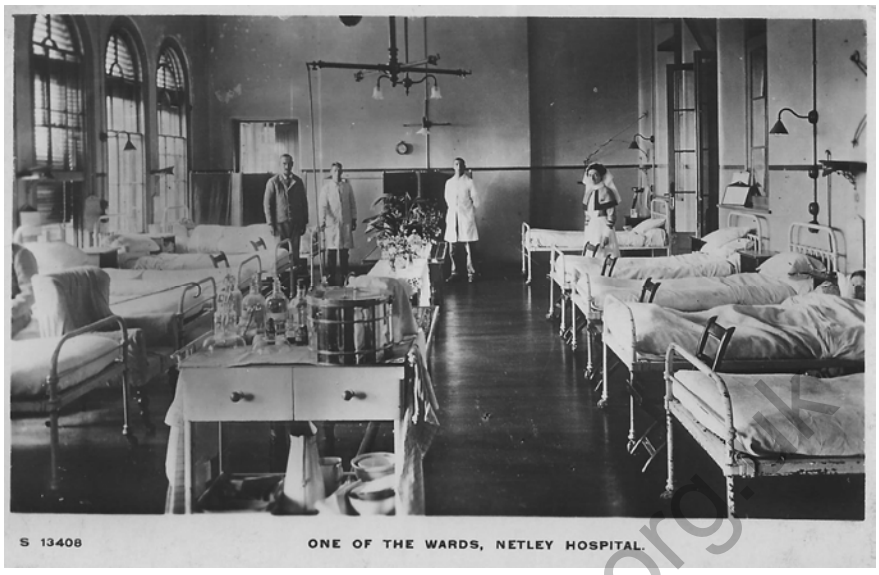


Figure 16. A view inside one of the wards. The postcard was posted in 1916 but the picture is probably earlier. Most of the beds appear to be empty.

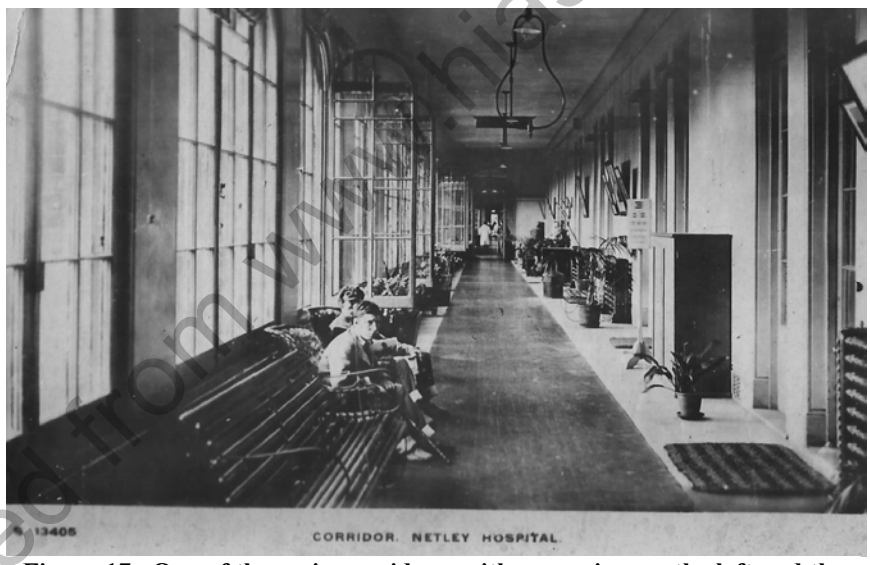


Figure 17. One of the main corridors, with a sea view on the left and the wards on the right.

The Queen's last visit was on the 16th May 1900 by Royal train from Windsor but this time the hospital station had been opened and the train was able to deliver her Majesty direct to the Hospital. It is recorded that the platform and corridors in the Hospital were laid with crimson cloth, with floral decorations supplied by Bailey's of Southampton. The Queen was wheeled around in a chair and, using the lift, visited the first floor.

Figure 18. The magnificent memorial to members of the Army Medical Corps who died in the Crimean War. Erected in 1864 it was 35 ft (11 m) high. However, when closure came it was declared unsafe and was demolished in 1973.



Until 1914, the only major conflict was the Boer War. However, there was a constant supply of sick and wounded from the various outposts of the Empire including India, Sudan, the Gold Coast and South Africa.

The First World War required a massive increase in facilities all over the U.K. and Netley played its part, with hutted camps on the plateau behind the Hospital. Under the names of the British Red Cross and the Welsh Hospitals, they offered 1500 beds in addition to the 1000 in the main hospital. Once on the way to recovery, service men were transferred to one of the many hotels and large houses taken over by the Red Cross or similar organisations in the area.

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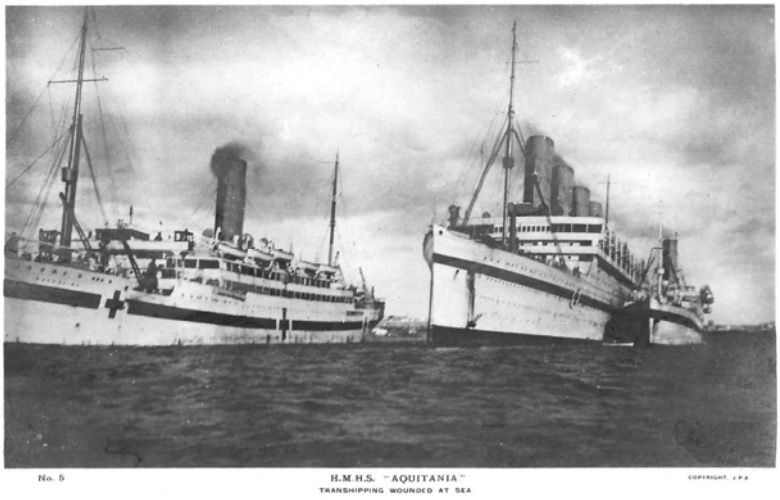


Figure 19. The *Aquitania* receiving casualties from small vessels, the *Essiquibo* in the foreground, possibly at Alexandria during the Gallipoli campaign.

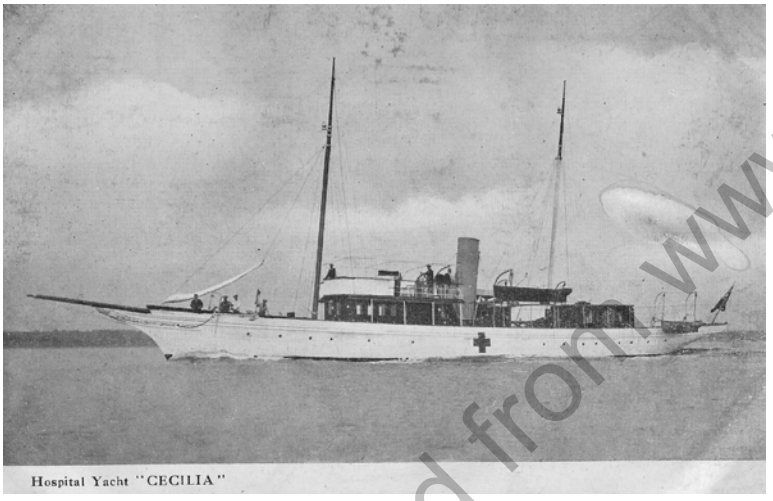


Figure 20. The *Cecilia*, a steel screw steamer of 137 gross tons which took patients from the pier to Ryde etc.

How did the casualties from these wars get to hospital in the U.K.? In most cases the army established local facilities to deal with immediate problems and once stabilized, they were returned to the U.K. by the returning troop transports. As far as Netley was concerned, the vessels would initially anchor and transfer patients by lighter or barge to the pier, but this was subject to weather conditions. Once the railway line to Netley village station was opened the ships went straight to Southampton Docks to land the patients, who went by train to Netley and on by horse-drawn carriage to the Hospital. Of course, once the railway line into the Hospital was opened, transport for the injured was vastly improved.

It would appear that the pier was used occasionally as, during the First World War, at least two ex-private yachts in white with green or red crosses painted on, took patients for pleasure cruises to Southampton, Cowes and Ryde.

Hospital ships in the 20th century as far as the army was concerned were invalid carriers for personnel stabilised in land based hospitals close to the conflict, then returned home for further treatment, recovery or discharge. However, in situations such as Gallipoli where no land-based hospital was possible, several large passenger ships including the '*Aquitainia*', '*Britannic*' and '*Mauretania*' were equipped with medical operating suites. They remained outside the main battle area, receiving their patients from smaller ships and returning to the U.K. when full. Indeed the 'Aquitania' on one occasion in 1915 brought some 5000 sick and wounded into Southampton requiring 20 ambulance trains (only 1 or 2 would be for Netley). By 1916 they had become troop ships except for the '*Britannic*' which struck a mine and sank.

What remains to-day? Apart from the chapel, there are the gate houses on Victoria Road and Hound Road and two houses on the north side used for accommodation by Park staff. In addition, nearby, the ex-officers block is now luxury flats; next to it we have the old NAFFI buildings, now the Park offices and public restaurant and behind this is a brick building which was part of the power house. Up a slope towards the Hound Road entrance are the ex-NCO's residential cottages now used by the police, who also have newly built headquarters on the south east of the site. This includes, behind a high brick wall, part of the notorious 'D' block where the mentally injured were treated. On the shore, in line with the chapel, the base of the pier can be found and behind the chapel there are still some sections of railway line to be seen. Finally, in the south east corner is the cemetery, an area of quiet and peacefulness.

This is obviously only a brief resume of the hospital and I would recommend the following books for further information.

1) Fairman, J. R., *Netley Hospital and its Railways*, Kingfisher Railway Productions, (1984)
2) Plumridge, John H., *Hospital Ships and Ambulance Trains*, Seele Service & Co., (1975)
3) Hoare, Phillip, *Spike Island, (The Memory of a Military Hospital)*, Forth Estate (Harper Collins), (2001)

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